EXHIBIT R

FAIR MARKET VALUE APPRAISAL
AUS CONSULTANTS

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June 20, 2021

Mr. John Nagel
Township Manager
East Whiteland Township
209 Conestoga Road
Frazer, PA 19355

RE: UVE Market Value Appraisal of East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity

Enclosed is AUS Consultants' fair market value appraisal report for East Whiteland Township's wastewater collection system and purchased treatment capacity (System) as of January 8, 2021, prepared for East Whiteland Township, Pennsylvania. The report was prepared based on the 2020-2021 Uniform Standards of Professional Practices (USPAP) and is intended to meet the criteria established with Title 66 (Public Utilities) of the Pennsylvania Consolidated Statues (PA CS) Paragraph 1329 "Valuation of acquired water and wastewater systems", collectively referred to as Act 12 of the 2016 Pennsylvania legislative session (Act 12). The intended users of this appraisal are Pennsylvania American Water Company and the Pennsylvania Public Utility Commission.

Based on our appraisal the Fair Market Value of East Whiteland Township's wastewater System's property, plant, and equipment operating as a Pennsylvania rate regulated wastewater utility is $58,100,696 determined based on the cost, income, and market approaches to value, as detailed in the following table:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value Appraisal

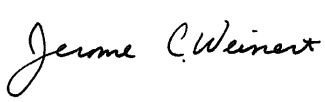
Appraisal Approach		Investor-owned Utility	Weight	Wtd Valuation Indications
Cost Approach				
Inventory of Assets				
Original Cost ($OC)		43,447,309		
Depreciated Original Cost ($OCLD)		33,403,972		
Intangible Assets (Treatement contracts)		1,768,832		
Cost Approach of all assets Conclusion		35,172,804		
Replacement Cost				
Replacement Cost New (COR)		85,964,664		
Depreciated Replacement Cost New (CORLD)	$	**58,078,339**		
External or Economic Obsolescence	$	-	AUS Input	
Market Value of Tangible Assets	$	**58,078,339**		
Intangible Assets (Treatement contracts)	$	1,768,832		
Cost Approach of all assets Conclusion		**59,847,171**		
Cost Approach Conclusion		**59,847,171**	**50%**	**29,923,586**
Income Approach				
Required Rate Increases: 30% period 4,25% period 6, 10% period 9, 6% period 12, and 6% every 3rd year beginning in period 15 (Input 6)		55,600,045		
Income Approach Conclusion		**55,600,045**	**40%**	**22,240,018**
Market Approach				
Market Comparables (to)				
OCLD		65,048,584		
CORLD		56,178,539		
Customers		34,298,172		
Cash Flows (EBITDA)		43,140,348		
Market Financials (to)				
OCLD		70,482,381		
Market Approach Conclusion		**56,178,539**	**10%**	**5,617,854**
Appraisal Conclusion	$	**57,781,458**	**100%**	**57,781,458**
Conclusion (cost approach)	$	**59,847,171**		

As the purpose of this appraisal was to fulfill the requirements of Act 12 in the establishment of value for rate making of the East Whiteland Township's wastewater collection system's

property, plant and equipment the appraisal's conclusion of $58,100,696 is consistent with the purpose of this appraisal. As the cost approach work papers detail our value conclusion by National Association of Regulatory Utility Commissioners' (NARUC) Uniform System of Accounts (USOA) for the wastewater industry account classifications and the installation year of the property this detail can be used to allocate the appraisal conclusion to establish the booked value for future accounting and rate making.

Respectfully Submitted,
AUS Consultants, Depreciation & Valuation
June 20, 2021

By: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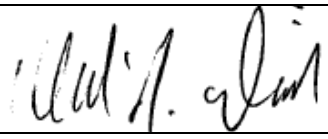	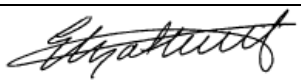
Michael J. Diedrich, ASA, P.E., CDP Certified General Appraiser Principal	Elizabeth A. Weinert Associate

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East Whiteland Township's
Wastewater Collection System
And
Purchased Treatment Capacity

Fair Market Value Appraisal Report
As of January 8, 2021
for
East Whiteland Township, Pennsylvania

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AUS CONSULTANTS

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EASMENT CURRENT COST

June 17, 2021

East Whiteland Township
Mechanicsburg, Pennsylvania

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RE: UVE Market Value Appraisal of East Whiteland Township's Wastewater Collection System and Purchased Treatment

Enclosed is AUS Consultants' fair market value appraisal report of the East Whiteland Township's (Pennsylvania) wastewater collection system and purchased treatment capacity (System) as of January 8, 2021, prepared for our client East Whiteland Township. The report was prepared based on the 2020-2021 Uniform Standards of Professional Practices (USPAP) and is intended to meet the criteria established with Title 66 (Public Utilities) of the Pennsylvania Consolidated (PA CS) Statues Section 1329 "Valuation of acquired water and wastewater systems", collectively referred to as Act 12 of the 2016 Pennsylvania legislative session (Act 12). The intended users of this appraisal are East Whiteland Township and the Pennsylvania Public Utility Commission.

Based on our appraisal, the Fair Market Value of the East Whiteland Township's (Pennsylvania) wastewater collection system's property, plant, and equipment operating as Pennsylvania rate regulated wastewater utility is $58,100,696 determined based on the cost, income, and market approaches to value, as detailed in the following table:

AUS CONSULTANTS

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value Appraisal

Appraisal Approach		Investor-owned Utility	Weight	Wtd Valuation Indications
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Appraisal Conclusion	**$**	**57,781,458**	**100%**	**57,781,458**
Conclusion (cost approach)	**$**	**59,847,171**		

AUS CONSULTANTS

As the purpose of this appraisal was to fulfill the requirements of Section 1329 of the PA CS in the establishment of value for rate making of the East Whiteland Township's wastewater system's property, plant and equipment this appraisal's conclusion of $58,100,696 is consistent with the purpose of the appraisal. As the cost approach work papers detail our value conclusion by National Association of Regulatory Utility Commissioners' (NARUC) Uniform System of Accounts (USOA) for the wastewater industry account classifications and the installation year of the property, this detail can be used to allocate the appraisal conclusion to establish the booked value for future accounting and rate making.

Respectfully Submitted,
AUS Consultants, Depreciation & Valuation
June 20, 2021

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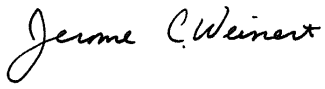	
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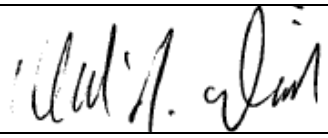	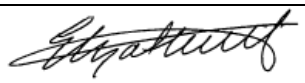
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AUS CONSULTANTS

APPRAISAL CERTIFICATION
for the Fair Market Appraisal of
East Whiteland Township Sewer Authority, Pennsylvania's
Wastewater Collection System and Purchased Treatment Capacity
As of January 8, 2021
Prepared for
East Whiteland Township, Pennsylvania

AUS Consultants, Depreciation & Valuation, certifies that, to the best of its knowledge and belief:

- The statements of fact contained in this report are true and correct.

- Prior to this appraisal during the last three-year period, AUS Consultants has not previously appraised these properties.

- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are our personal, impartial, and unbiased professional analyses, opinions, and conclusions.

- Neither AUS Consultants, Depreciation & Valuation, nor its professional staff has no present or prospective interest in the property that is the subject of this report and has no personal interest with respect to the parties involved.

- Neither AUS Consultants, Depreciation & Valuation, nor its professional staff has any bias with respect to the property that is the subject of this report or to the parties involved.

- Our compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.

- Our analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice 2020-2021 Edition.

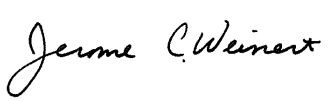
- The signers of this report have not made personal inspections of the property that is the subject of this report.

AUS CONSULTANTS

- No individuals provided significant professional assistance to the persons signing this report. However, Scott Shearer Managing Director and Garrett Moore – Senior Analyst of PFM Financial Advisors, LLC provided assistance in obtaining information and data from East Whiteland Township, Pennsylvania and the Engineer's Assessment report prepared by Pennoni Associates, Inc. which was the inventory starting point of the Cost Approach.

AUS Consultants, Depreciation & Valuation
June 20, 2021

By: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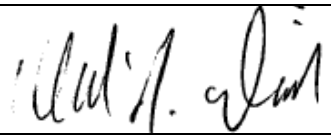	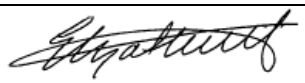
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AUS CONSULTANTS

NARRATIVE REPORT

EXECUTIVE SUMMARY

The purpose of this value appraisal is the determination of the fair market value of the property plant and equipment of the East Whiteland Township's wastewater collection system and purchased treatment capacity (System) for our client East Whiteland Township, Pennsylvania. The report was prepared based on the 2020-2021 Uniform Standards of Professional Practices (USPAP) and is intended to meet the criteria established with Title 66 (Public Utilities) of the Pennsylvania Consolidated Statues Paragraph 1329: "Valuation of acquired water and wastewater systems", collectively referred to as Act 12 of the 2016 Pennsylvania legislative session (Act 12) and the Pennsylvania Public Utility Commission's Final Implementation Order M-2016-2543193 adopted October 27, 2016. The intended users of this appraisal are East Whiteland Township, Pennsylvania and the Pennsylvania Public Utility Commission (PA PUC).

The value established in this appraisal was based on the definition of Market Value as:

> *"The most probable price, as of a specified date, in cash, or in terms equivalent to cash, or in other precisely revealed terms, for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress."* *The Appraisal of Real Estate, 14th Edition, page 58.*

In arriving at our opinion of value of the System's property, plant, and equipment as it is operated as an investor-owned Pennsylvania PUC rate regulated wastewater utility the cost, income, and market approaches to value were considered. Detailed explanations of each approach to value are included below in the section "Appraisal Procedures and Results". The following summarizes the data, analysis and conclusions of each of those valuation approaches.

Cost Approach - The philosophy in the cost approach to value is that the maximum value of a property's tangible assets is established by the cost to acquire or build a similar property. In this appraisal, the cost approach to value was analyzed using reproduction/replacement cost approach.

Reproduction cost and replacement cost are defined as:

> Reproduction cost – "Reproduction cost is the estimated cost to construct, as of the effective appraisal date, an exact duplicate or replica of the building [property] being appraised, insofar as possible, using the same materials, construction standards, design, layout, and quality of workmanship and embodying all the deficiencies, super-adequacies, and obsolescence of the subject improvements [property]."[1]
>
> Replacement cost – "Replacement cost is the estimated cost to construct, as of the effective appraisal date, a substitute for the building [property] being appraised using contemporary materials, standards, design and layout. When this cost basis is used, some existing obsolescence in the property may be cured. Replacement cost may be the only alternative if reproduction cost cannot be estimated"[2]
>
> In the wastewater industry the property's reproduction costs and replacement costs are quite similar; therefore, the most of the property's cost new was determined based on its reproduction/replacement cost new. However, for the easements the replacement cost were developed based on current costs.

The trended original cost method was utilized in preparing the replacement cost new. "Trending is a method of estimating a property's replacement cost new in which an *index* or *trend factor* is applied to the property's *historical costs* to convert the known historical costs into an indication of current (appraisal date) costs. Simply put, trending reflects the movement of price over time."[3] In the trended original cost method, East Whiteland Township's investment in wastewater collection plant and equipment is restated to costs reflective of the appraisal date, by the application of cost trends to the property's original investment. AUS Consultants utilized the Engineer's Assessment performed by Pennoni Associates, Inc. (Engineer's Assessment tab) as the starting point of the Cost Approach. Utilizing the Engineer's Assessment AUS Consultants developed the System's original cost less depreciation (OCLD) and replacement cost new less depreciation (CORLD) in property, plant and equipment on January 8, 2021 (Cost Approach tab).

The cost trends were applied to each of the System's various investment categories (NARUC plant accounts) by original year of placement for that investment. The cost

[1] The Appraisal of Real Estate, 14th Edition. pages 569-570
[2] Ibid, page 570
[3] Valuing Machinery and Equipment: The Fundamentals of Appraising Machinery and Technical Assets, Third Edition. Page 50

indexes used in these studies were the Handy-Whitman Index of Public Utility Construction Costs for the water industry in the northeastern region of the United States which includes the Commonwealth of Pennsylvania, the AUS General Plant Indexes, and various United States Bureau of Labor Statistics (US BLS) indexes as detailed in the following table:

1 2 3 4 5 6 7

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

Summary of Account Costing and Depreciation Parameters Used in the Depreciation Original Cost and the Depreciated Replacement Cost New Studies

(1)	(2)	(3)				
		(3a)	(3b)	(3c)	(3d)	(3e)
Account Number	Description	Costing Parameters				Reproduction to Replacement Cost Factor
		Index Series	Table	Line Reference	Lookup	AUS Input
353.20	Land & Land Rights - Original Basin	USBLS	PPI	1.00	USBLS1	1.00
353.30	Land & Land Rights - Pumping	USBLS	PPI	1.00	USBLS1	1.00
354.20	Stuctures & Improvements - Treatment	HW	W-1	15.00	HWW-115	1.00
354.30	Stuctures & Improvements - Pumping	HW	W-1	8.00	HWW-18	1.00
360.21	Collection Sewers - Force - Mains	HW	W-1	44.00	HWW-144	1.00
361.21	Collection Sewers - Gravity - Mains	HW	W-1	44.00	HWW-144	1.00
361.23	Collection Sewers - Gravity - Manholes	HW	W-1	45.00	HWW-145	1.00
363.20	Service Laterals	HW	W-1	39.00	HWW-139	1.00
365.20	Flow Measuring Installations Meter Pits	HW	W-1	40.00	HWW-140	1.00
390.70	Office Furniture and Equipment	AUS	T-1	15.00	AUST-115	1.00
391.70	Transportation Equipment	AUS	T-1	4.00	AUST-14	1.00

Using the trended original cost method, the System's investment in plant, property and equipment of $43,447,309.24 was determined to have a reproduction cost new of $85,233,123 and a replacement cost new of $85,964,664 as summarized in the following table:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(9)	(10)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Original Cost	Costing Parameter	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
			OC $s			RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt NARUC Code	AUS Input NARUC Code	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc. Asset Description	Eng Assmnt Original Cost	AUS Input Cost Index Table	Translator	RCN	AUS Input COR / RCN Factor	Col (14) * (15) COR
353.20	353.20	Land & Land Rights - Original Basin	668.00	USBLS1	2.87	1,920	375.01	720,020
353.30	353.30	Land & Land Rights - Pumping	13.00	USBLS1	2.08	27	498.82	13,468
354.30	354.30	Stuctures & Improvements - Pumping	8,005,275.38	HWW-18	1.52	12,142,235	1.00	12,142,235
360.21	360.21	Collection Sewers - Force - Mains	2,304,354.55	HWW-144	2.59	5,971,267	1.00	5,971,267
361.21	361.21	Collection Sewers - Gravity - Mains	10,767,737.96	HWW-144	2.84	30,582,161	1.00	30,582,161
361.23	361.23	Collection Sewers - Gravity - Manholes	4,350,867.01	HWW-145	2.32	10,108,723	1.00	10,108,723
363.20	363.20	Service Laterals	6,619,976.03	HWW-139	1.85	12,259,833	1.00	12,259,833
365.20	365.20	Flow Measuring Installations Meter Pits	78,670.00	HWW-140	4.95	389,338	1.00	389,338
354.20	354.20	Stuctures & Improvements - Treatment	11,085,241.50	HWW-115	1.22	13,511,701	1.00	13,511,701
390.70	390.70	Office Furniture and Equipment	21,550.00	AUST-115	1.16	25,084	1.00	25,084
391.70	391.70	Transportation Equipment	212,955.81	AUST-14	1.13	240,834	1.00	240,834
		Grand Total	43,447,309.24		1.96	85,233,123	1.01	85,964,664

Easement - For easement, the appraisal date cost to obtain and register an easement was developed as follows:

Current cost of Easements

Activity	Engineer	Legal	Fees	Total
Determine the facilities for which a Easment is need	1	0	0	
Locate the Land owner for the property needing a easement	1	1	0	
Develop a diagram o the Property, the facilities, and the easement	2	0	0	
Develop the easement document	1	1	0	
Visit the property owner to obtain permission for the easement and sign the easment documentation	4	0	0	
Register the easement with the Municipal Clerk	0	1	250	
Total	9	3	250	
Labor Costs per Hour	54	100		
Total Cost	486	300	250	1,036

Replacement Cost New Less Depreciation - The replacement cost described above reflects the cost of new property; however, East Whiteland Township's wastewater collection system property is not new and has experienced normal depreciation and potentially functional and/or economic obsolescence. These various forms of depreciation are defined as follows:

> Normal depreciation/deterioration, akin to physical deterioration, is "loss in value caused by wear, tear, age and use."[4]
>
> Functional obsolescence is "the loss in value or usefulness of a property caused by inefficiencies or inadequacies of the property itself, when compared to a more efficient of less costly replacement property that new technology has developed."[5]
>
> Economic, or external, obsolescence is defined as "a loss in value caused by factors outside a property"[6] and is most often indicated by insufficient earning.

Based on our experience in regard to water and wastewater depreciation studies and our analysis of East Whiteland Township's wastewater collection system operating performance; we found that the Borough of Brentwood's wastewater utility's property experiences normal depreciation but not any significant functional obsolescence; economic obsolescence is best evaluated after the results of the income and market approaches to values are determined (see Cost Approach Revisited).

The service lives used in the depreciation and functional obsolescence calculations were developed based on the property and its use, AUS Consultants' experience in developing depreciation studies for the water and wastewater industries and depreciation studies filed with PAWC and Aqua America rate cases. With each of their

[4] The Dictionary of Real Estate Appraisal, 4th Edition
[5] Valuing Machinery and Equipment: The Fundamentals of Appraising Machinery and Technical Assets, Second Edition. Page 67.
[6] The Appraisal of Real Estate, 13th Edition, page 442.

recent rate case filings PAWC and Aqua America have filed depreciation studies in support of their depreciation service lives and associated depreciation expenses contained within their revenue requirements. The depreciation studies were prepared by Gannett Fleming Rate Consultants a recognized firm in the depreciation consulting area. AUS Consultants has reviewed the PAWC studies which are summarized in the following table:

9 10 11 12 13

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

Summary of Account Costing and Depreciation Parameters Used in the Depreciation Original Cost and the Depreciated Replacement Cost New Studies

(1)	(2)	(4)	(4a)	(4b)	(5)	(6)	(6a)	(6b)
Account Number	Description	Iowa Survivor / Retirement Curve		Normal Service Life	Economic Obsolescence	Tax Depreciation		
				years	% of CORLD	Table		Life
353.20	Land & Land Rights - Original Basin	ZNonDep		0.00	0.00%	Non-Depr		0.00
353.30	Land & Land Rights - Pumping	ZNonDep		0.00	0.00%	Non-Depr		0.00
354.20	Stuctures & Improvements - Treatment	R4.0		55.00	0.00%	MACRS		25.00
354.30	Stuctures & Improvements - Pumping	R4.0		45.00	0.00%	MACRS		25.00
360.21	Collection Sewers - Force - Mains	R3.0		75.00	0.00%	MACRS		25.00
361.21	Collection Sewers - Gravity - Mains	R2.5		80.00	0.00%	MACRS		25.00
361.23	Collection Sewers - Gravity - Manholes	R2.5		80.00	0.00%	MACRS		25.00
363.20	Service Laterals	R3.0		70.00	0.00%	MACRS		25.00
365.20	Flow Measuring Installations Meter Pits	S2.0		30.00	0.00%	MACRS		25.00
390.70	Office Furniture and Equipment	R3.0		12.00	0.00%	MACRS		12.00
391.70	Transportation Equipment	R3.0		10.00	0.00%	MACRS		10.00

Normal Depreciation – The extent of the normal depreciation in the property was evaluated using age-life depreciation techniques. In age-life depreciation, the property's depreciation or condition is estimated using the following formulas:

$$\text{Depreciation (\%)} = \frac{\text{Age (years)} \times 100\%}{\text{Service Life (years)}}$$

$$\text{Condition (\%)} = \frac{\text{Remaining Life (years)} \times (100\%)}{\text{Service Life (years)}}$$

where: the property's Service Life = Age + Remaining Life and
Remaining Life = *f*(Survival Characteristic, Service Life, and Age)

However, due to the age of some of the assets the extent of the depreciation was limited to 85% of the asset's original cost and its replacement cost new.

When the above depreciation lives are used to quantify the property's depreciation is applied to the replacement cost new (COR) of $85,964,664 the resultant COR less normal depreciation (CORLD) was found to be $58,078,339 detailed as follows:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(21)	(22)	(23)	(24)	(28)	(29)	(30)	(31)
Account	Description	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)
		years	COR $s		years	years	years	% of COR	CORLD $s
Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Calculation	Calculation
Eng Assmnt	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.		Col (16)	AUS Input	AUS Input		Col (21) + (28)	Col (28) / (29)	Col (22) * (30)
Account	Description	Age	RCN	Iowa	NL	Rem Life	Total Life	Condition	CORLD
353.20	Land & Land Rights - Original Basin	31.62	720,020	ZNonDep	-	-	-	-	720,020
353.30	Land & Land Rights - Pumping	20.27	13,468	ZNonDep	-	-	-	-	13,468
354.30	Stuctures & Improvements - Pumping	14.58	12,142,235	R4.0	45.00	31.23	45.82	45.00	8,379,553
360.21	Collection Sewers - Force - Mains	29.95	5,971,267	R3.0	75.00	47.21	77.16	75.00	3,669,861
361.21	Collection Sewers - Gravity - Mains	33.23	30,582,161	R2.5	80.00	50.80	84.03	80.00	18,623,208
361.23	Collection Sewers - Gravity - Manholes	32.21	10,108,723	R2.5	80.00	51.66	83.87	80.00	6,272,518
363.20	Service Laterals	22.75	12,259,833	R3.0	70.00	48.95	71.70	70.00	8,428,787
365.20	Flow Measuring Installations Meter Pits	44.50	389,338	S2.0	30.00	4.50	49.00	30.00	58,401
354.20	Stuctures & Improvements - Treatment	6.78	13,511,701	R4.0	55.00	48.11	54.89	55.00	11,842,733
390.70	Office Furniture and Equipment	12.50	25,084	R3.0	12.00	2.20	14.70	12.00	3,763
391.70	Transportation Equipment	11.45	240,834	R3.0	10.00	2.91	14.35	10.00	66,027
Grand Total		24.57	85,964,664		68.23	46.41	70.71	0.68	58,078,339

The preliminary cost approach to value of East Whiteland Township's tangible wastewater system property was found to be $58,078,339.

Intangible Assets

In addition to the above-described tangible assets are the intangible assets, in East Whiteland Township's case which consist of the contract associated with its wastewater treatment contracts with the following communities:

Municipality	2020 YTD Projected
Charlestown Township	
Treatment Charge	80,068
Subtotal Charlestown Twp	80,068
Malvern Borough	
Treatment Charge	150,300
Subtotal Malvern Borough	150,300
East Whiteland Service Revenues	
Total Revenues	3,761,787

These contract represent value assets which are included in the overall income and market approaches which are not specifically address in the cost approach of the tangible assets; therefore, in order to make the cost approach comparable to the income and market these intangible assets were separately appraised and included in the cost approach totals. AUS Consultants developed using an income approach estimate to the value of the above contracts.

Income Approach to Treatment Contracts – AUS Consultants also developed a income approach analysis of the treatment contracts. Using the 2020 budget estimate the revenues and expenses of the treatment contracts in order to develop the estimated operating income as a surrogate for the cash flows associated the treatment contracts. The estimated cash flows were next discounted to appraisal date values using the cost of capital of 5.65% i.e., the cost of capital of 7.57% with the embedded growth rate of 1.82% removed; the development which is described in the Cost of Capital section of the workpapers. The income approach to the treatment contract was developed as follows:

East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Income Approach to Trearment Agreements Valuation

Municipality	2020 YTD Actual	2021 Projected		Expenses	Operating Income	Value Capitalized @ 5.65%
						5.65%
Charlestown Township						
Treatment Charge	80,068					
Subtotal Charlestown Twp	80,068	80,068	1.39%	45,324	34,744	614,938
Malvern Borough						
Treatment Charge	150,300					
Subtotal Malvern Borough	150,300	150,300	2.61%	85,105	65,195	1,153,894
Total East Whiteland Revenues						
Total Revenues	5,428,667	5,759,816		3,260,709		1,768,832

Based on the income analysis of the treatment contracts value were determined to be $1,768,832 which was included in the final cost approach to value.

East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

	Column Reference in OCLD & RCNLD	Amount in $s
Depreciated Replacement Cost (RCNLD)		
Original Cost (OC)	(9)	43,447,309
Replacement Cost New (RCN)	(16)	85,964,664
Replacement Cost New less Depreciation (RCNLD)	(31)	58,078,339
Intangible Assets - Treatment Contracts		1,768,832
Fair Market Vaue (FMV)	(41)	59,847,171
Depreciated Original Cost (OCLD)		
Original Cost (OC)	(46)	43,447,309
Original Cost less Depreciation (OCLD)	(57)	33,403,972
Intangible Assets - Treatment Contracts		1,768,832
Depreciated Original Cost (OCLD)		35,172,804
Cost Approach Conclusion		59,847,171

Income Approach

The income approach to value establishes the value of the property based on its economic returns. There are two generally accepted procedures in performing an income analysis: the direct capitalization of anticipated income, and the discounted cash flow procedures.

In the direct capitalization approach, anticipated earnings are capitalized directly into value using a market-required capitalization rate. The East Whiteland Township's wastewater system's operation will be moving from a municipal operation, wherein economic returns are not the primary objective of the operation to a private (investor owned) rate regulated sewer utility operation in which economic returns are one of the objectives of the operation; therefore, the direct capitalization of earnings approach was not utilized in this appraisal.

In the discounted cash flow (DCF) approach, the property's economic returns are forecast for future periods. The cash flows (debt-free after-tax net cash flows) from operations are discounted to the appraisal date using a market derived discount rate resulting in the DCF approach's income indicator of value. Use of the DCF approach allows the appraiser to address the property's historical operating experience and its migration, in future periods, to an operation as a rate regulated income taxed (local, state, and federal) operation; thus, making the DCF approach preferable in this case.

In preparing this appraisal's DCF analysis (Income Approach tab), first the results from the East Whiteland Township's wastewater system's operations were evaluated based on an analysis of historical operating performances over the period 2016 through budgetary 2019 (Financials tab) resulting in operating statistics such as revenues and their growth, various operating expenses stated as function of their typical drivers (revenues, plant investment, income from operations, etc.). Next, the results of future periods operations were forecast for a period of 20 years based on the migration of the East Whiteland Township's historical operations over time to operations of the wastewater operation similar to a public investor-owned water/wastewater utility. Finally, the resultant cash flows from future period operations on the System were discounted to the appraisal date using a market derived discount rate for a public investor-owned water/wastewater utility. The following table details the market discount rate developed using the weighted average cost of capital (WACC) of the market debt and equity:

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Discount Rate)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	After-tax Market Capital Cost (2)*(3)*(4a)
Debt	29%	Market	2.79%	Market	28.89%	71.11%	0.58%
Equity	71%	Market	9.85%	Market	0.0%	100.0%	6.99%
Total Capital r	**100.0%**						**7.57%**
Growth (g)							**1.82%**
Rate without Growth: [(1+r)/(1+g)]-1							**5.65%**

The following table presents the results of the discounted cash flow analysis:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021
Discounted Cash Flow Analysis

Discount Rate: 7.57%
Capitalization Rate: 5.65%

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Period	Age	Revenues	O&M Expenses	Tax Depreciation	Cash Flow from Operations	Taxable Income before State & Federal Taxes	State and Federal Taxes @ 28.89%	Capital Expenditures	Change in Working Capital	Net Cash Flows	Period Present Worth Factor (PW)	PW of Cashflow	Accumulated PW of Cashflows
					(3)-(4)	(6)-(5)	(7) *28.89%			(3)-(4)-(8)-(9)-(10)		(11)*(12)	Sum (13)
1	0.5	5,759,816	3,305,486	2,193,634	2,454,330	260,696	75,315	806,090	(78,093)	1,651,018	0.964	1,591,581	1,591,581
2	1.5	5,759,816	3,371,594	2,218,239	2,388,222	169,983	49,108	812,135	-	1,526,979	0.896	1,368,173	2,959,754
3	2.5	5,759,816	3,439,026	2,243,274	2,320,790	77,516	22,394	818,227	-	1,480,169	0.833	1,232,981	4,192,735
4	3.5	7,775,752	3,507,806	2,268,741	4,267,946	1,999,205	577,570	824,363	(27,334)	2,893,347	0.775	2,242,344	6,435,079
5	4.5	7,775,752	3,577,962	2,294,647	4,197,790	1,903,143	549,818	830,547	-	2,817,425	0.720	2,028,546	8,463,625
6	5.5	9,719,690	3,649,522	2,320,996	6,070,168	3,749,172	1,083,136	836,776	(26,356)	4,176,612	0.669	2,794,153	11,257,778
7	6.5	9,719,690	3,722,512	2,315,050	5,997,178	3,682,128	1,063,767	721,779	-	4,211,632	0.622	2,619,635	13,877,413
8	7.5	9,719,690	3,796,962	2,338,381	5,922,728	3,584,347	1,035,518	727,193	-	4,160,017	0.579	2,408,650	16,286,063
9	8.5	10,691,659	3,872,902	2,362,106	6,818,757	4,456,651	1,287,526	732,647	(13,178)	4,811,762	0.538	2,588,728	18,874,791
10	9.5	10,691,659	3,950,359	2,386,228	6,741,300	4,355,072	1,258,180	738,141	-	4,744,979	0.500	2,372,490	21,247,281
11	10.5	10,691,659	4,029,366	2,410,754	6,662,293	4,251,539	1,228,270	743,679	-	4,690,344	0.465	2,181,010	23,428,291
12	11.5	11,333,159	4,109,952	2,435,686	7,223,207	4,787,521	1,383,115	749,257	(8,698)	5,099,533	0.432	2,202,998	25,631,289
13	12.5	11,333,159	4,192,151	2,461,029	7,141,008	4,679,979	1,352,046	754,875	-	5,034,087	0.402	2,023,703	27,654,992
14	13.5	11,333,159	4,275,994	2,486,788	7,057,165	4,570,377	1,320,382	760,535	-	4,976,248	0.373	1,856,141	29,511,133
15	14.5	12,013,149	4,361,513	2,512,970	7,651,636	5,138,666	1,484,561	766,240	(9,219)	5,410,054	0.347	1,877,289	31,388,422
16	15.5	12,013,149	4,448,744	2,539,579	7,564,405	5,024,826	1,451,672	771,988	-	5,340,745	0.323	1,725,061	33,113,483
17	16.5	12,013,149	4,537,720	2,566,617	7,475,429	4,908,812	1,418,156	777,777	-	5,279,496	0.300	1,583,849	34,697,332
18	17.5	12,733,938	4,628,474	2,594,092	8,105,464	5,511,372	1,592,235	783,611	(9,773)	5,739,391	0.279	1,601,290	36,298,622
19	18.5	12,733,938	4,721,044	2,622,008	8,012,894	5,390,886	1,557,427	789,487	-	5,665,980	0.259	1,467,489	37,766,111
20 and beyond	19.5	12,733,938	4,815,465	2,650,370	7,918,473	5,268,103	1,521,955	795,408	-	5,601,110	3.184	17,833,934	55,600,045
								15,540,755					
Age				19.5									
PW(Age) = 1/(1+Discount Rate)$^{(Age)}$				0.241				Net Plant		44,551,804			
PW to Perpetuity = 1/Capitalization Rate				13.210				ADIT		(6,443,119)			
$PW_{(20and Beyond)}$ = PW to Perpetuity * PW $Factor_{(19.5)}$				3.184				Rate Base		38,108,685	0.241	9,184,193	46,950,304
								Annual Plant Construction Inflation Rate		0.0422 Input			
								Plant Inflation over 19.5 years		87,105,453	0.241	20,992,414	58,758,525
								PP	54,930,000				
								OCLD	33,403,972				
								PP/OCLD	1.644				
								RCNLD	58,078,339				
								RCNLD/PP		1.057315474			
										40,292,902.78	0.241	9,710,590	47,476,701
								Average					52,196,394

Based on the above-described discounted cash flow analysis, the Income Approach to value of the System's property operating as a rate regulated wastewater utility under the regulation of the Pennsylvania Public Utility Commission (PA PUC) was determined to be $56,398,141. To ensure that the above-described forecast captured the entire economic returns of the property an additional 40-year period beyond the original 20-year forecast was made. This additional forecast indicated the reasonableness of the initial forecast results.

Market Approach

The market or comparable sales approach to value looks to market sales of comparable properties in order to arrive at value. In this appraisal, the market approach was addressed from a comparable sales approach of Pennsylvania water and wastewater systems and market value to book value ratios based on investor-owned water utilities' financial performance as reported in Value Line Investment Survey (January 8, 2021).

Market Sales – In the comparable sale market approach, the sales of Pennsylvania municipal water and wastewater systems to investor-owned water/wastewater utilities were used to insure comparability. As the purpose of this appraisal is to define the value of East Whiteland Township's wastewater system under Section 1329 of the PA CS the market comparable sales were limited to sales subsequent to the passage of Section 1329 in 2016. The following sales were considered:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Data

RowID	Approximate Date	Buyer	Seller	County	Type of Facility	Initial Purchase Price	Final Purchase Price[1]	Number of Total Customers	Relationship to the passage of Section 1329
1	9/1/2016	PA American Water	City of McKeesport	Allegheny	Wastewater Collection and Treatment	156,000,000	159,000,000	21,953	Post
2	8/1/2016	Aqua PA	New Garden Twp. SA	Chester	Wastewater Collection and Paid for and Owned Treatment	29,500,000	29,500,000	2,106	Post
3	11/16/2016	Aqua PA	Limerick Township	Montgomery	Wastewater Collection and Treatment System	75,100,000	64,373,378	5,434	Post
4	12/10/2017	Aqua PA	East Bradford Township	Chester	Wastewater Collection and paid for treatment Capacity	5,000,000	5,000,000	1,248	Post
5	4/20/2018	SUEZ	Mahoning	Carbon	Water Distribution System	4,734,800	4,734,800	1,186	Post
6	4/20/2018	SUEZ	Mahoning	Carbon	Wastewater Collection	4,765,200	4,765,200	1,451	Post
7	6/1/2018	Aqua PA	Cheltenham	Montgomery	Wastewater Collection	50,250,000	50,250,000	10,500	Post
8	11/14/2018	PA American Water	Steelton	Dauphin	Water Distribution and Treatment	22,500,000	21,750,000	2,325	Post
9	1/1/2017	PA American Water	Sadsbury	Chester	Wastewater Collection	9,250,000	8,600,000	998	Post
10	5/28/2018	PA American Water	Exeter	Berks	Wastewater Collection and Treatment	96,000,000	93,500,000	9,000	Post
11	10/29/2018	Aqua PA	East Norriton	Montgomery	Wastewater Collection	21,000,000	21,000,000	4,950	Post
12	9/30/2018	PA American	Kane	McKean	Wastewater Collection and Treatment	17,560,000	17,560,000	2,006	Post
13	12/10/2019	PA American	Royersford	Montgomery	Wastewater Collection and Treatment	13,000,000	13,000,000	1,596	Post
14	12/17/2019	PA American	Valley	Chester	Water Treatment and Distribution System	7,325,000	7,325,000	1,459	Post
15	12/17/2019	PA American	Valley	Chester	Wastewater Collection System	13,950,000	13,950,000	1,644	Post
16	12/31/2019	Aqua PA	Delaware County Regional Wa	Delaware	Wastewater Collection and Treatment	276,500,000	276,500,000	16,473	Post
17	4/28/2020	PA American Water	Upper Pottsgrove	Montgomery	Wastewater Collection	13,750,000	13,750,000	1,428	Post
18	9/17/2020	Aqua PA	Lower Makefield	Bucks	Wastewater Collection and Purchased Treatment Capacity	53,000,000	53,000,000	11,151	Post

In order to arrive at a measure of comparability these system sales were analyzed in relationship of the purchase price to the properties' depreciated original cost (OCLD),

depreciated replacement cost (CORLD), customers, and cashflow (EBITDA) for an average 5-year and 13-year periods (Market Approach tab).

Financial Market Ratios – In the market approach based on market financial ratios the market data of companies (nine) in the water/wastewater industry as reported in Value Line Investment Surveys (January 2021) were analyzed. In the analysis the companies' stock (market) and debt (book value) per share are compared as a ratio to the book investment value per share.

The following table summarizes both the comparable sales and financial market ratio analysis and the Market Approach conclusion of this appraisal:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Data

Central Tendancy and Reliability Analysis

Market Sales Analysis - PP/OCLD

	Simple	Weighted	
Mean	1.7594	1.8494	
Standard Deviation	0.5882	0.4204	
Median	1.49	1.4355	
Mode	1.4418	1.4418	
Conclusion		1.8494	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity OCLD		35,172,804	Cost Approach - OCLD
Market Value Indication		**65,048,584**	

Market Sales Analysis - PP/CORLD

	Simple	Weighted	
Mean	0.8087	0.9337	
Standard Deviation	0.1746	0.1695	
Median	0.8229	0.7558	
Mode	0.6918	0.6918	
Conclusion		0.9387	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity CORLD		59,847,171	Cost Approach - CORLD
Market Value Indication		**56,178,539**	

Market Sales Analysis - PP/Customer

	Simple	Weighted	
Water Tretment & Distribution			
Mean	6,123	10,962	
Standard Deviation		4,613	
Median	5,021	4,963	
Wastewater Collection & Treatment		16,785	
Mean	9,579		
Standard Deviation		-	AUS Input
Median	8,754		
Wastewater Collection			
Mean	6,507		
Standard Deviation			
Median	6,636		
Watewater Treatment Only			
Mean	3,072		
Standard Deviation			
Median	2,118		
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity Customers		3,918	AUS Input
Wastewater Collection & Treatment PP/Customer		8,754	AUS Input
Collection and Treatement Customers Market Value Indica		**34,298,172**	
Treatement Only Market Value Indication			
Treatment Only PP/customer		2,118	AUS Input
Treatment Only Customers		-	AUS Input
Market Value Indication Treatment Only		-	
Total Market Value Indication		**34,298,172**	

Financial Basis[1]

Financial Markets	Market Value per Share to Book Value per Share	
Market to Book (equity)	3.40	
Market to Book (equity and debt)	2.11	
Use (equity and debt)	2.11	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity OCLD	33,403,972	Cost Approach - OCLD
Market Value Indication	**70,482,381**	

Market Sales Analysis - PP/Cash Flows (EBITDA Period 1-5)

	Simple	Weighted	
Mean	17.48	15.32	
Standard Deviation	5.71	5.10	
Median	17.41	18.13	
Mode	Not Applicable	Not Applicable	
Forecast			
Conclusion		18.00	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity Cash Flows		2,396,686	Income Approach
Market Value Indication		**43,140,348**	

Market Sales Analysis - PP/Cash Flows (EBITDA Period 1-13)

	Simple	Weighted	
Mean	11.62	11.45	
Standard Deviation	2.67	2.14	
Median	11.65	12.07	
Mode	Not Applicable	Not Applicable	
Forecast			
Conclusion		12.00	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity Cash		3,264,195	Income Approach
Market Value Indication		**39,170,336**	

Summary of Market Analyses

Indicators	
OCLD	65,048,584
CORLD	56,178,539
Customers	34,298,172
Cash Flows	
EBITDA Periods 1-5	43,140,348
EBITDA Periods 1-13	39,170,336
Value Line	70,482,381
Mean	51,386,393
Median	49,659,444
Conclusion	**56,178,539**

The market approach conclusion of this appraisal was determined to be $56,178,539.

Cost Approach Revisited – Before concluding this appraisal's fair market value, the preliminary cost approach conclusion of $59,847,171, including intangibles, needs to be reviewed in light of the above-described income and market analyses in order to evaluate if external obsolescence exists in the preliminary replacement cost new less depreciation conclusion. The appraisal literature in regard to developing a cost approach states:

> "The last step in the implementation of the cost approach is to estimate *economic obsolescence*. Economic obsolescence (sometimes called "external obsolescence") has been previously defined as the loss in value or usefulness of a property caused by factors external to the asset. These factors include increased cost of raw materials, labor, utilities (without an offsetting increase in product price); reduced demand for the product; increased competition; environmental or other regulations; or similar factors.
>
> The difficulty in measuring the full effect of economic obsolescence is one of the weaknesses of the cost approach. Because economic obsolescence is usually a function of outside influences that affect an entire business (i.e., all tangible and intangible assets) rather than individual assets or isolated groups of assets, it is sometimes measured using the income approach or by using the income approach to help identify the existence of economic influences on value. However, the cost approach can be used to measure some forms of economic obsolescence."[7]

The above-described income approach value conclusion of $56,398,141 and the market approach conclusion of $56,178,539 for the East Whiteland Township's future wastewater system compared to the preliminary cost approach conclusion of $59,847,171 indicates no significant external obsolescence exists in the cost approach conclusion of $59,847,171 detailed as follows:

[7] Valuing Machinery and Equipment: The Fundamentals of Appraising Machinery and Technical Assets, Second Edition, pp. 96-97.

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36)	(37)	(39)	(40)	(41)
Account	Description	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
		CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Prelim CORLD	EO%	FMV
353.20	Land & Land Rights - Original Basin	720,020	0.00%	720,020
353.30	Land & Land Rights - Pumping	13,468	0.00%	13,468
354.30	Stuctures & Improvements - Pumping	8,379,553	0.00%	8,379,553
360.21	Collection Sewers - Force - Mains	3,669,861	0.00%	3,669,861
361.21	Collection Sewers - Gravity - Mains	18,623,208	0.00%	18,623,208
361.23	Collection Sewers - Gravity - Manholes	6,272,518	0.00%	6,272,518
363.20	Service Laterals	8,428,787	0.00%	8,428,787
365.20	Flow Measuring Installations Meter Pits	58,401	0.00%	58,401
354.20	Stuctures & Improvements - Treatment	11,842,733	0.00%	11,842,733
390.70	Office Furniture and Equipment	3,763	0.00%	3,763
391.70	Transportation Equipment	66,027	0.00%	66,027
	Grand Total	58,078,339	0.00%	58,078,339

Value Conclusion

The Fair Market Value of the East Whiteland Township's wastewater collection system's property, plant and equipment and its operation was determined to be $58,100,696 as follows:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value Appraisal

Appraisal Approach		Investor-owned Utility	Weight	Wtd Valuation Indications
Cost Approach				
Inventory of Assets				
Original Cost ($OC)		43,447,309		
Depreciated Original Cost ($OCLD)		33,403,972		
Intangible Assets (Treatement contracts)		1,768,832		
Cost Approach of all assets Conclusion		35,172,804		
Replacement Cost				
Replacement Cost New (COR)		85,964,664		
Depreciated Replacement Cost New (CORLD)	**$**	**58,078,339**		
External or Economic Obsolescence	**$**	-	AUS Input	
Market Value of Tangible Assets	**$**	**58,078,339**		
Intangible Assets (Treatement contracts)	$	1,768,832		
Cost Approach of all assets Conclusion		**59,847,171**		
Cost Approach Conclusion		**59,847,171**	**50%**	**29,923,586**
Income Approach				
Required Rate Increases: 30% period 4,25% period 6, 10% period 9, 6% period 12, and 6% every 3rd year beginning in period 15 (Input 6)		55,600,045		
Income Approach Conclusion		**55,600,045**	**40%**	**22,240,018**
Market Approach				
Market Comparables (to)				
OCLD		65,048,584		
CORLD		56,178,539		
Customers		34,298,172		
Cash Flows (EBITDA)		43,140,348		
Market Financials (to)				
OCLD		70,482,381		
Market Approach Conclusion		**56,178,539**	**10%**	**5,617,854**
Appraisal Conclusion	**$**	**57,781,458**	**100%**	**57,781,458**
Conclusion (cost approach)	**$**	**59,847,171**		

As the purpose of this appraisal was to fulfill the requirements of Section 1329 of the PA CS in the establishment of value for rate making of the East Whiteland Township's property, plant and equipment this appraisal's conclusion of $58,100,696 is consistent with the purpose of the appraisal. As the cost approach work papers detail our value conclusion by National Association of Regulatory Utility Commissioners' (NARUC) Uniform System of Accounts (USOA) for the wastewater industry account classifications and the installation year of the property this detail can be used to allocate the appraisal conclusion to establish the booked value for future accounting and rate making.

PURPOSE AND SCOPE OF WORK

The purpose of this appraisal of the East Whiteland Township's wastewater collection system and purchased treatment capacity is the determination of the fair market value of the property plant and equipment of wastewater utility. The report was prepared based on the 2020-2021 Uniform Standards of Professional Practices (USPAP) and is intended to meet the criteria established with Title 66 (Public Utilities) of the Pennsylvania Consolidated Statues (PA CS) Paragraph 1329: Valuation of acquired water and wastewater systems, collectively referred to as Act 12 of the 2016 Pennsylvania legislative session (Act 12). The intended users of this appraisal are our client East Whiteland Township, Pennsylvania and the Pennsylvania Public Utility Commission.

The value established in this appraisal was based on the definition of Market Value as:

> *"The most probable price, as of a specified date, in cash, or in terms equivalent to cash, or in other precisely revealed terms, for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress."* *The Appraisal of Real Estate, 14th Edition, page 58.*

In conducting this appraisal, we utilized several sources of data:

- Annual (year-ending December 31) East Whiteland Township (Pennsylvania) wastewater collection and treatment operational financial statements cover the period 2016 through 2019 and budgets for 2019 and 2021.

- The Pennoni Associates, Inc.'s Engineer's Assessment and inventory of the Borough of Brentwood's wastewater system's property dated June 17, 2021.

- The Handy-Whitman (water industry) Index of Public Utilities Construction Costs for northeastern United States, AUS Consultant General Plant Cost Indexes for the period 1912 through January 1, 2021, and various cost indexes published by the United States Bureau of Labor Statistics (US BLS).

In preparing this fair market value appraisal of the System's property, plant and equipment, and its operations: the cost, income, and market approaches to value were considered. Primary reliance was placed on the cost approach for the property, plant and equipment, with the income approach and market approaches being utilized to confirm the overall value of the sewer system's operation. A detailed explanation of each approach to value is included below in the section "Appraisal Procedures and Results".

WATER/WASTEWATER INDUSTRY NATIONALLY AND IN PENNSYLVANIA AND EAST WHITELAND TOWNSHIP, PENNSYLVANIA WASTEWATER COLLECTION SYSTEM AND PURCHASED TREATMENT CAPACITY

Water/wastewater Industry

The water and wastewater industry in the United States consist of both municipal authorities (literally thousands) and private investor-owned companies. Of the investor owned there are nine which are large enough to be tracked by Value Line Investment Surveys, of which, two are major players in the northeast portion of the United States, American Water Works Company, Inc. and Aqua America, Inc. (on February 3, 2020, Aqua's name changed to Essential Utilities, Inc.) American and Aqua have been particularly active in the acquisition of municipal water and wastewater systems.

Pennsylvania Water / Wastewater Industry

The water and wastewater industry in Pennsylvania also consist of both municipal and investor-owned systems. Over last several years the need for infrastructure improvements has led the Pennsylvania legislature to pass legislation facilitating the acquisition of municipal water and/or wastewater systems to a private investor-owned rate regulated companies such as American Water and Aqua America. This legislation was Act 12 of the Pennsylvania legislator's 2016 legislative session (Act 12). The Act 12 legislation added a section (1329) modifying Title 66 (Public Utilities) of the Pennsylvania Consolidated Statues (PA CS) adding Section 1329: Valuation of acquired water and wastewater systems, collectively referred to as Act 12. This appraisal was developed to meet the valuation criteria established by Section 1329 and the PA PUC's subsequent Implementation Orders in the valuation of acquired water and wastewater systems.

East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity[8]

East Whiteland Township is responsible for the safe collection and transmission of an average over 1.062 million gallons per day (MGD) of wastewater generated in southeastern Pennsylvania. East Whiteland Township's facilities serve residential, commercial, institutional, and industrial customers all within Chester County. The Township owns and operates a system consisting of 12 pump stations and associated force mains, and approximately 60 miles of gravity collection system mains and interceptor sewers for the conveyance of wastewater to the Valley Forge Sewer Authority Wastewater Treatment Plant via the Valley Creek Trunk Sewer. The Township does not have any property held for future use.

In addition to customers within the Township, East Whiteland Township also collects/conveys sewage to/from municipalities that border the Township including Malvern Borough, Tredyffrin Township Charlestown Township and Willistown Township. Agreements with these municipalities, (or entities operating their respective system) outline the responsibilities regarding this relationship.

[8] Extracted from East Whiteland Township's Engineers Assessment

APPRAISAL PROCEDURES AND RESULTS

The purpose of this appraisal of the East Whiteland Township's wastewater collection system and purchased treatment capacity is the determination of the fair market value of the wastewater's property plant and equipment as of January 8, 2021. The report was prepared based on the 2020-2021 Uniform Standards of Professional Practices (USPAP) and is intended to meet the criteria established with Title 66 (Public Utilities) of the Pennsylvania Consolidated Statues (PS CS) Section 1329: Valuation of acquired water and wastewater systems, collectively referred to as Act 12 of the Pennsylvania legislator's 2016 legislative session (Act 12). The intended users of this appraisal are East Whiteland Township, Pennsylvania and the Pennsylvania Public Utility Commission (PA PUC).

The value established in this appraisal was based on the definition of Market Value as:

> *"The most probable price, as of a specified date, in cash, or in terms equivalent to cash, or in other precisely revealed terms, for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress."* *The Appraisal of Real Estate, 14th Edition, page 58.*

In conducting this appraisal, we utilized several sources of data:

- Annual (year-ending December 31) East Whiteland Township's wastewater system's operational financial statements cover the period 2016 through budgetary 2021.

- The Pennoni Associates, Inc.' Engineer's Assessment and inventory of the East Whiteland Township's wastewater system's property date June 17, 2021.

- The Handy-Whitman (water industry) Index of Public Utilities Construction Costs for northeastern United States, AUS Consultant General Plant Cost Indexes for the period 1912 through January 1, 2021, and various cost indexes published by the United States Bureau of Labor Statistics (US BLS).

In preparing this fair market value appraisal of the System's wastewater system's property, plant and equipment, and its operations; the cost, income, and market approaches to value were considered. Primary reliance was placed on the cost approach for the property, plant and equipment, with the income approach and market approaches being utilized to confirm the overall value of the sewer system's operation. Detailed explanation of each approach to value is included below.

Cost Approach (Cost Approach tab) - The philosophy in the cost approach to value is that the maximum value of a property's tangible assets is established by the cost to acquire or build a similar property. In this appraisal, the cost approach to value was analyzed using reproduction/replacement cost approach.

Reproduction cost and replacement cost are defined as:

> Reproduction cost – "The estimated cost to construct, at current prices as of the effective date of the appraisal, an exact duplicate or replica of the [property] being appraised, using the same materials, construction standards, design, layout, and quality of workmanship and embodying all the deficiencies, super-adequacies, and obsolescence of the subject [property]."[9]
>
> Replacement cost – "The estimated cost to construct, at current prices as of the effective appraisal date, a substitute for the [property] being appraised using modern materials and current standards, design and layout."[10]
>
> In the wastewater industry the property's reproduction costs and replacement costs are quite similar; therefore, the most of the property's cost new was determined based on its reproduction/replacement cost new. However, for the easements the replacement cost were developed based on current costs.

The trended original cost method was utilized in preparing the replacement cost new. "Trending is a method of estimating a property's replacement cost new in which an *index*

[9] The Appraisal of Real Estate, 13th Edition. Page 385
[10] ibid

or *trend factor* is applied to the property's *historical cost* to convert the known cost into an indication of current cost. Simply put, trending reflects the movement of price over time."[11] In the trended original cost method, the System's investment in wastewater plant and equipment is restated to costs reflective of the appraisal date, by the application of cost trends to the property's original investment. AUS Consultants utilized the Engineer's Assessment performed by Pennoni Associates, Inc. (Engineers Assessment tab) as the starting point of the Cost Approach. Utilizing the Engineer's Assessment of the System's original cost in property, plant and equipment AUS Consultants developed the plant's depreciated original cost (OCLD) and depreciated replacement cost (RCNLD) on January 8, 2021 (Cost Approach tab).

The cost trends are applied to each of the various investment categories (NARUC plant accounts) by original year of placement for that investment. The cost indexes used in these studies were the Handy-Whitman Index of Public Utility Construction Costs for the water industry of the northeastern region of the United States which includes the Commonwealth of Pennsylvania (HW), the AUS Consultants of General Plant Indexes AUS), and various United States Bureau of Labor Statistics (US BLS) indexes. The following table details the costing parameters using in the trending costing procedures:

1	2	3	4	5	6	7
East Whiteland Township, Pennsylvania						
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity						
Wastewater Collection System and Purchased Treatment Capacity						
Investor-Owned Utility						
January 8, 2021						

Summary of Account Costing and Depreciation Parameters Used in the Depreciation Original Cost and the Depreciated Replacement Cost New Studies

(1)	(2)	(3)				
		(3a)	(3b)	(3c)	(3d)	(3e)
Account Number	Description	Costing Parameters				Reproduction to Replacement Cost Factor
		Index Series	Table	Line Reference	Lookup	AUS Input
353.20	Land & Land Rights - Original Basin	USBLS	PPI	1.00	USBLS1	1.00
353.30	Land & Land Rights - Pumping	USBLS	PPI	1.00	USBLS1	1.00
354.20	Stuctures & Improvements - Treatment	HW	W-1	15.00	HWW-115	1.00
354.30	Stuctures & Improvements - Pumping	HW	W-1	8.00	HWW-18	1.00
360.21	Collection Sewers - Force - Mains	HW	W-1	44.00	HWW-144	1.00
361.21	Collection Sewers - Gravity - Mains	HW	W-1	44.00	HWW-144	1.00
361.23	Collection Sewers - Gravity - Manholes	HW	W-1	45.00	HWW-145	1.00
363.20	Service Laterals	HW	W-1	39.00	HWW-139	1.00
365.20	Flow Measuring Installations Meter Pits	HW	W-1	40.00	HWW-140	1.00
390.70	Office Furniture and Equipment	AUS	T-1	15.00	AUST-115	1.00
391.70	Transportation Equipment	AUS	T-1	4.00	AUST-14	1.00

[11] Valuing Machinery and Equipment: The Fundamentals of Appraising Machinery and Technical Assets, Second Edition. Page 59

The following table presents the development of the cost approach for the gravity mains (Accounts 361.21) portion of East Whiteland Township's wastewater service area this example will be used to describe the entire cost approach process:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Average Year Installed	Average Year Installed	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input	Input	Input	Input	Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input	Eng Assmnt	Eng Assmnt	AUS Input	Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date	Year Installed	Units	Quantity	COR Cost	Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
		COLLECTION SEWERS - GRAVITY - MAINS													
361.21	361.21	18" ACP	1975	1975	0	1841.805095	0	58,356.08	HWW-144	122	674.5	5.529	322,651	1	322,651
361.21	361.21	12" ACP	1975	1975	0	2830.245172	0	68,677.29	HWW-144	122	674.5	5.529	379,717	1	379,717
361.21	361.21	12" ACP	1978	1978	0	2027.433529	0	61,740.49	HWW-144	145.4	674.5	4.639	286,414	1	286,414
361.21	353.20	8" CSP	1983	1983	0	2489.772983	0	77,680.40	HWW-144	199.6	674.5	3.379	262,482	1	262,482
361.21	353.20	20" PVC	2014	2014	0	98.42282607	0	12,406.81	HWW-144	556	674.5	1.213	15,049	1	15,049
361.21	353.20	21" PVC	2014	2014	0	74.08715289	0	9,339.15	HWW-144	556	674.5	1.213	11,328	1	11,328
Subtotal 261.21		COLLECTION SEWERS - GRAVITY - MAINS						10,767,737.96					30,582,161	1.000	30,582,161

Using the trended original cost method, East Whiteland Township's investment in this example of $10,767,737.96 was determined to have a replacement cost new of $30,582,161. For brevity not all of the investment data was included in this example

When the trended cost method is applied to each of East Whiteland Township's investment in plant, property and equipment of $43,447,309.24 was determined to have a reproduction cost new of $85,233,123 replacement cost new of $85,964,664 detailed as follows:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(9)	(10)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Original Cost	Costing Parameter	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
			OC $s			RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt NARUC Code	AUS Input NARUC Code	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc. Asset Description	Eng Assmnt Original Cost	AUS Input Cost Index Table	Translator	RCN	AUS Input COR / RCN Factor	Col (14) * (15) COR
353.20	353.20	Land & Land Rights - Original Basin	668.00	USBLS1	2.87	1,920	375.01	720,020
353.30	353.30	Land & Land Rights - Pumping	13.00	USBLS1	2.08	27	498.82	13,468
354.30	354.30	Stuctures & Improvements - Pumping	8,005,275.38	HWW-18	1.52	12,142,235	1.00	12,142,235
360.21	360.21	Collection Sewers - Force - Mains	2,304,354.55	HWW-144	2.59	5,971,267	1.00	5,971,267
361.21	361.21	Collection Sewers - Gravity - Mains	10,767,737.96	HWW-144	2.84	30,582,161	1.00	30,582,161
361.23	361.23	Collection Sewers - Gravity - Manholes	4,350,867.01	HWW-145	2.32	10,108,723	1.00	10,108,723
363.20	363.20	Service Laterals	6,619,976.03	HWW-139	1.85	12,259,833	1.00	12,259,833
365.20	365.20	Flow Measuring Installations Meter Pits	78,670.00	HWW-140	4.95	389,338	1.00	389,338
354.20	354.20	Stuctures & Improvements - Treatment	11,085,241.50	HWW-115	1.22	13,511,701	1.00	13,511,701
390.70	390.70	Office Furniture and Equipment	21,550.00	AUST-115	1.16	25,084	1.00	25,084
391.70	391.70	Transportation Equipment	212,955.81	AUST-14	1.13	240,834	1.00	240,834
		Grand Total	43,447,309.24		1.96	85,233,123	1.01	85,964,664

Easement - For easement, the appraisal date cost to obtain and register an easement was developed as follows:

Current cost of Easements

Activity	Engineer	Legal	Fees	Total
Determine the facilities for which a Easment is need	1	0	0	
Locate the Land owner for the property needing a easement	1	1	0	
Develop a diagram o the Property, the facilities, and the easement	2	0	0	
Develop the easement document	1	1	0	
Visit the property owner to obtain permission for the easement and sign the easment documentation	4	0	0	
Register the easement with the Municipal Clerk	0	1	250	
Total	9	3	250	
Labor Costs per Hour	54	100		
Total Cost	486	300	250	1,036

Replacement Cost New less Depreciation - The replacement cost described above reflects the cost of new property; however, the Borough of Brentwood's wastewater system property is not new and has experienced normal depreciation and potentially functional and or economic obsolescence. These various forms of depreciation are defined as follows:

> Normal depreciation/deterioration, akin to physical deterioration, is "loss in value caused by wear, tear, age and use."[12]
>
> Functional obsolescence is "the loss in value or usefulness of a property caused by inefficiencies or inadequacies of the property itself, when compared to a more efficient of less costly replacement property that new technology has developed."[13]
>
> Economic, or external, obsolescence is defined as "A loss in value caused by factors outside a property"[14] and is most often indicated by insufficient earning.

Wastewater Depreciation Service Life Experience in Pennsylvania

The service lives used in the depreciation and functional obsolescence calculations were developed based on the property and its use, AUS Consultants' experience in developing depreciation studies for the water and wastewater industries and depreciation studies filed with PAWC and Aqua America rate cases. With each of their recent rate case filings PAWC and Aqua America have filed depreciation studies in support of their depreciation service lives and associated depreciation expenses contained within their revenue requirements. The depreciation studies were prepared by Gannett Fleming Rate Consultants a recognized firm in the depreciation consulting area. AUS Consultants has reviewed the PAWC studies which are summarized in the following table:

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[12] The Dictionary of Real Estate Appraisal, 4th Edition
[13] Valuing Machinery and Equipment: The Fundamentals of Appraising Machinery and Technical Assets, Second Edition. Page 67.
[14] The Appraisal of Real Estate, 13th Edition, page 442.

Summary of PAWC & Aqua Depreciation Studies Prepared for Rate Case

Account	Account Description	Iowa Curves			Service Life		
		PAWC 12/31/2016	PAWC 12/31/2019	Aqua 3/31/2018	PAWC 12/31/2016	PAWC 12/31/2019	Aqua 3/31/2018
					years	years	
354.20	STRUCTURES AND IMPROVEMENTS - COLLECTION	R3	R3	S0.5	45	45	55
354.30	STRUCTURES AND IMPROVEMENTS - SPP	R2.5	S0	S1.0	50	55	60
354.40	STRUCTURES AND IMPROVEMENTS - TDP	R2	S0	R2.0	65	55	50
354.70	STRUCTURES AND IMPROVEMENTS - GENERAL	S1	S1	R3.0	35	35	50
355.00	POWER GENERATION EQUIPMENT	R2.5	S0.5		35	35	
360.10	COLLECTION SEWERS - FORCE MAINS	S2	R3	R2.5	70	75	75
361.10	COLLECTION SEWERS - GRAVITY MAINS	R2.5	R2.5	R2.5	70	80	75
361.20	MANHOLES	S1.5	S2.5		50	50	
363.00	SERVICES	R3	R3	R4.0	38	47	70
364.00	FLOW MEASURING DEVICES	L3	L2.5		20	15	
365.00	FLOW MEASURING INSTALLATIONS	S1.5	S2		30	25	
370.00	RECEIVING WELLS	R3	R3		50	50	
371.00	PUMPING EQUIPMENT	SO	S0.5	L0.5	40	30	25
380.00	TREATMENT EQUIPMENT	5-R2	S1.5	S0.0	45	35	40
381.00	PLANT SEWERS	R3	R3	R1.5	50	50	40
382.00	OUTFALL SEWER LINES	R3	R3	R2.5	50	50	40
389.10	OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES	52.5	S2.5		20	20	
389.60	OTHER PLANT AND MISCELLANEOUS EQUIPMENT - CPS	SQ	SQ	L3.0	20	5	20
390.00	OFFICE FURNITURE AND EQUIPMENT	L4	SQ	SQ	15	20	20
391.00	TRANSPORTATION EQUIPMENT	SQ	L4		25	14	
392.00	STORES EQUIPMENT	SQ	SQ		20	25	
393.00	TOOLS, SHOP AND GARAGE EQUIPMENT	SQ	SQ	SQ	15	20	20
394.00	LABORATORY EQUIPMENT	L2.5	SQ	SQ	16	15	25
395.00	POWER OPERATED EQUIPMENT	SQ	R2		15	22	
396.00	COMMUNICATION EQUIPMENT	SQ	SQ		15	15	
397.00	MISCELLANEOUS EQUIPMENT		SQ			15	
398.00	OTHER TANGIBLE PLANT		SQ			25	

It is of particular importance in the above table the service life extension of the mains plant categories between the 2016 and the 2020 studies. The mains service lives increased as follows:

Account	Description	Service Life	
		2016	2020
360.10	COLLECTION SEWERS - FORCE MAINS	70	75
361.10	COLLECTION SEWERS - GRAVITY MAINS	70	80

AUS Consultants believe this increase in service lives is attributable to the widespread use of relining older mains instead of replacing mains which are in need of repair. The practice of relining mains with a cured in place plastic liner not only repairs specific main but has the effect of extending the life of the original mains by the length of time which the relining can be expected to last. Most relining vendors warranty their product and procedure for 50 years. Thus, in essence the original main's service life will be extended by 50 plus years at the date the relining occurred. For those mains associated with

relining their installation date was established at the date of their relining and their depreciation parameters were established the same as the depreciation parameters of the relining, i.e., R2.5 – 60 years.

The following table details the lives used in the depreciation portion of the replacement cost new less depreciation analysis:

9 10 11 12 13

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

Summary of Account Costing and Depreciation Parameters Used in the Depreciation Original Cost and the Depreciated Replacement Cost New Studies

(1)	(2)	(4)	(4a)	(4b)	(5)	(6)	(6a)	(6b)
Account Number	Description		Iowa Survivor / Retirement Curve	Normal Service Life	Economic Obsolescence		Tax Depreciation	
				years	% of CORLD		Table	Life
353.20	Land & Land Rights - Original Basin		ZNonDep	0.00	0.00%		Non-Depr	0.00
353.30	Land & Land Rights - Pumping		ZNonDep	0.00	0.00%		Non-Depr	0.00
354.20	Stuctures & Improvements - Treatment		R4.0	55.00	0.00%		MACRS	25.00
354.30	Stuctures & Improvements - Pumping		R4.0	45.00	0.00%		MACRS	25.00
360.21	Collection Sewers - Force - Mains		R3.0	75.00	0.00%		MACRS	25.00
361.21	Collection Sewers - Gravity - Mains		R2.5	80.00	0.00%		MACRS	25.00
361.23	Collection Sewers - Gravity - Manholes		R2.5	80.00	0.00%		MACRS	25.00
363.20	Service Laterals		R3.0	70.00	0.00%		MACRS	25.00
365.20	Flow Measuring Installations Meter Pits		S2.0	30.00	0.00%		MACRS	25.00
390.70	Office Furniture and Equipment		R3.0	12.00	0.00%		MACRS	12.00
391.70	Transportation Equipment		R3.0	10.00	0.00%		MACRS	10.00

As the above table demonstrates, the depreciation lives selected for the AUS Consultants appraisal are consistent with the depreciation studies' finding for wastewater plant.

Normal Depreciation – The extent of the depreciation in the property was evaluated using age-life depreciation techniques. In age-life depreciation, the property's depreciation or condition is estimated using the following formulas:

$$\text{Depreciation (\%)} = \frac{\text{Age (years) x100\%}}{\text{Service Life (years)}}$$

$$\text{Condition (\%)} = \frac{\text{Remaining Life (years) x (100\%)}}{}$$

Service Life (years)

where: the property's Service Life = Age + Remaining Life
and Remaining Life = f(Survival Characteristic, Service Life, Age)

However due to the age of some of the property the extent of the depreciation was limited to 85% of the assets original cost and its replacement cost new.

When the above depreciation lives are used to quantify the property's depreciation is applied to the replacement cost new of the gravity mains example East Whiteland Township's wastewater service area of $30,582,161, the replacement cost new less depreciation was determined to be $18,623,208 detailed as follows:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	2021-((20)+0.5)	Col (18)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)	Lookup Iowa Curves Life Tables @ col (26)	Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (34)
Account	Description	Year1	Age	RCN	Iowa	NLife	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR *Nlife
COLLECTION SEWERS - GRAVITY - MAINS																	
361.21	18" ACP	1975	45.50	322,651	R2.5	80	57	R2.5057	0.50654	40.52	86.02	47.105324%	151,986	14,680,621	13,073,819	27,754,439	25,812,080
361.21	12" ACP	1975	45.50	379,717	R2.5	80	57	R2.5057	0.50654	40.52	86.02	47.105324%	178,867	17,277,124	15,386,133	32,663,256	30,377,360
361.21	12" ACP	1978	42.50	286,414	R2.5	80	53	R2.5053	0.53711	42.97	85.47	50.274950%	143,995	12,172,595	12,307,210	24,479,805	22,913,120
353.2	8" CSP	1983	37.50	262,482	R2.5	80	47	R2.5047	0.58438	46.75	84.25	55.489614%	145,650	9,843,075	12,271,034	22,114,109	20,998,560
353.2	20" PVC	2014	6.50	15,049	R2.5	80	8	R2.5008	0.92492	73.99	80.49	91.924463%	13,834	97,819	1,113,476	1,211,294	1,203,920
353.2	21" PVC	2014	6.50	11,328	R2.5	80	8	R2.5008	0.92492	73.99	80.49	91.924463%	10,413	73,632	838,159	911,791	906,240
COLLECTION SEWERS - GRAVITY - MAINS				30,582,161									18,623,208	1,016,285,003	1,553,520,505	2,569,805,485	2,446,572,880

When the above depreciation lives are used to quantify the property's depreciation is applied to each of the East Whiteland Township's investment in plant, property and equipment the replacement cost new (RCN) of $85,964,664 the resultant RCN less depreciation (RCNLD) was found to be $58,078,339 detailed as follows:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(21)	(22)	(23)	(24)	(28)	(29)	(30)	(31)
Account	Description	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)
		years	COR $s		years	years	years	% of COR	CORLD $s
Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Calculation	Calculation
Eng Assmnt	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.		Col (16)	AUS Input	AUS Input		Col (21) + (28)	Col (28) / (29)	Col (22) * (30)
Account	Description	Age	RCN	Iowa	NL	Rem Life	Total Life	Condition	CORLD
353.20	Land & Land Rights - Original Basin	31.62	720,020	ZNonDep	-	-	-	-	720,020
353.30	Land & Land Rights - Pumping	20.27	13,468	ZNonDep	-	-	-	-	13,468
354.30	Stuctures & Improvements - Pumping	14.58	12,142,235	R4.0	45.00	31.23	45.82	45.00	8,379,553
360.21	Collection Sewers - Force - Mains	29.95	5,971,267	R3.0	75.00	47.21	77.16	75.00	3,669,861
361.21	Collection Sewers - Gravity - Mains	33.23	30,582,161	R2.5	80.00	50.80	84.03	80.00	18,623,208
361.23	Collection Sewers - Gravity - Manholes	32.21	10,108,723	R2.5	80.00	51.66	83.87	80.00	6,272,518
363.20	Service Laterals	22.75	12,259,833	R3.0	70.00	48.95	71.70	70.00	8,428,787
365.20	Flow Measuring Installations Meter Pits	44.50	389,338	S2.0	30.00	4.50	49.00	30.00	58,401
354.20	Stuctures & Improvements - Treatment	6.78	13,511,701	R4.0	55.00	48.11	54.89	55.00	11,842,733
390.70	Office Furniture and Equipment	12.50	25,084	R3.0	12.00	2.20	14.70	12.00	3,763
391.70	Transportation Equipment	11.45	240,834	R3.0	10.00	2.91	14.35	10.00	66,027
Grand Total		24.57	85,964,664		68.23	46.41	70.71	0.68	58,078,339

The preliminary cost approach to value of the tangible assets of East Whiteland Township's wastewater utility property was found to be $58,078,339.

Intangible Assets

In addition to the above-described tangible assets are the intangible assets, in East Whiteland Township's case which consist of the contract associated with its wastewater treatment contracts with the following communities:

Municipality	2020 YTD Projected
Charlestown Township	
Treatment Charge	80,068
Subtotal Charlestown Twp	80,068
Malvern Borough	
Treatment Charge	150,300
Subtotal Malvern Borough	150,300
East Whiteland Service Revenues	
Total Revenues	3,761,787

These contract represent value assets which are included in the overall income and market approaches which are not specifically address in the cost approach of the tangible assets; therefore, in order to make the cost approach comparable to the income and market these intangible assets were separately appraised and included in the cost approach totals. AUS Consultants developed an income approach estimate to the value of the above contracts.

Income Approach to Treatment Contracts – AUS Consultants also developed a income approach analysis of the treatment contracts. Using the 2020 budget estimate the revenues and expenses of the treatment contracts in order to develop the estimated operating income as a surrogate for the cash flows associated the treatment contracts. The estimated cash flows were next discounted to appraisal date values using the cost of capital of 5.65% i.e., the cost of capital of 7.57% with the embedded growth rate of 1.82% removed; the development which is described in the Cost of Capital section of the workpapers. The income approach to the treatment contract was developed as follows:

East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Income Approach to Trearment Agreements Valuation

Municipality	2020 YTD Actual	2021 Projected		Expenses	Operating Income	Value Capitalized @ 5.65%
						5.65%
Charlestown Township						
Treatment Charge	80,068					
Subtotal Charlestown Twp	80,068	80,068	1.39%	45,324	34,744	614,938
Malvern Borough						
Treatment Charge	150,300					
Subtotal Malvern Borough	150,300	150,300	2.61%	85,105	65,195	1,153,894
Total East Whiteland Revenues						
Total Revenues	5,428,667	5,759,816		3,260,709		1,768,832

Based on income analysis of the treatment contracts their value were determined to be $1,768,832 which was included in the final cost approach to value.

East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

	Column Reference in OCLD & RCNLD	Amount in $s
Depreciated Replacement Cost (RCNLD)		
Original Cost (OC)	(9)	43,447,309
Replacement Cost New (RCN)	(16)	85,964,664
Replacement Cost New less Depreciation (RCNLD)	(31)	58,078,339
Intangible Assets - Treatment Contracts		1,768,832
Fair Market Vaue (FMV)	(41)	59,847,171
Depreciated Original Cost (OCLD)		
Original Cost (OC)	(46)	43,447,309
Original Cost less Depreciation (OCLD)	(57)	33,403,972
Intangible Assets - Treatment Contracts		1,768,832
Depreciated Original Cost (OCLD)		35,172,804
Cost Approach Conclusion		59,847,171

Income Approach (Income Approach tabs)

The income approach to value establishes the value of the property based on its economic returns. There are two generally accepted procedures in performing an income analysis: the direct capitalization of anticipated income, and the discounted cash flow procedures.

In the direct capitalization approach, anticipated earnings are capitalized directly into value using a market-required capitalization rate. The East Whiteland Township's wastewater operation will be moving from a municipal operation, wherein economic returns are not the primary objective of the operation to a private (investor owned) rate regulated sewer utility operation in which economic returns are one of the objectives of the operation; therefore, the direct capitalization of earnings approach was not utilized in this appraisal.

In the discounted cash flow (DCF) approach, the property's economic returns are forecast for future periods. The cash flows (debt-free after-tax net cash flows) from operations are discounted to the appraisal date using a market derived discount rate resulting in the DCF approach's income indicator of value. Use of the DCF approach allows the appraiser to address the property's historical operating experience and its migration, in future periods, to an operation as a rate regulated income taxed (local, state and federal) operation; thus, making the DCF approach preferable in this case.

In preparing this appraisal's DCF analysis first the results from the Borough of Brentwood's wastewater utility's operations were evaluated based on an analysis of historical operating performances over the period 2016 through budgetary 2019 (Financials tab). In this analysis operating statistics such as revenues and their growth, various operating expenses were stated as function of their typical drivers (revenues, plant investment, income from operations, etc.) were analyzed. Details are provided in Income Approach tab. Using the above-described analyses, the results of future periods operations were forecast based on the migration of the East Whiteland Township's of historical operations type experience over time to operations of the wastewater operation similar to a public investor-owned water/wastewater utilities. These forecasts are detailed in the Income Approach tab.

In this appraisal, future operating results were forecasted as follows:

- Revenues
- Operating Expenses
  - Operating and Maintenance Expense
  - Depreciation & Amortization
- Total Operating Expenses
- Operating Income (Revenues less Operating Expenses)
- Taxes
  - Property
  - Income (state & federal)
- Total Taxes
- After Tax Income (Operating Income less Total Taxes)
- Net Cash Flows
  - Plus: After Tax Income
  - Plus: Depreciation
  - Less: Capital Expenditures
  - Plus/less: Change in Working Capital
- Equals: Debt-free after-tax net cash flows

In the above-described table, the depreciation expense (both book and tax) and the capital expenditures were forecast based on the investment in property plant and equipment at the appraisal date and in subsequent periods. The initial investment in the plant and depreciation forecast were based on the criteria established in Section 1329 for the acquisition and subsequent regulation (rate base) of the acquired property by the acquiring investor-owned utility company. The following table details the forecasts of plant investment, book depreciation, tax depreciation forecast, and the resultant net plant investment and rate base as follows:

- Plant Investment
  - Initial Investment/ Beginning Plant Balance
  - Additions (Capital Expenditures)
  - Retirements

Ending Plant Balance

Depreciation (book)

Initial Book Depreciation Reserve / Beginning Book Reserve Balance

Book Depreciation & Amortization

Retirements

Ending Book Reserve Balance

Depreciation (tax)

Initial Tax Reserve / Beginning Tax Reserve

Tax Depreciation

Retirement

Ending Tax Reserve Balance

In these forecasts, the initial plant investment was based on the allocated purchase price of $54,930,000. Initially, the Cost Approach results are utilized to allocate the purchase price by category of plant (NARUC account). The Cost Approach results also define the property's ages and remaining lives of the various plant investment categories. Using these inputs, the future periods book and tax depreciation can be forecast, as well as the accumulated deferred taxes and resulting rate base.

With a forecast of the future rate base and an estimate of the Pennsylvania Commission's authorized return on rate base, the future return on rate base can be estimated which along with the forecast operating expenses (operating expenses, depreciation, and taxes) the future period revenue requirement forecasts can be made. An estimate of the PA Commission return on rate base is detailed as follows:

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Rate of Return on Rate Base)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	Required Return on Rate Base (2)*(3)
Debt	44%	Embedded	3.84%	Embedded	Not Applicable	Not Applicable	1.69%
Equity	56%	Embedded	9.85%	Market	Not Applicable	Not Applicable	5.52%
Total Capital r	**100.0%**						**7.21%**
Growth (g)						Not Applicable	**0.00%**
Rate without Growth: [(1+r)/(1+g)]-1							**7.21%**

Based on a comparison of the forecast revenues and the forecast of the estimated revenue requirement, future period rate increases were forecast. The criteria in making future period rate adjustments was to bring the forecast achieved return in line with the required return. Based on this process the results of future operations were forecast for the next 20-year period. Period 20 of the forecast was treated in the discounted cash flow as the forecast for period 20 through perpetuity.

Finally, the resultant cash flows from future period operations of the System were discounted to the appraisal date using a market derived discount rate for a public investor-owned water/wastewater utility (Cost of Capital / Required Return tab). The following table details the market discount rate developed using the weighted average cost of capital (WACC) of the market debt and equity:

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Discount Rate)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	After-tax Market Capital Cost (2)*(3)*(4a)
Debt	29%	Market	2.79%	Market	28.89%	71.11%	0.58%
Equity	71%	Market	9.85%	Market	0.0%	100.0%	6.99%
Total Capital r	**100.0%**						**7.57%**
Growth (g)							**1.82%**
Rate without Growth: [(1+r)/(1+g)]-1							**5.65%**

The market cost of debt was developed based on market returns for utilities debt as reported in the Value Line Investment Survey. The market cost of equity was developed

using the capital asset pricing model (CAPM) and the dividend-growth model (DGM). Input to these equity costing models were developed based on Value Line Investment Surveys for the water industry published for January 1, 2021, consisting of the following nine companies:

Company	
American States Water (NYSE-AWR)	Consolidated Water Company (NDQ-CWCO)
American Water ((NYSE-AWK)	Middlesex Water (NDQ-MSEX)
Essential Utilities, Inc. (NYSE-WTRG)	SJW Corporation (NYSE-SJW)
California Water (NYSE-CWT)	York Water (NDQ-YORW)
In the January 2020 Issue Value Line dropped Connecticut Water (NDQ-CTWS) out of its list of Water Utility Industry companies	

The Value Line data was also used to develop the market capital structure used in the WACC determination. The market required return analysis can be found in the Cost of Capital / Required Return tab.

The following table presents the results of the discounted cash flow analysis:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021
Discounted Cash Flow Analysis

Discount Rate: 7.57%
Capitalization Rate: 5.65%

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Period	Age	Revenues	O&M Expenses	Tax Depreciation	Cash Flow from Operations	Taxable Income before State & Federal Taxes	State and Federal Taxes @ 28.89%	Capital Expenditures	Change in Working Capital	Net Cash Flows	Period Present Worth Factor (PW)	PW of Cashflow	Accumulated PW of Cashflows
					(3)-(4)	(6)-(5)	(7) *28.89%			(3)-(4)-(8)-(9)-(10)		(11)*(12)	Sum (13)
1	0.5	5,759,816	3,305,486	2,193,634	2,454,330	260,696	75,315	806,090	(78,093)	1,651,018	0.964	1,591,581	1,591,581
2	1.5	5,759,816	3,371,594	2,218,239	2,388,222	169,983	49,108	812,135	-	1,526,979	0.896	1,368,173	2,959,754
3	2.5	5,759,816	3,439,026	2,243,274	2,320,790	77,516	22,394	818,227	-	1,480,169	0.833	1,232,981	4,192,735
4	3.5	7,775,752	3,507,806	2,268,741	4,267,946	1,999,205	577,570	824,363	(27,334)	2,893,347	0.775	2,242,344	6,435,079
5	4.5	7,775,752	3,577,962	2,294,647	4,197,790	1,903,143	549,818	830,547	-	2,817,425	0.720	2,028,546	8,463,625
6	5.5	9,719,690	3,649,522	2,320,996	6,070,168	3,749,172	1,083,136	836,776	(26,356)	4,176,612	0.669	2,794,153	11,257,778
7	6.5	9,719,690	3,722,512	2,315,050	5,997,178	3,682,128	1,063,767	721,779	-	4,211,632	0.622	2,619,635	13,877,413
8	7.5	9,719,690	3,796,962	2,338,381	5,922,728	3,584,347	1,035,518	727,193	-	4,160,017	0.579	2,408,650	16,286,063
9	8.5	10,691,659	3,872,902	2,362,106	6,818,757	4,456,651	1,287,526	732,647	(13,178)	4,811,762	0.538	2,588,728	18,874,791
10	9.5	10,691,659	3,950,359	2,386,228	6,741,300	4,355,072	1,258,180	738,141	-	4,744,979	0.500	2,372,490	21,247,281
11	10.5	10,691,659	4,029,366	2,410,754	6,662,293	4,251,539	1,228,270	743,679	-	4,690,344	0.465	2,181,010	23,428,291
12	11.5	11,333,159	4,109,952	2,435,686	7,223,207	4,787,521	1,383,115	749,257	(8,698)	5,099,533	0.432	2,202,998	25,631,289
13	12.5	11,333,159	4,192,151	2,461,029	7,141,008	4,679,979	1,352,046	754,875	-	5,034,087	0.402	2,023,703	27,654,992
14	13.5	11,333,159	4,275,994	2,486,788	7,057,165	4,570,377	1,320,382	760,535	-	4,976,248	0.373	1,856,141	29,511,133
15	14.5	12,013,149	4,361,513	2,512,970	7,651,636	5,138,666	1,484,561	766,240	(9,219)	5,410,054	0.347	1,877,289	31,388,422
16	15.5	12,013,149	4,448,744	2,539,579	7,564,405	5,024,826	1,451,672	771,988	-	5,340,745	0.323	1,725,061	33,113,483
17	16.5	12,013,149	4,537,720	2,566,617	7,475,429	4,908,812	1,418,156	777,777	-	5,279,496	0.300	1,583,849	34,697,332
18	17.5	12,733,938	4,628,474	2,594,092	8,105,464	5,511,372	1,592,235	783,611	(9,773)	5,739,391	0.279	1,601,290	36,298,622
19	18.5	12,733,938	4,721,044	2,622,008	8,012,894	5,390,886	1,557,427	789,487	-	5,665,980	0.259	1,467,489	37,766,111
20 and beyond	19.5	12,733,938	4,815,465	2,650,370	7,918,473	5,268,103	1,521,955	795,408	-	5,601,110	3.184	17,833,934	55,600,045
								15,540,755					

Age	19.5				
PW(Age) = 1/(1+Discount Rate)$^{(Age)}$	0.241				
PW to Perpetuity = 1/Capitalization Rate	13.210				
$PW_{(20and\ Beyond)}$ = PW to Perpetuity * PW Factor$_{(19.5)}$	3.184				
		Net Plant		44,551,804	
		ADIT		(6,443,119)	
		Rate Base		38,108,685	0.241
		Annual Plant Construction Inflation Rate		0.0422 Input	
		Plant Inflation over 19.5 years		87,105,453	0.241
		PP	54,930,000		
		OCLD	33,403,972		
		PP/OCLD	1.644		
		RCNLD	58,078,339		
		RCNLD/PP		1.057315474	
				40,292,902.78	0.241
		Average			

9,184,193	46,950,304	
20,992,414	58,758,525	
9,710,590	47,476,701	
	52,196,394	

Based on the above-described discounted cash flow analysis, the Income Approach to value of the System's wastewater property and its operations was determined to be $56,398,141. To ensure that the above-described forecast captured the entire economic returns of the property an additional 40-year period beyond the original 20-year forecast was made. This additional forecast indicated the reasonableness of the initial forecast results.

Market Approach (Market Approach tab)

The market or comparable sales approach to value looks to market sales of comparable properties in order to arrive at value. In this appraisal, the market approach was addressed from a comparable sales approach using Pennsylvania water and wastewater

systems and market value to book value ratios based on investor-owned water utilities reported in Value Line Investment Survey.

Market Sales – In the comparable sales market approach the sales of Pennsylvania municipal water and wastewater systems to investor-owned water/wastewater utilities following the passage of Section 1329 were used to insure comparability. The following sales were considered:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Data

RowID	Approximate Date	Buyer	Seller	County	Type of Facility	Initial Purchase Price	Final Purchase Price[1]	Number of Total Customers	Relationship to the passage of Section 1329
1	9/1/2016	PA American Water	City of McKeesport	Allegheny	Wastewater Collection and Treatment	156,000,000	159,000,000	21,953	Post
2	8/1/2016	Aqua PA	New Garden Twp. SA	Chester	Wastewater Collection and Paid for and Owned Treatment	29,500,000	29,500,000	2,106	Post
3	11/16/2016	Aqua PA	Limerick Township	Montgomery	Wastewater Collection and Treatment System	75,100,000	64,373,378	5,434	Post
4	12/10/2017	Aqua PA	East Bradford Township	Chester	Wastewater Collection and paid for treatment Capacity	5,000,000	5,000,000	1,248	Post
5	4/20/2018	SUEZ	Mahoning	Carbon	Water Distribution System	4,734,800	4,734,800	1,186	Post
6	4/20/2018	SUEZ	Mahoning	Carbon	Wastewater Collection	4,765,200	4,765,200	1,451	Post
7	6/1/2018	Aqua PA	Cheltenham	Montgomery	Wastewater Collection	50,250,000	50,250,000	10,500	Post
8	11/14/2018	PA American Water	Steelton	Dauphin	Water Distribution and Treatment	22,500,000	21,750,000	2,325	Post
9	1/1/2017	PA American Water	Sadsbury	Chester	Wastewater Collection	9,250,000	8,600,000	998	Post
10	5/28/2018	PA American Water	Exeter	Berks	Wastewater Collection and Treatment	96,000,000	93,500,000	9,000	Post
11	10/29/2018	Aqua PA	East Norriton	Montgomery	Wastewater Collection	21,000,000	21,000,000	4,950	Post
12	9/30/2018	PA American	Kane	McKean	Wastewater Collection and Treatment	17,560,000	17,560,000	2,006	Post
13	12/10/2019	PA American	Royersford	Montgomery	Wastewater Collection and Treatment	13,000,000	13,000,000	1,596	Post
14	12/17/2019	PA American	Valley	Chester	Water Treatment and Distribution System	7,325,000	7,325,000	1,459	Post
15	12/17/2019	PA American	Valley	Chester	Wastewater Collection System	13,950,000	13,950,000	1,644	Post
16	12/31/2019	Aqua PA	Delaware County Regional Wa	Delaware	Wastewater Collection and Treatment	276,500,000	276,500,000	16,473	Post
17	4/28/2020	PA American Water	Upper Pottsgrove	Montgomery	Wastewater Collection	13,750,000	13,750,000	1,428	Post
18	9/17/2020	Aqua PA	Lower Makefield	Bucks	Wastewater Collection and Purchased Treatment Capacity	53,000,000	53,000,000	11,151	Post

In order to arrive at a measure of comparability these system sales were analyzed in relationship of the purchase price to the properties' depreciated original cost (OCLD), depreciated replacement cost (RCNLD), customers, and cashflows (EBITDA) for an average 5-year and 13-year periods (Market Approach tab).

The following tables details the market sales analyses:

Purchase Price to Original Cost less Depreciation (OCLD)

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Analysis - PP/OCLD

Property Acquired	Type of System and Attributes	Purchase Price (PP)	Proportion of Purchase Price to Total	Depreciated Original Cost (OCLD) (AUS Consultants Determination	Purchase Price to (PP/OCLD)	Variance to Simple Mean	Variance to Wtd Mean	(Variance to Wtd Mean)^2
City of McKeesport	Wastewater Collection and Treatment	159,000,000	19%	80,085,602	1.9854	0.226	0.136	0.0185
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	29,500,000	3%	18,567,728	1.5888	-0.1706	-0.2606	0.0679
Limerick Township	Wastewater Collection and Treatment System	64,373,378	8%	46,153,867	1.3948	-0.3646	-0.4546	0.2067
East Bradford Township	Wastewater Collection and paid for treatment Capacity	5,000,000	1%	5,383,591	0.9287	-0.8307	-0.9207	0.8477
Mahoning	Water Distribution System	4,734,800	1%	3,507,138	1.3500	-0.4094	-0.4994	0.2494
Mahoning	Wastewater Collection	4,765,200	1%	3,234,859	1.4731	-0.2863	-0.3763	0.1416
Cheltenham	Wastewater Collection	50,250,000	6%	15,784,463	3.1835	1.4241	1.3341	1.7798
Steelton	Water Distribution and Treatment	21,750,000	3%	14,433,435	1.5069	-0.2525	-0.3425	0.1173
Sadsbury	Wastewater Collection	8,600,000	1%	6,128,876	1.4032	-0.3562	-0.4462	0.1991
Exeter	Wastewater Collection and Treatment	93,500,000	11%	40,057,634	2.3341	0.5747	0.4847	0.2349
East Norriton	Wastewater Collection	21,000,000	2%	8,407,007	2.4979	0.7385	0.6485	0.4206
Kane	Wastewater Collection and Treatment	17,560,000	2%	12,070,455	1.4548	-0.3046	-0.3946	0.1557
Royersford	Wastewater Collection and Treatment	13,000,000	2%	5,173,559	2.5128	0.7534	0.6634	0.4401
Valley	Water Treatment and Distribution System	7,325,000	1%	5,370,438	1.3639	-0.3955	-0.4855	0.2357
Valley	Wastewater Collection System	13,950,000	2%	9,214,738	1.5139	-0.2455	-0.3355	0.1126
Delaware County Regional Water Quality Au	Wastewater Collection and Treatment	276,500,000	32%	191,774,486	1.4418	-0.3176	-0.4076	0.1661
Upper Pottsgrove	Wastewater Collection	13,750,000	2%	11,769,925	1.1682	-0.5912	-0.6812	0.464
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	53,000,000	6%	20,644,920	2.5672	0.8078	0.7178	0.5152
		857,558,378	100%	497,762,721	1.7228			6.3729

Simple Mean		1.7594	Square Root[(Variance to Wtd Mean)^2]/Count
Standard Deviation		0.5882	2.52446
SimpleMedian		1.4900	18
Simple Mode	DELCOR	1.4418	0.140248
Weighted Mean		1.849	
Standard Deviation		0.4204	
Wtd Median		1.4355	
Wtd Mode	DELCOR	1.4418	

Property Acquired	Type of System and Attributes	Depreciated Original Cost (OCLD) (AUS Consultants Determination	Purchase Price to (PP/OCLD)	Accummulated OCLD
East Bradford Township	Wastewater Collection and paid for treatment Capacity	5,383,591	0.9287	5,383,591
Upper Pottsgrove	Wastewater Collection	11,769,925	1.1682	17,153,516
Mahoning	Water Distribution System	3,507,138	1.35	20,660,654
Valley	Water Treatment and Distribution System	5,370,438	1.3639	26,031,092
Limerick Township	Wastewater Collection and Treatment System	46,153,867	1.3948	72,184,959
Sadsbury	Wastewater Collection	6,128,876	1.4032	78,313,835
Delaware County Regional Water Quality Au	Wastewater Collection and Treatment	191,774,486	1.4418	270,088,321
Kane	Wastewater Collection and Treatment	12,070,455	1.4548	282,158,776
Mahoning	Wastewater Collection	3,234,859	1.4731	285,393,635
Steelton	Water Distribution and Treatment	14,433,435	1.5069	299,827,070
Valley	Wastewater Collection System	9,214,738	1.5139	309,041,808
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	18,567,728	1.5888	327,609,536
City of McKeesport	Wastewater Collection and Treatment	80,085,602	1.9854	407,695,138
Exeter	Wastewater Collection and Treatment	40,057,634	2.3965	447,752,772
East Norriton	Wastewater Collection	8,407,007	2.4979	456,159,779
Royersford	Wastewater Collection and Treatment	5,173,559	2.5128	461,333,338
Cheltenham	Wastewater Collection	15,784,463	3.1835	477,117,801
		477,117,801	2.5672	

Middle OCLD			238,558,901
Bottomvalue of the range containng the Middle Value		1.4032	78,313,835
Top value of the range containing the Middle Value		1.4418	270,088,321
Range containng the middle value		0.0386	191,774,486
Range from bottom value to middle value		0.0323	160,245,066
Median Value		1.4355	

Purchase Price to Replacement Cost New less Depreciation (CORLD)

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Analysis - PP/CORLD

Property Acquired	Type of System and Attributes	Purchase Price (PP)	Proportion of Purchase Price to Total	Replacement Cost New less Depreciation (CORLD)	Purchase Price to CORLD	Variance to Simple Mean	Variance to Wtd Mean	(Variance to Wtd Mean)^2
City of McKeesport	Wastewater Collection and Treatment	159,000,000	19%	156,524,909	1.0158	0.2071	0.0821	0.0067
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	29,500,000	3%	30,615,410	0.9636	0.1549	0.0299	0.0009
Limerick Township	Wastewater Collection and Treatment System	64,373,378	8%	73,068,377	0.881	0.0723	-0.0527	0.0028
East Bradford Township	Wastewater Collection and paid for treatment Capacity	5,000,000	1%	9,236,581	0.5413	-0.2674	-0.3924	0.154
Mahoning	Water Distribution System	4,734,800	1%	8,899,336	0.532	-0.2767	-0.4017	0.1614
Mahoning	Wastewater Collection	4,765,200	1%	7,991,234	0.5963	-0.2124	-0.3374	0.1138
Cheltenham	Wastewater Collection	50,250,000	6%	49,940,486	1.0062	0.1975	0.0725	0.0053
Steelton	Water Distribution and Treatment	21,750,000	3%	23,921,473	0.9092	0.1005	-0.0245	0.0006
Sadsbury	Wastewater Collection	8,600,000	1%	8,517,587	1.0097	0.2010	0.076	0.0058
Exeter	Wastewater Collection and Treatment	93,500,000	11%	99,589,819	0.9389	0.1302	0.0052	0
East Norriton	Wastewater Collection	21,000,000	2%	27,461,356	0.7647	-0.0440	-0.169	0.0286
Kane	Wastewater Collection and Treatment	17,560,000	2%	29,015,055	0.6052	-0.2035	-0.3285	0.1079
Royersford	Wastewater Collection and Treatment	13,000,000	2%	13,376,109	0.9719	0.1632	0.0382	0.0015
Valley	Water Treatment and Distribution System	7,325,000	1%	11,664,026	0.628	-0.1807	-0.3057	0.0935
Valley	Wastewater Collection System	13,950,000	2%	19,252,333	0.7246	-0.0841	-0.2091	0.0437
Delaware County Regional Water Quality Authority	Wastewater Collection and Treatment	276,500,000	32%	399,664,111	0.6918	-0.1169	-0.2419	0.0585
Upper Pottsgrove	Wastewater Collection	13,750,000	2%	18,460,028	0.7449	-0.0638	-0.1888	0.0356
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	53,000,000	6%	51,414,555	1.0308	0.2221	0.0971	0.0094
		857,558,378	100%	1,038,612,785	0.8257			

Simple Mean	
	0.8087
Standard Deviation	0.1746
SimpleMedian	0.8229
Simple Mode	0.6918

Weighted Mean	0.9337
Standard Deviation	0.1695
Wtd Median	0.7558
Wtd Mode	0.6918

Property Acquired	Type of System and Attributes	Purchase Price (PP)	Proportion of Purchase Price to Total	Replacement Cost New less Depreciation (CORLD)	Purchase Price to CORLD	Accummulated CORLD
Mahoning	Water Distribution System	4734800	1%	8,899,336	0.532	8,899,336
East Bradford Township	Wastewater Collection and paid for treatment Capacity	5000000	1%	9,236,581	0.5413	18,135,917
Mahoning	Wastewater Collection	4765200	1%	7,991,234	0.5963	26,127,151
Kane	Wastewater Collection and Treatment	17560000	2%	29,015,055	0.6052	55,142,206
Valley	Water Treatment and Distribution System	7325000	1%	11,664,026	0.628	66,806,232
Delaware County Regional Water Quality Authority	Wastewater Collection and Treatment	276500000	32%	399,664,111	0.6918	466,470,343
Valley	Wastewater Collection System	13950000	2%	19,252,333	0.7246	485,722,676
Upper Pottsgrove	Wastewater Collection	13750000	2%	18,460,028	0.7449	504,182,704
East Norriton	Wastewater Collection	21000000	2%	27,461,356	0.7647	531,644,060
Limerick Township	Wastewater Collection and Treatment System	64373378	7%	73,068,377	0.881	604,712,437
Steelton	Water Distribution and Treatment	21750000	3%	23,921,473	0.9092	628,633,910
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	29500000	3%	30,615,410	0.9636	659,249,320
Exeter	Wastewater Collection and Treatment	96000000	11%	99,589,819	0.964	758,839,139
Royersford	Wastewater Collection and Treatment	13000000	2%	13,376,109	0.9719	772,215,248
Cheltenham	Wastewater Collection	50250000	6%	49,940,486	1.0062	822,155,734
Sadsbury	Wastewater Collection	8600000	1%	8,517,587	1.0097	830,673,321
City of McKeesport	Wastewater Collection and Treatment	159000000	18%	156,524,909	1.0158	987,198,230
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	53000000	6%	51,414,555	1.0308	1,038,612,785
		860058378	1	1,038,612,785	0.8281	

Middle OCLD		519,306,393
Bottomvalue of the range containng the Middle Value	0.7449	504,182,704
Top value of the range containing the Middle Value	0.7647	531,644,060
Range containg the middle value	0.0198	27,461,356
Range from bottom value to middle value	0.0109	15,123,689
Median Value	0.7558	

Purchase Price to Customers

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Analysis - PP/Customer

Property Acquired	Type of System and Attributes		Asset Purchase Agreement (APA) Date	Purchase Price (PP)	Proportion of Purchase Price to Total	Customers	Purchase Price to Customers	Variance to Simple Mean	Variance to Wtd Mean	(Variance to Wtd Mean)^2
City of McKeesport	Wastewater Collection and Treatment	2	2016.67	159,000,000	19%	21,953	7,243	(720)	(3,719)	13,830,961
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	2	2016.59	29,500,000	3%	2,106	14,008	6,045	3,046	9,278,116
Limerick Township	Wastewater Collection and Treatment System	2	2016.88	64,373,378	8%	5,434	11,846	3,883	884	781,456
East Bradford Township	Wastewater Collection and paid for treatment Capacity	2	2017.94	5,000,000	1%	1,248	4,006	(3,957)	(6,956)	48,385,936
Mahoning	Water Distribution System	1	2018.30	4,734,800	1%	1,186	3,992	(3,971)	(6,970)	48,580,900
Mahoning	Wastewater Collection	3	2018.30	4,740,200	1%	1,451	3,284	(4,679)	(7,678)	58,951,684
Cheltenham	Wastewater Collection	3	2018.42	50,250,000	6%	10,500	4,786	(3,177)	(6,176)	38,142,976
Steelton	Water Distribution and Treatment	1	2018.87	21,750,000	3%	2,325	9,355	1,392	(1,607)	2,582,449
Sadsbury	Wastewater Collection	3	2017.00	8,600,000	1%	998	8,617	654	(2,345)	5,499,025
Exeter	Wastewater Collection and Treatment	2	2018.41	93,500,000	11%	9,000	10,389	2,426	(573)	328,329
East Norriton	Wastewater Collection	3	2018.83	21,000,000	2%	4,950	4,242	(3,721)	(6,720)	45,158,400
Kane	Wastewater Collection and Treatment	2	2018.75	17,560,000	2%	2,006	8,754	791	(2,208)	4,875,264
Royersford	Wastewater Collection and Treatment	2	2019.94	13,000,000	2%	1,596	8,145	182	(2,817)	7,935,489
Valley	Water Treatment and Distribution System	1	2019.96	7,325,000	1%	1,459	5,021	(2,942)	(5,941)	35,295,481
Valley	Wastewater Collection System	3	2019.96	13,950,000	2%	1,644	8,485	522	(2,477)	6,135,529
Delaware County Regional Water Quality Au	Wastewater Collection and Treatment	2	2020.00	276,500,000	32%	16,473	16,785	8,822	5,823	33,907,329
Upper Pottsgrove	Wastewater Collection	3	2020.33	13,750,000	2%	1,428	9,629	1,666	(1,333)	1,776,889
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	2	2020.71	53,000,000	6%	11,151	4,753	(3,210)	(6,209)	38,551,681
				857,558,378	100%	96,908	8,849			
Simple Mean										
							7963			
Standard Deviation							3637			
SimpleMedian							8,355			
Simple Mode							16,785			
Weighted Mean							10962			
Standard Deviation							4613			
Wtd Median							4,963			
Wtd Mode							16,785			
Forecast			2019.944064				7,600			
			2021				7,301			

Property Acquired	Type of System and Attributes	Asset Purchase Agreement (APA) Date	Purchase Price (PP)	Proportion of Purchase Price to Total	Customers	Purchase Price to Customers	Accummulated Customers
Mahoning	Wastewater Collection	2018.30	4,740,200	1%	1,451	3,284	1,451
Mahoning	Water Distribution System	2018.30	4,734,800	1%	1,186	3,992	2,637
East Bradford Township	Wastewater Collection and paid for treatment Capacity	2017.94	5,000,000	1%	1,248	4,006	3,885
East Norriton	Wastewater Collection	2018.83	21,000,000	2%	4,950	4,242	8,835
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	2020.71	53,000,000	6%	11,151	4,753	19,986
Cheltenham	Wastewater Collection	2018.42	50,250,000	6%	10,500	4,786	30,486
Valley	Water Treatment and Distribution System	2019.96	7,325,000	1%	1,459	5,021	31,945
City of McKeesport	Wastewater Collection and Treatment	2016.67	159,000,000	18%	21,953	7,243	53,898
Royersford	Wastewater Collection and Treatment	2019.94	13,000,000	2%	1,596	8,145	55,494
Valley	Wastewater Collection System	2019.96	13,950,000	2%	1,644	8,485	57,138
Sadsbury	Wastewater Collection	2017.00	8,600,000	1%	998	8,617	58,136
Kane	Wastewater Collection and Treatment	2018.75	17,560,000	2%	2,006	8,754	60,142
Steelton	Water Distribution and Treatment	2018.87	21,750,000	3%	2,325	9,355	62,467
Upper Pottsgrove	Wastewater Collection	2020.33	13,750,000	2%	1,428	9,629	63,895
Exeter	Wastewater Collection and Treatment	2018.41	96,000,000	11%	9,000	10,667	72,895
Limerick Township	Wastewater Collection and Treatment System	2016.88	64,373,378	7%	5,434	11,846	78,329
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	2016.59	29,500,000	3%	2,106	14,008	80,435
Delaware County Regional Water Quality Au	Wastewater Collection and Treatment	2020.00	276,500,000	32%	16,473	16,785	96,908
			860,058,378	100%	96,908	8,875	
Middle OCLD							48,454
Bottomvalue of the range containing the Middle Value						4,786	31,945
Top value of the range containing the Middle Value						5,021	53,898
Range containing the middle value						235	21,953
Range from bottom value to middle value						177	16,509
Median Value						4,963	

Property Acquired	Type of System and Attributes	Asset Purchase Agreement (APA) Date	Purchase Price (PP)	Proportion of Purchase Price to Total	Customers	Purchase Price to Customers	Accummulated Customers
Water Distribution and Treatment							
Mahoning	Water Distribution System	2018.304795	4,734,800	0.005505208	1186	3992	2637
Valley	Water Treatment and Distribution System	2019.963242	7,325,000	0.008516884	1459	5021	31945
Steelton	Water Distribution and Treatment	2018.871489	21,750,000	0.025288981	2325	9355	62467
Mean						6122.66667	
Median						5021	
Wastewater Collection and Treatment							
East Bradford Township	Wastewater Collection and paid for treatment Capacity	2017.944064	5,000,000	0.005813559	1248	4006	3885
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	2020.713242	53,000,000	0.061623724	11151	4753	19986
City of McKeesport	Wastewater Collection and Treatment	2016.669406	159,000,000	0.184871172	21953	7243	53898
Royersford	Wastewater Collection and Treatment	2019.944064	13,000,000	0.015115253	1596	8145	55494
Kane	Wastewater Collection and Treatment	2018.748858	17,560,000	0.020417219	2006	8754	60142
Exeter	Wastewater Collection and Treatment	2018.410046	96,000,000	0.11162033	9000	10667	72895
Limerick Township	Wastewater Collection and Treatment System	2016.877169	64,373,378	0.074847684	5434	11846	78329
New Garden Twp. SA	Wastewater Collection and Paid for and Owned T	2016.586073	29,500,000	0.034299997	2106	14008	80435
Delaware County Regional Water Quality Au	Wastewater Collection and Treatment	2020.001598	276,500,000	0.321489885	16473	16785	96908
Mean						9578.53556	
Median						8754	
Wastewater Collection Only							
Mahoning	Wastewater Collection	2018.304795	4,740,200	0.005540554	1451	3284	1451
East Norriton	Wastewater Collection	2018.829452	21,000,000	0.034416947	4950	4242	8835
Cheltenham	Wastewater Collection	2018.419406	50,250,000	0.058426267	10500	4786	30486
Valley	Wastewater Collection System	2019.963242	13,950,000	0.016219829	1644	8485	57138
Sadsbury	Wastewater Collection	2017.00274	8,600,000	0.009999321	998	8617	58136
Upper Pottsgrove	Wastewater Collection	2020.326712	13,750,000	0.015987287	1428	9629	63895
Mean						6507.16667	
Median						6635.5	

Description of Service	Purchase Price per Customer Mean	Median
Water Distribution and Treatment	6,123	5,021
Wastewater Collection and Treatment	9,579	8,754
Wastewater Collection	6,507	6,636
Wastewater Treatment Only	3,072	2,118

Purchase Price to Cash Flows (EBITDA Period 1-5)

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Analysis - PP/Cash Flow (EBITDA Periods 1-5)

Property Acquired	Type of System and Attributes	Asset Purchase Agreement (APA) Date	Purchase Price (PP)	Proportion of Purchase Price to Total	Cash Flows (EBITDA Periods 1-5)	Purchase Price to Cash Flow	Variance to Simple Mean	Variance to Wtd Mean	Variance Squared	Wtd Mean Cash Flow
City of McKeesport	Wastewater Collection and Treatment	2016.67	159,000,000	19%	7,409,096	21.46	3.98	6.14	37.70	3.98
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	2016.59	29,500,000	3%	1,717,347	17.18	(0.30)	1.86	3.46	0.59
Limerick Township	Wastewater Collection and Treatment System	2016.88	64,373,378	8%	3,542,124	18.17	0.69	2.85	8.12	1.36
East Bradford Township	Wastewater Collection and paid for treatment Capacity	2017.94	5,000,000	1%	283,367	17.64	0.16	2.32	5.38	0.10
Mahoning	Water Distribution System	2018.30	4,734,800	1%	233,922	20.24	2.76	4.92	24.21	0.11
Mahoning	Wastewater Collection	2018.30	4,765,200	1%	233,922	20.37	2.89	5.05	25.50	0.11
Cheltenham	Wastewater Collection	2018.42	50,250,000	6%	4,754,020	10.57	(6.91)	(4.75)	22.56	0.62
Steelton	Water Distribution and Treatment	2018.87	21,750,000	3%	2,278,514	9.55	(7.93)	(5.77)	33.29	0.24
Sadsbury	Wastewater Collection	2017.00	8,600,000	1%	714,645	12.03	(5.45)	(3.29)	10.82	0.12
Exeter	Wastewater Collection and Treatment	2018.41	93,500,000	11%	7,279,978	12.84	(4.64)	(2.48)	6.15	1.40
East Norriton	Wastewater Collection	2018.83	21,000,000	2%	1,265,269	16.60	(0.88)	1.28	1.64	0.41
Kane	Wastewater Collection and Treatment	2018.75	17,560,000	2%	1,039,593	16.89	(0.59)	1.57	2.46	0.35
Royersford	Wastewater Collection and Treatment	2019.94	13,000,000	2%	600,765	21.64	4.16	6.32	39.94	0.33
Valley	Water Treatment and Distribution System	2019.96	7,325,000	1%	398,458	18.38	0.90	3.06	9.36	0.16
Valley	Wastewater Collection System	2019.96	13,950,000	2%	392,972	35.50	18.02	20.18	407.23	0.58
Delaware County Regional Wa	Wastewater Collection and Treatment	2020.00	276,500,000	32%	25,883,282	10.68	(6.80)	(4.64)	21.53	3.44
Upper Pottsgrove	Wastewater Collection	2020.33	13,750,000	2%	845,182	16.27	(1.21)	0.95	0.90	0.26
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	2020.71	53,000,000	6%	2,839,988	18.66	1.18	3.34	11.16	1.15
			857,558,378	100%	61,712,444					
Simple Mean						17.48				
Standard Deviation						5.71				
SimpleMedian						17.41				
Simple Mode						Not Applicable				
Weighted Mean						15.32				
Standard Deviation						5.10				
Wtd Median						18.13				
Wtd Mode						Not Applicable				

Property Acquired	Type of System and Attributes	Asset Purchase Agreement (APA) Date	Purchase Price (PP)	Proportion of Purchase Price to Total	Cash Flows (EBITDA Periods 1-5)	Purchase Price to Cash Flow	Accummulated Cashflow (EBITDA Period 1-5)
Steelton	Water Distribution and Treatment	2018.871689	21750000	0.025288981	2278514	9.55	9.55
Cheltenham	Wastewater Collection	2018.419406	50250000	0.058426267	4754020	10.57	20.12
Delaware County Regional Wa	Wastewater Collection and Treatme	2020.001598	276500000	0.321489805	25883282	10.68	30.8
Sadsbury	Wastewater Collection	2017.00274	8600000	0.009999321	714645	12.03	42.83
Exeter	Wastewater Collection and Treatme	2018.410046	96000000	0.11162033	7279978	13.19	56.02
Upper Pottsgrove	Wastewater Collection	2020.326712	13750000	0.015987287	845182	16.27	72.29
East Norriton	Wastewater Collection	2018.829452	21000000	0.024416947	1265269	16.6	88.89
Kane	Wastewater Collection and Treatme	2018.748858	17560000	0.020417219	1039593	16.89	105.78
New Garden Twp. SA	Wastewater Collection and Paid for	2016.586073	29500000	0.034299997	1717347	17.18	122.96
East Bradford Township	Wastewater Collection and paid for	2017.944064	5000000	0.005813559	283367	17.64	140.6
Limerick Township	Wastewater Collection and Treatme	2016.877169	64373378	0.074847684	3542124.2	18.17	158.77
Valley	Water Treatment and Distribution Sy	2019.963242	7325000	0.008516864	398458	18.38	177.15
Lower Makefield	Wastewater Collection and Purchase	2020.713242	53000000	0.061623724	2839988	18.66	195.81
Mahoning	Water Distribution System	2018.304795	4734800	0.005505208	233922	20.24	216.05
Mahoning	Wastewater Collection	2018.304795	4765200	0.005540554	233922	20.37	236.42
City of McKeesport	Wastewater Collection and Treatme	2016.669406	159000000	0.184871172	7409096	21.46	257.88
Royersford	Wastewater Collection and Treatme	2019.944064	13000000	0.015115253	600765	21.64	279.52
Valley	Wastewater Collection System	2019.963242	13950000	0.016219829	392972	35.5	315.02
			860058378	1	61712444.2		
Middle Cash Flow							157.51
Bottomvalue of the range containng the Middle Value						17.64	140.60
Top value of the range containing the Middle Value						18.17	158.77
Range containng the middle value						0.53	18.17
Range from bottom value to middle value						0.49	16.91
Median Value						18.13	

Purchase Price to Cash Flows (EBITDA Periods 1-13)

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Analysis - PP/Cash Flow (EBITDA Periods 1-13)

Property Acquired	Type of System and Attributes	Asset Purchase Agreement (APA) Date	Purchase Price (PP)	Proportion of Purchase Price to Total	Cash Flows (EBITDA Periods 1-13)	Purchase Price to Cash Flow	Variance to Simple Mean	Variance to Wtd Mean	Variance Squared	Wtd Mean Cash Flow
City of McKeesport	Wastewater Collection and Treatment	2016.67	159,000,000	19%	11,958,224	13.30	1.68	1.85	3.42	2.47
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	2016.59	29,500,000	3%	2,625,115	11.24	(0.38)	(0.21)	0.04	0.39
Limerick Township	Wastewater Collection and Treatment System	2016.88	64,373,378	8%	5,212,045	12.35	0.73	0.90	0.81	0.93
East Bradford Township	Wastewater Collection and paid for treatment Capacity	2017.94	5,000,000	1%	632,892	7.90	(3.72)	(3.55)	12.60	0.05
Mahoning	Water Distribution System	2018.30	4,734,800	1%	348,409	13.59	1.97	2.14	4.58	0.08
Mahoning	Wastewater Collection	2018.30	4,765,200	1%	348,409	13.68	2.06	2.23	4.97	0.08
Cheltenham	Wastewater Collection	2018.42	50,250,000	6%	4,326,210	11.62	-	0.17	0.03	0.68
Steelton	Water Distribution and Treatment	2018.87	21,750,000	3%	3,893,757	5.59	(6.03)	(5.86)	34.34	0.14
Sadsbury	Wastewater Collection	2017.00	8,600,000	1%	895,128	9.61	(2.01)	(1.84)	3.39	0.10
Exeter	Wastewater Collection and Treatment	2018.41	93,500,000	11%	8,011,315	11.67	0.05	0.22	0.05	1.27
East Norriton	Wastewater Collection	2018.83	21,000,000	2%	2,011,465	10.44	(1.18)	(1.01)	1.02	0.26
Kane	Wastewater Collection and Treatment	2018.75	17,560,000	2%	1,446,948	12.14	0.52	0.69	0.48	0.25
Royersford	Wastewater Collection and Treatment	2019.94	13,000,000	2%	1,209,765	10.75	(0.87)	(0.70)	0.49	0.16
Valley	Water Treatment and Distribution System	2019.96	7,325,000	1%	817,993	8.95	(2.67)	(2.50)	6.25	0.08
Valley	Wastewater Collection System	2019.96	13,950,000	2%	844,046	16.53	4.91	5.08	25.81	0.27
Delaware County Regional Water Q	Wastewater Collection and Treatment	2020.00	276,500,000	32%	28,960,162	9.55	(2.07)	(1.90)	3.61	3.08
Upper Pottsgrove	Wastewater Collection	2020.33	13,750,000	2%	932,042	14.75	3.13	3.30	10.89	0.24
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	2020.71	53,000,000	6%	3,432,340	15.44	3.82	3.99	15.92	0.95
			857,558,378	100%	77,906,265					

Simple Mean	11.62
Standard Deviation	2.67
SimpleMedian	11.65
Simple Mode	Not Applicable
Weighted Mean	11.45
Standard Deviation	2.14
Wtd Median	12.07
Wtd Mode	Not Applicable

Property Acquired	Type of System and Attributes	Asset Purchase Agreement (APA) Date	Purchase Price (PP)	Proportion of Purchase Price to Total	Cash Flows (EBITDA Periods 1-13)	Purchase Price to Cash Flow	Accummulated Cashflow (EBITDA Period 1-13)
Steelton	Water Distribution and Treatment	2018.87	21,750,000	3%	3,893,757	5.59	5.59
East Bradford Township	Wastewater Collection and paid for treatment Capacity	2017.94	5,000,000	1%	632,892	7.90	13.49
Valley	Water Treatment and Distribution System	2019.96	7,325,000	1%	817,993	8.95	22.44
Delaware County Regional Water Q	Wastewater Collection and Treatment	2020.00	276,500,000	32%	28,960,162	9.55	31.99
Sadsbury	Wastewater Collection	2017.00	8,600,000	1%	895,128	9.61	41.60
East Norriton	Wastewater Collection	2018.83	21,000,000	2%	2,011,465	10.44	52.04
Royersford	Wastewater Collection and Treatment	2019.94	13,000,000	2%	1,209,765	10.75	62.79
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	2016.59	29,500,000	3%	2,625,115	11.24	74.03
Cheltenham	Wastewater Collection	2018.42	50,250,000	6%	4,326,210	11.62	85.65
Exeter	Wastewater Collection and Treatment	2018.41	96,000,000	11%	8,011,315	11.98	97.63
Kane	Wastewater Collection and Treatment	2018.75	17,560,000	2%	1,446,948	12.14	109.77
Limerick Township	Wastewater Collection and Treatment System	2016.88	64,373,378	7%	5,212,045	12.35	122.12
City of McKeesport	Wastewater Collection and Treatment	2016.67	159,000,000	18%	11,958,224	13.30	135.42
Mahoning	Water Distribution System	2018.30	4,734,800	1%	348,409	13.59	149.01
Mahoning	Wastewater Collection	2018.30	4,765,200	1%	348,409	13.68	162.69
Upper Pottsgrove	Wastewater Collection	2020.33	13,750,000	2%	932,042	14.75	177.44
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	2020.71	53,000,000	6%	3,432,340	15.44	192.88
Valley	Wastewater Collection System	2019.96	13,950,000	2%	844,046	16.53	209.41
			860,058,378	100%	77,906,265		

Middle Cash Flow		104.71
Bottomvalue of the range containng the Middle Value	11.98	97.63
Top value of the range containing the Middle Value	12.14	109.77
Range containng the middle value	0.16	12.14
Range from bottom value to middle value	0.09	7.08
Median Value	12.07	

Financial Market Ratios – In the market approach based on market financial ratios the market data of companies (nine) in the water industry as reported in Value Line Investment Surveys (January 2021) were analyzed. In the analysis the companies' stock (market) and debt (book) per share are compared as a ratio to the book value per share which is detailed in the following table:

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Investor-Owned Utility
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Comparable Sales Approach

Financial Basis[1]

	Industry Averages	American & Aqua Averages	American States Water	American Water	Aqua America	California Water	Consol. Water Co.	Middlesex Water	SJW Corp	York	Totals
Price per Share			87.33	123.05	47.08	51.52	16.46	63.56	71.79	46.38	
Book value per share			16.1	34.4	18	15.85	10.95	15.7	31.2	10.4	
Market to Book Equity Ratio			5.42	3.58	2.62	3.25	1.5	4.05	2.3	4.46	
Minimum	1.5	2.62									
Mean	3.40	3.1		3.58	2.62						
Standard Deviation	1.18	0.480									
Weighted Market to Debt Ratio	3.41		20,013.22	112,367.28	34,710.24	11,207.07	371.03	5,481.74	5,874.18	3,135.10	193,159.86
Median	3.415	3.1									
Maximum	5.42	3.58									
Debt (Total) $s millions			475.3	9,143.0	3,086.4	967.9	-	294.0	511.1	100.7	
Outstanding Shares (millions)			36.84	180.78	215.84	48.15	15.03	16.67	28.46	12.98	
Debt per share			12.9	50.58	14.3	20.1	0	17.64	17.96	7.76	
Equity (Total) $s millions			3,217.18	22,244.51	10,161.78	2,480.43	247.35	1,059.52	2,042.89	602.24	
Total Capital (Debt + Equity)			3,692.48	31,387.51	13,248.18	3,448.33	247.35	1,353.52	2,553.99	702.94	56,634.30
			0.07	0.55	0.23	0.06	-	0.02	0.05	0.01	0.99
Market Value per Share (Equity+Debt)			100.23	173.63	61.38	71.62	16.46	81.2	89.75	54.14	
Book Value per Share (Equity+Debt)			29	84.98	32.3	35.95	10.95	33.34	49.16	18.16	
Market to Book (Total Capital) Ratio			3.46	2.04	1.9	1.99	1.5	2.44	1.83	2.98	
Minimum	1.5	1.9									
Mean	2.27	1.97		2.04	1.9						
Standard Deviation	0.61	0.070									
Weighted Market to Book (Debt&Equity) Ratio	2.11		12,775.97	64,030.52	25,171.55	6,862.18	371.03	3,302.58	4,673.80	2,094.75	119,282.38
Variance to Wtd Mean	0.1392		1.35	(0.07)	(0.21)	(0.12)	(0.61)	0.33	(0.28)	0.87	
Median	2.015	1.97									
Maximum	3.46	2.04									

1. Value Line Investment Survey January 10, 2020
2. Value Line dropped Connecticut Water in its January 10, 2020 publication

The following table summarizes both the comparable sales and financial market ratio analysis and the Market Approach conclusion of this appraisal:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
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Comparable Sales Approach

Market Sales Data

Central Tendancy and Reliability Analysis

Market Sales Analysis - PP/OCLD	Simple	Weighted	
Mean	1.7594	1.8494	
Standard Deviation	0.5882	0.4204	
Median	1.49	1.4355	
Mode	1.4418	1.4418	
Conclusion		1.8494	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity OCLD		35,172,804	Cost Approach - OCLD
Market Value Indication		**65,048,584**	

Market Sales Analysis - PP/CORLD	Simple	Weighted	
Mean	0.8087	0.9337	
Standard Deviation	0.1746	0.1695	
Median	0.8229	0.7558	
Mode	0.6918	0.6918	
Conclusion		0.9387	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity CORLD		59,847,171	Cost Approach - CORLD
Market Value Indication		**56,178,539**	

Market Sales Analysis - PP/Customer	Simple	Weighted	
Water Tretment & Distribution			
Mean	6,123	10,962	
Standard Deviation		4,613	
Median	5,021	4,963	
Wastewater Collection & Treatment		16,785	
Mean	9,579		
Standard Deviation		-	AUS Input
Median	8,754		
Wastewater Collection			
Mean	6,507		
Standard Deviation			
Median	6,636		
Watewater Treatment Only			
Mean	3,072		
Standard Deviation			
Median	2,118		
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity Customers		3,918	AUS Input
Wastewater Collection & Treatment PP/Customer		8,754	AUS Input
Collection and Treatement Customers Market Value Indica		**34,298,172**	
Treatement Only Market Value Indication			
Treatment Only PP/customer		2,118	AUS Input
Treatment Only Customers		-	AUS Input
Market Value Indication Treatment Only		-	
Total Market Value Indication		**34,298,172**	

Financial Basis[1]

Financial Markets	Market Value per Share to Book Value per Share	
Market to Book (equity)	3.40	
Market to Book (equity and debt)	2.11	
Use (equity and debt)	2.11	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity OCLD	33,403,972	Cost Approach - OCLD
Market Value Indication	**70,482,381**	

Market Sales Analysis - PP/Cash Flows (EBITDA Period 1-5)	Simple	Weighted	
Mean	17.48	15.32	
Standard Deviation	5.71	5.10	
Median	17.41	18.13	
Mode	Not Applicable	Not Applicable	
Forecast			
Conclusion		18.00	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity Cash Flows		2,396,686	Income Approach
Market Value Indication		**43,140,348**	

Market Sales Analysis - PP/Cash Flows (EBITDA Period 1-13)	Simple	Weighted	
Mean	11.62	11.45	
Standard Deviation	2.67	2.14	
Median	11.65	12.07	
Mode	Not Applicable	Not Applicable	
Forecast			
Conclusion		12.00	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity Cash		3,264,195	Income Approach
Market Value Indication		**39,170,336**	

Summary of Market Analyses

Indicators	
OCLD	65,048,584
CORLD	56,178,539
Customers	34,298,172
Cash Flows	
EBITDA Periods 1-5	43,140,348
EBITDA Periods 1-13	39,170,336
Value Line	70,482,381
Mean	51,386,393
Median	49,659,444
Conclusion	**56,178,539**

The market approach conclusion of this appraisal was determined to be $56,178,539.

Cost Approach Revisited – Before concluding this appraisal's fair market value, the preliminary cost approach conclusion of $59,847,171, including intangibles, needs to be evaluated to determine if external obsolescence exists in the preliminary replacement cost new less depreciation conclusion of $59,847,171. The appraisal literature regarding developing a cost approach state:

> "The last step in the implementation of the cost approach is to estimate *economic obsolescence*. Economic obsolescence (sometimes called "external obsolescence") has been previously defined as the loss in value or usefulness of a property caused by factors external to the asset. These factors include increased cost of raw materials, labor, utilities (without an offsetting increase in product price); reduced demand for the product; increased competition; environmental or other regulations; or similar factors.
>
> The difficulty in measuring the full effect of economic obsolescence is one of the weaknesses of the cost approach. Because economic obsolescence is usually a function of outside influences that affect an entire business (i.e., all tangible and intangible assets) rather than individual assets or isolated groups of assets, it is sometimes measured using the income approach or by using the income approach to help identify the existence of economic influences on value. However, the cost approach can be used to measure some forms of economic obsolescence."[15]

The above-described income approach value conclusion of $56,398,141 and the market approach conclusion of $56,178,539 for the East Whiteland Township's future wastewater system compared to the preliminary cost approach conclusion of $59,847,171 indicates no significant external obsolescence exists in the cost approach conclusion of $59,847,171 detailed as follows:

[15] Valuing Machinery and Equipment: The Fundamentals of Appraising Machinery and Technical Assets, Second Edition, pp. 96-97.

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(36)	(37)	(38)	(39)	(40)	(41)
Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	CORLD	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
	COLLECTION SEWERS - GRAVITY - MAINS				
361.21	18" ACP	1975	151,986	0.00%	151,986
361.21	12" ACP	1975	178,867	0.00%	178,867
361.21	12" ACP	1978	143,995	0.00%	143,995
353.2	8" CSP	1983	145,650	0.00%	145,650
353.2	20" PVC	2014	13,834	0.00%	13,834
353.2	21" PVC	2014	10,413	0.00%	10,413
	COLLECTION SEWERS - GRAVITY - MAINS		18,623,208		18,623,208

Therefore, the preliminary cost approach conclusion of $59,847,171 can be considered the final cost approach conclusion as follows:

East Whiteland Township, Pennsylvania
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Wastewater Collection System and Purchased Treatment Capacity
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Fair Market Value

(36)	(37)	(39)	(40)	(41)
Account	Description	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
		CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Prelim CORLD	EO%	FMV
353.20	Land & Land Rights - Original Basin	720,020	0.00%	720,020
353.30	Land & Land Rights - Pumping	13,468	0.00%	13,468
354.30	Stuctures & Improvements - Pumping	8,379,553	0.00%	8,379,553
360.21	Collection Sewers - Force - Mains	3,669,861	0.00%	3,669,861
361.21	Collection Sewers - Gravity - Mains	18,623,208	0.00%	18,623,208
361.23	Collection Sewers - Gravity - Manholes	6,272,518	0.00%	6,272,518
363.20	Service Laterals	8,428,787	0.00%	8,428,787
365.20	Flow Measuring Installations Meter Pits	58,401	0.00%	58,401
354.20	Stuctures & Improvements - Treatment	11,842,733	0.00%	11,842,733
390.70	Office Furniture and Equipment	3,763	0.00%	3,763
391.70	Transportation Equipment	66,027	0.00%	66,027
	Grand Total	58,078,339	0.00%	58,078,339

Value Conclusion

The Fair Market Value of the East Whiteland Township's, wastewater property, plant and equipment and its operation were determined to be $58,100,696 as follows:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value Appraisal

Appraisal Approach		Investor-owned Utility	Weight	Wtd Valuation Indications
Cost Approach				
Inventory of Assets				
Original Cost ($OC)		43,447,309		
Depreciated Original Cost ($OCLD)		33,403,972		
Intangible Assets (Treatement contracts)		1,768,832		
Cost Approach of all assets Conclusion		35,172,804		
Replacement Cost				
Replacement Cost New (COR)		85,964,664		
Depreciated Replacement Cost New (CORLD)	**$**	**58,078,339**		
External or Economic Obsolescence	**$**	-	AUS Input	
Market Value of Tangible Assets	**$**	**58,078,339**		
Intangible Assets (Treatement contracts)	$	1,768,832		
Cost Approach of all assets Conclusion		**59,847,171**		
Cost Approach Conclusion		**59,847,171**	**50%**	**29,923,586**
Income Approach				
Required Rate Increases: 30% period 4,25% period 6, 10% period 9, 6% period 12, and 6% every 3rd year beginning in period 15 (Input 6)		55,600,045		
Income Approach Conclusion		**55,600,045**	**40%**	**22,240,018**
Market Approach				
Market Comparables (to)				
OCLD		65,048,584		
CORLD		56,178,539		
Customers		34,298,172		
Cash Flows (EBITDA)		43,140,348		
Market Financials (to)				
OCLD		70,482,381		
Market Approach Conclusion		**56,178,539**	**10%**	**5,617,854**
Appraisal Conclusion	**$**	**57,781,458**	**100%**	**57,781,458**
Conclusion (cost approach)	**$**	**59,847,171**		

As the purpose of this appraisal was to fulfill the requirements of Section 1329 of the PA CS in the establishment of value for rate making of the East Whiteland Township's wastewater collection system's property, plant and equipment this appraisal's conclusion of $58,100,696 is consistent with the purpose of the appraisal. As the cost approach work papers detail our value conclusion by National Association of Regulatory Utility Commissioners' (NARUC) Uniform System of Accounts (USOA) for the water industry account classifications and the installation year of the property, this detail can be used to allocate the appraisal conclusion to establish the booked value for future accounting and rate making.

Compliance with Uniform Standards of Professional Appraisal Practice (USPAP) 2020-2021

Fulfillment of Requirements for a Personal Property Appraisal and Report

- State the identity of the client and any intended users, by name or type:
  East Whiteland Township, PA and the Pennsylvania Public Utility Commission

- State the intended use of the appraisal
  To establish the Fair Market Value of East Whiteland Township's (PA) Wastewater Collection System (System), Purchased Treatment Capacity and other assets.

- Describe information sufficient to identify the property, real, personal, and intangible, involved in the appraisal, including the physical and economic property characteristics relevant to the assignment.

  The system consists of collection mains and laterals of various sizes and types, pumping structures, improvements and equipment, and purchased treatment capacity. The property is in good condition based on physical inspections and reviews or operating statements. The property is an operating wastewater system the economics of which were analyzed based on seven years of operating financials which were incorporated into the income approach to value analysis in this appraisal.

- State the real property interests appraised
  The system's land rights agreements necessary to access its property.

- State the type and definition of value and city the source of the definition, including whether the opinion of value is in terms of cash or of financing terms equivalent to cash, or based on non-market financing or financing with unusual conditions or incentives
  - *Market Value definition:*
    "The most probable price, as of a specified date, in cash, or in terms equivalent to cash, or in other precisely revealed terms, for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress." The Appraisal of Real Estate, 12th Edition, page 22.

- State the effective date of the appraisal and the date of the report
  The effective date of the appraisal is January 8, 2021, and the appraisal report date is June 20, 2021.

- Describe sufficient information to disclose to the client and any other intended users of the appraisal the scope of work used to develop the appraisal
  The appraisal considered all three approaches to value: the cost, income and market. Briefly the scopes of work for each are as follows:

Compliance with Uniform Standards of Professional Appraisal Practice (USPAP) 2020-2021

Fulfillment of Requirements for a Personal Property Appraisal and Report

Cost Approach – The cost approach utilized the trended cost method utilizing the investment inventory developed by Pennoni Associates, Inc's "Engineers Assessment". The Handy Whitman Index of Public Utility Construction Costs for the water industry were used in the trending. Depreciation was assessed based on straight line age-life depreciation method based on service life expectation for each of the various account categories.

Income Approach – The income approach utilized the discounted cash flow (DCF) method that facilitates the development of cash flows from operations as the property migrates from municipal operation to a regulated investor-owned operation. The Townships' operating experience was analyzed (2016-2019) in order to estimate the initial cash flows. Future customer tariff rates address the rates agreed to by the parties in the Asset Purchase Agreement between the parties. The operations were forecast for 19 periods in the future and a 20th period which is intended to reflect operation beyond that time. The discount rate was developed based on market debt and equity rates at the appraisal date.

Market Approach – The market approach was developed based on market comparable sales of Pennsylvania wastewater properties and market to book ratios developed for the water industry based on information published by Value Line Investment Surveys at the appraisal date.

Valuation Approaches Reconciliation - The appraisal conclusion was based on reconciliation of each of the approaches and the intended purpose of the appraisal.

- Clearly and conspicuously:
  - State all extraordinary assumptions and hypothetical conditions;

    There were no extraordinary assumptions or hypothetical conditions in this appraisal.

  - State that their use might have affected the assignment results

    Not applicable.

- Clearly and accurately disclose all assumptions, extraordinary assumptions, hypothetical conditions, and limiting conditions used in the assignment

  Not applicable.

- Describe the information analyzed, the appraisal procedures followed, and the reasoning that supports the analyses, opinions, and conclusions

Compliance with Uniform Standards of Professional Appraisal Practice (USPAP) 2020-2021

Fulfillment of Requirements for a Personal Property Appraisal and Report

See scope of work above.

- State the use of the real estate existing as of the date of value and the use of the real estate reflected in the appraisal – when reporting an opinion of market value, describe the support and rationale for the appraiser's opinion of the highest and best use of the real estate

- State and explain any permitted departures from specific requirements of STANDARD 1 and the reason for excluding any of the usual valuation approaches. The appraisal then becomes a limited appraisal – a limited appraisal report must contain a prominent section that clearly identifies the extent of the appraisal process performed and the departures taken

  No departures for Standard 1 were made.

- Include a signed certification in accordance with Standards Rule 2-3

  Contained in Narrative Report.

Compliance with Uniform Standards of Professional Appraisal Practice (USPAP) 2020-2021

Fulfillment of Requirements for a Personal Property Appraisal and Report

AUS Consultants, Valuation and Depreciation Services Group certify that, to the best of its knowledge and belief:

- The statements of fact contained in this report are true and correct.

- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are our personal, impartial, and unbiased professional analyses, opinions, and conclusions.

- AUS Consultants, Valuation and Depreciation Services Group has not performed an appraisal of the East Whiteland Township's wastewater collection system previously in the last three year.

- AUS Consultants, Valuation and Depreciation Services Group, nor its professional staff has any present or prospective interest in the property that is the subject of this report and has no interest or bias with respect to the parties involved.

- We have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.

- Our engagement in this assignment is not contingent upon developing or reporting predetermined results.

- Our compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.

- Our analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice 2020-2021.

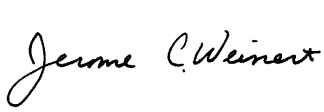
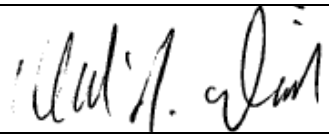
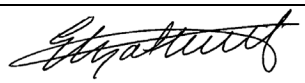
- The signers of this report have not made a personal inspection of the property that is the subject of this report.

- Individuals providing significant appraisal assistance to the person signing this certification include: Scott Shearer- Managing Director and Garrett Moore – Senior Analyst both oof PFM Financials Advisors, LLC whom provided information obtained from East Whiteland Township and the Engineer's Assessment report prepared by Pennoni Associates, Inc.which was the inventory starting point of the Cost Approach.

Compliance with Uniform Standards of Professional Appraisal Practice (USPAP) 2020-2021

Fulfillment of Requirements for a Personal Property Appraisal and Report

AUS Consultants, Depreciation & Valuation
By:

	
Jerome C. Weinert, AM, P.E., CDP Principal and Director	David A. Sheffer Principal
	
Michael J. Diedrich, ASA, P.E., CDP Certified General Appraiser Principal	Elizabeth A. Weinert Associate

ASA: Accredited Senior Appraiser in the Machinery and Equipment (Public Utilities) discipline of the American Society of Appraisers
AMA: Accredited Member Appraiser in the Machinery and Equipment (Public Utilities) discipline of the American Society of Appraisers
P.E.: Registered Professional Engineer State of Wisconsin
CDP: Certified Depreciation Professions in the Society of Depreciation Professionals

Curriculum Vitae (CV) of Jerome C. Weinert, P.E., CDP, ASA

Mr. Weinert is currently Principal and Director of AUS Consultants, Depreciation and Valuation. He has forty-nine (2021-1972) years' experience in valuation and depreciation consulting and management. AUS, with offices across the country, has provided consulting services to the regulated utility industry nationally for over thirty-nine years. A partial list of services provided includes valuations depreciation studies, rate of return studies, cost of service studies, and rate design.

Prior to joining AUS in 1987, Mr. Weinert was employed by American Appraisal Associates, Inc. (American) for sixteen years in their Regulated Industries Group. He held various positions at American, the last being supervising appraiser. Among his other valuation responsibilities, he directed the firm's utility industry capital recovery studies and AUS Consultant's valuation of communication company assets and businesses.

Mr. Weinert graduated from the Milwaukee School of Engineering with a Bachelor of Science degree in Mechanical Engineering and received a master's in business administration from Marquette University. He is a registered professional engineer (1976) (by examination) in the state of Wisconsin as well as a senior member (1982) of the American Society of Appraisers in the public utility valuation field. This latter designation is obtained by written examination primarily in the areas of utility valuation, depreciation, and the economics of regulated firms. He is also a Certified Depreciation Professional (1997) (CDP) and founding member of the Society of Depreciation Professionals and the Society's 1995 President and sponsor of the Society's Certification and re-certification program as such Mr. Weinert developed these programs and oversaw their initial introduction into the Society. He also worked in conjunction with Society members in the development of the Society's training programs which as of 2003 has become the only such formalized depreciation training program in the North America and is an instructor in several of its courses.

During his professional career related to valuations and depreciation matters Mr. Weinert has testified before various courts and public service commissions on these subjects. He has also assisted numerous utilities in preparing capital recovery plans which specifically address the issues of plant replacement. Mr. Weinert has also presented expert testimony on valuation matters. Mr. Weinert has testified before the Pennsylvania Public Utility Commission on regulatory matters associated with Pennsylvania Section 1329 matters. On matters related to eminent domain issues, Mr. Weinert has presented expert testimony in the Massachusetts Superior Court, the Court of Common Pleas, Fayette County, Ohio, the New Hampshire Public Utilities Commission, the Twentieth Judicial Court (deposition only) in Charlotte County, Florida, the Nineteenth Judicial Circuit Court in St. Lucie County, Florida (deposition only). In regard to ad valorem taxation, Mr. Weinert has presented study results to the New York State Board of Equalization and Assessment (now the New York Office of Real Property Services (NY ORPS)), pertaining to useful life and net salvage values for all types of utility property subject to the Board's mass appraisal model. Mr. Weinert has appeared before the Valuation Adjustment Board in Florida for Duval, Hillsborough, Okeechobee, and Palm Beach counties, the Twelfth Judicial Circuit Sarasota County, Florida, the California Board of Equalization and Assessment, the Arizona Board of Assessment, the Missouri Board of Taxation, the Colorado and Texas Departments of Review, the Massachusetts Tax Appeal Court, the Superior Court of the State of Arizona in the County of Maricopa, the State Tax Appeal Board of the State of Montana, the New York City Tax Commission and the Public Utility Commission of Pennsylvania Section 1329 hearings (8).

Mr. Weinert has appeared before regulatory bodies in Alaska, Arkansas, Illinois, Indiana, Iowa, Missouri, Nevada, Nebraska, North Carolina, Ohio, Oregon, Pennsylvania, and South Carolina in support of rate-base valuation determination and capital recovery. He has presented testimony on depreciation matters before the Canadian Radio-Television and Telecommunications Commission (CRTC) and the United

States Federal Energy Regulatory Commission (FERC). In terms of water and wastewater acquisitions and applications for regulatory approval of rate base Mr. Weinert has testified for two investor-owned acquisitions of municipal wastewater authorities one representing the municipality and secondly for the acquiring investor-owned utility. He has submitted study results to the State Commissions of Alabama, Alaska, Arkansas, Idaho, Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, North Carolina, Oregon, Pennsylvania, South Carolina, Washington, and Wisconsin, and the Federal Communications Commission.

Mr. Weinert has presented papers on valuation and depreciation topics to professional and utility industry trade organizations. He also directed AUS Consultants' semi-annual week-long depreciation training programs (1988-1997). These specialized training courses, offered at basic and advanced levels, teach depreciation study techniques to public utility and public service commission staff specialists. The training includes depreciation theory and concepts and hands-on experience with personal computer-based analytical depreciation programs.

Appraisal & Capital Recovery Activities Client List

Company	Property	Study Year	Year Performed	Activity
2021				
AT&T Communications	North America	2020	2021	Ad Valorem Tax Appraisal
AT&T Communications	California	2020	2021	Ad Valorem Tax Appraisal
AT&T Communications	Florida	2020	2021	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2020	2021	Ad Valorem Tax Appraisal
AT&T - Indiana Bell Telephone Company	Indiana	2020	2021	Ad Valorem Tax Appraisal
Verizon New York, Inc.	New York	2020	2021	Ad Valorem Tax Appraisal
Lower Makefield	Lower Makefield Wastewater	2020	2021	Fair Market Value 1329
Pennsylvania American Water Company	Brentwood Borough Wastewater	2020	2021	Fair Market Value 1329
2020				
AT&T Communications	North America	2019	2020	Ad Valorem Tax Appraisal
AT&T Communications	California	2019	2020	Ad Valorem Tax Appraisal
AT&T Communications	Florida	2019	2020	Ad Valorem Tax Appraisal
AT&T - Indiana Bell Telephone Company	Indiana	2019	2020	Ad Valorem Tax Appraisal
Verizon New York, Inc.	New York	2019	2020	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2019	2020	Ad Valorem Tax Appraisal
East Norriton Township, PA	East Norriton Wastewater	2019	2020	Fair Market Value 1329
Pennsylvania American Water Company	Kane Wastewater	2019	2020	Fair Market Value 1329
Pennsylvania American Water Company	Royersford Wastewater	2019	2020	Fair Market Value 1329
Pennsylvania American Water Company	Valley Wastewater	2019	2020	Fair Market Value 1329
Pennsylvania American Water Company	Valley Water	2019	2020	Fair Market Value 1329
Lehigh County Authority	Allentown Water & Sewer	2020	2020	Financing
Pennsylvania American Water Company	Upper Pottsgrove wastewater	2020	2020	Fair Market Value 1329
2019				
AT&T Communications	North America	2018	2019	Ad Valorem Tax Appraisal
AT&T Communications	California	2018	2019	Ad Valorem Tax Appraisal
AT&T Communications	Florida	2018	2019	Ad Valorem Tax Appraisal
AT&T - Indiana Bell Telephone Company	Indiana	2018	2019	Ad Valorem Tax Appraisal
Embarq Florida, Inc.	Florida	2018	2019	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2018	2019	Ad Valorem Tax Appraisal
Cheltenham Township, PA	Cheltenham Wastewater	2018	2019	Fair Market Value 1329
Pennsylvania American Water Company	Steelton Water	2018	2019	Fair Market Value 1329
Pennsylvania American Water Company	Exeter Wastewater	2018	2019	Fair Market Value 1329
2018				
AT&T Communications	North America	2017	2018	Ad Valorem Tax Appraisal
AT&T Communications	California	2017	2018	Ad Valorem Tax Appraisal
AT&T Communications	Florida	2017	2018	Ad Valorem Tax Appraisal
AT&T - Indiana Bell Telephone Company	Indiana	2017	2018	Ad Valorem Tax Appraisal
Embarq Florida, Inc.	Florida	2017	2018	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2017	2018	Ad Valorem Tax Appraisal
Level 3 Communications, LLC	North America	2017	2018	Ad Valorem Tax Appraisal
Level 3 Communications, LLC	California	2017	2018	Ad Valorem Tax Appraisal
CenturyLink Communications, LLC	North America	2017	2018	Ad Valorem Tax Appraisal
CenturyLink Communications, LLC	California	2017	2018	Ad Valorem Tax Appraisal
East Bradford Township, PA	East Bradford Wastewater	2018	2018	Fair Market Value 1329

Appraisal & Capital Recovery Activities Client List

Company	Property	Study Year	Year Performed	Activity
Pennsylvania American Water Company	Sadsbury Wastewater	2017	2018	Fair Market Value Appraisal
Pennsylvania American Water Company	Kane Wastewater	2017	2018	Fair Market Value Appraisal
2017				
AT&T Communications	North America	2016	2017	Ad Valorem Tax Appraisal
AT&T Communications	California	2016	2017	Ad Valorem Tax Appraisal
AT&T Communications	Florida	2016	2017	Ad Valorem Tax Appraisal
AT&T - Indiana Bell Telephone Company	Indiana	2016	2017	Ad Valorem Tax Appraisal
Embarq Florida, Inc.	Florida	2016	2017	Ad Valorem Tax Appraisal
Verizon Communications	Florida	2016	2017	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2016	2017	Ad Valorem Tax Appraisal
Level 3 Communications	North America	2016	2017	Ad Valorem Tax Appraisal
Level 3 Communications	California	2016	2017	Ad Valorem Tax Appraisal
Whitpain Township, PA	Whitpain Wastewater	2016	2017	Appraisal for Planning
Plymouth Township, PA	Plymouth Wastewater	2016	2017	Appraisal for Planning
East Norriton Township, PA	East Norriton Wastewater	2016	2017	Appraisal for Planning
Pennsylvania American Water Company	Sadsbury Wastewater	2016	2017	Fair Market Value Appraisal
Pennsylvania American Water Company	McKeesport Wastewater	2016	2017	Fair Market Value Appraisal
Intermountain Gas Company	Idaho	2016	2017	Depreciation Study
2016				
AT&T Communications	North America	2015	2016	Ad Valorem Tax Appraisal
AT&T Communications	California	2015	2016	Ad Valorem Tax Appraisal
AT&T Communications	Florida	2015	2016	Ad Valorem Tax Appraisal
AT&T - Indiana Bell Telephone Company	Indiana	2015	2016	Ad Valorem Tax Appraisal
Embarq Florida, Inc.	Florida	2015	2016	Ad Valorem Tax Appraisal
Verizon Communications	Florida	2015	2016	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2015	2016	Ad Valorem Tax Appraisal
Level 3 Communications	North America,	2015	2016	Ad Valorem Tax Appraisal
Level 3 Communications	California	2015	2016	Ad Valorem Tax Appraisal
New Garden Township, PA	New Garden Wastewater	2016	2016	Fair Market Value Appraisal
2015				
AT&T Communications	North America	2014	2015	Ad Valorem Tax Appraisal
AT&T Communications	California	2014	2015	Ad Valorem Tax Appraisal
AT&T Communications	Florida	2014	2015	Ad Valorem Tax Appraisal
AT&T - Indiana Bell Telephone Company	Indiana	2014	2015	Ad Valorem Tax Appraisal
Embarq Florida, Inc.	Florida	2014	2015	Ad Valorem Tax Appraisal
Verizon Communications	Florida	2014	2015	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2014	2015	Ad Valorem Tax Appraisal
Level 3 Communications	North America,	2014	2015	Ad Valorem Tax Appraisal
Level 3 Communications	California	2014	2015	Ad Valorem Tax Appraisal
Verizon Wireless	Nationwide	2014	2015	Ad Valorem Tax Appraisal
2014				
AT&T Communications	North America	2013	2014	Ad Valorem Tax Appraisal
AT&T Communications	California	2013	2014	Ad Valorem Tax Appraisal
AT&T Communications	Florida	2013	2014	Ad Valorem Tax Appraisal

Appraisal & Capital Recovery Activities Client List

Company	Property	Study Year	Year Performed	Activity
AT&T - Indiana Bell Telephone Company	Indiana	2013	2014	Ad Valorem Tax Appraisal
Embarq Florida, Inc.	Florida	2013	2014	Ad Valorem Tax Appraisal
Verizon Communications	Florida	2013	2014	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2013	2014	Ad Valorem Tax Appraisal
Level 3 Communications	North America,	2013	2014	Ad Valorem Tax Appraisal
Level 3 Communications	California	2013	2014	Ad Valorem Tax Appraisal
Cascade Natural Gas Corporation	Oregon & Washington	2013	2014	Depreciation Study
Intermountain Gas Company	Idaho	2013	2014	Depreciation Study
Virgin Islands Telephone Corporation	US Virgin Islands	2013	2014	Depreciation Study
Verizon Wireless	Nationwide	2013	2014	Ad Valorem Tax Appraisal
2013				
AT&T Communications	North America	2012	2013	Ad Valorem Tax Appraisal
AT&T Communications	California	2012	2013	Ad Valorem Tax Appraisal
AT&T Communications	Florida	2012	2013	Ad Valorem Tax Appraisal
AT&T - Indiana Bell Telephone Company	Indiana	2012	2013	Ad Valorem Tax Appraisal
AT&T - Michigan Bell Telephone Company	Michigan	2012	2013	Ad Valorem Tax Appraisal
Embarq Florida, Inc.	Florida	2012	2013	Ad Valorem Tax Appraisal
Verizon Communications	Florida	2012	2013	Ad Valorem Tax Appraisal
Verizon Communications	New England - Mass	2012	2013	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2012	2013	Ad Valorem Tax Appraisal
Level 3 Communications	North America, California	2012	2013	Ad Valorem Tax Appraisal
Sprint Nextel Corporation	North America	2012	2013	Ad Valorem Tax Appraisal
Verizon Wireless	Palm Beach, Florida	2012	2013	Ad Valorem Tax Appraisal
Verizon Communications	New England Mass	2002-2007	2013	Ad Valorem Tax Appraisal
2012				
AT&T Communications	North America	2011	2012	Ad Valorem Tax Appraisal
AT&T Communications	California	2011	2012	Ad Valorem Tax Appraisal
AT&T Communications	Florida	2011	2012	Ad Valorem Tax Appraisal
AT&T - Indiana Bell Telephone Company	Indiana	2011	2012	Ad Valorem Tax Appraisal
AT&T - Michigan Bell Telephone Company	Michigan	2011	2012	Ad Valorem Tax Appraisal
Embarq Florida, Inc.	Florida	2011	2012	Ad Valorem Tax Appraisal
Verizon Communications	Florida	2011	2012	Ad Valorem Tax Appraisal
Verizon Communications	New England - Mass	2011	2012	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2011	2012	Ad Valorem Tax Appraisal
Level 3 Communications	North America, California	2011	2012	Ad Valorem Tax Appraisal
Sprint Nextel Corporation	North America	2011	2012	Ad Valorem Tax Appraisal
Verizon Wireless	Palm Beach, Florida	2011	2012	Ad Valorem Tax Appraisal
MetroPCS	Palm Beach, Florida	2011	2012	Ad Valorem Tax Appraisal
Verizon Communications	Florida - revised	2008	2012	Ad Valorem Tax Appraisal
Verizon Wireless	Palm Beach, Florida	2012	2012	Ad Valorem Tax Appraisal
2011				
AT&T Communications	North America	2010	2011	Ad Valorem Tax Appraisal
AT&T Communications	California	2010	2011	Ad Valorem Tax Appraisal
AT&T Communications	Florida	2010	2011	Ad Valorem Tax Appraisal
AT&T - Indiana Bell Telephone Company	Indiana	2010	2011	Ad Valorem Tax Appraisal

Appraisal & Capital Recovery Activities Client List

Company	Property	Study Year	Year Performed	Activity
AT&T - Michigan Bell Telephone Company	Michigan	2010	2011	Ad Valorem Tax Appraisal
Embarq Florida, Inc.	Florida	2010	2011	Ad Valorem Tax Appraisal
Verizon Communications	Florida	2010	2011	Ad Valorem Tax Appraisal
Verizon Communications	New England - Mass	2010	2011	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2010	2011	Ad Valorem Tax Appraisal
Level 3 Communications	North America, California	2010	2011	Ad Valorem Tax Appraisal
Global Crossing	North America	2010	2011	Ad Valorem Tax Appraisal
Intermountain Gas Company	Idaho	2010	2011	Depreciation Study
Sprint Nextel Corporation	North America	2010	2011	Ad Valorem Tax Appraisal
Verizon Wireless	Palm Beach, Florida	2010	2011	Ad Valorem Tax Appraisal
MetroPCS	Palm Beach, Florida	2010	2011	Ad Valorem Tax Appraisal
Verizon Communications	Florida - revised	2008	2011	Ad Valorem Tax Appraisal
Intermountain Gas Company	Idaho	2010	2011	Depreciation Study
Virgin Islands Telephone Corporation	US Virgin Islands	2010	2011	Technical Update of Depreciation Study
2010				
AT&T Communications	North America	2009	2010	Ad Valorem Tax Appraisal
AT&T Communications	California	2009	2010	Ad Valorem Tax Appraisal
AT&T Communications	Florida	2009	2010	Ad Valorem Tax Appraisal
AT&T - Indiana Bell Telephone Company	Indiana	2009	2010	Ad Valorem Tax Appraisal
AT&T - Michigan Bell Telephone Company	Michigan	2009	2010	Ad Valorem Tax Appraisal
AT&T - Southwestern Bell Telephone Company	Arkansas, Kansas, Missouri, Oklahoma, Texas	2009	2010	Ad Valorem Tax Appraisal
Embarq Florida, Inc.	Florida	2009	2010	Ad Valorem Tax Appraisal
Embarq Missouri, Inc.	Missouri	2009	2010	Ad Valorem Tax Appraisal
Verizon Communications	Florida	2009	2010	Ad Valorem Tax Appraisal
Verizon Communications	Northwest	2009	2010	Ad Valorem Tax Appraisal
Verizon Communications	New England - Mass	2009	2010	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2009	2010	Ad Valorem Tax Appraisal
Level 3 Communications	North America, California	2009	2010	Ad Valorem Tax Appraisal
Global Crossing	North America	2009	2010	Ad Valorem Tax Appraisal
MetroPCS	Palm Beach, Florida	2009	2010	Ad Valorem Tax Appraisal
2009				
AT&T Communications	North America	2008	2009	Ad Valorem Tax Appraisal
AT&T Communications	California	2008	2009	Ad Valorem Tax Appraisal
AT&T Communications	Florida	2008	2009	Ad Valorem Tax Appraisal
AT&T - Indiana Bell Telephone Company	Indiana	2008	2009	Ad Valorem Tax Appraisal
AT&T - Michigan Bell Telephone Company	Michigan	2008	2009	Ad Valorem Tax Appraisal
AT&T - Wisconsin Bell Telephone Company	Wisconsin	2008	2009	Ad Valorem Tax Appraisal
AT&T - Southwestern Bell Telephone Company	Arkansas, Kansas, Missouri, Oklahoma, Texas	2008	2009	Ad Valorem Tax Appraisal
Embarq Florida, Inc.	Florida	2008	2009	Ad Valorem Tax Appraisal
Embarq Texas, Inc.	Texas	2008	2009	Ad Valorem Tax Appraisal
Embarq Missouri, Inc.	Missouri	2008	2009	Ad Valorem Tax Appraisal
Embarq Northwest	Washington	2008	2009	Ad Valorem Tax Appraisal

Appraisal & Capital Recovery Activities Client List

Company	Property	Study Year	Year Performed	Activity
Embarq Virginia	Virginia	2008	2009	Ad Valorem Tax Appraisal
Verizon Communications	Florida	2008	2009	Ad Valorem Tax Appraisal
Verizon Communications	Northwest	2008	2009	Ad Valorem Tax Appraisal
Verizon Communications	New England - Mass	2008	2009	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2008	2009	Ad Valorem Tax Appraisal
Level 3 Communications	North America, California, Michigan & Arizona	2008	2009	Ad Valorem Tax Appraisal
Global Crossing	North America	2008	2009	Ad Valorem Tax Appraisal
AboveNet, Inc	North America/California	2003	2009	Ad Valorem Tax Appraisal
Verizon Wireless	Ohio Properties	2004-2005	2009	Ad Valorem Tax Appraisal
Virgin Islands Telephone Corporation	US Virgin Islands	2008	2009	Depreciation Study
Sprint Nextel Corporation	North America	2008	2009	Ad Valorem Tax Appraisal
2008				
AT&T Communications	North America	2007	2008	Ad Valorem Tax Appraisal
AT&T Communications	California	2007	2008	Ad Valorem Tax Appraisal
AT&T - Indiana Bell Telephone Company	Indiana	2007	2008	Ad Valorem Tax Appraisal
AT&T - Michigan Bell Telephone Company	Michigan	2007	2008	Ad Valorem Tax Appraisal
AT&T - Wisconsin Bell Telephone Company	Wisconsin	2007	2008	Ad Valorem Tax Appraisal
AT&T - Southwestern Bell Telephone Company	Arkansas, Kansas, Missouri, Oklahoma, Texas	2007	2008	Ad Valorem Tax Appraisal
Embarq Florida, Inc.	Florida	2007	2008	Ad Valorem Tax Appraisal
Embarq Texas, Inc.	Texas	2007	2008	Ad Valorem Tax Appraisal
Embarq Missouri, Inc.	Missouri	2007	2008	Ad Valorem Tax Appraisal
Embarq Northwest	Washington	2007	2008	Ad Valorem Tax Appraisal
Embarq Virginia	Virginia	2007	2008	Ad Valorem Tax Appraisal
Verizon Communications	Florida	2007	2008	Ad Valorem Tax Appraisal
Verizon Communications	California	2007	2008	Ad Valorem Tax Appraisal
Verizon Communications	Northwest	2007	2008	Ad Valorem Tax Appraisal
Verizon Communications	New England Mass	2002-2007	2008	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2007	2008	Ad Valorem Tax Appraisal
Level 3 Communications	North America, California, Michigan & Arizona	2007	2008	Ad Valorem Tax Appraisal
Global Crossing	North America	2007	2007	Ad Valorem Tax Appraisal
Intermountain Gas Company	Idaho	2007	2008	Depreciation Study
2007				
AT&T Communications	North America	2006	2007	Ad Valorem Tax Appraisal
AT&T Communications	California	2006	2007	Ad Valorem Tax Appraisal
AT&T - Indiana Bell Telephone Company	Indiana	2006	2007	Ad Valorem Tax Appraisal
AT&T - Michigan Bell Telephone Company	Michigan	2006	2007	Ad Valorem Tax Appraisal
AT&T - Wisconsin Bell Telephone Company	Wisconsin	2006	2007	Ad Valorem Tax Appraisal
Embarq Florida, Inc.	Florida	2006	2007	Ad Valorem Tax Appraisal
Embarq Texas, Inc.	Texas,	2006	2007	Ad Valorem Tax Appraisal
Embarq Missouri, Inc.	Missouri	2006	2007	Ad Valorem Tax Appraisal
Embarq North Carolina	North Carolina	2006	2007	Ad Valorem Tax Appraisal
Embarq Virginia	Virginia	2006	2007	Ad Valorem Tax Appraisal
Verizon Communications	Florida	2006	2007	Ad Valorem Tax Appraisal
Verizon Communications	California	2006	2007	Ad Valorem Tax Appraisal
Verizon Communications	Northwest	2006	2007	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	North America	2006	2007	Ad Valorem Tax Appraisal

Appraisal & Capital Recovery Activities Client List

Company	Property	Study Year	Year Performed	Activity
Qwest Communications Corporation	North America California	2006	2007	Ad Valorem Tax Appraisal
Level 3 Communications	North America, California, Michigan, & Arizona	2006	2007	Ad Valorem Tax Appraisal
Level 3 Communications	Arizona	2002 - 2006	2007	Ad Valorem Tax Appraisal
Global Crossing	North America	2006	2007	Ad Valorem Tax Appraisal
Alaska Communications System, Inc. (ACS)	ACS of Alaska ACS of Anchorage ACS of Fairbanks ACS of the Northland ACS Holdings	2006	2007	Depreciation Studies
Intermountain Gas Company	Idaho	2006	2007	Depreciation Study
2006				
AT&T Communications	Palm Beach Florida	2000 - 2003	2006	Ad Valorem Tax Appraisal
AT&T Communications	North America	2005	2006	Ad Valorem Tax Appraisal
AT&T Communications	California	2005	2006	Ad Valorem Tax Appraisal
Sprint Florida, Inc.	Florida	2005	2006	Ad Valorem Tax Appraisal
Sprint Texas, Inc.	Texas,	2005	2006	Ad Valorem Tax Appraisal
Sprint Missouri, Inc.	Missouri	2005	2006	Ad Valorem Tax Appraisal
Sprint North Carolina	North Carolina	2005	2006	Ad Valorem Tax Appraisal
Sprint Virginia	Virginia	2005	2006	Ad Valorem Tax Appraisal
Embarq Nevada	Nevada	2005	2006	Ad Valorem Tax Appraisal
Verizon Communications	Florida	2005	2006	Ad Valorem Tax Appraisal
Verizon Communications	California	2005	2006	Ad Valorem Tax Appraisal
Verizon Communications	Northwest	2005	2006	Ad Valorem Tax Appraisal
Verizon Business (formerly MCI)	Massachusetts	2002-2--5	2006	Ad Valorem Tax Appraisal
Level 3 Communications	North America	2005	2006	Ad Valorem Tax Appraisal
Level 3 Communications	Arizona	2002-2006	2006	Ad Valorem Tax Appraisal
Global Crossing	North America	2005	2006	Ad Valorem Tax Appraisal
Indianapolis Power & Light	IPL	2005	2006	Depreciation Study
2005				
AT&T Communications	North America	2004	2005	Ad Valorem Tax Appraisal
AT&T Communications	California	2004	2005	Ad Valorem Tax Appraisal
Sprint Florida, Inc.	Florida	2004	2005	Ad Valorem Tax Appraisal
Sprint PCS	North America	2004	2005	Ad Valorem Tax Appraisal
Verizon Communications	Florida	2004	2005	Ad Valorem Tax Appraisal
Verizon Communications	California	2004	2005	Ad Valorem Tax Appraisal
Verizon Communications	Northwest	2004	2005	Ad Valorem Tax Appraisal
Sprint Communications, LP	North America	2004	2005	Ad Valorem Tax Appraisal
Level 3 Communications	North America	2004	2005	Ad Valorem Tax Appraisal
Global Crossing	North America	2004	2005	Ad Valorem Tax Appraisal
Global Crossing	New York Special Franchise Property	2003 & 2004	2005	Ad Valorem Tax Appraisal
Indianapolis Power & Light	IPL	2004	2005	Depreciation Study
2004				
Sprint Florida, Inc.	Florida	2003	2004	Ad Valorem Tax Appraisal
Verizon Communications	California	2003	2004	Ad Valorem Tax Appraisal

Appraisal & Capital Recovery Activities Client List

Company	Property	Study Year	Year Performed	Activity
Verizon Communications	Northwest	2003	2004	Ad Valorem Tax Appraisal
Verizon Communications	New England	2003	2004	Ad Valorem Tax Appraisal
Sprint Communications, LP	North America	2003	2004	Ad Valorem Tax Appraisal
Level 3 Communications	North America	2003	2004	Ad Valorem Tax Appraisal
Global Crossing	North America	2003	2004	Ad Valorem Tax Appraisal
Sprint PCS	Cost Indexes	2003	2004	Ad Valorem Tax Appraisal
AT&T Communications	North America	2003	2004	Ad Valorem Tax Appraisal
AT&T Communications	California	2003	2004	Ad Valorem Tax Appraisal
Intermountain Gas Company	Idaho	2003	2004	Depreciation Study
2003				
Sprint Florida, Inc.	Florida	2002	2003	Ad Valorem Tax Appraisal
Verizon Communications	California	2002	2003	Ad Valorem Tax Appraisal
Verizon Communications	Northwest	2002	2003	Ad Valorem Tax Appraisal
Sprint Communications, LP	North America	2002	2003	Ad Valorem Tax Appraisal
Level 3 Communications	North America	2002	2003	Ad Valorem Tax Appraisal
Sprint PCS	Cost Indexes	2002	2003	Ad Valorem Tax Appraisal
AT&T Communications	North America	2002	2003	Ad Valorem Tax Appraisal
AT&T Communications	California	2002	2003	Ad Valorem Tax Appraisal
Global Crossing	North America	2002	2003	Ad Valorem Tax Appraisal
Verizon Wireless	Broward County, FL	1998 through 2002	2003	Ad Valorem Tax Appraisal
2002				
Sprint Florida, Inc.	Florida	2001	2002	Ad Valorem Tax Appraisal
Verizon Communications	California	2001	2002	Ad Valorem Tax Appraisal
Verizon Communications	Northwest	2001	2002	Ad Valorem Tax Appraisal
Sprint Communications, LP	North America	2001	2002	Ad Valorem Tax Appraisal
Level 3 Communications	North America	2001	2002	Ad Valorem Tax Appraisal
Global Crossing	North America	2001	2002	Ad Valorem Tax Appraisal
AT&T Wireless	Plymouth, MI	2001	2002	Ad Valorem Tax Appraisal
Sprint PCS	Cost Indexes	2001	2002	Ad Valorem Tax Appraisal
AT&T Communications	North America	2001	2002	Ad Valorem Tax Appraisal
Intermountain Gas Company	Idaho	2001	2002	Depreciation Study
AT&T Communications	California	2001	2002	Ad Valorem Tax Appraisal
2001				
Verizon	Verizon - New York	2001	2001-2	Functional Obsolescence & Useful Life studies for valuation
Sprint Florida, Inc.	Sprint Florida, Inc.	2000	2001	Ad Valorem Tax Appraisal
Verizon Communications	California	2000	2001	Ad Valorem Tax Appraisal
Sprint Communications, LP	North America	2000	2001	Ad Valorem Tax Appraisal
Global Crossing	North America	2000	2001	Ad Valorem Tax Appraisal
Sprint PCS	Cost Indexes	2000	2001	Ad Valorem Tax Appraisal
Sprint Corporation	Centel - Nevada	2000	2001-2	Depreciation Study
Alaska Communications System, Inc. (ACS)	ACS of Alaska ACS of Anchorage ACS of Fairbanks ACS of the Northland ACS Holdings	2000	2001	Depreciation Study

Appraisal & Capital Recovery Activities Client List

Company	Property	Study Year	Year Performed	Activity
2000				
Sprint PCS	BTS Equipment	2000	2000	Economic Life Study
Telus Communications	Telus - Alberta & British Columbia	2000	2000	Depreciation study Phase III Price Caps
Sprint Florida, Inc.	Florida	1999	2000	Ad Valorem Tax Appraisal
Verizon Communications	California	1999	2000	Ad Valorem Tax Appraisal
Sprint Communications, LP	North America	1999	2000	Ad Valorem Tax Appraisal
1999				
Sprint Corporation	Centel - Nevada	1998	1999	Depreciation Study
Intermountain Gas Company	Intermountain Gas Company	1998	1999	Depreciation Study
Sprint Florida, Inc.	Florida	1998	1999	Ad Valorem Tax Appraisal
Sprint Communications, LP	North America	1998	1999	Ad Valorem Tax Appraisal
1998				
Frontier Corporation	Frontier Telephone of Rochester	1998	1997	Valuation depreciation Lives and Net Salvage Parameters
Pacific Telecom, Inc.	Telephone Utilities of Washington	1997	1998	Depreciation Study
Sprint Florida, Inc.	Florida	1997	1998	Ad Valorem Tax Appraisal
Verizon Communications	Florida	1997	1998	Ad Valorem Tax Appraisal
Sprint Communications, LP	North America	1997	1998	Ad Valorem Tax Appraisal
Sprint Corporation	United Telephone Company of South Carolina	1998	1998	Depreciation Expense Universal Service Fund
Sprint Corporation	Carolina Telephone and Telegraph and Central Telephone of North Carolina	1998	1998	Depreciation Expense Universal Service Fund
Telus Communications	Telus - Edmonton (TCE)	1997	1998	Depreciation Study Phase II Price Caps
1997				
Sprint Corporation	Centel - Nevada	1997	1997	Unbundling/ Inter-connection Depreciation Study
Pacific Telecom, Inc.	Telephone Utilities of Oregon	1996	1997	Depreciation Study
Pacific Telecom, Inc.	Telephone Utilities of Alaska And the Northland	1996	1997	Depreciation Study
Telus Communications	Telus - TCI formerly AGT	1996	1997	Depreciation Study Phase II Price Caps
Indianapolis Power & Light	IPL	1996	1997	Depreciation Study
Sprint Florida, Inc.	Florida	1996	1997	Ad Valorem Tax Appraisal

Appraisal & Capital Recovery Activities Client List

Company	Property	Study Year	Year Performed	Activity
Verizon Communications	Florida	1996	1997	Ad Valorem Tax Appraisal
Pacific Telecom, Inc.	Eagle Telephone (Colorado)	1996	1997	Depreciation Study
1996				
Intermountain Gas Company	Intermountain Gas Company	1995	1996	Depreciation Study
Sprint Florida, Inc.	Florida	1995	1996	Ad Valorem Tax Appraisal
Century Telephone	Century Telephone of Ohio, Inc.	1995	1996	Depreciation Study
Telus Communications	AGT Limited (Alberta Government Telephones)	1995	1996	Depreciation Study
Johnson County Kansas Office of the Assessor	Useful Life of Computer Equipment	1995	1995	Useful/Market Life Analysis
Milwaukee Metropolitan Sewerage District	Milwaukee Metropolitan Sewerage District	1995	1996	Depreciation Study
Sprint Corporation	Long Distance Division	1995	1995	Depreciation/Recovery Status Study
Sprint Corporation	Cellular Division	1995	1995	Depreciation/Recovery Status Study
Pacific Telecom, Inc.	Alascom, Inc.	1994	1995	Depreciation Study
Pacific Telecom, Inc.	Telephone Utilities of the Northland	1993	1994	Depreciation Study
	Telephone Utilities of Alaska	1993	1994	Depreciation Study
Indiana Energy	Indiana Gas Company	1993	1994	Depreciation Study
Columbia Gas Transmission	Gas Pipeline Property in Sullivan County, NY	1993	1993	Useful Life Study
United Telephone - Midwest Group	United Telephone Company of Missouri	1993	1993	Modernization/ Depreciation Study
Intermountain Gas Co.	Intermountain Gas Co.	1992	1993	Depreciation Study
Pacific Telecom, Inc.	Alascom, Inc.	1992	1993	Depreciation Study
	Telephone Utilities of Oregon, Inc.	1991	1992	Depreciation Study
	Telephone Utilities of Washington, Inc.	1991	1992	Depreciation Study
Small Telephone Company Coalition	Oregon Small Telephone Companies	1991	1992	Depreciation Support

Appraisal & Capital Recovery Activities Client List

Company	Property	Study Year	Year Performed	Activity
United Telephone Systems	United Telephone Co. of Pennsylvania	1991	1992	Instructional Depreciation Study
New York State Division of Equalization and Assessment	Electric, Gas, Water, Telephone, Pipeline, Steam, CATV	1991	1992	Useful Lives and Net Salvage Values
Rochester Telephone Company	Enterprise Telephone	1991	1992	Study Review
Indiana Energy	Indiana Gas/Richmond Gas/ Terre Haute Gas	1990	1991	Depreciation Study
American Electric Power	Indiana/Michigan Power Co.	1990	1991	Depreciation Study
Rochester Telephone Company	Rochester Telephone Co.	1990	1991	Study Review
United Telephone Systems	United Telephone Co. of Florida	1990	1991	Instructional Depreciation Study
United Telephone Systems	United Telephone Co. of Oregon	1989	1990	Study Review
Telephone and Data Systems, Inc.	Quincy Telephone Company	1990	1991	Depreciation Study
Telephone and Data Systems, Inc.	Wolverine Telephone Company	1989	1990	Depreciation Study
Indiana Energy	Indiana Gas Company, Inc.	1989	1990	Depreciation Study
Intermountain Gas Co.	Intermountain Gas Co.	1989	1990	Remaining Life/Net Salvage Support
North-West Telephone Company	North-West Telephone Company	1989	1990	Study Review
United Telephone System	United of Texas	1989	1990	Instructional Depreciation Study
	United of Missouri	1989	1990	Instructional Depreciation Study
Milwaukee Water	Milwaukee Water	1989	1990	Depreciation Study
Indiana Natural Gas Corp.	Indiana Natural Gas Corp.	1989	1990	Depreciation Study
Pacific Telecom	Telephone Utilities of the Northland	1989	1990	Depreciation Study

Appraisal & Capital Recovery Activities Client List

Company	Property	Year	Study Year Performed	Activity
	Telephone Utilities of Alaska	1989	1990	Depreciation Study
	Alascom	1989	1990	Depreciation Study
	Telephone Utilities of Washington, Inc.	1988	1989	Depreciation Study
WICOR	Wisconsin Gas Company	1988	1989	Depreciation Study
ALLTEL	ALLTEL - Kentucky, Inc.	1987	1989	Depreciation Study
	ALLTEL - Ohio, Inc.	1988	1989	Depreciation Study
	Western Reserve Telephone Company	1988	1989	Depreciation Study
Milwaukee Metropolitan Sewer District	Milwaukee Metropolitan Sewer District	1988	1989	Depreciation Study
United Telephone	United of Ohio	1988	1989	ELG Support
Telephone Company	Telephone Company	1988	1989	ELG Support
United Telecom	U.S. Sprint	1988	1988	Useful Life Study
Pacific Telecom	Telephone Utilities of Oregon	1987	1988	Depreciation Study
	Telephone Utilities of Eastern Oregon	1987	1988	Depreciation Study
	Rose Valley Telephone Company	1987	1988	Depreciation Study
United Telephone	United of Minnesota	1987	1988	Capital Planning Support
Wisconsin Southern Gas	Wisconsin Southern Gas	1987	1988	Depreciation Study
Pacific Telecom	Glacier State Telephone Company	1986	1987	Depreciation Study
	Sitka Telephone Co.	1986	1987	Depreciation Study
	Juneau-Douglas Tel Company	1986	1987	Depreciation Study
Pacific Telecom	Telephone Utilities of Alaska	1986	1987	Depreciation Study
	Alascom	1986	1987	Depreciation Study

Appraisal & Capital Recovery Activities Client List

Company	Property	Year	Study Year Performed	Activity
Lincoln Telecommunications	Lincoln Telephone and Telegraph Company	1986	1987	Digital Switching Service Life
Northwest Natural Gas Corporation	Northwest Natural Gas Corporation	1985	1986	Depreciation Study
ALLTEL	Western Reserve Telephone Company	1984	1985	Depreciation Study
	ALLTEL - Ohio	1984	1985	Depreciation Study
	ALLTEL - Alabama	1984	1985	Depreciation Study
Gulf Telephone Co.	Gulf Telephone Company	1984	1985	Depreciation Study
United Telephone Systems, Inc.	United of Iowa	1984	1985	Depreciation Study
	United of Arkansas	1984	1985	Depreciation Study
Pacific Telecom	Telephone Utilities of Washington	1983	1984	Depreciation Study
	Telephone Utilities of Eastern Oregon	1983	1984	Depreciation Study
Pacific Telecom	Telephone Utilities of Oregon	1983	1984	Depreciation Study
	Northwestern Telephone Systems, Inc., Oregon	1983	1984	Depreciation Study
	Rose Valley Telephone Company	1983	1984	Depreciation Study
United Telecommunications	All United Telephone Companies	1983	1984	Capital Recovery Strategy
Lincoln Telecommunications	Lincoln Telephone & Telegraph Company	1983	1984	Depreciation Study
ALLTEL	ALLTEL - Mississippi	1982	1983	Depreciation Study
	ALLTEL - Michigan	1982	1983	Depreciation Study
North Carolina Natural Gas Corp.	North Carolina Natural Gas Corporation	1982	1983	Depreciation Study
Mid Continent Telephone (Currently ALLTEL)	Western Reserve Telephone	1982	1983	Depreciation Study
	Mid Ohio Telephone	1982	1982	Depreciation Study

Appraisal & Capital Recovery Activities Client List

Company	Property	Study Year	Year Performed	Activity
	Florence Telephone Company	1980	1981	Depreciation Study
	Leeds Telephone Co.	1980	1981	Depreciation Study
	Elmore Coosa Tel Company	1980	1981	Depreciation Study
	Brookville Telephone Company	1980	1981	Depreciation Study
	Mid-Pennsylvania Telegraph	1980	1981	Depreciation Study
Telephone Utilities (Currently Pacific Telecom)	Telephone Utilities of Oregon	1979	1980	Depreciation Study
	Telephone Utilities of Eastern Oregon	1979	1980	Depreciation Study
	Northwestern Telephone Systems, Inc.-Oregon	1979	1980	Depreciation Study
	Rose Valley Telephone Company	1979	1980	Depreciation Study
United Telephone Systems, Inc.	United of Ohio	1979	1980	Depreciation Study
Telephone Utilities	Telephone Utilities of Washington	1978	1979	Depreciation Study
United Telephone Systems, Inc.	United of Ohio	1978	1979	Depreciation Study
Rochester Telephone	Rochester Telephone (Indiana)	1977	1978	Depreciation Study
United Telephone Systems, Inc.	United of Ohio	1977	1978	Depreciation Study
Princeton Telephone	Princeton Telephone (Indiana)	1976	1977	Depreciation Study
Northwestern Telephone	Northwestern Telephone (Illinois)	1975	1976	Depreciation Study

Papers and Seminars

2011 Training Instructor Depreciation Basics Sessions A & B and Life and Salvage Analysis
Society of Depreciation Professionals 25th Annual Meeting
Atlanta, GA September 20-22, 2011

2010 Will the Real Cost Approach Please Stand Up?
National Association of Property Tax Representatives Transportation, Energy, & Communications (NAPTR·TEC)
Scottsdale, Arizona October 25-27, 2010

Issues Affecting Assessment of Regulated Industries
Institute for Professionals in Taxation (IPT) Property Tax Symposium
Austin, Texas October 31 – November 3, 2010

2009 (Valuing) Intangibles
Appraisal for Ad Valorem Taxation, Wichita State University
Wichita, Kansas July 28, 2009

Fair Value Accounting (Appraisal Panelist)
Appraisal for Ad Valorem Taxation, Wichita State University
Wichita, Kansas July 29, 2009

2008 Valuation Issues Valuation of Assets and the Impact of Depreciation
Society of Depreciation Professionals Annual Meeting
Greenville, SC September 21-26, 2008

Obsolescence in the Long-Distance and Local Transport Networks
Technology Futures Inc. Asset Valuation Conference
Austin Texas February 8, 2008

2007 Communications Industry Issues
National Association of Property Tax Representative – Transportation, Energy, & Communications
New Orleans, LA October 30, 2007

2006 Appraisal Procedures & Issues in a Changing communications Industry
Florida Chapter International Association of Assessing Officers' Tangible Personal Property Conference
Ocala, Florida January 12, 2006

Valuation of Intangibles
Appraisal for Ad Valorem Taxation, Wichita State University
Wichita, Kansas July 25, 2006

SDP 20 years of History and Beyond
Society of Depreciation Professionals 20th Annual Meeting
Long Beach, CA September 18, 2006

2005 Valuation in a World with Asset Impairments
Appraisal for Ad Valorem Taxation, Wichita State University
Wichita, Kansas August 1, 2005

Papers and Seminars

2004 Depreciation in the Valuation of Assets
Society of Depreciation Professionals' Eighteenth Annual Meeting
Washington, D.C., September 13, 2004

2003 Cost Approach and the Use of Appraisal Guidelines
Institute for Professionals in Taxation – Property Tax Symposium
Fort Lauderdale, FL, September 17, 2003

Cost Approach – Obsolescence and Depreciation
Appraisal for Ad Valorem Taxation, Wichita State University
Wichita, Kansas, July 28, 2003

2000 Appraisal Issues Associated with Technological Change in the Wireline Telecommunications Industry
Appraisal for Ad Valorem Taxation, Wichita State University
Wichita, Kansas, July 31, 2000

The Impact of Advancing Technology and the Changing Regulatory Environment on Obsolescence Calculations for Ad Valorem Valuation Purposes
Journal of Property Tax Management, Spring 2000

1996 How to Develop a Reproduction/Replacement Cost New Less Depreciation Approach to Value
Appraisal for Ad Valorem Taxation, Wichita State University
Wichita, Kansas, August 4, 1996

1995 Valuation Method, Techniques and Strategies (How to Quantify Stranded Investment) (Market, Income, & Cost Approach
AGA Depreciation Committee Meeting
Denver, Colorado, August 6-9, 1995, jointly presented with Earl Robinson of AUS Consultants

1994 Integrating Future Expectations for the Telephone Industry into Historical Depreciation Analysis
United States Telephone Association (USTA's 1994 Capital Recovery Seminar)
Scottsdale, Arizona, September 12-13, 1994

1994 Capital Recovery: United States versus Canada
Canadian Telephone Industry's Annual Capital Recovery Seminar
Edmonton, Alberta, Canada June 14-15, 1994

1990 Capital Recovery: Methods, Terminology, Procedures, and Record Keeping
United States Telephone Association (USTA)'s
1990 Non-FCC Subject and Small Company Capital Recovery Seminar
Minneapolis, Minnesota April 10_11, 1990

Integration of Technology Forecasting Into Historical Life Studies
29th Iowa State Regulatory Conference
Ames, Iowa May 15-17, 1990

The 1990's and the Second Wave of Major Plant Retirements in the Communications Industry
NARUC's Seventh Biennial Information Conference
Columbus, Ohio September 12-14, 1990

Papers and Seminars

How Do We Incorporate Change into the Study Filing Procedures?
USTA's 1990 Capital Recovery Seminar
Chicago, Illinois October 16_17, 1990

1989 Plant Modernization: Capital Planning and Capital Recovery
Midwest Utilities Conference
Chicago, Illinois September 11_14, 1989

Price Indexes Today: Procedures, Uses, and Misuses
Society of Depreciation Professionals' Third Annual Meeting
New Orleans, Louisiana December 6_7, 1989

1988 Plant Modernization: Capital Planning and Capital Recovery
National Association of Regulatory Utility Commissioners (NARUC)'s
Sixth Biennial Regulatory Information Conference
Columbus, Ohio September 14_16, 1988

Papers and Seminars

1997	Sprint Corporation - West Finance Center Overland Park, Kansas, August 1997
1997	Rochester Telephone Corporation Rochester, New York, April 1997
1996	Sprint-Florida-Vista United Telecommunications Altamonte Springs, Florida August 27-29, 1996
1994	Saskatchewan Telecommunications Regina, Saskatchewan, Canada, June 1994
1994	AUS Consultants/Leroy J. Murphy and Associates 1994 Capital Recovery Seminar May 1994
1993	Manitoba Telephone System, Winnipeg, Manitoba, December 1993
1993	Society of Depreciation Professionals Annual Meeting Charleston, South Carolina September 30, 1993
1993	SPRINT - Local Telephone Division Atlanta, Georgia August 11-12, 1993
1993	AUS Consultants/Leroy J. Murphy and Associates 1993 Capital Recovery Seminar Chicago, Illinois May 11 - 13, 1993
1993	Canadian Telephone Capital Recovery Seminar Halifax, Nova Scotia April 20 - 22, 1993
1993	United Telephone, Midwest Group Overland Park, Kansas January 20, 1993
1992	BellSouth Corporation Birmingham, Alabama November 23, 1992
1992	Sprint - Local Telephone Division Kansas City, Kansas November 18 - 20, 1992
1992	Society of Depreciation Professionals Annual Meeting San Antonio, Texas September 9 - 10, 1992
1992	AUS Consultants/Leroy J. Murphy and Associates 1992 Capital Recovery Seminar Chicago, Illinois October 6 - 8, 1992
1991	Society of Depreciation Professionals Annual Meeting Nashville, Tennessee November 20-22, 1991
1991	ALLTEL Corporation Microcomputer Depreciation Studies System Training Hudson, Ohio October 14-16, 1991

Capital Recovery Training

2016 Society of Depreciation Professionals
Annual Training
Charleston, South Carolina, September 18-23, 2016

2015 Society of Depreciation Professionals
Annual Training
Austin Texas September 2015

2014 Society of Depreciation Professionals
Annual Training
New Orleans, Louisiana September 2014

2013 Society of Depreciation Professionals
Annual Training
Salt Lake City, Utah September 2013

2012 Society of Depreciation Professionals
Annual Training
Minneapolis, Minnesota, September 16-18, 2012

1991 United Telecommunications, Inc., Capital Recovery/Microcomputer Depreciation Studies System Training
Kansas City, Kansas September 23-25, 1991

1991 AUS Consultants/Leroy J. Murphy and Associates 1991 Capital Recovery Seminar
Lake Geneva, Wisconsin September 17-19, 1991

1991 Rochester Telephone Corporation, Capital Recovery/Microcomputer Depreciation Studies System Training, Rochester, New York September 3-7, 1991

1991 Ameritech Services, Microcomputer Depreciation Studies System Training
Chicago, Illinois May 16-17, 1991

1991 AUS Consultants/Leroy J. Murphy and Associates 1991 Capital Recovery Seminar
Washington, D.C. April 9_11, 1991

1990 United Telecommunications, Inc., Capital Recovery Seminar
Overland Park, Kansas December 1990

1990 AUS Consultants/Leroy J. Murphy and Associates 1990 Capital Recovery Seminar
Chicago, Illinois September 24_27, 1990

1990 AUS Consultants/Leroy J. Murphy and Associates 1990 Capital Recovery Seminar
Chicago, Illinois January 29-February 1, 1990

1990 United Telecommunications, Inc., Capital Recovery/Microcomputer Depreciation Studies System Training, Chicago, Illinois July 1990

1989 United Telecommunications, Inc., Capital Recovery/Microcomputer Depreciation Studies System Training, Chicago, Illinois July 1989

Capital Recovery Training

1989	AUS Consultants/Leroy J. Murphy and Associates 1989 Capital Recovery Seminar Chicago, Illinois March 6_9, 1989
1988	AUS Consultants/Leroy J. Murphy and Associates 1988 Capital Recovery Seminar Chicago, Illinois July 25_28, 1988
1988	United Telecommunications, Inc., Microcomputer Depreciation Studies System Training Kansas City, Kansas January 1988

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Valuation Summary

AUS Consultants
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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value Appraisal

Appraisal Approach		Investor-owned Utility	Weight	Wtd Valuation Indications
Cost Approach				
Inventory of Assets				
Original Cost ($OC)		43,447,309		
Depreciated Original Cost ($OCLD)		33,403,972		
Intangible Assets (Treatement contracts)		1,768,832		
Cost Approach of all assets Conclusion		35,172,804		
Replacement Cost				
Replacement Cost New (COR)		85,964,664		
Depreciated Replacement Cost New (CORLD)	**$**	**58,078,339**		
External or Economic Obsolescence	**$**	**-**	AUS Input	
Market Value of Tangible Assets	**$**	**58,078,339**		
Intangible Assets (Treatement contracts)	$	1,768,832		
Cost Approach of all assets Conclusion		**59,847,171**		
Cost Approach Conclusion		**59,847,171**	**50%**	**29,923,586**
Income Approach				
Required Rate Increases: 30% period 4,25% period 6, 10% period 9, 6% period 12, and 6% every 3rd year beginning in period 15 (Input 6)		55,600,045		
Income Approach Conclusion		**55,600,045**	**40%**	**22,240,018**
Market Approach				
Market Comparables (to)				
OCLD		65,048,584		
CORLD		56,178,539		
Customers		34,298,172		
Cash Flows (EBITDA)		43,140,348		
Market Financials (to)				
OCLD		70,482,381		
Market Approach Conclusion		**56,178,539**	**10%**	**5,617,854**
Appraisal Conclusion	**$**	**57,781,458**	**100%**	**57,781,458**
Conclusion (cost approach)	$	59,847,171		

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Cost Approach

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Greenfield, Wisconsin 53228
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J. Weinert's Cell: 414-698-8371
J. Weinert's E-Mail: weinertj@auswest.net

East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

	Column Reference in OCLD & RCNLD	Amount in $s		
Depreciated Replacement Cost (RCNLD)				
Original Cost (OC)	(9)	43,447,309		
Replacement Cost New (RCN)	(16)	85,964,664		
Replacement Cost New less Depreciation (RCNLD)	(31)	58,078,339	54,930,000.00	Purchase Price
Intangible Assets - Treatment Contracts		1,768,832		
				Economic
Fair Market Vaue (FMV)	(41)	59,847,171	-	Obsolescence
			-	Condition
Depreciated Original Cost (OCLD)				
Original Cost (OC)	(46)	43,447,309		
Original Cost less Depreciation (OCLD)	(57)	33,403,972		
Intangible Assets - Treatment Contracts		1,768,832		
Depreciated Original Cost (OCLD)		35,172,804		
Cost Approach Conclusion		59,847,171		

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Income Approach to Trearment Agreements Valuation

Municipality	2020 YTD Actual	2021 Projected		Expenses	Operating Income	Value Capitalized @ 5.65%
						5.65%
Charlestown Township						
Treatment Charge	80,068					
Subtotal Charlestown Twp	80,068	80,068	1.39%	45,324	34,744	614,938
Malvern Borough						
Treatment Charge	150,300					
Subtotal Malvern Borough	150,300	150,300	2.61%	85,105	65,195	1,153,894
Total Revenues						
Total Revenues	5,428,667	5,759,816		3,260,709		1,768,832

EAST WHITELAND TOWNSHIP WASTEWATER SYSTEM
SUMMARY OF ANALYSIS OF ORIGINAL COST OF WASTEWATER SYSTEM
AS OF JUNE 17, 2021

ACCOUNT	DESCRIPTION		ORIGINAL COST ($)
353.2	LAND AND LAND RIGHTS - COLLECTION	$	668.00
353.3	LAND AND LAND RIGHTS - PUMPING	$	13.00
354.2	STRUCTURES AND IMPROVEMENTS - COLLECTION PLANT	$	11,085,241.50
354.3	STRUCTURES AND IMPROVEMENTS - PUMPING	$	8,005,275.38
360.21	COLLECTION SEWERS - FORCE - MAINS	$	2,304,354.55
361.21	COLLECTION SEWERS - GRAVITY - MAINS	$	10,767,737.96
361.23	COLLECTION SEWERS - GRAVITY - MANHOLES	$	4,350,867.01
363.2	SERVICES TO CUSTOMERS	$	6,619,976.03
365.2	FLOW MEASURING INSTALLATIONS	$	78,670.00
390.7	COMPUTER AND SOFTWARE	$	21,550.00
391.7	TRANSPORTATION EQUIPMENT	$	212,955.81
	SYSTEM TOTAL	$	43,447,309.24

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Cost Approach
Replacement Cost New

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(9)	(10)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Original Cost	Costing Parameter	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
			OC $s			RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input			AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Original Cost	Cost Index Table	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	Land & Land Rights - Original Basin	668.00	USBLS1	2.87	1,920	375.01	720,020
353.30	353.30	Land & Land Rights - Pumping	13.00	USBLS1	2.08	27	498.82	13,468
354.30	354.30	Stuctures & Improvements - Pumping	8,005,275.38	HWW-18	1.52	12,142,235	1.00	12,142,235
360.21	360.21	Collection Sewers - Force - Mains	2,304,354.55	HWW-144	2.59	5,971,267	1.00	5,971,267
361.21	361.21	Collection Sewers - Gravity - Mains	10,767,737.96	HWW-144	2.84	30,582,161	1.00	30,582,161
361.23	361.23	Collection Sewers - Gravity - Manholes	4,350,867.01	HWW-145	2.32	10,108,723	1.00	10,108,723
363.20	363.20	Service Laterals	6,619,976.03	HWW-139	1.85	12,259,833	1.00	12,259,833
365.20	365.20	Flow Measuring Installations Meter Pits	78,670.00	HWW-140	4.95	389,338	1.00	389,338
354.20	354.20	Stuctures & Improvements - Treatment	11,085,241.50	HWW-115	1.22	13,511,701	1.00	13,511,701
390.70	390.70	Office Furniture and Equipment	21,550.00	AUST-115	1.16	25,084	1.00	25,084
391.70	391.70	Transportation Equipment	212,955.81	AUST-14	1.13	240,834	1.00	240,834
		Grand Total	43,447,309.24		1.96	85,233,123	1.01	85,964,664

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

Summary of Account Costing and Depreciation Parameters Used in the Depreciation Original Cost and the Depreciated Replacement Cost New Studies

(1)	(2)	(3)				
		(3a)	(3b)	(3c)	(3d)	(3e)
Account Number	Description	Costing Parameters				Reproduction to Replacement Cost Factor
		Index Series	Table	Line Reference	Lookup	AUS Input
353.20	Land & Land Rights - Original Basin	USBLS	PPI	1.00	USBLS1	1.00
353.30	Land & Land Rights - Pumping	USBLS	PPI	1.00	USBLS1	1.00
354.20	Stuctures & Improvements - Treatment	HW	W-1	15.00	HWW-115	1.00
354.30	Stuctures & Improvements - Pumping	HW	W-1	8.00	HWW-18	1.00
360.21	Collection Sewers - Force - Mains	HW	W-1	44.00	HWW-144	1.00
361.21	Collection Sewers - Gravity - Mains	HW	W-1	44.00	HWW-144	1.00
361.23	Collection Sewers - Gravity - Manholes	HW	W-1	45.00	HWW-145	1.00
363.20	Service Laterals	HW	W-1	39.00	HWW-139	1.00
365.20	Flow Measuring Installations Meter Pits	HW	W-1	40.00	HWW-140	1.00
390.70	Office Furniture and Equipment	AUS	T-1	15.00	AUST-115	1.00
391.70	Transportation Equipment	AUS	T-1	4.00	AUST-14	1.00

Current cost of Easements

Activity	Engineer	Legal	Fees	Total
Determine the facilities for which a Easment is need	1	0	0	
Locate the Land owner for the property needing a easement	1	1	0	
Develop a diagram o the Property, the facilities, and the easement	2	0	0	
Develop the easement document	1	1	0	
Visit the property owner to obtain permission for the easement and sign the easment documentation	4	0	0	
Register the easement with the Municipal Clerk	0	1	250	
Total	9	3	250	
Labor Costs per Hour	54	100		
Total Cost	486	300	250	1,036

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Cost Approach
Replacement Cost New less Depreciation

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(21)	(22)	(23)	(24)	(28)	(29)	(30)	(31)
Account	Description	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa type	Normal Service Life (NSL)	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)
		years	COR $s		years	years	years	% of COR	CORLD $s
Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Calculation	Calculation
Eng Assmnt	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.		Col (16)	AUS Input	AUS Input		Col (21) + (28)	Col (28) / (29)	Col (22) * (30)
Account	Description	Age	RCN	Iowa	NL	Rem Life	Total Life	Condition	CORLD
353.20	Land & Land Rights - Original Basin	31.62	720,020	ZNonDep	-	-	-	-	720,020
353.30	Land & Land Rights - Pumping	20.27	13,468	ZNonDep	-	-	-	-	13,468
354.30	Stuctures & Improvements - Pumping	14.58	12,142,235	R4.0	45.00	31.23	45.82	45.00	8,379,553
360.21	Collection Sewers - Force - Mains	29.95	5,971,267	R3.0	75.00	47.21	77.16	75.00	3,669,861
361.21	Collection Sewers - Gravity - Mains	33.23	30,582,161	R2.5	80.00	50.80	84.03	80.00	18,623,208
361.23	Collection Sewers - Gravity - Manholes	32.21	10,108,723	R2.5	80.00	51.66	83.87	80.00	6,272,518
363.20	Service Laterals	22.75	12,259,833	R3.0	70.00	48.95	71.70	70.00	8,428,787
365.20	Flow Measuring Installations Meter Pits	44.50	389,338	S2.0	30.00	4.50	49.00	30.00	58,401
354.20	Stuctures & Improvements - Treatment	6.78	13,511,701	R4.0	55.00	48.11	54.89	55.00	11,842,733
390.70	Office Furniture and Equipment	12.50	25,084	R3.0	12.00	2.20	14.70	12.00	3,763
391.70	Transportation Equipment	11.45	240,834	R3.0	10.00	2.91	14.35	10.00	66,027
Grand Total		24.57	85,964,664		68.23	46.41	70.71	0.68	58,078,339

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

Summary of Account Costing and Depreciation Parameters Used in the Depreciation Original Cost and the Depreciated Replacement Cost New Studies

(1)	(2)	(3a)	(3b)	(3c)	(3d)	(3e)
Account Number	Description	Costing Parameters				Reproduction to Replacement Cost Factor
		Index Series	Table	Line Reference	Lookup	AUS Input
353.20	Land & Land Rights - Original Basin	USBLS	PPI	1.00	USBLS1	1.00
353.30	Land & Land Rights - Pumping	USBLS	PPI	1.00	USBLS1	1.00
354.20	Stuctures & Improvements - Treatment	HW	W-1	15.00	HWW-115	1.00
354.30	Stuctures & Improvements - Pumping	HW	W-1	8.00	HWW-18	1.00
360.21	Collection Sewers - Force - Mains	HW	W-1	44.00	HWW-144	1.00
361.21	Collection Sewers - Gravity - Mains	HW	W-1	44.00	HWW-144	1.00
361.23	Collection Sewers - Gravity - Manholes	HW	W-1	45.00	HWW-145	1.00
363.20	Service Laterals	HW	W-1	39.00	HWW-139	1.00
365.20	Flow Measuring Installations Meter Pits	HW	W-1	40.00	HWW-140	1.00
390.70	Office Furniture and Equipment	AUS	T-1	15.00	AUST-115	1.00
391.70	Transportation Equipment	AUS	T-1	4.00	AUST-14	1.00

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Cost Approach

Replacement Cost New less Depreciation to Fair Market Value

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36)	(37)	(39)	(40)	(41)
Account	Description	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
		CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Prelim CORLD	EO%	FMV
353.20	Land & Land Rights - Original Basin	720,020	0.00%	720,020
353.30	Land & Land Rights - Pumping	13,468	0.00%	13,468
354.30	Stuctures & Improvements - Pumping	8,379,553	0.00%	8,379,553
360.21	Collection Sewers - Force - Mains	3,669,861	0.00%	3,669,861
361.21	Collection Sewers - Gravity - Mains	18,623,208	0.00%	18,623,208
361.23	Collection Sewers - Gravity - Manholes	6,272,518	0.00%	6,272,518
363.20	Service Laterals	8,428,787	0.00%	8,428,787
365.20	Flow Measuring Installations Meter Pits	58,401	0.00%	58,401
354.20	Stuctures & Improvements - Treatment	11,842,733	0.00%	11,842,733
390.70	Office Furniture and Equipment	3,763	0.00%	3,763
391.70	Transportation Equipment	66,027	0.00%	66,027
	Grand Total	58,078,339	0.00%	58,078,339

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

Summary of Account Costing and Depreciation Parameters Used in the Depreciation Original Cost and the Depreciated Replacement Cost New Studies

(1)	(2)	(3)				
		(3a)	(3b)	(3c)	(3d)	(3e)
Account Number	Description	Costing Parameters				Reproduction to Replacement Cost Factor
		Index Series	Table	Line Reference	Lookup	AUS Input
353.20	Land & Land Rights - Original Basin	USBLS	PPI	1.00	USBLS1	1.00
353.30	Land & Land Rights - Pumping	USBLS	PPI	1.00	USBLS1	1.00
354.20	Stuctures & Improvements - Treatment	HW	W-1	15.00	HWW-115	1.00
354.30	Stuctures & Improvements - Pumping	HW	W-1	8.00	HWW-18	1.00
360.21	Collection Sewers - Force - Mains	HW	W-1	44.00	HWW-144	1.00
361.21	Collection Sewers - Gravity - Mains	HW	W-1	44.00	HWW-144	1.00
361.23	Collection Sewers - Gravity - Manholes	HW	W-1	45.00	HWW-145	1.00
363.20	Service Laterals	HW	W-1	39.00	HWW-139	1.00
365.20	Flow Measuring Installations Meter Pits	HW	W-1	40.00	HWW-140	1.00
390.70	Office Furniture and Equipment	AUS	T-1	15.00	AUST-115	1.00
391.70	Transportation Equipment	AUS	T-1	4.00	AUST-14	1.00

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Original Cost less Depreciation

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(46)	(47)	(48)	(49)	(53)	(54)	(55)	(56)	(57)
Account	Description	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost
Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input			Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)
Acct	Descrip	Original Cost	Iowa	Normal Life	age	Rem Life	Total Life	Theo%	Theo Reserve	Net Book
353.20	Land & Land Rights - Original Basin	668	ZNonDep	-	32.06	-	-	0.00%	-	668
353.30	Land & Land Rights - Pumping	13	ZNonDep	-	20.77	-	-	0.00%	-	13
354.30	Stuctures & Improvements - Pumping	8,005,275	R4.0	45.00	10.35	35.02	45.37	22.00%	1,800,950	6,204,325
360.21	Collection Sewers - Force - Mains	2,304,355	R3.0	75.00	23.91	52.62	76.52	31.00%	712,885	1,591,470
361.21	Collection Sewers - Gravity - Mains	10,767,738	R2.5	80.00	25.14	57.61	82.74	30.00%	3,226,805	7,540,933
361.23	Collection Sewers - Gravity - Manholes	4,350,867	R2.5	80.00	24.70	57.94	82.64	30.00%	1,283,915	3,066,952
363.20	Service Laterals	6,619,976	R3.0	70.00	15.43	55.45	70.88	22.00%	1,424,567	5,195,409
365.20	Flow Measuring Installations Meter Pits	78,670	S2.0	30.00	44.50	4.50	49.00	85.00%	66,870	11,800
354.20	Stuctures & Improvements - Treatment	11,085,242	R4.0	55.00	6.72	48.18	54.89	12.00%	1,357,375	9,727,867
390.70	Office Furniture and Equipment	21,550	R3.0	12.00	12.50	2.20	14.70	85.00%	18,318	3,232
391.70	Transportation Equipment	212,956	R3.0	10.00	11.16	3.04	14.20	71.00%	151,652	61,304
Grand Total		43,447,309		64.92	16.08	50.09	66.17	23.12%	10,043,337	33,403,972

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

Summary of Account Costing and Depreciation Parameters Used in the Depreciation Original Cost and the Depreciated Replacement Cost New Studies

(1)	(2)	(4)		(5)	(6)	
		(4a)	(4b)		(6a)	(6b)
Account Number	Description	Iowa Survivor / Retirement Curve	Normal Service Life	Economic Obsolescence	Tax Depreciation	
			years	% of CORLD	Table	Life
353.20	Land & Land Rights - Original Basin	ZNonDep	0.00	0.00%	Non-Depr	0.00
353.30	Land & Land Rights - Pumping	ZNonDep	0.00	0.00%	Non-Depr	0.00
354.20	Stuctures & Improvements - Treatment	R4.0	55.00	0.00%	MACRS	25.00
354.30	Stuctures & Improvements - Pumping	R4.0	45.00	0.00%	MACRS	25.00
360.21	Collection Sewers - Force - Mains	R3.0	75.00	0.00%	MACRS	25.00
361.21	Collection Sewers - Gravity - Mains	R2.5	80.00	0.00%	MACRS	25.00
361.23	Collection Sewers - Gravity - Manholes	R2.5	80.00	0.00%	MACRS	25.00
363.20	Service Laterals	R3.0	70.00	0.00%	MACRS	25.00
365.20	Flow Measuring Installations Meter Pits	S2.0	30.00	0.00%	MACRS	25.00
390.70	Office Furniture and Equipment	R3.0	12.00	0.00%	MACRS	12.00
391.70	Transportation Equipment	R3.0	10.00	0.00%	MACRS	10.00

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Income Approach

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021
Discounted Cash Flow Analysis

Discount Rate: 7.57%
Capitalization Rate: 5.65%

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Period	Age	Revenues	O&M Expenses	Tax Depreciation	Cash Flow from Operations	Taxable Income before State & Federal Taxes	State and Federal Taxes @ 28.89%	Capital Expenditures	Change in Working Capital	Net Cash Flows	Period Present Worth Factor (PW)	PW of Cashflow	Accumulated PW of Cashflows
					(3)-(4)	(6)-(5)	(7) *28.89%			(3)-(4)-(8)-(9)-(10)		(11)*(12)	Sum (13)
1	0.5	5,759,816	3,305,486	2,193,634	2,454,330	260,696	75,315	806,090	(78,093)	1,651,018	0.964	1,591,581	1,591,581
2	1.5	5,759,816	3,371,594	2,218,239	2,388,222	169,983	49,108	812,135	-	1,526,979	0.896	1,368,173	2,959,754
3	2.5	5,759,816	3,439,026	2,243,274	2,320,790	77,516	22,394	818,227	-	1,480,169	0.833	1,232,981	4,192,735
4	3.5	7,775,752	3,507,806	2,268,741	4,267,946	1,999,205	577,570	824,363	(27,334)	2,893,347	0.775	2,242,344	6,435,079
5	4.5	7,775,752	3,577,962	2,294,647	4,197,790	1,903,143	549,818	830,547	-	2,817,425	0.720	2,028,546	8,463,625
6	5.5	9,719,690	3,649,522	2,320,996	6,070,168	3,749,172	1,083,136	836,776	(26,356)	4,176,612	0.669	2,794,153	11,257,778
7	6.5	9,719,690	3,722,512	2,315,050	5,997,178	3,682,128	1,063,767	721,779	-	4,211,632	0.622	2,619,635	13,877,413
8	7.5	9,719,690	3,796,962	2,338,381	5,922,728	3,584,347	1,035,518	727,193	-	4,160,017	0.579	2,408,650	16,286,063
9	8.5	10,691,659	3,872,902	2,362,106	6,818,757	4,456,651	1,287,526	732,647	(13,178)	4,811,762	0.538	2,588,728	18,874,791
10	9.5	10,691,659	3,950,359	2,386,228	6,741,300	4,355,072	1,258,180	738,141	-	4,744,979	0.500	2,372,490	21,247,281
11	10.5	10,691,659	4,029,366	2,410,754	6,662,293	4,251,539	1,228,270	743,679	-	4,690,344	0.465	2,181,010	23,428,291
12	11.5	11,333,159	4,109,952	2,435,686	7,223,207	4,787,521	1,383,115	749,257	(8,698)	5,099,533	0.432	2,202,998	25,631,289
13	12.5	11,333,159	4,192,151	2,461,029	7,141,008	4,679,979	1,352,046	754,875	-	5,034,087	0.402	2,023,703	27,654,992
14	13.5	11,333,159	4,275,994	2,486,788	7,057,165	4,570,377	1,320,382	760,535	-	4,976,248	0.373	1,856,141	29,511,133
15	14.5	12,013,149	4,361,513	2,512,970	7,651,636	5,138,666	1,484,561	766,240	(9,219)	5,410,054	0.347	1,877,289	31,388,422
16	15.5	12,013,149	4,448,744	2,539,579	7,564,405	5,024,826	1,451,672	771,988	-	5,340,745	0.323	1,725,061	33,113,483
17	16.5	12,013,149	4,537,720	2,566,617	7,475,429	4,908,812	1,418,156	777,777	-	5,279,496	0.300	1,583,849	34,697,332
18	17.5	12,733,938	4,628,474	2,594,092	8,105,464	5,511,372	1,592,235	783,611	(9,773)	5,739,391	0.279	1,601,290	36,298,622
19	18.5	12,733,938	4,721,044	2,622,008	8,012,894	5,390,886	1,557,427	789,487	-	5,665,980	0.259	1,467,489	37,766,111
20 and beyond	19.5	12,733,938	4,815,465	2,650,370	7,918,473	5,268,103	1,521,955	795,408	-	5,601,110	3.184	17,833,934	55,600,045
								15,540,755					

Age 19.5
PW(Age) = 1/(1+Discount Rate)$^{(Age)}$ 0.241
PW to Perpetuity = 1/Capitalization Rate 13.210
$PW_{(20and\ Beyond)}$ = PW to Perpetuity * $PW\ Factor_{(19.5)}$ 3.184

Net Plant		44,551,804		
ADIT		(6,443,119)		
Rate Base		38,108,685	0.241	9,184,193	46,950,304
Annual Plant Construction Inflation Rate		0.0422 Input			
Plant Inflation over 19.5 years		87,105,453	0.241	20,992,414	58,758,525
PP	54,930,000				
OCLD	33,403,972				
PP/OCLD	1.644				
RCNLD	58,078,339				
RCNLD/PP		1.057315474			
		40,292,902.78	0.241	9,710,590	47,476,701
Average					52,196,394

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021
Calculated Rates of Return on Rate Base and Equity
(Years 1 through 20)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Period	Age	Revenues	O&M Expenses	Book Depreciation	Ratemaking Interest Expense	Book Taxable Income (Current + Deferred)	State and Federal Taxes @ 28.89%	Net Operating Income	Net (Equity) Income	Net Plant	Working Capital	Accumulated Deferred Income Taxes (ADIT)	Rate Base	Return on Rate Base	Net Equity	Return on Equity
						(3)-(4)-(5)-(6)	(7) *28.89%	(7)-(8)=(6)	(9) - (6)				(11)+(12)+(13)	(9)/(14)		(10)/(16)
1	0.5	5,759,816	3,305,486	1,258,810	657,820	537,700	155,341	1,040,179	382,359	54,477,279	(78,093)	(270,070)	54,129,116	1.92%	58,107,277	0.66%
2	1.5	5,759,816	3,371,594	1,235,592	637,528	515,102	148,813	1,003,817	366,289	54,053,822	(78,093)	(553,957)	53,421,772	1.88%	58,473,566	0.63%
3	2.5	5,759,816	3,439,026	1,238,242	618,311	464,237	134,118	948,430	330,119	53,633,807	(78,093)	(844,311)	52,711,403	1.80%	58,803,685	0.56%
4	3.5	7,775,752	3,507,806	1,243,980	597,701	2,426,265	700,948	2,323,018	1,725,317	53,214,190	(105,427)	(1,140,364)	51,968,399	4.47%	60,529,002	2.85%
5	4.5	7,775,752	3,577,962	1,253,783	577,777	2,366,230	683,604	2,260,403	1,682,626	52,790,953	(105,427)	(1,441,070)	51,244,456	4.41%	62,211,627	2.70%
6	5.5	9,719,690	3,649,522	1,266,757	558,518	4,244,893	1,226,350	3,577,061	3,018,543	52,360,973	(131,783)	(1,745,640)	50,483,550	7.09%	65,230,171	4.63%
7	6.5	9,719,690	3,722,512	1,263,283	539,901	4,193,994	1,211,645	3,522,250	2,982,349	51,819,469	(131,783)	(2,049,496)	49,638,190	7.10%	68,212,520	4.37%
8	7.5	9,719,690	3,796,962	1,272,326	521,904	4,128,498	1,192,723	3,457,679	2,935,775	51,274,335	(131,783)	(2,357,479)	48,785,073	7.09%	71,148,294	4.13%
9	8.5	10,691,659	3,872,902	1,283,163	504,507	5,031,087	1,453,481	4,082,113	3,577,606	50,723,819	(144,961)	(2,669,186)	47,909,672	8.52%	74,725,900	4.79%
10	9.5	10,691,659	3,950,359	1,294,982	487,690	4,958,628	1,432,548	4,013,770	3,526,080	50,166,978	(144,961)	(2,984,447)	47,037,570	8.53%	78,251,980	4.51%
11	10.5	10,691,659	4,029,366	1,301,010	471,434	4,889,849	1,412,677	3,948,606	3,477,172	49,609,648	(144,961)	(3,305,052)	46,159,635	8.55%	81,729,153	4.25%
12	11.5	11,333,159	4,109,952	1,304,247	455,720	5,463,240	1,578,330	4,340,630	3,884,910	49,054,657	(153,659)	(3,631,925)	45,269,073	9.59%	85,614,062	4.54%
13	12.5	11,333,159	4,192,151	1,317,942	440,529	5,382,537	1,555,015	4,268,051	3,827,522	48,491,590	(153,659)	(3,962,163)	44,375,768	9.62%	89,441,584	4.28%
14	13.5	11,333,159	4,275,994	1,325,816	425,845	5,305,504	1,532,760	4,198,589	3,772,744	47,926,309	(153,659)	(4,297,568)	43,475,082	9.66%	93,214,328	4.05%
15	14.5	12,013,149	4,361,513	1,324,075	411,650	5,915,911	1,709,107	4,618,454	4,206,804	47,368,474	(162,878)	(4,641,040)	42,564,556	10.85%	97,421,132	4.32%
16	15.5	12,013,149	4,448,744	1,333,017	397,928	5,833,460	1,685,287	4,546,101	4,148,173	46,807,445	(162,878)	(4,989,616)	41,654,951	10.91%	101,569,305	4.08%
17	16.5	12,013,149	4,537,720	1,341,466	384,664	5,749,299	1,660,972	4,472,991	4,088,327	46,243,756	(162,878)	(5,343,562)	40,737,316	10.98%	105,657,632	3.87%
18	17.5	12,733,938	4,628,474	1,352,522	371,842	6,381,100	1,843,500	4,909,442	4,537,600	45,674,846	(172,651)	(5,702,252)	39,799,943	12.34%	110,195,233	4.12%
19	18.5	12,733,938	4,721,044	1,349,227	359,447	6,304,220	1,821,289	4,842,378	4,482,931	45,115,106	(172,651)	(6,069,958)	38,872,497	12.46%	114,678,164	3.91%
20	19.5	12,733,938	4,815,465	1,358,709	347,465	6,212,299	1,794,733	4,765,031	4,417,566	44,551,804	(172,651)	(6,443,119)	37,936,034	12.56%	119,095,729	3.71%
										10,736,984.86						

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021
Discounted Cash Flow Analysis

Discount Rate: 7.57%
Capitalization Rate: 5.65%

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Period	Age	Revenues	O&M Expenses	Tax Depreciation	Cash Flow from Operations	Taxable Income before State & Federal Taxes	State and Federal Taxes @ 28.89%	Capital Expenditures	Change in Working Capital	Net Cash Flows	Period Present Worth Factor (PW)	PW of Cashflow	Accumulated PW of Cashflows
					(3)-(4)	(6)-(5)	(7) *28.89%			(3)-(4)-(8)-(9)-(10)		(11)*(12)	Sum (13)
20	19.5	12,733,938	4,815,465	2,650,370	7,918,473	5,268,103	1,521,955	795,408	-	5,601,110	0.241	1,349,868	39,115,979
21	20.5	13,497,974	4,911,774	2,679,185	8,586,200	5,907,015	1,706,537	801,375	(10,359)	6,088,647	0.224	1,363,857	40,479,836
22	21.5	13,497,974	5,010,009	2,708,454	8,487,965	5,779,511	1,669,701	807,384	-	6,010,880	0.208	1,250,263	41,730,099
23	22.5	13,497,974	5,110,209	2,738,187	8,387,765	5,649,578	1,632,163	813,440	-	5,942,162	0.194	1,152,779	42,882,878
24	23.5	14,307,852	5,212,413	2,768,387	9,095,439	6,327,052	1,827,885	819,542	(10,981)	6,458,993	0.180	1,162,619	44,045,497
25	24.5	14,307,852	5,316,662	2,799,057	8,991,190	6,192,133	1,788,907	825,688	-	6,376,595	0.167	1,064,891	45,110,388
26	25.5	14,307,852	5,422,995	831,880	8,884,857	8,052,977	2,326,505	831,880	-	5,726,472	0.156	893,330	46,003,718
27	26.5	15,166,323	5,531,456	838,118	9,634,867	8,796,749	2,541,381	838,118	(11,639)	6,267,007	0.145	908,716	46,912,434
28	27.5	15,166,323	5,642,086	844,404	9,524,237	8,679,833	2,507,604	844,404	-	6,172,229	0.134	827,079	47,739,513
29	28.5	15,166,323	5,754,928	850,737	9,411,395	8,560,658	2,473,174	850,737	-	6,087,484	0.125	760,936	48,500,449
30	29.5	15,166,323	5,870,025	857,118	9,296,298	8,439,180	2,438,079	857,118	-	6,001,101	0.116	696,128	49,196,577
31	30.5	15,166,323	5,987,426	863,547	9,178,897	8,315,350	2,402,305	863,547	-	5,913,045	0.108	638,609	49,835,186
32	31.5	15,166,323	6,107,174	870,023	9,059,149	8,189,126	2,365,839	870,023	-	5,823,287	0.100	582,329	50,417,515
33	32.5	15,166,323	6,229,318	876,548	8,937,005	8,060,457	2,328,666	876,548	-	5,731,791	0.093	533,057	50,950,572
34	33.5	15,166,323	6,353,904	883,122	8,812,419	7,929,297	2,290,774	883,122	-	5,638,523	0.087	490,552	51,441,124
35	34.5	15,166,323	6,480,982	889,746	8,685,341	7,795,595	2,252,147	889,746	-	5,543,448	0.081	449,019	51,890,143
36	35.5	15,166,323	6,610,601	896,419	8,555,722	7,659,303	2,212,773	896,419	-	5,446,530	0.075	408,490	52,298,633
37	36.5	15,166,323	6,742,813	903,142	8,423,510	7,520,368	2,172,634	903,142	-	5,347,734	0.070	374,341	52,672,974
38	37.5	15,166,323	6,877,669	909,916	8,288,654	7,378,738	2,131,717	909,916	-	5,247,021	0.065	341,056	53,014,030
39	38.5	15,166,323	7,015,223	916,739	8,151,100	7,234,361	2,090,007	916,739	-	5,144,354	0.060	308,661	53,322,691
40	39.5	15,166,323	7,155,528	923,616	8,010,795	7,087,179	2,047,486	923,616	-	5,039,693	0.056	282,223	53,604,914
41	40.5	15,166,323	7,298,639	930,542	7,867,684	6,937,142	2,004,140	930,542	-	4,933,002	0.052	256,516	53,861,430
42	41.5	15,166,323	7,444,612	937,521	7,721,711	6,784,190	1,959,952	937,521	-	4,824,238	0.048	231,563	54,092,993
43	42.5	15,166,323	7,593,504	982,336	7,572,819	6,590,483	1,903,990	944,554	-	4,724,275	0.045	212,592	54,305,585
44	43.5	15,166,323	7,745,376	1,027,770	7,420,947	6,393,177	1,846,989	951,639	-	4,622,319	0.042	194,137	54,499,722
45	44.5	15,166,323	7,900,284	1,035,477	7,266,039	6,230,562	1,800,009	958,775	-	4,507,255	0.039	175,783	54,675,505
46	45.5	15,166,323	8,058,289	1,043,243	7,108,034	6,064,791	1,752,118	965,966	-	4,389,950	0.036	158,038	54,833,543
47	46.5	15,166,323	8,219,456	1,051,067	6,946,867	5,895,800	1,703,297	973,210	-	4,270,360	0.034	145,192	54,978,735
48	47.5	15,166,323	8,383,846	1,058,950	6,782,477	5,723,527	1,653,527	980,509	-	4,148,441	0.031	128,602	55,107,337
49	48.5	15,166,323	8,551,523	1,066,893	6,614,800	5,547,907	1,602,790	987,864	-	4,024,146	0.029	116,700	55,224,037
50	49.5	15,166,323	8,722,554	1,074,894	6,443,769	5,368,875	1,551,068	995,272	-	3,897,429	0.027	105,231	55,329,268
51	50.5	15,166,323	8,897,006	1,082,956	6,269,317	5,186,361	1,498,340	1,002,737	-	3,768,240	0.025	94,206	55,423,474
52	51.5	15,166,323	9,074,946	1,091,076	6,091,377	5,000,301	1,444,587	1,010,256	-	3,636,534	0.023	83,640	55,507,114
53	52.5	15,166,323	9,256,446	1,099,260	5,909,877	4,810,617	1,389,787	1,017,833	-	3,502,257	0.022	77,050	55,584,164
54	53.5	15,166,323	9,441,576	1,107,507	5,724,747	4,617,240	1,333,921	1,025,469	-	3,365,357	0.020	67,307	55,651,471
55	54.5	15,166,323	9,630,407	1,115,812	5,535,916	4,420,104	1,276,968	1,033,159	-	3,225,789	0.019	61,290	55,712,761
56	55.5	15,166,323	9,823,016	1,124,182	5,343,307	4,219,125	1,218,905	1,040,909	-	3,083,493	0.017	52,419	55,765,180
57	56.5	15,166,323	10,019,477	1,132,612	5,146,846	4,014,234	1,159,712	1,048,715	-	2,938,419	0.016	47,015	55,812,195
58	57.5	15,166,323	10,219,867	1,141,107	4,946,456	3,805,349	1,099,365	1,056,581	-	2,790,510	0.015	41,858	55,854,053
59	58.5	15,166,323	10,424,265	1,149,665	4,742,058	3,592,393	1,037,842	1,064,505	-	2,639,711	0.014	36,956	55,891,009
60	59.5	15,166,323	10,632,751	1,158,287	4,533,572	3,375,285	975,120	1,072,488	-	2,485,964	0.172	427,586	56,318,595
								38,016,416					

Age				59.5									
PW(Age) = 1/(1+Discount Rate)$^{(Age)}$				0.013				Net Plant		26,481,778			
PW to Perpetuity = 1/Capitalization Rate				13.210				ADIT		(4,411,713)			
$PW_{(20and\ Beyond)}$ = PW to Perpetuity * $PW\ Factor_{(19.5)}$				0.172				Rate Base		22,070,065	0.013	286,911	56,177,920
								Plant Construction Inflation Rate		0.0422 Input			
								Plant Inflation over 59.5 years		258,161,931	0.013	3,356,105	59,247,114
								PP	54,930,000				
								RCNLD	58,078,339				
								RCNLD/PP		1.057315474			
										23,335,020.85	0.013	303,355	56,194,364

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021
Calculated Rates of Return on Rate Base and Equity
(Years 1 through 20)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Period	Age	Revenues	O&M Expenses	Book Depreciation	Ratemaking Interest Expense	Book Taxable Income (Current + Deferred)	State and Federal Taxes @ 28.89%	Net Operating Income	Net (Equity) Income	Net Plant	Working Capital	Accumulated Deferred Income Taxes (ADIT)	Rate Base	Return on Rate Base	Net Equity	Return on Equity
						(3)-(4)-(5)-(6)	(7) *28.89%	(7)-(8)+(6)	(9) - (6)				(11)+(12)+(13)	(9)/(14)		(10)/(16)
20	19.5	12,733,938	4,815,465	1,358,709	347,465	6,212,299	1,794,733	4,765,031	4,417,566	44,551,804	(172,651)	(6,443,119)	37,936,034	12.56%	119,095,729	3.71%
20	20.5	13,497,974	4,911,774	1,366,549	335,883	6,883,768	1,988,721	5,230,930	4,895,047	43,986,630	(183,010)	(6,822,340)	36,981,280	14.14%	123,990,776	3.95%
20	21.5	13,497,974	5,010,009	1,362,390	324,687	6,800,888	1,964,777	5,160,798	4,836,111	43,431,625	(183,010)	(7,211,218)	36,037,397	14.32%	128,826,888	3.75%
20	22.5	13,497,974	5,110,209	1,374,124	313,864	6,699,777	1,935,566	5,078,075	4,764,211	42,870,941	(183,010)	(7,605,296)	35,082,635	14.47%	133,591,099	3.57%
20	23.5	14,307,852	5,212,413	1,374,966	303,402	7,417,071	2,142,792	5,577,681	5,274,279	42,315,517	(193,991)	(8,007,855)	34,113,671	16.35%	138,865,378	3.80%
20	24.5	14,307,852	5,316,662	1,382,034	293,289	7,315,867	2,113,554	5,495,602	5,202,313	41,759,171	(193,991)	(8,417,233)	33,147,947	16.58%	144,067,691	3.61%
20	25.5	14,307,852	5,422,995	1,382,866	283,512	7,218,479	2,085,419	5,416,572	5,133,060	41,208,185	(193,991)	(8,258,054)	32,756,140	16.54%	149,200,751	3.44%
20	26.5	15,166,323	5,531,456	1,394,024	274,062	7,966,781	2,301,603	5,939,240	5,665,178	40,652,279	(205,630)	(8,097,453)	32,349,196	18.36%	154,865,929	3.66%
20	27.5	15,166,323	5,642,086	1,391,056	264,927	7,868,254	2,273,138	5,860,043	5,595,116	40,105,627	(205,630)	(7,939,525)	31,960,472	18.34%	160,461,045	3.49%
20	28.5	15,166,323	5,754,928	1,396,962	256,096	7,758,337	2,241,384	5,773,049	5,516,953	39,559,402	(205,630)	(7,781,721)	31,572,051	18.29%	165,977,998	3.32%
20	29.5	15,166,323	5,870,025	1,398,780	247,559	7,649,959	2,210,073	5,687,445	5,439,886	39,017,740	(205,630)	(7,625,235)	31,186,875	18.24%	171,417,884	3.17%
20	30.5	15,166,323	5,987,426	1,400,275	239,307	7,539,315	2,178,108	5,600,514	5,361,207	38,481,012	(205,630)	(7,470,174)	30,805,208	18.18%	176,779,091	3.03%
20	31.5	15,166,323	6,107,174	1,405,611	231,330	7,422,208	2,144,276	5,509,262	5,277,932	37,945,424	(205,630)	(7,315,443)	30,424,351	18.11%	182,057,023	2.90%
20	32.5	15,166,323	6,229,318	1,398,379	223,619	7,315,007	2,113,305	5,425,321	5,201,702	37,423,593	(205,630)	(7,164,686)	30,053,277	18.05%	187,258,725	2.78%
20	33.5	15,166,323	6,353,904	1,405,952	216,165	7,190,302	2,077,278	5,329,189	5,113,024	36,900,763	(205,630)	(7,013,640)	29,681,493	17.95%	192,371,749	2.66%
20	34.5	15,166,323	6,480,982	1,405,849	208,960	7,070,532	2,042,677	5,236,815	5,027,855	36,384,660	(205,630)	(6,864,538)	29,314,492	17.86%	197,399,604	2.55%
20	35.5	15,166,323	6,610,601	1,405,176	201,994	6,948,552	2,007,437	5,143,109	4,941,115	35,875,903	(205,630)	(6,717,558)	28,952,715	17.76%	202,340,719	2.44%
20	36.5	15,166,323	6,742,813	1,409,408	195,261	6,818,841	1,969,963	5,044,139	4,848,878	35,369,636	(205,630)	(6,571,298)	28,592,708	17.64%	207,189,596	2.34%
20	37.5	15,166,323	6,877,669	1,401,253	188,753	6,698,648	1,935,239	4,952,162	4,763,409	34,878,299	(205,630)	(6,429,350)	28,243,319	17.53%	211,953,005	2.25%
20	38.5	15,166,323	7,015,223	1,412,498	182,461	6,556,141	1,894,069	4,844,533	4,662,072	34,382,540	(205,630)	(6,286,125)	27,890,785	17.37%	216,615,077	2.15%
20	39.5	15,166,323	7,155,528	1,405,954	176,379	6,428,462	1,857,183	4,747,658	4,571,279	33,900,202	(205,630)	(6,146,778)	27,547,794	17.23%	221,186,356	2.07%
20	40.5	15,166,323	7,298,639	1,399,524	170,499	6,297,661	1,819,394	4,648,766	4,478,267	33,431,220	(205,630)	(6,011,289)	27,214,301	17.08%	225,664,623	1.98%
20	41.5	15,166,323	7,444,612	1,392,677	164,816	6,164,218	1,780,843	4,548,191	4,383,375	32,976,064	(205,630)	(5,879,795)	26,890,639	16.91%	230,047,998	1.91%
20	42.5	15,166,323	7,593,504	1,399,178	159,322	6,014,319	1,737,537	4,436,104	4,276,782	32,521,440	(205,630)	(5,759,370)	26,556,440	16.70%	234,324,780	1.83%
20	43.5	15,166,323	7,745,376	1,399,404	154,012	5,867,531	1,695,130	4,326,413	4,172,401	32,073,675	(205,630)	(5,652,005)	26,216,040	16.50%	238,497,181	1.75%
20	44.5	15,166,323	7,900,284	1,386,508	148,878	5,730,653	1,655,586	4,223,945	4,075,067	31,645,943	(205,630)	(5,550,592)	25,889,721	16.32%	242,572,249	1.68%
20	45.5	15,166,323	8,058,289	1,387,556	143,915	5,576,563	1,611,069	4,109,409	3,965,494	31,224,353	(205,630)	(5,451,120)	25,567,603	16.07%	246,537,743	1.61%
20	46.5	15,166,323	8,219,456	1,384,304	139,118	5,423,445	1,566,833	3,995,730	3,856,612	30,813,259	(205,630)	(5,354,848)	25,252,781	15.82%	250,394,355	1.54%
20	47.5	15,166,323	8,383,846	1,382,505	134,481	5,265,491	1,521,200	3,878,772	3,744,291	30,411,263	(205,630)	(5,261,373)	24,944,260	15.55%	254,138,646	1.47%
20	48.5	15,166,323	8,551,523	1,373,723	129,998	5,111,079	1,476,591	3,764,486	3,634,488	30,025,404	(205,630)	(5,172,730)	24,647,044	15.27%	257,773,134	1.41%
20	49.5	15,166,323	8,722,554	1,373,892	125,665	4,944,212	1,428,383	3,641,494	3,515,829	29,646,784	(205,630)	(5,086,350)	24,354,804	14.95%	261,288,963	1.35%
20	50.5	15,166,323	8,897,006	1,371,200	121,476	4,776,641	1,379,971	3,518,146	3,396,670	29,278,321	(205,630)	(5,003,076)	24,069,615	14.62%	264,685,633	1.28%
20	51.5	15,166,323	9,074,946	1,359,051	117,427	4,614,899	1,333,244	3,399,082	3,281,655	28,929,526	(205,630)	(4,925,658)	23,798,238	14.28%	267,967,288	1.22%
20	52.5	15,166,323	9,256,446	1,370,652	113,513	4,425,712	1,278,588	3,260,637	3,147,124	28,576,706	(205,630)	(4,847,253)	23,523,823	13.86%	271,114,411	1.16%
20	53.5	15,166,323	9,441,576	1,357,387	109,729	4,257,631	1,230,030	3,137,330	3,027,601	28,244,788	(205,630)	(4,775,063)	23,264,095	13.49%	274,142,012	1.10%
20	54.5	15,166,323	9,630,407	1,352,196	106,071	4,077,649	1,178,033	3,005,687	2,899,616	27,925,751	(205,630)	(4,706,772)	23,013,349	13.06%	277,041,628	1.05%
20	55.5	15,166,323	9,823,016	1,351,772	102,536	3,888,999	1,123,532	2,868,003	2,765,467	27,614,888	(205,630)	(4,641,021)	22,768,237	12.60%	279,807,095	0.99%
20	56.5	15,166,323	10,019,477	1,348,237	99,118	3,699,491	1,068,783	2,729,826	2,630,708	27,315,366	(205,630)	(4,578,727)	22,531,009	12.12%	282,437,803	0.93%
20	57.5	15,166,323	10,219,867	1,344,043	95,814	3,506,599	1,013,057	2,589,356	2,493,542	27,027,904	(205,630)	(4,520,099)	22,302,175	11.61%	284,931,345	0.88%
20	58.5	15,166,323	10,424,265	1,337,385	92,620	3,312,053	956,852	2,447,821	2,355,201	26,755,024	(205,630)	(4,465,867)	22,083,527	11.08%	287,286,546	0.82%
20	59.5	15,166,323	10,632,751	1,345,734	89,533	3,098,305	895,100	2,292,738	2,203,205	26,481,778	(205,630)	(4,411,713)	21,864,435	10.49%	289,489,751	0.76%

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Discount Rate)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	After-tax Market Capital Cost (2)*(3)*(4a)
Debt	29%	Market	2.79%	Market	28.89%	71.11%	0.58%
Equity	71%	Market	9.85%	Market	0.0%	100.0%	6.99%
Total Capital r	100.0%						**7.57%**
Growth (g)							**1.82%**
Rate without Growth: [(1+r)/(1+g)]-1							**5.65%**

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Capitlization Rate)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	Market Capital Cost (2)*(3)
Debt	29%	Market	2.79%	Market	Not Applicable	Not Applicable	0.81%
Equity	71%	Market	9.85%	Market	Not Applicable	Not Applicable	6.99%
Total Capital r	100.0%						**7.80%**
Growth (g)							**1.82%**
Rate without Growth: [(1+r)/(1+g)]-1							**5.87%**

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Rate of Return on Rate Base)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	Required Return on Rate Base (2)*(3)
Debt	44%	Embedded	3.84%	Embedded	Not Applicable	Not Applicable	1.69%
Equity	56%	Embedded	9.85%	Market	Not Applicable	Not Applicable	5.52%
Total Capital r	100.0%						**7.21%**
Growth (g)						Not Applicable	**0.00%**
Rate without Growth: [(1+r)/(1+g)]-1							**7.21%**

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Market Approach

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Data

Central Tendancy and Reliability Analysis

Market Sales Analysis - PP/OCLD

	Simple	Weighted	
Mean	1.7594	1.8494	
Standard Deviation	0.5882	0.4204	
Median	1.49	1.4355	
Mode	1.4418	1.4418	
Conclusion		1.8494	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity OCLD		35,172,804	Cost Approach - OCLD
Market Value Indication		**65,048,584**	

Market Sales Analysis - PP/CORLD

	Simple	Weighted	
Mean	0.8087	0.9337	
Standard Deviation	0.1746	0.1695	
Median	0.8229	0.7558	
Mode	0.6918	0.6918	
Conclusion		0.9387	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity CORLD		59,847,171	Cost Approach - CORLD
Market Value Indication		**56,178,539**	

Market Sales Analysis - PP/Customer

	Simple	Weighted	
Water Tretment & Distribution			
Mean	6,123	10,962	
Standard Deviation		4,613	
Median	5,021	4,963	
Wastewater Collection & Treatment		16,785	
Mean	9,579		
Standard Deviation		-	AUS Input
Median	8,754		
Wastewater Collection			
Mean	6,507		
Standard Deviation			
Median	6,636		
Watewater Treatment Only			
Mean	3,072		
Standard Deviation			
Median	2,118		
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity Customers		3,918	AUS Input
Wastewater Collection & Treatment PP/Customer		8,754	AUS Input
Collection and Treatement Customers Market Value Indic		**34,298,172**	

Treatement Only Market Value Indication

Treatment Only PP/customer	2,118	AUS Input
Treatment Only Customers	-	AUS Input
Market Value Indication Treatment Only	-	

Total Market Value Indication **34,298,172**

Financial Basis[1]

Financial Markets	Market Value per Share to Book Value per Share	
Market to Book (equity)	3.40	
Market to Book (equity and debt)	2.11	
Use (equity and debt)	2.11	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity OCLD	33,403,972	Cost Approach - OCLD
Market Value Indication	**70,482,381**	

Market Sales Analysis - PP/Cash Flows (EBITDA Period 1-5)

	Simple	Weighted	
Mean	17.48	15.32	
Standard Deviation	5.71	5.10	
Median	17.41	18.13	
Mode	Not Applicable	Not Applicable	
Forecast			
Conclusion		18.00	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity Cash Flows		2,396,686	Income Approach
Market Value Indication		**43,140,348**	

Market Sales Analysis - PP/Cash Flows (EBITDA Period 1-13)

	Simple	Weighted	
Mean	11.62	11.45	
Standard Deviation	2.67	2.14	
Median	11.65	12.07	
Mode	Not Applicable	Not Applicable	
Forecast			
Conclusion		12.00	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity Cash		3,264,195	Income Approach
Market Value Indication		**39,170,336**	

Summary of Market Analyses

Indicators	
OCLD	65,048,584
CORLD	56,178,539
Customers	34,298,172
Cash Flows	
EBITDA Periods 1-5	43,140,348
EBITDA Periods 1-13	39,170,336
Value Line	70,482,381
Mean	51,386,393
Median	49,659,444
Conclusion	**56,178,539**

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Data

RowID	Approximate Date	Buyer	Seller	County	Type of Facility	Initial Purchase Price	Final Purchase Price[1]	Number of Total Customers	Relationship to the passage of Section 1329
1	9/1/2016	PA American Water	City of McKeesport	Allegheny	Wastewater Collection and Treatment	156,000,000	159,000,000	21,953	Post
2	8/1/2016	Aqua PA	New Garden Twp. SA	Chester	Wastewater Collection and Paid for and Owned Treatment	29,500,000	29,500,000	2,106	Post
3	11/16/2016	Aqua PA	Limerick Township	Montgomery	Wastewater Collection and Treatment System	75,100,000	64,373,378	5,434	Post
4	12/10/2017	Aqua PA	East Bradford Township	Chester	Wastewater Collection and paid for treatment	5,000,000	5,000,000	1,248	Post
5	4/20/2018	SUEZ	Mahoning	Carbon	Water Distribution System	4,734,800	4,734,800	1,186	Post
6	4/20/2018	SUEZ	Mahoning	Carbon	Wastewater Collection	4,765,200	4,765,200	1,451	Post
7	6/1/2018	Aqua PA	Cheltenham	Montgomery	Wastewater Collection	50,250,000	50,250,000	10,500	Post
8	11/14/2018	PA American Water	Steelton	Dauphin	Water Distribution and Treatment	22,500,000	21,750,000	2,325	Post
9	1/1/2017	PA American Water	Sadsbury	Chester	Wastewater Collection	9,250,000	8,600,000	998	Post
10	5/28/2018	PA American Water	Exeter	Berks	Wastewater Collection and Treatment	96,000,000	93,500,000	9,000	Post
11	10/29/2018	Aqua PA	East Norriton	Montgomery	Wastewater Collection	21,000,000	21,000,000	4,950	Post
12	9/30/2018	PA American	Kane	McKean	Wastewater Collection and Treatment	17,560,000	17,560,000	2,006	Post
13	12/10/2019	PA American	Royersford	Montgomery	Wastewater Collection and Treatment	13,000,000	13,000,000	1,596	Post
14	12/17/2019	PA American	Valley	Chester	Water Treatment and Distribution System	7,325,000	7,325,000	1,459	Post
15	12/17/2019	PA American	Valley	Chester	Wastewater Collection System	13,950,000	13,950,000	1,644	Post
16	12/31/2019	Aqua PA	Delaware County Regional Wa	Delaware	Wastewater Collection and Treatment	276,500,000	276,500,000	16,473	Post
17	4/28/2020	PA American Water	Upper Pottsgrove	Montgomery	Wastewater Collection	13,750,000	13,750,000	1,428	Post
18	9/17/2020	Aqua PA	Lower Makefield	Bucks	Wastewater Collection and Purchased Treatment Capacity	53,000,000	53,000,000	11,151	Post

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Cost Approach

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East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

	Column Reference in OCLD & RCNLD	Amount in $s		
Depreciated Replacement Cost (RCNLD)				
Original Cost (OC)	(9)	43,447,309		
Replacement Cost New (RCN)	(16)	85,964,664		
Replacement Cost New less Depreciation (RCNLD)	(31)	58,078,339	54,930,000.00	Purchase Price
Intangible Assets - Treatment Contracts		1,768,832		
				Economic
Fair Market Vaue (FMV)	(41)	59,847,171	-	Obsolescence
			-	Condition
Depreciated Original Cost (OCLD)				
Original Cost (OC)	(46)	43,447,309		
Original Cost less Depreciation (OCLD)	(57)	33,403,972		
Intangible Assets - Treatment Contracts		1,768,832		
Depreciated Original Cost (OCLD)		35,172,804		
Cost Approach Conclusion		59,847,171		

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Income Approach to Trearment Agreements Valuation

Municipality	2020 YTD Actual	2021 Projected		Expenses	Operating Income	Value Capitalized @ 5.65%
						5.65%
Charlestown Township						
Treatment Charge	80,068					
Subtotal Charlestown Twp	80,068	80,068	1.39%	45,324	34,744	614,938
Malvern Borough						
Treatment Charge	150,300					
Subtotal Malvern Borough	150,300	150,300	2.61%	85,105	65,195	1,153,894
Total Revenues						
Total Revenues	5,428,667	5,759,816		3,260,709		1,768,832

EAST WHITELAND TOWNSHIP WASTEWATER SYSTEM
SUMMARY OF ANALYSIS OF ORIGINAL COST OF WASTEWATER SYSTEM
AS OF JUNE 17, 2021

ACCOUNT	DESCRIPTION		ORIGINAL COST ($)
353.2	LAND AND LAND RIGHTS - COLLECTION	$	668.00
353.3	LAND AND LAND RIGHTS - PUMPING	$	13.00
354.2	STRUCTURES AND IMPROVEMENTS - COLLECTION PLANT	$	11,085,241.50
354.3	STRUCTURES AND IMPROVEMENTS - PUMPING	$	8,005,275.38
360.21	COLLECTION SEWERS - FORCE - MAINS	$	2,304,354.55
361.21	COLLECTION SEWERS - GRAVITY - MAINS	$	10,767,737.96
361.23	COLLECTION SEWERS - GRAVITY - MANHOLES	$	4,350,867.01
363.2	SERVICES TO CUSTOMERS	$	6,619,976.03
365.2	FLOW MEASURING INSTALLATIONS	$	78,670.00
390.7	COMPUTER AND SOFTWARE	$	21,550.00
391.7	TRANSPORTATION EQUIPMENT	$	212,955.81
	SYSTEM TOTAL	$	43,447,309.24

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Cost Approach
Replacement Cost New

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(9)	(10)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Original Cost	Costing Parameter	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
			OC $s			RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input			AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Original Cost	Cost Index Table	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	Land & Land Rights - Original Basin	668.00	USBLS1	2.87	1,920	375.01	720,020
353.30	353.30	Land & Land Rights - Pumping	13.00	USBLS1	2.08	27	498.82	13,468
354.30	354.30	Stuctures & Improvements - Pumping	8,005,275.38	HWW-18	1.52	12,142,235	1.00	12,142,235
360.21	360.21	Collection Sewers - Force - Mains	2,304,354.55	HWW-144	2.59	5,971,267	1.00	5,971,267
361.21	361.21	Collection Sewers - Gravity - Mains	10,767,737.96	HWW-144	2.84	30,582,161	1.00	30,582,161
361.23	361.23	Collection Sewers - Gravity - Manholes	4,350,867.01	HWW-145	2.32	10,108,723	1.00	10,108,723
363.20	363.20	Service Laterals	6,619,976.03	HWW-139	1.85	12,259,833	1.00	12,259,833
365.20	365.20	Flow Measuring Installations Meter Pits	78,670.00	HWW-140	4.95	389,338	1.00	389,338
354.20	354.20	Stuctures & Improvements - Treatment	11,085,241.50	HWW-115	1.22	13,511,701	1.00	13,511,701
390.70	390.70	Office Furniture and Equipment	21,550.00	AUST-115	1.16	25,084	1.00	25,084
391.70	391.70	Transportation Equipment	212,955.81	AUST-14	1.13	240,834	1.00	240,834
		Grand Total	43,447,309.24		1.96	85,233,123	1.01	85,964,664

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

Summary of Account Costing and Depreciation Parameters Used in the Depreciation Original Cost and the Depreciated Replacement Cost New Studies

(1)	(2)	(3)				
		(3a)	(3b)	(3c)	(3d)	(3e)
Account Number	Description	Costing Parameters				Reproduction to Replacement Cost Factor
		Index Series	Table	Line Reference	Lookup	AUS Input
353.20	Land & Land Rights - Original Basin	USBLS	PPI	1.00	USBLS1	1.00
353.30	Land & Land Rights - Pumping	USBLS	PPI	1.00	USBLS1	1.00
354.20	Stuctures & Improvements - Treatment	HW	W-1	15.00	HWW-115	1.00
354.30	Stuctures & Improvements - Pumping	HW	W-1	8.00	HWW-18	1.00
360.21	Collection Sewers - Force - Mains	HW	W-1	44.00	HWW-144	1.00
361.21	Collection Sewers - Gravity - Mains	HW	W-1	44.00	HWW-144	1.00
361.23	Collection Sewers - Gravity - Manholes	HW	W-1	45.00	HWW-145	1.00
363.20	Service Laterals	HW	W-1	39.00	HWW-139	1.00
365.20	Flow Measuring Installations Meter Pits	HW	W-1	40.00	HWW-140	1.00
390.70	Office Furniture and Equipment	AUS	T-1	15.00	AUST-115	1.00
391.70	Transportation Equipment	AUS	T-1	4.00	AUST-14	1.00

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
Account 353.20		LAND AND LAND RIGHTS - COLLECTION													
353.20	353.20	DEER RUN DRAINAGE AREA (DR)	1976	1976			1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	DEER RUN DRAINAGE AREA (DR)	1976	1976			1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	DEER RUN DRAINAGE AREA (DR)	1976	1976			1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	DEER RUN DRAINAGE AREA (DR)	1976	1976			1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	DEER RUN DRAINAGE AREA (DR)	1976	1976			1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	DEER RUN DRAINAGE AREA (DR)	1976	1976			1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	DEER RUN DRAINAGE AREA (DR)	1976	1976			1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	FLAT ROAD DRAINAGE AREA (FR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	FLAT ROAD DRAINAGE AREA (FR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	FLAT ROAD DRAINAGE AREA (FR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	FLAT ROAD DRAINAGE AREA (FR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	FLAT ROAD DRAINAGE AREA (FR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	2000			1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	2000			1,036	-	USBLS1	172	262	1.523	-	1.000	1,036
353.20	353.20	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	2000			1,036	-	USBLS1	172	262	1.523	-	1.000	1,036
353.20	353.20	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	2000			1,036	-	USBLS1	172	262	1.523	-	1.000	1,036
353.20	353.20	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	2000			1,036	-	USBLS1	172	262	1.523	-	1.000	1,036
353.20	353.20	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	2000			1,036	-	USBLS1	172	262	1.523	-	1.000	1,036
353.20	353.20	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	2000			1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	2000			1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	2000			1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	2000			1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988			1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	KING ROAD DRAINAGE AREA (KR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LAPP ROAD DRAINAGE AREA (LR)	1987	1987				1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
353.20	353.20	LEE BOULEVARD DRAINAGE AREA (LB)	2007	2007				1,036	1.00	USBLS1	207	262	1.266	1	1.000	1,036
353.20	353.20	LEE BOULEVARD DRAINAGE AREA (LB)	2007	2007				1,036	1.00	USBLS1	207	262	1.266	1	1.000	1,036
353.20	353.20	LEE BOULEVARD DRAINAGE AREA (LB)	2007	2007				1,036	1.00	USBLS1	207	262	1.266	1	1.000	1,036
353.20	353.20	LEE BOULEVARD DRAINAGE AREA (LB)	2007	2007				1,036	1.00	USBLS1	207	262	1.266	1	1.000	1,036
353.20	353.20	LEE BOULEVARD DRAINAGE AREA (LB)	2007	2007				1,036	1.00	USBLS1	207	262	1.266	1	1.000	1,036
353.20	353.20	LEE BOULEVARD DRAINAGE AREA (LB)	2007	2007				1,036	1.00	USBLS1	207	262	1.266	1	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000				1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	-	USBLS1	118	262	2.220	-	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	-	USBLS1	118	262	2.220	-	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15) Reproduction Cost New (RCN) to Replacement Cost New (COR)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)		Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	-	USBLS1	118	262	2.220	-	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	-	USBLS1	118	262	2.220	-	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	-	USBLS1	118	262	2.220	-	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	-	USBLS1	118	262	2.220	-	1.000	1,036

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00 USBLS1	118	262	2.220	2	1.000	1,036

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	-	USBLS1	118	262	2.220	-	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	1988				1,036	1.00	USBLS1	118	262	2.220	2	1.000	1,036
353.20	353.20	MEADOW VIEW DRAINAGE AREA (MV)	1980	1980				1,036	1.00	USBLS1	82	262	3.195	3	1.000	1,036
353.20	353.20	MEADOW VIEW DRAINAGE AREA (MV)	1980	1980				1,036	1.00	USBLS1	82	262	3.195	3	1.000	1,036
353.20	353.20	MEADOW VIEW DRAINAGE AREA (MV)	1980	1980				1,036	1.00	USBLS1	82	262	3.195	3	1.000	1,036
353.20	353.20	MEADOW VIEW DRAINAGE AREA (MV)	1980	1980				1,036	1.00	USBLS1	82	262	3.195	3	1.000	1,036
353.20	353.20	MEADOW VIEW DRAINAGE AREA (MV)	1980	1980				1,036	1.00	USBLS1	82	262	3.195	3	1.000	1,036
353.20	353.20	MEADOW VIEW DRAINAGE AREA (MV)	1980	1980				1,036	1.00	USBLS1	82	262	3.195	3	1.000	1,036
353.20	353.20	MEADOW VIEW DRAINAGE AREA (MV)	1980	1980				1,036	1.00	USBLS1	82	262	3.195	3	1.000	1,036
353.20	353.20	MEADOW VIEW DRAINAGE AREA (MV)	1980	1980				1,036	1.00	USBLS1	82	262	3.195	3	1.000	1,036
353.20	353.20	MEADOW VIEW DRAINAGE AREA (MV)	1980	1980				1,036	1.00	USBLS1	82	262	3.195	3	1.000	1,036
353.20	353.20	MEADOW VIEW DRAINAGE AREA (MV)	1980	1980				1,036	1.00	USBLS1	82	262	3.195	3	1.000	1,036
353.20	353.20	MEADOW VIEW DRAINAGE AREA (MV)	1980	1980				1,036	-	USBLS1	82	262	3.195	-	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	-	USBLS1	57	262	4.596	-	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976			1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036

Cost Approach

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	-	USBLS1	57	262	4.596	-	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	-	USBLS1	57	262	4.596	-	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	-	USBLS1	57	262	4.596	-	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	-	USBLS1	57	262	4.596	-	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	-	USBLS1	57	262	4.596	-	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	-	USBLS1	57	262	4.596	-	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	MILL LANE DRAINAGE AREA (ML)	1976	1976				1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	PLANEBROOK DRAINAGE AREA (PB)	2018	2018				1,036	1.00	USBLS1	251	262	1.044	1	1.000	1,036
353.20	353.20	PLANEBROOK DRAINAGE AREA (PB)	2018	2018				1,036	1.00	USBLS1	251	262	1.044	1	1.000	1,036
353.20	353.20	PLANEBROOK DRAINAGE AREA (PB)	2018	2018				1,036	1.00	USBLS1	251	262	1.044	1	1.000	1,036
353.20	353.20	PLANEBROOK DRAINAGE AREA (PB)	2018	2018				1,036	1.00	USBLS1	251	262	1.044	1	1.000	1,036
353.20	353.20	PLANEBROOK DRAINAGE AREA (PB)	2018	2018				1,036	1.00	USBLS1	251	262	1.044	1	1.000	1,036
353.20	353.20	PLANEBROOK DRAINAGE AREA (PB)	2018	2018				1,036	1.00	USBLS1	251	262	1.044	1	1.000	1,036
353.20	353.20	PLANEBROOK DRAINAGE AREA (PB)	2018	2018				1,036	1.00	USBLS1	251	262	1.044	1	1.000	1,036
353.20	353.20	PLANEBROOK DRAINAGE AREA (PB)	2018	2018				1,036	1.00	USBLS1	251	262	1.044	1	1.000	1,036
353.20	353.20	PLANEBROOK DRAINAGE AREA (PB)	2018	2018				1,036	1.00	USBLS1	251	262	1.044	1	1.000	1,036
353.20	353.20	PLANEBROOK DRAINAGE AREA (PB)	2018	2018				1,036	-	USBLS1	251	262	1.044	-	1.000	1,036
353.20	353.20	PLANEBROOK DRAINAGE AREA (PB)	2018	2018				1,036	1.00	USBLS1	251	262	1.044	1	1.000	1,036
353.20	353.20	PLANEBROOK DRAINAGE AREA (PB)	2018	2018				1,036	1.00	USBLS1	251	262	1.044	1	1.000	1,036
353.20	353.20	PLANEBROOK DRAINAGE AREA (PB)	2018	2018				1,036	1.00	USBLS1	251	262	1.044	1	1.000	1,036
353.20	353.20	PLANEBROOK DRAINAGE AREA (PB)	2018	2018				1,036	1.00	USBLS1	251	262	1.044	1	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	-	USBLS1	163	262	1.607	-	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s				~	RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
353.20	353.20	WESTGATE DRAINAGE AREA (WG)	1998	1998				1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
	353.20	353.20 WESTGATE DRAINAGE AREA (WG)	1998	1998			1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
	353.20	353.20 WILBURDALE ROAD DRAINAGE AREA (WB)	2017	2017			1,036	1.00	USBLS1	245	262	1.069	1	1.000	1,036
	353.20	353.20 WILBURDALE ROAD DRAINAGE AREA (WB)	2017	2017			1,036	1.00	USBLS1	245	262	1.069	1	1.000	1,036
	353.20	353.20 WILBURDALE ROAD DRAINAGE AREA (WB)	2017	2017			1,036	1.00	USBLS1	245	262	1.069	1	1.000	1,036
	353.20	353.20 WILBURDALE ROAD DRAINAGE AREA (WB)	2017	2017			1,036	1.00	USBLS1	245	262	1.069	1	1.000	1,036
	353.20	353.20 WILBURDALE ROAD DRAINAGE AREA (WB)	2017	2017			1,036	1.00	USBLS1	245	262	1.069	1	1.000	1,036
Subtotal 353.20		LAND AND LAND RIGHTS - COLLECTION						668.00					**1,920**		**720,020**
Saccout 353.3		LAND AND LAND RIGHTS - PUMPING													
	353.30	353.30 DEER RUN DRAINAGE AREA (DR)	1976	1976			1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
	353.30	353.30 HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	2000			1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
	353.30	353.30 KING ROAD DRAINAGE AREA (KR)	2004	2004			1,036	1.00	USBLS1	189	262	1.386	1	1.000	1,036
	353.30	353.30 LAPP ROAD DRAINAGE AREA (LR)	1987	1987			1,036	1.00	USBLS1	114	262	2.298	2	1.000	1,036
	353.30	353.30 LEE BOULEVARD DRAINAGE AREA (LB)	2007	2007			1,036	1.00	USBLS1	207	262	1.266	1	1.000	1,036
	353.30	353.30 MALVERN HUNT DRAINAGE AREA (MAL)	2000	2000			1,036	1.00	USBLS1	172	262	1.523	2	1.000	1,036
	353.30	353.30 MEADOW VIEW DRAINAGE AREA (MV)	1980	1980			1,036	1.00	USBLS1	82	262	3.195	3	1.000	1,036
	353.30	353.30 MILL LANE DRAINAGE AREA (ML)	1976	1976			1,036	1.00	USBLS1	57	262	4.596	5	1.000	1,036
	353.30	353.30 0	2020	2020			1,036	1.00	USBLS1	259	262	1.012	1	1.000	1,036
	353.30	353.30 PLANEBROOK DRAINAGE AREA (PB)	2018	2018			1,036	1.00	USBLS1	251	262	1.044	1	1.000	1,036
	353.30	353.30 0	2020	2020			1,036	1.00	USBLS1	259	262	1.012	1	1.000	1,036
	353.30	353.30 WESTGATE DRAINAGE AREA (WG)	1998	1998			1,036	1.00	USBLS1	163	262	1.607	2	1.000	1,036
	353.30	353.30 WILBURDALE ROAD DRAINAGE AREA (WB)	2017	2017			1,036	1.00	USBLS1	245	262	1.069	1	1.000	1,036
Subtotal 353.3		**LAND AND LAND RIGHTS - PUMPING**						**13.00**					**27**		**13,468**
Subtotal 354.4		STRUCTURES AND IMPROVEMENTS - PUMPING													
	354.30	354.30 (P.S. 1) Deer Run	1976	1976				78,670.00	HWW-18	130	762	5.862	461,164	1.000	461,164
	354.30	354.30 (P.S. 1) Deer Run	2018	2018				51,550.00	HWW-18	704	762	1.082	55,777	1.000	55,777
	354.30	354.30 (P.S. 11) Hillbrook Circle	2000	2000				464,526.14	HWW-18	362	762	2.105	977,828	1.000	977,828
	354.30	354.30 (P.S. 12) King Road	2004	2004				233,129.00	HWW-18	420.8	762	1.811	422,197	1.000	422,197
	354.30	354.30 (P.S. 13) Malvern Hunt	2000	2000				374,100.00	HWW-18	362	762	2.105	787,481	1.000	787,481
	354.30	354.30 (P.S. 14) Planebrook Road	2018	2018				353,800.00	HWW-18	704	762	1.082	382,812	1.000	382,812
	354.30	354.30 (P.S. 14) Planebrook Road	2018	2018				79,730.00	HWW-18	704	762	1.082	86,268	1.000	86,268
	354.30	354.30 (P.S. 2) Mill Lane	2014	2014				3,001,023.00	HWW-18	630.8	762	1.208	3,625,236	1.000	3,625,236
	354.30	354.30 (P.S. 2) Mill Lane	1976	1976				40,000.00	HWW-18	130	762	5.862	234,480	1.000	234,480
	354.30	354.30 (P.S. 3) Wilburdale	2017	2017				469,600.00	HWW-18	675.3	762	1.128	529,709	1.000	529,709
	354.30	354.30 (P.S. 3) Wilburdale	2017	2017				95,500.00	HWW-18	675.3	762	1.128	107,724	1.000	107,724
	354.30	354.30 (P.S. 4) Lee Boulevard	2007	2007				556,117.00	HWW-18	496.3	762	1.535	853,640	1.000	853,640
	354.30	354.30 0	2002	2002				49,664.45	HWW-18	388.8	762	1.960	97,342	1.000	97,342
	354.30	354.30 (P.S. 5) Meadowview	1980	1980				106,067.00	HWW-18	181	762	4.210	446,542	1.000	446,542
	354.30	354.30 (P.S. 6) Flat Road	2019	2019				352,000.00	HWW-18	715.5	762	1.065	374,880	1.000	374,880
	354.30	354.30 (P.S. 7) Lapp Road	1987	1987				179,265.00	HWW-18	239	762	3.188	571,497	1.000	571,497
	354.30	354.30 (P.S. 7) Lapp Road	2006	2006				131,119.57	HWW-18	466.3	762	1.634	214,249	1.000	214,249
	354.30	354.30 (P.S. 8) Westgate	1988	1988				78,824.35	HWW-18	251	762	3.036	239,311	1.000	239,311
	354.30	354.30 (P.S. 8) Westgate	2001	2001				89,972.00	HWW-18	378	762	2.016	181,384	1.000	181,384
	354.30	354.30 0	2007	2007				23,866.00	HWW-18	496.3	762	1.535	36,634	1.000	36,634

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
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Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
354.30	354.30	0	2009	2009				53,907.50	HWW-18	543.8	762	1.401	75,524	1.000	75,524
354.30	354.30	0	2014	2014				1,142,844.37	HWW-18	630.8	762	1.208	1,380,556	1.000	1,380,556
Subtotal 354.30		**STRUCTURES AND IMPROVEMENTS - PUMPING**						**8,005,275.38**					**12,142,235**		**12,142,235**
Account 360.21		COLLECTION SEWERS - FORCE - MAINS													
360.21	360.21	(P.S. 1) Deer Run FM - 4" ACP	1976	1976		830		31,269.40	HWW-144	129.8	674.5	5.196	162,476	1.000	162,476
360.21	360.21	(P.S. 11) Hillbrook Circle FM - 4" PVC	2000	2000		785		85,964.86	HWW-144	313.6	674.5	2.151	184,910	1.000	184,910
360.21	360.21	(P.S. 12) King Road FM - 4" PVC	2004	2004		2,400		286,021.50	HWW-144	362.6	674.5	1.860	532,000	1.000	532,000
360.21	360.21	(P.S. 13) Malvern Hunt FM - 6" DIP	2000	2000		2,860		279,122.94	HWW-144	313.6	674.5	2.151	600,393	1.000	600,393
360.21	360.21	(P.S. 14) Planebrook FM - 8" PVC	2017	2017		2,545		443,454.75	HWW-144	573.5	674.5	1.176	521,503	1.000	521,503
360.21	360.21	(P.S. 2) Mill Lane FM - 14" DIP	1976	1976		3,400		193,322.11	HWW-144	129.8	674.5	5.196	1,004,502	1.000	1,004,502
360.21	360.21	(P.S. 3) Wilburdale Rd FM - 10" PVC Replacement	2016	2016		1,935		89,428.47	HWW-144	567.3	674.5	1.189	106,330	1.000	106,330
360.21	360.21	(P.S. 4) Lee Blvd FM - 8" DIP	1987	1987		3,310		276,127.99	HWW-144	217.2	674.5	3.105	857,377	1.000	857,377
360.21	360.21	(P.S. 5) Meadow View FM - 4" ACP	1980	1980		1,245		63,237.44	HWW-144	173	674.5	3.899	246,563	1.000	246,563
360.21	360.21	(P.S. 6) Flat Rd FM - 6" ACP	1979	1979		1,655		77,969.12	HWW-144	160.5	674.5	4.202	327,626	1.000	327,626
360.21	360.21	(P.S. 7) Lapp Rd FM - 6" PVC	1987	1987		3,715		340,443.41	HWW-144	217.2	674.5	3.105	1,057,077	1.000	1,057,077
360.21	360.21	(P.S. 8) Westgate FM - 8" PVC	1988	1988		1,620		137,992.57	HWW-144	251.2	674.5	2.685	370,510	1.000	370,510
Subtotal 360.21		**COLLECTION SEWERS - FORCE - MAINS**						**2,304,354.55**					**5,971,267**		**5,971,267**
Account 361.21		COLLECTION SEWERS - GRAVITY - MAINS													
361.21	361.21	18" ACP	1975	1975		1,842		58,356.08	HWW-144	122	674.5	5.529	322,651	1.000	322,651
361.21	361.21	12" ACP	1975	1975		2,830		68,677.29	HWW-144	122	674.5	5.529	379,717	1.000	379,717
361.21	361.21	12" ACP	1978	1978		2,027		61,740.49	HWW-144	145.4	674.5	4.639	286,414	1.000	286,414
361.21	361.21	10" ACP	1975	1975		4,486		75,582.08	HWW-144	122	674.5	5.529	417,893	1.000	417,893
361.21	361.21	10" ACP	1977	1977		2,296		45,057.04	HWW-144	137.1	674.5	4.920	221,681	1.000	221,681
361.21	361.21	10" ACP	2012	2012		109		7,711.37	HWW-144	564.1	674.5	1.196	9,223	1.000	9,223
361.21	361.21	36" ACP	1967	1967		157		3,625.87	HWW-144	73.6	674.5	9.164	33,227	1.000	33,227
361.21	361.21	27" ACP	1967	1967		3,833		67,279.78	HWW-144	73.6	674.5	9.164	616,552	1.000	616,552
361.21	361.21	24" ACP	1967	1967		243		3,557.15	HWW-144	73.6	674.5	9.164	32,598	1.000	32,598
361.21	361.21	24" ACP	1975	1975		632		19,081.73	HWW-144	122	674.5	5.529	105,503	1.000	105,503
361.21	361.21	10" PVC	1991	1991		1,427		52,555.09	HWW-144	263.4	674.5	2.561	134,594	1.000	134,594
361.21	361.21	10" PVC	1992	1992		1,054		40,012.42	HWW-144	253.3	674.5	2.663	106,553	1.000	106,553
361.21	361.21	10" PVC	1993	1993		183		7,273.99	HWW-144	264.5	674.5	2.550	18,549	1.000	18,549
361.21	361.21	10" PVC	2007	2007		8,646		524,646.93	HWW-144	465.8	674.5	1.448	759,689	1.000	759,689
361.21	361.21	10" PVC	2019	2019		492		42,281.39	HWW-144	601.5	674.5	1.121	47,397	1.000	47,397
361.21	361.21	10" PVC	2020	2020		1,275		111,336.08	HWW-144	631.9	674.5	1.067	118,796	1.000	118,796
361.21	361.21	8" ACP	1951	1951		719		2,995.29	HWW-144	47.5	674.5	14.200	42,533	1.000	42,533
361.21	361.21	8" ACP	1954	1954		2,913		14,038.43	HWW-144	52.1	674.5	12.946	181,742	1.000	181,742
361.21	361.21	8" ACP	1967	1967		3,298		27,177.06	HWW-144	73.6	674.5	9.164	249,051	1.000	249,051
361.21	361.21	8" ACP	1970	1970		5,901		62,533.31	HWW-144	82.9	674.5	8.136	508,771	1.000	508,771
361.21	361.21	8" ACP	1971	1971		2,094		25,402.60	HWW-144	92.5	674.5	7.292	185,236	1.000	185,236
361.21	361.21	8" ACP	1972	1972		1,725		23,205.13	HWW-144	97.5	674.5	6.918	160,533	1.000	160,533
361.21	361.21	8" ACP	1973	1973		6,653		96,745.87	HWW-144	100	674.5	6.745	652,551	1.000	652,551
361.21	361.21	8" ACP	1974	1974		6,831		105,874.72	HWW-144	112.6	674.5	5.990	634,190	1.000	634,190
361.21	361.21	8" ACP	1975	1975		49,832		845,813.84	HWW-144	122	674.5	5.529	4,676,505	1.000	4,676,505
361.21	361.21	8" ACP	1977	1977		7,370		145,673.10	HWW-144	137.1	674.5	4.920	716,712	1.000	716,712

Cost Approach

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
361.21	361.21	8" ACP	1978	1978		16,989		361,879.62	HWW-144	145.4	674.5	4.639	1,678,760	1.000	1,678,760
361.21	361.21	8" ACP	1979	1979		4,942		113,876.97	HWW-144	160.5	674.5	4.202	478,511	1.000	478,511
361.21	361.21	8" ACP	1981	1981		7,549		204,755.08	HWW-144	185.5	674.5	3.636	744,489	1.000	744,489
361.21	361.21	8" ACP	2012	2012		430		30,744.03	HWW-144	564.1	674.5	1.196	36,770	1.000	36,770
361.21	361.21	8" PVC	1970	1970		346		3,668.20	HWW-144	82.9	674.5	8.136	29,844	1.000	29,844
361.21	361.21	8" PVC	1983	1983		1,492		46,541.18	HWW-144	199.6	674.5	3.379	157,263	1.000	157,263
361.21	361.21	8" PVC	1984	1984		3,842		122,229.73	HWW-144	200.5	674.5	3.364	411,181	1.000	411,181
361.21	361.21	8" PVC	1985	1985		794		25,549.19	HWW-144	204.6	674.5	3.297	84,236	1.000	84,236
361.21	361.21	8" PVC	1987	1987		13,171		445,308.18	HWW-144	217.2	674.5	3.105	1,382,682	1.000	1,382,682
361.21	361.21	8" PVC	1988	1988		16,918		586,647.87	HWW-144	251.2	674.5	2.685	1,575,150	1.000	1,575,150
361.21	361.21	8" PVC	1990	1990		8,876		322,292.20	HWW-144	268.4	674.5	2.513	809,920	1.000	809,920
361.21	361.21	8" PVC	1991	1991		3,676		136,365.76	HWW-144	263.4	674.5	2.561	349,233	1.000	349,233
361.21	361.21	8" PVC	1992	1992		1,919		73,418.31	HWW-144	253.3	674.5	2.663	195,513	1.000	195,513
361.21	361.21	8" PVC	1993	1993		2,966		118,574.34	HWW-144	264.5	674.5	2.550	302,365	1.000	302,365
361.21	361.21	8" PVC	1994	1994		1,176		48,812.47	HWW-144	264.7	674.5	2.548	124,374	1.000	124,374
361.21	361.21	8" PVC	1996	1996		409		17,626.35	HWW-144	284.9	674.5	2.367	41,722	1.000	41,722
361.21	361.21	8" PVC	1997	1997		4,377		195,693.34	HWW-144	291.1	674.5	2.317	453,421	1.000	453,421
361.21	361.21	8" PVC	1998	1998		3,549		161,226.12	HWW-144	295	674.5	2.286	368,563	1.000	368,563
361.21	361.21	8" PVC	1999	1999		4,126		191,811.88	HWW-144	299.7	674.5	2.251	431,769	1.000	431,769
361.21	361.21	8" PVC	2000	2000		17,626		841,402.41	HWW-144	313.6	674.5	2.151	1,809,857	1.000	1,809,857
361.21	361.21	8" PVC	2001	2001		697		33,916.65	HWW-144	327.2	674.5	2.061	69,902	1.000	69,902
361.21	361.21	8" PVC	2002	2002		11,437		573,796.70	HWW-144	338.8	674.5	1.991	1,142,429	1.000	1,142,429
361.21	361.21	8" PVC	2003	2003		2,539		130,439.13	HWW-144	341	674.5	1.978	258,009	1.000	258,009
361.21	361.21	8" PVC	2004	2004		2,760		150,691.88	HWW-144	362.6	674.5	1.860	280,287	1.000	280,287
361.21	361.21	8" PVC	2005	2005		18,989		1,084,944.19	HWW-144	393.8	674.5	1.713	1,858,509	1.000	1,858,509
361.21	361.21	8" PVC	2006	2006		423		25,135.71	HWW-144	433.5	674.5	1.556	39,111	1.000	39,111
361.21	361.21	8" PVC	2007	2007		784		47,935.30	HWW-144	465.8	674.5	1.448	69,410	1.000	69,410
361.21	361.21	8" PVC	2011	2011		1,899		132,177.28	HWW-144	540	674.5	1.249	165,089	1.000	165,089
361.21	361.21	8" PVC	2012	2012		2,913		208,075.48	HWW-144	564.1	674.5	1.196	248,858	1.000	248,858
361.21	361.21	8" PVC	2013	2013		380		27,836.86	HWW-144	551.7	674.5	1.223	34,044	1.000	34,044
361.21	361.21	8" PVC	2014	2014		111		8,385.04	HWW-144	556	674.5	1.213	10,171	1.000	10,171
361.21	361.21	8" PVC	2017	2017		3,251		267,817.00	HWW-144	573.5	674.5	1.176	314,953	1.000	314,953
361.21	361.21	8" PVC	2018	2018		1,398		118,706.70	HWW-144	587.2	674.5	1.149	136,394	1.000	136,394
361.21	361.21	8" DIP	1954	1954		862		4,154.49	HWW-144	52.1	674.5	12.946	53,784	1.000	53,784
361.21	361.21	8" DIP	1975	1975		274		4,654.72	HWW-144	122	674.5	5.529	25,736	1.000	25,736
361.21	361.21	8" CIP	1975	1975		123		2,079.98	HWW-144	122	674.5	5.529	11,500	1.000	11,500
361.21	361.21	20" ACP	1975	1975		4,544		129,196.92	HWW-144	122	674.5	5.529	714,330	1.000	714,330
361.21	361.21	16" ACP	1975	1975		349		9,050.37	HWW-144	122	674.5	5.529	50,039	1.000	50,039
361.21	361.21	12" PVC	1970	1970		1,503		22,773.69	HWW-144	82.9	674.5	8.136	185,287	1.000	185,287
361.21	361.21	12" PVC	2012	2012		81		8,301.62	HWW-144	564.1	674.5	1.196	9,929	1.000	9,929
361.21	361.21	12" PVC	2016	2016		1,348		152,918.81	HWW-144	567.3	674.5	1.189	181,820	1.000	181,820
361.21	361.21	15" PVC	2013	2013		916		81,957.99	HWW-144	551.7	674.5	1.223	100,235	1.000	100,235
361.21	361.21	15" PVC	2017	2017		2,253		226,562.48	HWW-144	573.5	674.5	1.176	266,437	1.000	266,437
361.21	361.21	18" PVC	1988	1988		1,496		96,804.77	HWW-144	251.2	674.5	2.685	259,921	1.000	259,921
361.21	361.21	18" PVC	2013	2013		2,835		387,731.42	HWW-144	551.7	674.5	1.223	474,196	1.000	474,196
361.21	361.21	18" PVC	2014	2014		139		19,571.48	HWW-144	556	674.5	1.213	23,740	1.000	23,740

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
361.21	361.21	18" PVC	2017	2017		621		95,579.17	HWW-144	573.5	674.5	1.176	112,401	1.000	112,401
361.21	361.21	10" DI	2020	2020		93		8,118.65	HWW-144	631.9	674.5	1.067	8,663	1.000	8,663
361.21	361.21	8" CSP	1978	1978		1,049		22,339.74	HWW-144	145.4	674.5	4.639	103,634	1.000	103,634
361.21	361.21	8" CSP	1983	1983		2,490		77,680.40	HWW-144	199.6	674.5	3.379	262,482	1.000	262,482
361.21	361.21	20" PVC	2014	2014		98		12,406.81	HWW-144	556	674.5	1.213	15,049	1.000	15,049
361.21	361.21	21" PVC	2014	2014		74		9,339.15	HWW-144	556	674.5	1.213	11,328	1.000	11,328
Subtotal 261.21		**COLLECTION SEWERS - GRAVITY - MAINS**						**10,767,737.96**					**30,582,161**		**30,582,161**
Account 361.23		COLLECTION SEWERS - GRAVITY - MANHOLES													
361.23	361.23	Manholes	1951	1951		6		2,077.71	HWW-145	41.3	586.4	14.199	29,501	1.000	29,501
361.23	361.23	Manholes	1954	1954		22		8,810.81	HWW-145	47.3	586.4	12.397	109,228	1.000	109,228
361.23	361.23	Manholes	1967	1967		35		23,972.06	HWW-145	65.6	586.4	8.939	214,286	1.000	214,286
361.23	361.23	Manholes	1970	1970		28		24,659.55	HWW-145	82	586.4	7.151	176,340	1.000	176,340
361.23	361.23	Manholes	1971	1971		9		9,074.19	HWW-145	90.4	586.4	6.487	58,864	1.000	58,864
361.23	361.23	Manholes	1972	1972		5		5,589.66	HWW-145	94.6	586.4	6.199	34,650	1.000	34,650
361.23	361.23	Manholes	1973	1973		40		48,339.55	HWW-145	100	586.4	5.864	283,463	1.000	283,463
361.23	361.23	Manholes	1974	1974		30		38,646.13	HWW-145	112	586.4	5.236	202,351	1.000	202,351
361.23	361.23	Manholes	1975	1975		297		418,962.34	HWW-145	125.1	586.4	4.687	1,963,676	1.000	1,963,676
361.23	361.23	Manholes	1977	1977		50		82,138.97	HWW-145	138.5	586.4	4.234	347,776	1.000	347,776
361.23	361.23	Manholes	1978	1978		83		146,936.93	HWW-145	148.4	586.4	3.951	580,548	1.000	580,548
361.23	361.23	Manholes	1979	1979		24		45,962.11	HWW-145	166	586.4	3.533	162,384	1.000	162,384
361.23	361.23	Manholes	1980	1980		2		4,128.63	HWW-145	185.7	586.4	3.158	13,038	1.000	13,038
361.23	361.23	Manholes	1981	1981		36		81,156.88	HWW-145	205.4	586.4	2.855	231,703	1.000	231,703
361.23	361.23	Manholes	1983	1983		17		44,080.82	HWW-145	229.5	586.4	2.555	112,627	1.000	112,627
361.23	361.23	Manholes	1984	1984		24		63,456.18	HWW-145	237.5	586.4	2.469	156,673	1.000	156,673
361.23	361.23	Manholes	1985	1985		5		13,376.28	HWW-145	248.1	586.4	2.364	31,622	1.000	31,622
361.23	361.23	Manholes	1987	1987		67		188,257.68	HWW-145	255.6	586.4	2.294	431,863	1.000	431,863
361.23	361.23	Manholes	1988	1988		89		256,487.24	HWW-145	260.6	586.4	2.250	577,096	1.000	577,096
361.23	361.23	Manholes	1990	1990		40		120,708.58	HWW-145	263	586.4	2.230	269,180	1.000	269,180
361.23	361.23	Manholes	1991	1991		30		92,502.00	HWW-145	273	586.4	2.148	198,694	1.000	198,694
361.23	361.23	Manholes	1992	1992		16		50,864.94	HWW-145	276	586.4	2.125	108,088	1.000	108,088
361.23	361.23	Manholes	1993	1993		19		63,128.39	HWW-145	282.2	586.4	2.078	131,181	1.000	131,181
361.23	361.23	Manholes	1994	1994		7		24,141.72	HWW-145	290.8	586.4	2.017	48,694	1.000	48,694
361.23	361.23	Manholes	1996	1996		2		7,168.03	HWW-145	310.5	586.4	1.889	13,540	1.000	13,540
361.23	361.23	Manholes	1997	1997		23		85,453.87	HWW-145	309.8	586.4	1.893	161,764	1.000	161,764
361.23	361.23	Manholes	1998	1998		30		113,259.95	HWW-145	326.7	586.4	1.795	203,302	1.000	203,302
361.23	361.23	Manholes	1999	1999		20		77,279.51	HWW-145	333.4	586.4	1.759	135,935	1.000	135,935
361.23	361.23	Manholes	2000	2000		111		440,368.85	HWW-145	341.5	586.4	1.717	756,113	1.000	756,113
361.23	361.23	Manholes	2001	2001		4		16,180.36	HWW-145	355.8	586.4	1.648	26,665	1.000	26,665
361.23	361.23	Manholes	2002	2002		61		254,336.19	HWW-145	371	586.4	1.581	402,106	1.000	402,106
361.23	361.23	Manholes	2003	2003		13		55,496.10	HWW-145	377.9	586.4	1.552	86,130	1.000	86,130
361.23	361.23	Manholes	2004	2004		15		68,061.20	HWW-145	375.6	586.4	1.561	106,244	1.000	106,244
361.23	361.23	Manholes	2005	2005		98		465,353.00	HWW-145	398.8	586.4	1.470	684,069	1.000	684,069
361.23	361.23	Manholes	2006	2006		4		19,772.02	HWW-145	412.5	586.4	1.422	28,116	1.000	28,116
361.23	361.23	Manholes	2007	2007		36		182,884.21	HWW-145	443.3	586.4	1.323	241,956	1.000	241,956
361.23	361.23	Manholes	2011	2011		9		52,057.49	HWW-145	483.7	586.4	1.212	63,094	1.000	63,094

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
	361.23	361.23 Manholes	2012	2012		17		100,911.05	HWW-145	491.1	586.4	1.194	120,488	1.000	120,488
	361.23	361.23 Manholes	2013	2013		14		85,237.04	HWW-145	493.6	586.4	1.188	101,262	1.000	101,262
	361.23	361.23 Manholes	2014	2014		4		25,014.12	HWW-145	506.5	586.4	1.158	28,966	1.000	28,966
	361.23	361.23 Manholes	2016	2016		5		32,964.00	HWW-145	530.8	586.4	1.105	36,425	1.000	36,425
	361.23	361.23 Manholes	2017	2017		36		246,501.10	HWW-145	542.1	586.4	1.082	266,714	1.000	266,714
	361.23	361.23 Manholes	2018	2018		11		77,599.65	HWW-145	548.3	586.4	1.069	82,954	1.000	82,954
	361.23	361.23 Manholes	2019	2019		2		14,388.35	HWW-145	555.8	586.4	1.055	15,180	1.000	15,180
	361.23	361.23 Manholes	2020	2020		8		58,497.23	HWW-145	576.1	586.4	1.018	59,550	1.000	59,550
	361.23	361.23 Manholes	2021	2021		2		14,624.31	HWW-145	586.4	586.4	1.000	14,624	1.000	14,624
Subtotal 361.23		**COLLECTION SEWERS - GRAVITY - MANHOLES**						**4,350,867.01**					**10,108,723**		**10,108,723**
Account 363.20		SERVICES TO CUSTOMERS													
	363.20	363.20 4" PVC	1982	1982		3,190		102,469.43	HWW-139	198	712	3.596	368,480	1.000	368,480
	363.20	363.20 4" PVC	1985	1985		1,485		52,315.53	HWW-139	221	712	3.222	168,561	1.000	168,561
	363.20	363.20 4" PVC	1986	1986		1,320		47,611.22	HWW-139	226	712	3.150	149,975	1.000	149,975
	363.20	363.20 4" PVC	1987	1987		996		36,853.27	HWW-139	230	712	3.096	114,098	1.000	114,098
	363.20	363.20 4" PVC	1988	1988		2,952		112,029.11	HWW-139	245	712	2.906	325,557	1.000	325,557
	363.20	363.20 4" PVC	1989	1989		5,578		216,183.43	HWW-139	256	712	2.760	596,666	1.000	596,666
	363.20	363.20 4" PVC	1993	1993		1,629		71,273.98	HWW-139	292	712	2.438	173,766	1.000	173,766
	363.20	363.20 4" PVC	1995	1995		628		28,853.50	HWW-139	307	712	2.319	66,911	1.000	66,911
	363.20	363.20 4" PVC	1996	1996		227		10,713.57	HWW-139	321	712	2.218	23,763	1.000	23,763
	363.20	363.20 4" PVC	1997	1997		936		45,795.05	HWW-139	323	712	2.204	100,932	1.000	100,932
	363.20	363.20 4" PVC	1998	1998		2,142		106,491.11	HWW-139	330	712	2.158	229,808	1.000	229,808
	363.20	363.20 4" PVC	1999	1999		1,592		81,005.82	HWW-139	334	712	2.132	172,704	1.000	172,704
	363.20	363.20 4" PVC	2000	2000		622		32,495.47	HWW-139	348	712	2.046	66,486	1.000	66,486
	363.20	363.20 4" PVC	2001	2001		6,397		340,755.79	HWW-139	304	712	2.342	798,050	1.000	798,050
	363.20	363.20 4" PVC	2002	2002		2,486		136,495.47	HWW-139	359.8	712	1.979	270,125	1.000	270,125
	363.20	363.20 4" PVC	2003	2003		464		26,084.10	HWW-139	367.5	712	1.937	50,525	1.000	50,525
	363.20	363.20 4" PVC	2004	2004		6,820		407,503.61	HWW-139	388.3	712	1.834	747,362	1.000	747,362
	363.20	363.20 4" PVC	2012	2012		54,800		4,283,602.02	HWW-139	597.8	712	1.191	5,101,770	1.000	5,101,770
	363.20	363.20 4" ACP	1970	1970		6,016		69,770.80	HWW-139	79	712	9.013	628,844	1.000	628,844
	363.20	363.20 4" ACP	1976	1976		13,260		267,367.04	HWW-139	130	712	5.477	1,464,369	1.000	1,464,369
	363.20	363.20 4" ACP	1978	1978		2,749		64,086.47	HWW-139	145	712	4.910	314,665	1.000	314,665
	363.20	363.20 4" ACP	1980	1980		2,951		80,220.26	HWW-139	175	712	4.069	326,416	1.000	326,416
Subtotal 363.20		**SERVICES TO CUSTOMERS**						**6,619,976.03**					**12,259,833**		**12,259,833**
Account 365.20		FLOW MEASURING INSTALLATIONS													
	365.20	365.20 Meter Pits	1976	1976				78,670.00	HWW-140	98	485	4.949	389,338	1.000	389,338
Subtotal 365.20		**FLOW MEASURING INSTALLATIONS**						**78,670.00**					**389,338**		**389,338**
Account 390.70		COMPUTER AND SOFTWARE													
	390.70	390.70 PIPE TECH SOFTWARE AND DURABOOK LAPTOP	2008	2008				21,550.00	AUST-115	263.4	306.6	1.164	25,084	1.000	25,084
Subtotal 390.70		**COMPUTER AND SOFTWARE**						**21,550.00**					**25,084**		**25,084**
Account 391.70		TRANSPORTATION EQUIPMENT													
	391.70	391.70 2001 FORD E350 TRUCK	2001	2001				39,952.00	AUST-14	266	310	1.165	46,544	1.000	46,544

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New (RCN)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Account	Account	Asset Description	Year Installed	Effective Installation Year	Units	Quantity	Replacement cost per unit	Original Cost	Costing Parameter	Placement Date Cost Index	Appraisal Date Cost Index	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New (RCN) to Replacement Cost New (COR)	Replacement Cost New (COR)
								OC $s					RCN $s	COR $s / RCN $s	COR $s
Input	Input	Input	Input	Input				Input	Input	Input	Input	Calculation	Calculation	Input	Calculation
Eng Assmnt	AUS Input	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.	Eng Assmnt	AUS Input				Eng Assmnt	AUS Input	Cost Indices Lookup Cols(10) & (5)	Cost Indices Lookup Cols(10) & Study YR	Col (12) / (11)	Col (5) * (13)	AUS Input	Col (14) * (15)
NARUC Code	NARUC Code	Asset Description	Service Date					Original Cost	Cost Index Table	YearIndex	APPCostIndex	Translator	RCN	COR / RCN Factor	COR
391.70	391.70	2003 GMC PICKUP TRUCK	2003	2003				25,808.00	AUST-14	257	310	1.206	31,124	1.000	31,124
391.70	391.70	2018 Carmate 20' Custom Cargo Trailer	2018	2018				7,264.50	AUST-14	306	310	1.013	7,359	1.000	7,359
391.70	391.70	2010 FORD F550 TRUCK	2010	2010				62,722.85	AUST-14	269	310	1.152	72,257	1.000	72,257
391.70	391.70	2011 GMC PICKUP TRUCK	2011	2011				23,738.01	AUST-14	273	310	1.136	26,966	1.000	26,966
391.70	391.70	2011 GMC PICKUP TRUCK	2011	2011				20,470.45	AUST-14	273	310	1.136	23,254	1.000	23,254
391.70	391.70	2019 Ford F-150 Unit	2019	2019				33,000.00	AUST-14	307	310	1.010	33,330	1.000	33,330
Subtotal 391.70		**TRANSPORTATION EQUIPMENT**						**212,955.81**					**240,834**		**240,834**
Grand Total		**SYSTEM TOTAL**						**32,362,067.74**					**71,721,422**		**72,452,963**
Account 380		Purchased Treatment Capacity													
354.20	354.20	Sewer Capacity Rights	2017	2017				2,168,888.00	HWW-115	675.3	762	1.128	2,446,506	1.000	2,446,506
354.20	354.20	VFSA Capacity Rights	2013	2013				8,916,353.50	HWW-115	613.8	762	1.241	11,065,195	1.000	11,065,195
Subtotal 380		**Purchased Treatment Capacity**						**11,085,241.50**					**13,511,701**		**13,511,701**
Grand Grand Total		**System Total plus Purchased Treatment Capacity**						**43,447,309.24**					**85,233,123**		**85,964,664**

Current cost of Easements

Activity	Engineer	Legal	Fees	Total
Determine the facilities for which a Easment is need	1	0	0	
Locate the Land owner for the property needing a easement	1	1	0	
Develop a diagram o the Property, the facilities, and the easement	2	0	0	
Develop the easement document	1	1	0	
Visit the property owner to obtain permission for the easement and sign the easment documentation	4	0	0	
Register the easement with the Municipal Clerk	0	1	250	
Total	9	3	250	
Labor Costs per Hour	54	100		
Total Cost	486	300	250	1,036

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Cost Approach
Replacement Cost New less Depreciation

AUS Consultants
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8555 West Forest Home Avenue
Greenfield, Wisconsin 53228
Office Telephone: 414-529-5755
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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(21)	(22)	(23)	(24)	(28)	(29)	(30)	(31)
Account	Description	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa type	Normal Service Life (NSL)	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)
		years	COR $s		years	years	years	% of COR	CORLD $s
Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Calculation	Calculation
Eng Assmnt	East Whiteland Township Wastewater Assets Detail by Pennoni Associates, Inc.		Col (16)	AUS Input	AUS Input		Col (21) + (28)	Col (28) / (29)	Col (22) * (30)
Account	Description	Age	RCN	Iowa	NL	Rem Life	Total Life	Condition	CORLD
353.20	Land & Land Rights - Original Basin	31.62	720,020	ZNonDep	-	-	-	-	720,020
353.30	Land & Land Rights - Pumping	20.27	13,468	ZNonDep	-	-	-	-	13,468
354.30	Stuctures & Improvements - Pumping	14.58	12,142,235	R4.0	45.00	31.23	45.82	45.00	8,379,553
360.21	Collection Sewers - Force - Mains	29.95	5,971,267	R3.0	75.00	47.21	77.16	75.00	3,669,861
361.21	Collection Sewers - Gravity - Mains	33.23	30,582,161	R2.5	80.00	50.80	84.03	80.00	18,623,208
361.23	Collection Sewers - Gravity - Manholes	32.21	10,108,723	R2.5	80.00	51.66	83.87	80.00	6,272,518
363.20	Service Laterals	22.75	12,259,833	R3.0	70.00	48.95	71.70	70.00	8,428,787
365.20	Flow Measuring Installations Meter Pits	44.50	389,338	S2.0	30.00	4.50	49.00	30.00	58,401
354.20	Stuctures & Improvements - Treatment	6.78	13,511,701	R4.0	55.00	48.11	54.89	55.00	11,842,733
390.70	Office Furniture and Equipment	12.50	25,084	R3.0	12.00	2.20	14.70	12.00	3,763
391.70	Transportation Equipment	11.45	240,834	R3.0	10.00	2.91	14.35	10.00	66,027
Grand Total		24.57	85,964,664		68.23	46.41	70.71	0.68	58,078,339

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

Summary of Account Costing and Depreciation Parameters Used in the Depreciation Original Cost and the Depreciated Replacement Cost New Studies

(1)	(2)	(4)		(5)	(6)	
		(4a)	(4b)		(6a)	(6b)
Account Number	Description	Iowa Survivor / Retirement Curve	Normal Service Life	Economic Obsolescence	Tax Depreciation	
			years	% of CORLD	Table	Life
353.20	Land & Land Rights - Original Basin	ZNonDep	0.00	0.00%	Non-Depr	0.00
353.30	Land & Land Rights - Pumping	ZNonDep	0.00	0.00%	Non-Depr	0.00
354.20	Stuctures & Improvements - Treatment	R4.0	55.00	0.00%	MACRS	25.00
354.30	Stuctures & Improvements - Pumping	R4.0	45.00	0.00%	MACRS	25.00
360.21	Collection Sewers - Force - Mains	R3.0	75.00	0.00%	MACRS	25.00
361.21	Collection Sewers - Gravity - Mains	R2.5	80.00	0.00%	MACRS	25.00
361.23	Collection Sewers - Gravity - Manholes	R2.5	80.00	0.00%	MACRS	25.00
363.20	Service Laterals	R3.0	70.00	0.00%	MACRS	25.00
365.20	Flow Measuring Installations Meter Pits	S2.0	30.00	0.00%	MACRS	25.00
390.70	Office Furniture and Equipment	R3.0	12.00	0.00%	MACRS	12.00
391.70	Transportation Equipment	R3.0	10.00	0.00%	MACRS	10.00

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)		Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
353.2	DEER RUN DRAINAGE AREA (DR)	1976	44.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	46,102	-	-	-
353.2	DEER RUN DRAINAGE AREA (DR)	1976	44.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	46,102	-	-	-
353.2	DEER RUN DRAINAGE AREA (DR)	1976	44.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	46,102	-	-	-
353.2	DEER RUN DRAINAGE AREA (DR)	1976	44.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	46,102	-	-	-
353.2	DEER RUN DRAINAGE AREA (DR)	1976	44.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	46,102	-	-	-
353.2	DEER RUN DRAINAGE AREA (DR)	1976	44.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	46,102	-	-	-
353.2	DEER RUN DRAINAGE AREA (DR)	1976	44.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	46,102	-	-	-
353.2	FLAT ROAD DRAINAGE AREA (FR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	FLAT ROAD DRAINAGE AREA (FR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	FLAT ROAD DRAINAGE AREA (FR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	FLAT ROAD DRAINAGE AREA (FR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	FLAT ROAD DRAINAGE AREA (FR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)		Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LAPP ROAD DRAINAGE AREA (LR)		1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.2 LEE BOULEVARD DRAINAGE AREA (LB)		2007	13.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	13,986	-	-	-
353.2 LEE BOULEVARD DRAINAGE AREA (LB)		2007	13.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	13,986	-	-	-
353.2 LEE BOULEVARD DRAINAGE AREA (LB)		2007	13.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	13,986	-	-	-
353.2 LEE BOULEVARD DRAINAGE AREA (LB)		2007	13.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	13,986	-	-	-
353.2 LEE BOULEVARD DRAINAGE AREA (LB)		2007	13.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	13,986	-	-	-
353.2 LEE BOULEVARD DRAINAGE AREA (LB)		2007	13.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	13,986	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2 MALVERN HUNT DRAINAGE AREA (MAL)		2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

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As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmt	Eng Assmt	Eng Assmt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)		Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
353.2	MALVERN HUNT DRAINAGE AREA (MAL)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA (MAL)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA (MAL)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA (MAL)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmt	Eng Assmt	Eng Assmt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)	Col (24) * (27)	Col (21) - (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)	
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
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Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmt	Eng Assmt	Eng Assmt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)		Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)	Col (24) * (27)	Col (24) * (28)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
353.2	MATTHEWS ROAD DRAINAGE AREA (MR)	1988	32.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	33,670	-	-	-

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmt	Eng Assmt	Eng Assmt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)	lowaCondition	Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	lowaLookup	lowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
353.2	MILL LANE DRAINAGE AREA (ML)	1976	44.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	46,102	-	-	-

East Whiteland Township, Pennsylvania
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Investor-Owned Utility
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Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmt	Eng Assmt	Eng Assmt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)	lowaCondition	Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	lowaLookup	lowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
353.2	MILL LANE DRAINAGE AREA (ML)	1976	44.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	46,102	-	-	-

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

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Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)		Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
353.2	MILL LANE DRAINAGE AREA (ML)	1976	44.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	46,102	-	-	-

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

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Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)		Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
353.2	MILL LANE DRAINAGE AREA (ML)	1976	44.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	46,102	-	-	-

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

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East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
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Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmt	Eng Assmt	Eng Assmt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)	lowaCondition	Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	lowaLookup	lowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
353.2	MILL LANE DRAINAGE AREA (ML)	1976	44.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	46,102	-	-	-

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmt	Eng Assmt	Eng Assmt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)	Col (24) * (27)	Col (24) * (28)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
353.2	PLANEBROOK DRAINAGE AREA (PB)	2018	2.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	2,590	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (PB)	2018	2.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	2,590	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (PB)	2018	2.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	2,590	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (PB)	2018	2.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	2,590	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (PB)	2018	2.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	2,590	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

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Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmt	Eng Assmt	Eng Assmt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)		Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

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Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)		Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.2	WILBURDALE ROAD DRAINAGE AREA (WB)	2017	3.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	3,626	-	-	-
353.2	WILBURDALE ROAD DRAINAGE AREA (WB)	2017	3.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	3,626	-	-	-
353.2	WILBURDALE ROAD DRAINAGE AREA (WB)	2017	3.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	3,626	-	-	-
353.2	WILBURDALE ROAD DRAINAGE AREA (WB)	2017	3.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	3,626	-	-	-
353.2	WILBURDALE ROAD DRAINAGE AREA (WB)	2017	3.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	3,626	-	-	-
				720,020									**720,020**	**22,767,654**	-	-	-
353.3	DEER RUN DRAINAGE AREA (DR)	1976	44.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	46,102	-	-	-
353.3	HILLBROOK CIRCLE DRAINAGE AREA (HB)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.3	KING ROAD DRAINAGE AREA (KR)	2004	16.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	17,094	-	-	-
353.3	LAPP ROAD DRAINAGE AREA (LR)	1987	33.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	34,706	-	-	-
353.3	LEE BOULEVARD DRAINAGE AREA (LB)	2007	13.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	13,986	-	-	-
353.3	MALVERN HUNT DRAINAGE AREA (MAL)	2000	20.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	21,238	-	-	-
353.3	MEADOW VIEW DRAINAGE AREA (MV)	1980	40.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	41,958	-	-	-
353.3	MILL LANE DRAINAGE AREA (ML)	1976	44.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	46,102	-	-	-
353.3	0	2020	0.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	518	-	-	-
353.3	PLANEBROOK DRAINAGE AREA (PB)	2018	2.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	2,590	-	-	-
353.3	0	2020	0.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	518	-	-	-
353.3	WESTGATE DRAINAGE AREA (WG)	1998	22.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	23,310	-	-	-
353.3	WILBURDALE ROAD DRAINAGE AREA (WB)	2017	3.50	1,036	ZNonDep	0.0	0	ZNonDep000	0.00000	0.00	0.00	100.000000%	1,036	3,626	-	-	-
				13,468									**13,468**	**272,986**	-	-	-

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmt	Eng Assmt	Eng Assmt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)		Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
354.3 (P.S. 1) Deer Run		1976	44.50	461,164	R4.0	45.0	99	R4.0099	0.15108	6.80	51.30	15.000000%	69,175	20,521,798	3,135,915	23,657,713	20,752,380
354.3 (P.S. 1) Deer Run		2018	2.50	55,777	R4.0	45.0	6	R4.0006	0.94008	42.30	44.80	94.419643%	52,664	139,443	2,359,367	2,498,810	2,509,965
354.3 (P.S. 11) Hillbrook Circle		2000	20.50	977,828	R4.0	45.0	46	R4.0046	0.54887	24.70	45.20	54.646018%	534,344	20,045,474	24,152,352	44,197,826	44,002,260
354.3 (P.S. 12) King Road		2004	16.50	422,197	R4.0	45.0	37	R4.0037	0.63414	28.54	45.04	63.365897%	267,529	6,966,251	12,049,502	19,015,753	18,998,865
354.3 (P.S. 13) Malvern Hunt		2000	20.50	787,481	R4.0	45.0	46	R4.0046	0.54887	24.70	45.20	54.646018%	430,327	16,143,361	19,450,781	35,594,141	35,436,645
354.3 (P.S. 14) Planebrook Road		2018	2.50	382,812	R4.0	45.0	6	R4.0006	0.94008	42.30	44.80	94.419643%	361,450	957,030	16,192,948	17,149,978	17,226,540
354.3 (P.S. 14) Planebrook Road		2018	2.50	86,268	R4.0	45.0	6	R4.0006	0.94008	42.30	44.80	94.419643%	81,454	215,670	3,649,136	3,864,806	3,882,060
354.3 (P.S. 2) Mill Lane		2014	6.50	3,625,236	R4.0	45.0	14	R4.0014	0.86031	38.71	45.21	85.622650%	3,104,023	23,564,034	140,332,886	163,896,920	163,135,620
354.3 (P.S. 2) Mill Lane		1976	44.50	234,480	R4.0	45.0	99	R4.0099	0.15108	6.80	51.30	15.000000%	35,172	10,434,360	1,594,464	12,028,824	10,551,600
354.3 (P.S. 3) Wilburdale		2017	3.50	529,709	R4.0	45.0	8	R4.0008	0.92012	41.41	44.91	92.206635%	488,427	1,853,982	21,935,250	23,789,231	23,836,905
354.3 (P.S. 3) Wilburdale		2017	3.50	107,724	R4.0	45.0	8	R4.0008	0.92012	41.41	44.91	92.206635%	99,329	377,034	4,460,851	4,837,885	4,847,580
354.3 (P.S. 4) Lee Boulevard		2007	13.50	853,640	R4.0	45.0	30	R4.0030	0.70211	31.59	45.09	70.059880%	598,059	11,524,140	26,966,488	38,490,628	38,413,800
354.3	0	2002	18.50	97,342	R4.0	45.0	41	R4.0041	0.59589	26.82	45.32	59.179170%	57,606	1,800,827	2,610,712	4,411,539	4,380,390
354.3 (P.S. 5) Meadowview		1980	40.50	446,542	R4.0	45.0	90	R4.0090	0.20092	9.04	49.54	18.247881%	81,484	18,084,951	4,036,740	22,121,691	20,094,390
354.3 (P.S. 6) Flat Road		2019	1.50	374,880	R4.0	45.0	3	R4.0003	0.97003	43.65	45.15	96.677741%	362,426	562,320	16,363,512	16,925,832	16,869,600
354.3 (P.S. 7) Lapp Road		1987	33.50	571,497	R4.0	45.0	74	R4.0074	0.31142	14.01	47.51	29.488529%	168,526	19,145,150	8,006,673	27,151,822	25,717,365
354.3 (P.S. 7) Lapp Road		2006	14.50	214,249	R4.0	45.0	32	R4.0032	0.68258	30.72	45.22	67.934542%	145,549	3,106,611	6,581,729	9,688,340	9,641,205
354.3 (P.S. 8) Westgate		1988	32.50	239,311	R4.0	45.0	72	R4.0072	0.32657	14.70	47.20	31.144068%	74,531	7,777,608	3,517,872	11,295,479	10,768,995
354.3 (P.S. 8) Westgate		2001	19.50	181,384	R4.0	45.0	43	R4.0043	0.57696	25.96	45.46	57.105147%	103,580	3,536,988	4,708,729	8,245,717	8,162,280
354.3	0	2007	13.50	36,634	R4.0	45.0	30	R4.0030	0.70211	31.59	45.09	70.059880%	25,666	494,559	1,157,268	1,651,827	1,648,530
354.3	0	2009	11.50	75,524	R4.0	45.0	26	R4.0026	0.74138	33.36	44.86	74.364690%	56,163	868,526	2,519,481	3,388,007	3,398,580
354.3	0	2014	6.50	1,380,556	R4.0	45.0	14	R4.0014	0.86031	38.71	45.21	85.622650%	1,182,069	8,973,614	53,441,323	62,414,937	62,125,020
				12,142,235									**8,379,553**	**177,093,731**	**379,223,979**	**556,317,706**	**546,400,575**
360.21 (P.S. 1) Deer Run FM - 4" ACP		1976	44.50	162,476	R3.0	75.0	59	R3.0059	0.46530	34.90	79.40	43.954660%	71,416	7,230,182	5,670,412	12,900,594	12,185,700
360.21 (P.S. 11) Hillbrook Circle FM - 4" PVC		2000	20.50	184,910	R3.0	75.0	27	R3.0027	0.74058	55.54	76.04	73.040505%	135,059	3,790,655	10,269,901	14,060,556	13,868,250
360.21 (P.S. 12) King Road FM - 4" PVC		2004	16.50	532,000	R3.0	75.0	22	R3.0022	0.78729	59.05	75.55	78.160159%	415,812	8,778,000	31,414,600	40,192,600	39,900,000
360.21 (P.S. 13) Malvern Hunt FM - 6" DIP		2000	20.50	600,393	R3.0	75.0	27	R3.0027	0.74058	55.54	76.04	73.040505%	438,530	12,308,057	33,345,827	45,653,884	45,029,475
360.21 (P.S. 14) Planebrook FM - 8" PVC		2017	3.50	521,503	R3.0	75.0	5	R3.0005	0.95090	71.32	74.82	95.322106%	497,108	1,825,261	37,193,594	39,018,854	39,112,725
360.21 (P.S. 2) Mill Lane FM - 14" DIP		1976	44.50	1,004,502	R3.0	75.0	59	R3.0059	0.46530	34.90	79.40	43.954660%	441,525	44,700,339	35,057,120	79,757,459	75,337,650
360.21 (P.S. 3) Wilburdale Rd FM - 10" PVC Replacement		2016	4.50	106,330	R3.0	75.0	6	R3.0006	0.94112	70.58	75.08	94.006393%	99,957	478,485	7,504,771	7,983,256	7,974,750
360.21 (P.S. 4) Lee Blvd FM - 8" DIP		1987	33.50	857,377	R3.0	75.0	45	R3.0045	0.58001	43.50	77.00	56.493506%	484,362	28,722,130	37,295,900	66,018,029	64,303,275
360.21 (P.S. 5) Meadow View FM - 4" ACP		1980	40.50	246,563	R3.0	75.0	54	R3.0054	0.50513	37.88	78.38	48.328655%	119,161	9,985,802	9,339,806	19,325,608	18,492,225
360.21 (P.S. 6) Flat Rd FM - 6" ACP		1979	41.50	327,626	R3.0	75.0	55	R3.0055	0.49706	37.28	78.78	47.321655%	155,038	13,596,479	12,213,897	25,810,376	24,571,950
360.21 (P.S. 7) Lapp Rd FM - 6" PVC		1987	33.50	1,057,077	R3.0	75.0	45	R3.0045	0.58001	43.50	77.00	56.493506%	597,180	35,412,080	45,982,850	81,394,929	79,280,775
360.21 (P.S. 8) Westgate FM - 8" PVC		1988	32.50	370,510	R3.0	75.0	43	R3.0043	0.59718	44.79	77.29	57.950576%	214,713	12,041,575	16,595,143	28,636,718	27,788,250
				5,971,267									**3,669,861**	**178,869,045**	**281,883,821**	**460,752,863**	**447,845,025**
361.21 18" ACP		1975	45.50	322,651	R2.5	80.0	57	R2.5057	0.50654	40.52	86.02	47.105324%	151,986	14,680,621	13,073,819	27,754,439	25,812,080
361.21 12" ACP		1975	45.50	379,717	R2.5	80.0	57	R2.5057	0.50654	40.52	86.02	47.105324%	178,867	17,277,124	15,386,133	32,663,256	30,377,360
361.21 12" ACP		1978	42.50	286,414	R2.5	80.0	53	R2.5053	0.53711	42.97	85.47	50.274950%	143,994	12,172,595	12,307,210	24,479,805	22,913,120
361.21 10" ACP		1975	45.50	417,893	R2.5	80.0	57	R2.5057	0.50654	40.52	86.02	47.105324%	196,850	19,014,132	16,933,024	35,947,156	33,431,440
361.21 10" ACP		1977	43.50	221,681	R2.5	80.0	54	R2.5054	0.52940	42.35	85.85	49.330227%	109,356	9,643,124	9,388,190	19,031,314	17,734,480
361.21 10" ACP		2012	8.50	9,223	R2.5	80.0	11	R2.5011	0.89711	71.77	80.27	89.410739%	8,246	78,396	661,935	740,330	737,840
361.21 36" ACP		1967	53.50	33,227	R2.5	80.0	67	R2.5067	0.43365	34.69	88.19	39.335526%	13,070	1,777,645	1,152,645	2,930,289	2,658,160
361.21 27" ACP		1967	53.50	616,552	R2.5	80.0	67	R2.5067	0.43365	34.69	88.19	39.335526%	242,524	32,985,532	21,388,189	54,373,721	49,324,160
361.21 24" ACP		1967	53.50	32,598	R2.5	80.0	67	R2.5067	0.43365	34.69	88.19	39.335526%	12,823	1,743,993	1,130,825	2,874,818	2,607,840

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

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Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmt	Eng Assmt	Eng Assmt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)		Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
361.21 24" ACP		1975	45.50	105,503	R2.5	80.0	57	R2.5057	0.50654	40.52	86.02	47.105324%	49,698	4,800,387	4,274,982	9,075,368	8,440,240
361.21 10" PVC		1991	29.50	134,594	R2.5	80.0	37	R2.5037	0.66661	53.33	82.83	64.384885%	86,658	3,970,523	7,177,898	11,148,421	10,767,520
361.21 10" PVC		1992	28.50	106,553	R2.5	80.0	36	R2.5036	0.67506	54.00	82.50	65.454545%	69,744	3,036,761	5,753,862	8,790,623	8,524,240
361.21 10" PVC		1993	27.50	18,549	R2.5	80.0	34	R2.5034	0.69207	55.37	82.87	66.815494%	12,394	510,098	1,027,058	1,537,156	1,483,920
361.21 10" PVC		2007	13.50	759,689	R2.5	80.0	17	R2.5017	0.84214	67.37	80.87	83.306541%	632,871	10,255,802	51,180,248	61,436,049	60,775,120
361.21 10" PVC		2019	1.50	47,397	R2.5	80.0	2	R2.5002	0.98112	78.49	79.99	98.124766%	46,508	71,096	3,720,191	3,791,286	3,791,760
361.21 10" PVC		2020	0.50	118,796	R2.5	80.0	1	R2.5001	0.99055	79.24	79.74	99.372962%	118,051	59,398	9,413,395	9,472,793	9,503,680
361.21 8" ACP		1951	69.50	42,533	R2.5	80.0	87	R2.5087	0.30585	24.47	93.97	26.040226%	11,076	2,956,044	1,040,783	3,996,826	3,402,640
361.21 8" ACP		1954	66.50	181,742	R2.5	80.0	83	R2.5083	0.32920	26.34	92.84	28.371392%	51,563	12,085,843	4,787,084	16,872,927	14,539,360
361.21 8" ACP		1967	53.50	249,051	R2.5	80.0	67	R2.5067	0.43365	34.69	88.19	39.335526%	97,966	13,324,229	8,639,579	21,963,808	19,924,080
361.21 8" ACP		1970	50.50	508,771	R2.5	80.0	63	R2.5063	0.46218	36.97	87.47	42.265920%	215,037	25,692,936	18,809,264	44,502,199	40,701,680
361.21 8" ACP		1971	49.50	185,236	R2.5	80.0	62	R2.5062	0.46944	37.56	87.06	43.142660%	79,916	9,169,182	6,957,464	16,126,646	14,818,880
361.21 8" ACP		1972	48.50	160,533	R2.5	80.0	61	R2.5061	0.47676	38.14	86.64	44.021237%	70,669	7,785,851	6,122,729	13,908,579	12,842,640
361.21 8" ACP		1973	47.50	652,551	R2.5	80.0	59	R2.5059	0.49155	39.32	86.82	45.289104%	295,535	30,996,173	25,658,305	56,654,478	52,204,080
361.21 8" ACP		1974	46.50	634,190	R2.5	80.0	58	R2.5058	0.49902	39.92	86.42	46.193011%	292,951	29,489,835	25,316,865	54,806,700	50,735,200
361.21 8" ACP		1975	45.50	4,676,505	R2.5	80.0	57	R2.5057	0.50654	40.52	86.02	47.105324%	2,202,883	212,780,978	189,491,983	402,272,960	374,120,400
361.21 8" ACP		1977	43.50	716,712	R2.5	80.0	54	R2.5054	0.52940	42.35	85.85	49.330227%	353,556	31,176,972	30,352,753	61,529,725	57,336,960
361.21 8" ACP		1978	42.50	1,678,760	R2.5	80.0	53	R2.5053	0.53711	42.97	85.47	50.274950%	843,996	71,347,300	72,136,317	143,483,617	134,300,800
361.21 8" ACP		1979	41.50	478,511	R2.5	80.0	52	R2.5052	0.54488	43.59	85.09	51.228111%	245,132	19,858,207	20,858,294	40,716,501	38,280,880
361.21 8" ACP		1981	39.50	744,489	R2.5	80.0	49	R2.5049	0.56844	45.48	84.98	53.518475%	398,439	29,407,316	33,859,360	63,266,675	59,559,120
361.21 8" ACP		2012	8.50	36,770	R2.5	80.0	11	R2.5011	0.89711	71.77	80.27	89.410739%	32,876	312,545	2,638,983	2,951,528	2,941,600
361.21 8" PVC		1970	50.50	29,844	R2.5	80.0	63	R2.5063	0.46218	36.97	87.47	42.265920%	12,614	1,507,122	1,103,333	2,610,455	2,387,520
361.21 8" PVC		1983	37.50	157,263	R2.5	80.0	47	R2.5047	0.58438	46.75	84.25	55.489614%	87,265	5,897,363	7,352,045	13,249,408	12,581,040
361.21 8" PVC		1984	36.50	411,181	R2.5	80.0	46	R2.5046	0.59241	47.39	83.89	56.490643%	232,279	15,008,107	19,485,868	34,493,974	32,894,480
361.21 8" PVC		1985	35.50	84,236	R2.5	80.0	44	R2.5044	0.60861	48.69	84.19	57.833472%	48,717	2,990,378	4,101,451	7,091,829	6,738,880
361.21 8" PVC		1987	33.50	1,382,682	R2.5	80.0	42	R2.5042	0.62498	50.00	83.50	59.880240%	827,953	46,319,847	69,134,100	115,453,947	110,614,560
361.21 8" PVC		1988	32.50	1,575,150	R2.5	80.0	41	R2.5041	0.63322	50.66	83.16	60.918711%	959,561	51,192,375	79,797,099	130,989,474	126,012,000
361.21 8" PVC		1990	30.50	809,920	R2.5	80.0	38	R2.5038	0.65821	52.66	83.16	63.323713%	512,871	24,702,560	42,650,387	67,352,947	64,793,600
361.21 8" PVC		1991	29.50	349,233	R2.5	80.0	37	R2.5037	0.66661	53.33	82.83	64.384885%	224,853	10,302,374	18,624,596	28,926,969	27,938,640
361.21 8" PVC		1992	28.50	195,513	R2.5	80.0	36	R2.5036	0.67506	54.00	82.50	65.454545%	127,972	5,572,121	10,557,702	16,129,823	15,641,040
361.21 8" PVC		1993	27.50	302,365	R2.5	80.0	34	R2.5034	0.69207	55.37	82.87	66.815494%	202,027	8,315,038	16,741,950	25,056,988	24,189,200
361.21 8" PVC		1994	26.50	124,374	R2.5	80.0	33	R2.5033	0.70063	56.05	82.55	67.898243%	84,448	3,295,911	6,971,163	10,267,074	9,949,920
361.21 8" PVC		1996	24.50	41,722	R2.5	80.0	31	R2.5031	0.71785	57.43	81.93	70.096424%	29,246	1,022,189	2,396,094	3,418,283	3,337,760
361.21 8" PVC		1997	23.50	453,421	R2.5	80.0	29	R2.5029	0.73522	58.82	82.32	71.452867%	323,982	10,655,394	26,670,223	37,325,617	36,273,680
361.21 8" PVC		1998	22.50	368,563	R2.5	80.0	28	R2.5028	0.74396	59.52	82.02	72.567666%	267,458	8,292,668	21,936,870	30,229,537	29,485,040
361.21 8" PVC		1999	21.50	431,769	R2.5	80.0	27	R2.5027	0.75273	60.22	81.72	73.690651%	318,173	9,283,034	26,001,129	35,284,163	34,541,520
361.21 8" PVC		2000	20.50	1,809,857	R2.5	80.0	26	R2.5026	0.76153	60.92	81.42	74.821911%	1,354,170	37,102,069	110,256,488	147,358,557	144,788,560
361.21 8" PVC		2001	19.50	69,902	R2.5	80.0	24	R2.5024	0.77923	62.34	81.84	76.173021%	53,246	1,363,089	4,357,691	5,720,780	5,592,160
361.21 8" PVC		2002	18.50	1,142,429	R2.5	80.0	23	R2.5023	0.78813	63.05	81.55	77.314531%	883,264	21,134,937	72,030,148	93,165,085	91,394,320
361.21 8" PVC		2003	17.50	258,009	R2.5	80.0	22	R2.5022	0.79706	63.76	81.26	78.464189%	202,445	4,515,158	16,450,654	20,965,811	20,640,720
361.21 8" PVC		2004	16.50	280,287	R2.5	80.0	21	R2.5021	0.80602	64.48	80.98	79.624599%	223,177	4,624,736	18,072,906	22,697,641	22,422,960
361.21 8" PVC		2005	15.50	1,858,509	R2.5	80.0	19	R2.5019	0.82402	65.92	81.42	80.962908%	1,504,703	28,806,890	122,512,913	151,319,803	148,680,720
361.21 8" PVC		2006	14.50	39,111	R2.5	80.0	18	R2.5018	0.83306	66.64	81.14	82.129652%	32,122	567,110	2,606,357	3,173,467	3,128,880
361.21 8" PVC		2007	13.50	69,410	R2.5	80.0	17	R2.5017	0.84214	67.37	80.87	83.306541%	57,823	937,035	4,676,152	5,613,187	5,552,800
361.21 8" PVC		2011	9.50	165,089	R2.5	80.0	12	R2.5012	0.88789	71.03	80.53	88.203154%	145,614	1,568,346	11,726,272	13,294,617	13,207,120
361.21 8" PVC		2012	8.50	248,858	R2.5	80.0	11	R2.5011	0.89711	71.77	80.27	89.410739%	222,506	2,115,293	17,860,539	19,975,832	19,908,640
361.21 8" PVC		2013	7.50	34,044	R2.5	80.0	9	R2.5009	0.91563	73.25	80.75	90.712074%	30,882	255,330	2,493,723	2,749,053	2,723,520
361.21 8" PVC		2014	6.50	10,171	R2.5	80.0	8	R2.5008	0.92492	73.99	80.49	91.924463%	9,350	66,112	752,552	818,664	813,680
361.21 8" PVC		2017	3.50	314,953	R2.5	80.0	4	R2.5004	0.96231	76.98	80.48	95.651093%	301,256	1,102,336	24,245,082	25,347,417	25,196,240
361.21 8" PVC		2018	2.50	136,394	R2.5	80.0	3	R2.5003	0.97170	77.74	80.24	96.884347%	132,144	340,985	10,603,270	10,944,255	10,911,520
361.21 8" DIP		1954	66.50	53,784	R2.5	80.0	83	R2.5083	0.32920	26.34	92.84	28.371392%	15,259	3,576,636	1,416,671	4,993,307	4,302,720

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmt	Eng Assmt	Eng Assmt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)		Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
361.21 8" DIP		1975	45.50	25,736	R2.5	80.0	57	R2.5057	0.50654	40.52	86.02	47.105324%	12,123	1,170,988	1,042,823	2,213,811	2,058,880
361.21 8" CIP		1975	45.50	11,500	R2.5	80.0	57	R2.5057	0.50654	40.52	86.02	47.105324%	5,417	523,250	465,980	989,230	920,000
361.21 20" ACP		1975	45.50	714,330	R2.5	80.0	57	R2.5057	0.50654	40.52	86.02	47.105324%	336,487	32,502,015	28,944,652	61,446,667	57,146,400
361.21 16" ACP		1975	45.50	50,039	R2.5	80.0	57	R2.5057	0.50654	40.52	86.02	47.105324%	23,571	2,276,775	2,027,580	4,304,355	4,003,120
361.21 12" PVC		1970	50.50	185,287	R2.5	80.0	63	R2.5063	0.46218	36.97	87.47	42.265920%	78,313	9,356,994	6,850,060	16,207,054	14,822,960
361.21 12" PVC		2012	8.50	9,929	R2.5	80.0	11	R2.5011	0.89711	71.77	80.27	89.410739%	8,878	84,397	712,604	797,001	794,320
361.21 12" PVC		2016	4.50	181,820	R2.5	80.0	6	R2.5006	0.94357	75.49	79.99	94.374297%	171,591	818,190	13,725,592	14,543,782	14,545,600
361.21 15" PVC		2013	7.50	100,235	R2.5	80.0	9	R2.5009	0.91563	73.25	80.75	90.712074%	90,925	751,763	7,342,214	8,093,976	8,018,800
361.21 15" PVC		2017	3.50	266,437	R2.5	80.0	4	R2.5004	0.96231	76.98	80.48	95.651093%	254,850	932,530	20,510,320	21,442,850	21,314,960
361.21 18" PVC		1988	32.50	259,921	R2.5	80.0	41	R2.5041	0.63322	50.66	83.16	60.918711%	158,341	8,447,433	13,167,598	21,615,030	20,793,680
361.21 18" PVC		2013	7.50	474,196	R2.5	80.0	9	R2.5009	0.91563	73.25	80.75	90.712074%	430,153	3,556,470	34,734,857	38,291,327	37,935,680
361.21 18" PVC		2014	6.50	23,740	R2.5	80.0	8	R2.5008	0.92492	73.99	80.49	91.924463%	21,823	154,310	1,756,523	1,910,833	1,899,200
361.21 18" PVC		2017	3.50	112,401	R2.5	80.0	4	R2.5004	0.96231	76.98	80.48	95.651093%	107,513	393,404	8,652,629	9,046,032	8,992,080
361.21 10" DI		2020	0.50	8,663	R2.5	80.0	1	R2.5001	0.99055	79.24	79.74	99.372962%	8,609	4,332	686,456	690,788	693,040
361.21 8" CSP		1978	42.50	103,634	R2.5	80.0	53	R2.5053	0.53711	42.97	85.47	50.274950%	52,102	4,404,445	4,453,153	8,857,598	8,290,720
361.21 8" CSP		1983	37.50	262,482	R2.5	80.0	47	R2.5047	0.58438	46.75	84.25	55.489614%	145,650	9,843,075	12,271,034	22,114,109	20,998,560
361.21 20" PVC		2014	6.50	15,049	R2.5	80.0	8	R2.5008	0.92492	73.99	80.49	91.924463%	13,834	97,819	1,113,476	1,211,294	1,203,920
361.21 21" PVC		2014	6.50	11,328	R2.5	80.0	8	R2.5008	0.92492	73.99	80.49	91.924463%	10,413	73,632	838,159	911,791	906,240
			33.23	**30,582,161**									**18,623,208**	**1,016,285,003**	**1,553,520,505**	**2,569,805,485**	**2,446,572,880**
361.23 Manholes		1951	69.50	29,501	R2.5	80.0	87	R2.5087	0.30585	24.47	93.97	26.040226%	7,682	2,050,320	721,889	2,772,209	2,360,080
361.23 Manholes		1954	66.50	109,228	R2.5	80.0	83	R2.5083	0.32920	26.34	92.84	28.371392%	30,990	7,263,662	2,877,066	10,140,728	8,738,240
361.23 Manholes		1967	53.50	214,286	R2.5	80.0	67	R2.5067	0.43365	34.69	88.19	39.335526%	84,291	11,464,301	7,433,581	18,897,882	17,142,880
361.23 Manholes		1970	50.50	176,340	R2.5	80.0	63	R2.5063	0.46218	36.97	87.47	42.265920%	74,532	8,905,170	6,519,290	15,424,460	14,107,200
361.23 Manholes		1971	49.50	58,864	R2.5	80.0	62	R2.5062	0.46944	37.56	87.06	43.142660%	25,395	2,913,768	2,210,932	5,124,700	4,709,120
361.23 Manholes		1972	48.50	34,650	R2.5	80.0	61	R2.5061	0.47676	38.14	86.64	44.021237%	15,253	1,680,525	1,321,551	3,002,076	2,772,000
361.23 Manholes		1973	47.50	283,463	R2.5	80.0	59	R2.5059	0.49155	39.32	86.82	45.289104%	128,378	13,464,493	11,145,765	24,610,258	22,677,040
361.23 Manholes		1974	46.50	202,351	R2.5	80.0	58	R2.5058	0.49902	39.92	86.42	46.193011%	93,472	9,409,322	8,077,852	17,487,173	16,188,080
361.23 Manholes		1975	45.50	1,963,676	R2.5	80.0	57	R2.5057	0.50654	40.52	86.02	47.105324%	924,996	89,347,258	79,568,152	168,915,410	157,094,080
361.23 Manholes		1977	43.50	347,776	R2.5	80.0	54	R2.5054	0.52940	42.35	85.85	49.330227%	171,559	15,128,256	14,728,314	29,856,570	27,822,080
361.23 Manholes		1978	42.50	580,548	R2.5	80.0	53	R2.5053	0.53711	42.97	85.47	50.274950%	291,870	24,673,290	24,946,148	49,619,438	46,443,840
361.23 Manholes		1979	41.50	162,384	R2.5	80.0	52	R2.5052	0.54488	43.59	85.09	51.228111%	83,186	6,738,936	7,078,319	13,817,255	12,990,720
361.23 Manholes		1980	40.50	13,038	R2.5	80.0	51	R2.5051	0.55269	44.22	84.72	52.195467%	6,805	528,039	576,540	1,104,579	1,043,040
361.23 Manholes		1981	39.50	231,703	R2.5	80.0	49	R2.5049	0.56844	45.48	84.98	53.518475%	124,004	9,152,269	10,537,852	19,690,121	18,536,240
361.23 Manholes		1983	37.50	112,627	R2.5	80.0	47	R2.5047	0.58438	46.75	84.25	55.489614%	62,496	4,223,513	5,265,312	9,488,825	9,010,160
361.23 Manholes		1984	36.50	156,673	R2.5	80.0	46	R2.5046	0.59241	47.39	83.89	56.490643%	88,506	5,718,565	7,424,733	13,143,298	12,533,840
361.23 Manholes		1985	35.50	31,622	R2.5	80.0	44	R2.5044	0.60861	48.69	84.19	57.833472%	18,288	1,122,581	1,539,675	2,662,256	2,529,760
361.23 Manholes		1987	33.50	431,863	R2.5	80.0	42	R2.5042	0.62498	50.00	83.50	59.880240%	258,601	14,467,411	21,593,150	36,060,561	34,549,040
361.23 Manholes		1988	32.50	577,096	R2.5	80.0	41	R2.5041	0.63322	50.66	83.16	60.918711%	351,559	18,755,620	29,235,683	47,991,303	46,167,680
361.23 Manholes		1990	30.50	269,180	R2.5	80.0	38	R2.5038	0.65821	52.66	83.16	63.323713%	170,455	8,209,990	14,175,019	22,385,009	21,534,400
361.23 Manholes		1991	29.50	198,694	R2.5	80.0	37	R2.5037	0.66661	53.33	82.83	64.384885%	127,929	5,861,473	10,596,351	16,457,824	15,895,520
361.23 Manholes		1992	28.50	108,088	R2.5	80.0	36	R2.5036	0.67506	54.00	82.50	65.454545%	70,749	3,080,508	5,836,752	8,917,260	8,647,040
361.23 Manholes		1993	27.50	131,181	R2.5	80.0	34	R2.5034	0.69207	55.37	82.87	66.815494%	87,649	3,607,478	7,263,492	10,870,969	10,494,480
361.23 Manholes		1994	26.50	48,694	R2.5	80.0	33	R2.5033	0.70063	56.05	82.55	67.898243%	33,062	1,290,391	2,729,299	4,019,690	3,895,520
361.23 Manholes		1996	24.50	13,540	R2.5	80.0	31	R2.5031	0.71785	57.43	81.93	70.096424%	9,491	331,730	777,602	1,109,332	1,083,200
361.23 Manholes		1997	23.50	161,764	R2.5	80.0	29	R2.5029	0.73522	58.82	82.32	71.452867%	115,585	3,801,454	9,514,958	13,316,412	12,941,120
361.23 Manholes		1998	22.50	203,302	R2.5	80.0	28	R2.5028	0.74396	59.52	82.02	72.567666%	147,532	4,574,295	12,100,535	16,674,830	16,264,160
361.23 Manholes		1999	21.50	135,935	R2.5	80.0	27	R2.5027	0.75273	60.22	81.72	73.690651%	100,171	2,922,603	8,186,006	11,108,608	10,874,800
361.23 Manholes		2000	20.50	756,113	R2.5	80.0	26	R2.5026	0.76153	60.92	81.42	74.821911%	565,738	15,500,317	46,062,404	61,562,720	60,489,040
361.23 Manholes		2001	19.50	26,665	R2.5	80.0	24	R2.5024	0.77923	62.34	81.84	76.173021%	20,312	519,968	1,662,296	2,182,264	2,133,200

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmt	Eng Assmt	Eng Assmt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)	IowaCondition	Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
361.23 Manholes		2002	18.50	402,106	R2.5	80.0	23	R2.5023	0.78813	63.05	81.55	77.314531%	310,886	7,438,961	25,352,783	32,791,744	32,168,480
361.23 Manholes		2003	17.50	86,130	R2.5	80.0	22	R2.5022	0.79706	63.76	81.26	78.464189%	67,581	1,507,275	5,491,649	6,998,924	6,890,400
361.23 Manholes		2004	16.50	106,244	R2.5	80.0	21	R2.5021	0.80602	64.48	80.98	79.624599%	84,596	1,753,026	6,850,613	8,603,639	8,499,520
361.23 Manholes		2005	15.50	684,069	R2.5	80.0	19	R2.5019	0.82402	65.92	81.42	80.962908%	553,842	10,603,070	45,093,828	55,696,898	54,725,520
361.23 Manholes		2006	14.50	28,116	R2.5	80.0	18	R2.5018	0.83306	66.64	81.14	82.129652%	23,092	407,682	1,873,650	2,281,332	2,249,280
361.23 Manholes		2007	13.50	241,956	R2.5	80.0	17	R2.5017	0.84214	67.37	80.87	83.306541%	201,565	3,266,406	16,300,576	19,566,982	19,356,480
361.23 Manholes		2011	9.50	63,094	R2.5	80.0	12	R2.5012	0.88789	71.03	80.53	88.203154%	55,651	599,393	4,481,567	5,080,960	5,047,520
361.23 Manholes		2012	8.50	120,488	R2.5	80.0	11	R2.5011	0.89711	71.77	80.27	89.410739%	107,729	1,024,148	8,647,424	9,671,572	9,639,040
361.23 Manholes		2013	7.50	101,262	R2.5	80.0	9	R2.5009	0.91563	73.25	80.75	90.712074%	91,857	759,465	7,417,442	8,176,907	8,100,960
361.23 Manholes		2014	6.50	28,966	R2.5	80.0	8	R2.5008	0.92492	73.99	80.49	91.924463%	26,627	188,279	2,143,194	2,331,473	2,317,280
361.23 Manholes		2016	4.50	36,425	R2.5	80.0	6	R2.5006	0.94357	75.49	79.99	94.374297%	34,376	163,913	2,749,723	2,913,636	2,914,000
361.23 Manholes		2017	3.50	266,714	R2.5	80.0	4	R2.5004	0.96231	76.98	80.48	95.651093%	255,115	933,499	20,531,644	21,465,143	21,337,120
361.23 Manholes		2018	2.50	82,954	R2.5	80.0	3	R2.5003	0.97170	77.74	80.24	96.884347%	80,369	207,385	6,448,844	6,656,229	6,636,320
361.23 Manholes		2019	1.50	15,180	R2.5	80.0	2	R2.5002	0.98112	78.49	79.99	98.124766%	14,895	22,770	1,191,478	1,214,248	1,214,400
361.23 Manholes		2020	0.50	59,550	R2.5	80.0	1	R2.5001	0.99055	79.24	79.74	99.372962%	59,177	29,775	4,718,742	4,748,517	4,764,000
361.23 Manholes		2021	0.00	14,624	R2.5	80.0	0	R2.5000	1.00000	80.00	80.00	100.000000%	14,624	-	1,169,920	1,169,920	1,169,920
				10,108,723									**6,272,518**	**325,612,553**	**522,169,595**	**847,782,144**	**808,697,840**
363.2 4" PVC		1982	38.50	368,480	R3.0	70.0	55	R3.0055	0.49706	34.79	73.29	47.468959%	174,914	14,186,480	12,819,419	27,005,899	25,793,600
363.2 4" PVC		1985	35.50	168,561	R3.0	70.0	51	R3.0051	0.52965	37.08	72.58	51.088454%	86,115	5,983,916	6,250,242	12,234,157	11,799,270
363.2 4" PVC		1986	34.50	149,975	R3.0	70.0	49	R3.0049	0.54624	38.24	72.74	52.570800%	78,843	5,174,138	5,735,044	10,909,182	10,498,250
363.2 4" PVC		1987	33.50	114,098	R3.0	70.0	48	R3.0048	0.55461	38.82	72.32	53.678097%	61,246	3,822,283	4,429,284	8,251,567	7,986,860
363.2 4" PVC		1988	32.50	325,557	R3.0	70.0	46	R3.0046	0.57150	40.01	72.51	55.178596%	179,638	10,580,603	13,025,536	23,606,138	22,788,990
363.2 4" PVC		1989	31.50	596,666	R3.0	70.0	45	R3.0045	0.58001	40.60	72.10	56.310680%	335,987	18,794,979	24,224,640	43,019,619	41,766,620
363.2 4" PVC		1993	27.50	173,766	R3.0	70.0	39	R3.0039	0.63205	44.24	71.74	61.667131%	107,157	4,778,565	7,687,408	12,465,973	12,163,620
363.2 4" PVC		1995	25.50	66,911	R3.0	70.0	36	R3.0036	0.65866	46.11	71.61	64.390448%	43,084	1,706,231	3,085,266	4,791,497	4,683,770
363.2 4" PVC		1996	24.50	23,763	R3.0	70.0	35	R3.0035	0.66761	46.73	71.23	65.604380%	15,590	582,194	1,110,445	1,692,638	1,663,410
363.2 4" PVC		1997	23.50	100,932	R3.0	70.0	34	R3.0034	0.67660	47.36	70.86	66.836015%	67,459	2,371,902	4,780,140	7,152,042	7,065,240
363.2 4" PVC		1998	22.50	229,808	R3.0	70.0	32	R3.0032	0.69469	48.63	71.13	68.367777%	157,115	5,170,680	11,175,563	16,346,243	16,086,560
363.2 4" PVC		1999	21.50	172,704	R3.0	70.0	31	R3.0031	0.70380	49.27	70.77	69.619895%	120,236	3,713,136	8,509,126	12,222,262	12,089,280
363.2 4" PVC		2000	20.50	66,486	R3.0	70.0	29	R3.0029	0.72212	50.55	71.05	71.147080%	47,303	1,362,963	3,360,867	4,723,830	4,654,020
363.2 4" PVC		2001	19.50	798,050	R3.0	70.0	28	R3.0028	0.73133	51.19	70.69	72.414769%	577,906	15,561,975	40,852,180	56,414,155	55,863,500
363.2 4" PVC		2002	18.50	270,125	R3.0	70.0	26	R3.0026	0.74986	52.49	70.99	73.939992%	199,730	4,997,313	14,178,861	19,176,174	18,908,750
363.2 4" PVC		2003	17.50	50,525	R3.0	70.0	25	R3.0025	0.75917	53.14	70.64	75.226501%	38,008	884,188	2,684,899	3,569,086	3,536,750
363.2 4" PVC		2004	16.50	747,362	R3.0	70.0	24	R3.0024	0.76851	53.80	70.30	76.529161%	571,950	12,331,473	40,208,076	52,539,549	52,315,340
363.2 4" PVC		2012	8.50	5,101,770	R3.0	70.0	12	R3.0012	0.88279	61.80	70.30	87.908962%	4,484,913	43,365,045	315,289,386	358,654,431	357,123,900
363.2 4" ACP		1970	50.50	628,844	R3.0	70.0	72	R3.0072	0.36837	25.79	76.29	33.805217%	212,582	31,756,622	16,217,887	47,974,509	44,019,080
363.2 4" ACP		1976	44.50	1,464,369	R3.0	70.0	64	R3.0064	0.42683	29.88	74.38	40.172089%	588,268	65,164,421	43,755,346	108,919,766	102,505,830
363.2 4" ACP		1978	42.50	314,665	R3.0	70.0	61	R3.0061	0.44974	31.48	73.98	42.552041%	133,896	13,373,263	9,905,654	23,278,917	22,026,550
363.2 4" ACP		1980	40.50	326,416	R3.0	70.0	58	R3.0058	0.47316	33.12	73.62	44.987775%	146,847	13,219,848	10,810,898	24,030,746	22,849,120
				12,259,833									**8,428,787**	**278,882,218**	**600,096,167**	**878,978,380**	**858,188,310**
365.2 Meter Pits		1976	44.50	389,338	S2.0	30.0	148	S2.0148	0.15000	4.50	49.00	15.000000%	58,401	17,325,541	1,752,021	19,077,562	11,680,140
				389,338									**58,401**	**17,325,541**	**1,752,021**	**19,077,562**	**11,680,140**
390.7 PIPE TECH SOFTWARE AND DURABOOK LAPTOP		2008	12.50	25,084	R3.0	12.0	104	R3.0104	0.18372	2.20	14.70	15.000000%	3,763	313,550	55,185	368,735	301,008
				25,084									**3,763**	**313,550**	**55,185**	**368,735**	**301,008**

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Replacement Cost New less Depreciation (RCNLD)

(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Account	Description	Placement Year	Age at January 8, 2021 Appraisal Date	Replacement Cost New (COR)	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (COR less Normal Depreciation)	COR Weighted Age	COR Weighted Normal Remaining Life	COR Weighted Total Life Expectancy	COR Weighted Normal Service Life (NSL)
			years	COR $s		years	% of NSL	Lookup	%	years	years	% of COR	CORLD $s	COR $s * Years	COR $s * Years	COR $s * Years	COR $s * Years
Input	Input	Input	Calculation	Calculation	Input	Input	Calculation	Calculation	Lookup Lookup Iowa Curves Life Tables @ col (26)	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	2021-[(20)+0.5]	Col (16)	AUS Input	AUS Input	Col (21) / (24)	Col (23) & (25)		Col (24) * (27)	Col (21) + (28)	Col (28) / (29)	Col (22) * (30)	Col (22) * (21)	Col (22) * (28)	Col (22) * (29)	Col (22) * (24)
Account	Description	Year1	Age	RCN	Iowa	NL	AgeP	IowaLookup	IowaCondition	Rem Life	Total Life	Condition	CORLD	COR * Age	COR * RL	COR * TL	COR * NL
391.7 2001 FORD E350 TRUCK		2001	19.50	46,544	R3.0	10.0	195	R3.0195	0.15000	1.50	21.00	15.000000%	6,982	907,608	69,816	977,424	465,440
391.7 2003 GMC PICKUP TRUCK		2003	17.50	31,124	R3.0	10.0	175	R3.0175	0.15000	1.50	19.00	15.000000%	4,669	544,670	46,686	591,356	311,240
391.7 2018 Carmate 20' Custom Cargo Trailer		2018	2.50	7,359	R3.0	10.0	25	R3.0025	0.75917	7.59	10.09	75.222993%	5,536	18,398	55,855	74,252	73,590
391.7 2010 FORD F550 TRUCK		2010	10.50	72,257	R3.0	10.0	105	R3.0105	0.17945	1.79	12.29	15.000000%	10,839	758,699	129,340	888,039	722,570
391.7 2011 GMC PICKUP TRUCK		2011	9.50	26,966	R3.0	10.0	95	R3.0095	0.22643	2.26	11.76	19.217687%	5,182	256,177	60,943	317,120	269,660
391.7 2011 GMC PICKUP TRUCK		2011	9.50	23,254	R3.0	10.0	95	R3.0095	0.22643	2.26	11.76	19.217687%	4,469	220,913	52,554	273,467	232,540
391.7 2019 Ford F-150 Unit		2019	1.50	33,330	R3.0	10.0	15	R3.0015	0.85389	8.54	10.04	85.059761%	28,350	49,995	284,638	334,633	333,300
				240,834									**66,027**	**2,756,460**	**699,832**	**3,456,291**	**2,408,340**
				72,452,963									**46,235,606**	**2,020,178,741**	**3,339,401,105**	**5,336,539,166**	**5,122,094,118**
354.2 Sewer Capacity Rights		2017	3.50	2,446,506	R4.0	55.0	6	R4.0006	0.94008	51.70	55.20	93.659420%	2,291,383	8,562,771	126,484,360	135,047,131	134,557,830
354.2 VFSA Capacity Rights		2013	7.50	11,065,195	R4.0	55.0	14	R4.0014	0.86031	47.32	54.82	86.318862%	9,551,350	82,988,963	523,605,027	606,593,990	608,585,725
				13,511,701									**11,842,733**	**91,551,734**	**650,089,387**	**741,641,121**	**743,143,555**
				85,964,664									**58,078,339**	**2,111,730,475**	**3,989,490,492**	**6,078,180,287**	**5,865,237,673**

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Cost Approach

Replacement Cost New less Depreciation to Fair Market Value

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36)	(37)	(39)	(40)	(41)
Account	Description	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
		CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Prelim CORLD	EO%	FMV
353.20	Land & Land Rights - Original Basin	720,020	0.00%	720,020
353.30	Land & Land Rights - Pumping	13,468	0.00%	13,468
354.30	Stuctures & Improvements - Pumping	8,379,553	0.00%	8,379,553
360.21	Collection Sewers - Force - Mains	3,669,861	0.00%	3,669,861
361.21	Collection Sewers - Gravity - Mains	18,623,208	0.00%	18,623,208
361.23	Collection Sewers - Gravity - Manholes	6,272,518	0.00%	6,272,518
363.20	Service Laterals	8,428,787	0.00%	8,428,787
365.20	Flow Measuring Installations Meter Pits	58,401	0.00%	58,401
354.20	Stuctures & Improvements - Treatment	11,842,733	0.00%	11,842,733
390.70	Office Furniture and Equipment	3,763	0.00%	3,763
391.70	Transportation Equipment	66,027	0.00%	66,027
	Grand Total	58,078,339	0.00%	58,078,339

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

Summary of Account Costing and Depreciation Parameters Used in the Depreciation Original Cost and the Depreciated Replacement Cost New Studies

(1)	(2)	(3)				
		(3a)	(3b)	(3c)	(3d)	(3e)
Account Number	Description	Costing Parameters				Reproduction to Replacement Cost Factor
		Index Series	Table	Line Reference	Lookup	AUS Input
353.20	Land & Land Rights - Original Basin	USBLS	PPI	1.00	USBLS1	1.00
353.30	Land & Land Rights - Pumping	USBLS	PPI	1.00	USBLS1	1.00
354.20	Stuctures & Improvements - Treatment	HW	W-1	15.00	HWW-115	1.00
354.30	Stuctures & Improvements - Pumping	HW	W-1	8.00	HWW-18	1.00
360.21	Collection Sewers - Force - Mains	HW	W-1	44.00	HWW-144	1.00
361.21	Collection Sewers - Gravity - Mains	HW	W-1	44.00	HWW-144	1.00
361.23	Collection Sewers - Gravity - Manholes	HW	W-1	45.00	HWW-145	1.00
363.20	Service Laterals	HW	W-1	39.00	HWW-139	1.00
365.20	Flow Measuring Installations Meter Pits	HW	W-1	40.00	HWW-140	1.00
390.70	Office Furniture and Equipment	AUS	T-1	15.00	AUST-115	1.00
391.70	Transportation Equipment	AUS	T-1	4.00	AUST-14	1.00

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Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	DEER RUN DRAINAGE AREA (DI	1976	1,036	0.00%	1,036
353.2	DEER RUN DRAINAGE AREA (DI	1976	1,036	0.00%	1,036
353.2	DEER RUN DRAINAGE AREA (DI	1976	1,036	0.00%	1,036
353.2	DEER RUN DRAINAGE AREA (DI	1976	1,036	0.00%	1,036
353.2	DEER RUN DRAINAGE AREA (DI	1976	1,036	0.00%	1,036
353.2	DEER RUN DRAINAGE AREA (DI	1976	1,036	0.00%	1,036
353.2	DEER RUN DRAINAGE AREA (DI	1976	1,036	0.00%	1,036
353.2	FLAT ROAD DRAINAGE AREA (F	1988	1,036	0.00%	1,036
353.2	FLAT ROAD DRAINAGE AREA (F	1988	1,036	0.00%	1,036
353.2	FLAT ROAD DRAINAGE AREA (F	1988	1,036	0.00%	1,036
353.2	FLAT ROAD DRAINAGE AREA (F	1988	1,036	0.00%	1,036
353.2	FLAT ROAD DRAINAGE AREA (F	1988	1,036	0.00%	1,036
353.2	HILLBROOK CIRCLE DRAINAGE	2000	1,036	0.00%	1,036
353.2	HILLBROOK CIRCLE DRAINAGE	2000	1,036	0.00%	1,036
353.2	HILLBROOK CIRCLE DRAINAGE	2000	1,036	0.00%	1,036
353.2	HILLBROOK CIRCLE DRAINAGE	2000	1,036	0.00%	1,036
353.2	HILLBROOK CIRCLE DRAINAGE	2000	1,036	0.00%	1,036
353.2	HILLBROOK CIRCLE DRAINAGE	2000	1,036	0.00%	1,036
353.2	HILLBROOK CIRCLE DRAINAGE	2000	1,036	0.00%	1,036
353.2	HILLBROOK CIRCLE DRAINAGE	2000	1,036	0.00%	1,036
353.2	HILLBROOK CIRCLE DRAINAGE	2000	1,036	0.00%	1,036
353.2	HILLBROOK CIRCLE DRAINAGE	2000	1,036	0.00%	1,036
353.2	HILLBROOK CIRCLE DRAINAGE	2000	1,036	0.00%	1,036
353.2	HILLBROOK CIRCLE DRAINAGE	2000	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
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Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	KING ROAD DRAINAGE AREA (K	1988	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.2	LEE BOULEVARD DRAINAGE AF	2007	1,036	0.00%	1,036
353.2	LEE BOULEVARD DRAINAGE AF	2007	1,036	0.00%	1,036
353.2	LEE BOULEVARD DRAINAGE AF	2007	1,036	0.00%	1,036
353.2	LEE BOULEVARD DRAINAGE AF	2007	1,036	0.00%	1,036
353.2	LEE BOULEVARD DRAINAGE AF	2007	1,036	0.00%	1,036
353.2	LEE BOULEVARD DRAINAGE AF	2007	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
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353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
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353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
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353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
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353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
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353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
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353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
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353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
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353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
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As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
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As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

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			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
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353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
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353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MATTHEWS ROAD DRAINAGE A	1988	1,036	0.00%	1,036
353.2	MEADOW VIEW DRAINAGE ARE	1980	1,036	0.00%	1,036
353.2	MEADOW VIEW DRAINAGE ARE	1980	1,036	0.00%	1,036
353.2	MEADOW VIEW DRAINAGE ARE	1980	1,036	0.00%	1,036
353.2	MEADOW VIEW DRAINAGE ARE	1980	1,036	0.00%	1,036
353.2	MEADOW VIEW DRAINAGE ARE	1980	1,036	0.00%	1,036
353.2	MEADOW VIEW DRAINAGE ARE	1980	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	MEADOW VIEW DRAINAGE ARE	1980	1,036	0.00%	1,036
353.2	MEADOW VIEW DRAINAGE ARE	1980	1,036	0.00%	1,036
353.2	MEADOW VIEW DRAINAGE ARE	1980	1,036	0.00%	1,036
353.2	MEADOW VIEW DRAINAGE ARE	1980	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036

36	37	38	39	40	41

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Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36)	(37)	(38)	(39)	(40)	(41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036

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East Whiteland Township, Pennsylvania
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Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036

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Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
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353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
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353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036

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Investor-Owned Utility
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Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
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353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
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353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
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353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
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353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036

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Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
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353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
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353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
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353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.2	WILBURDALE ROAD DRAINAGE	2017	1,036	0.00%	1,036
353.2	WILBURDALE ROAD DRAINAGE	2017	1,036	0.00%	1,036

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Fair Market Value

(36) (37) (38) (39) (40) (41)

Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
353.2	WILBURDALE ROAD DRAINAGE	2017	1,036	0.00%	1,036
353.2	WILBURDALE ROAD DRAINAGE	2017	1,036	0.00%	1,036
353.2	WILBURDALE ROAD DRAINAGE	2017	1,036	0.00%	1,036
			720,020		**720,020**
353.3	DEER RUN DRAINAGE AREA (DI	1976	1,036	0.00%	1,036
353.3	HILLBROOK CIRCLE DRAINAGE	2000	1,036	0.00%	1,036
353.3	KING ROAD DRAINAGE AREA (K	2004	1,036	0.00%	1,036
353.3	LAPP ROAD DRAINAGE AREA (L	1987	1,036	0.00%	1,036
353.3	LEE BOULEVARD DRAINAGE AF	2007	1,036	0.00%	1,036
353.3	MALVERN HUNT DRAINAGE ARI	2000	1,036	0.00%	1,036
353.3	MEADOW VIEW DRAINAGE ARE	1980	1,036	0.00%	1,036
353.3	MILL LANE DRAINAGE AREA (MI	1976	1,036	0.00%	1,036
353.3	0	2020	1,036	0.00%	1,036
353.3	PLANEBROOK DRAINAGE AREA	2018	1,036	0.00%	1,036
353.3	0	2020	1,036	0.00%	1,036
353.3	WESTGATE DRAINAGE AREA (V	1998	1,036	0.00%	1,036
353.3	WILBURDALE ROAD DRAINAGE	2017	1,036	0.00%	1,036
			13,468		**13,468**
354.3	(P.S. 1) Deer Run	1976	69,175	0.00%	69,175
354.3	(P.S. 1) Deer Run	2018	52,664	0.00%	52,664
354.3	(P.S. 11) Hillbrook Circle	2000	534,344	0.00%	534,344
354.3	(P.S. 12) King Road	2004	267,529	0.00%	267,529
354.3	(P.S. 13) Malvern Hunt	2000	430,327	0.00%	430,327
354.3	(P.S. 14) Planebrook Road	2018	361,450	0.00%	361,450
354.3	(P.S. 14) Planebrook Road	2018	81,454	0.00%	81,454
354.3	(P.S. 2) Mill Lane	2014	3,104,023	0.00%	3,104,023
354.3	(P.S. 2) Mill Lane	1976	35,172	0.00%	35,172
354.3	(P.S. 3) Wilburdale	2017	488,427	0.00%	488,427

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Account	Description		Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
				CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input		Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt		Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description		Year	Prelim CORLD	EO%	FMV
354.3	(P.S. 3) Wilburdale		2017	99,329	0.00%	99,329
354.3	(P.S. 4) Lee Boulevard		2007	598,059	0.00%	598,059
354.3		0	2002	57,606	0.00%	57,606
354.3	(P.S. 5) Meadowview		1980	81,484	0.00%	81,484
354.3	(P.S. 6) Flat Road		2019	362,426	0.00%	362,426
354.3	(P.S. 7) Lapp Road		1987	168,526	0.00%	168,526
354.3	(P.S. 7) Lapp Road		2006	145,549	0.00%	145,549
354.3	(P.S. 8) Westgate		1988	74,531	0.00%	74,531
354.3	(P.S. 8) Westgate		2001	103,580	0.00%	103,580
354.3		0	2007	25,666	0.00%	25,666
354.3		0	2009	56,163	0.00%	56,163
354.3		0	2014	1,182,069	0.00%	1,182,069
				8,379,553		**8,379,553**
360.21	(P.S. 1) Deer Run FM - 4" ACP		1976	71,416	0.00%	71,416
360.21	(P.S. 11) Hillbrook Circle FM - 4" F		2000	135,059	0.00%	135,059
360.21	(P.S. 12) King Road FM - 4" PVC		2004	415,812	0.00%	415,812
360.21	(P.S. 13) Malvern Hunt FM - 6" DI		2000	438,530	0.00%	438,530
360.21	(P.S. 14) Planebrook FM - 8" PVC		2017	497,108	0.00%	497,108
360.21	(P.S. 2) Mill Lane FM - 14" DIP		1976	441,525	0.00%	441,525
360.21	(P.S. 3) Wilburdale Rd FM - 10" P\		2016	99,957	0.00%	99,957
360.21	(P.S. 4) Lee Blvd FM - 8" DIP		1987	484,362	0.00%	484,362
360.21	(P.S. 5) Meadow View FM - 4" ACI		1980	119,161	0.00%	119,161
360.21	(P.S. 6) Flat Rd FM - 6" ACP		1979	155,038	0.00%	155,038
360.21	(P.S. 7) Lapp Rd FM - 6" PVC		1987	597,180	0.00%	597,180
360.21	(P.S. 8) Westgate FM - 8" PVC		1988	214,713	0.00%	214,713
				3,669,861		**3,669,861**
361.21	18" ACP		1975	151,986	0.00%	151,986
361.21	12" ACP		1975	178,867	0.00%	178,867
361.21	12" ACP		1978	143,994	0.00%	143,994

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Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
361.21 10" ACP		1975	196,850	0.00%	196,850
361.21 10" ACP		1977	109,356	0.00%	109,356
361.21 10" ACP		2012	8,246	0.00%	8,246
361.21 36" ACP		1967	13,070	0.00%	13,070
361.21 27" ACP		1967	242,524	0.00%	242,524
361.21 24" ACP		1967	12,823	0.00%	12,823
361.21 24" ACP		1975	49,698	0.00%	49,698
361.21 10" PVC		1991	86,658	0.00%	86,658
361.21 10" PVC		1992	69,744	0.00%	69,744
361.21 10" PVC		1993	12,394	0.00%	12,394
361.21 10" PVC		2007	632,871	0.00%	632,871
361.21 10" PVC		2019	46,508	0.00%	46,508
361.21 10" PVC		2020	118,051	0.00%	118,051
361.21 8" ACP		1951	11,076	0.00%	11,076
361.21 8" ACP		1954	51,563	0.00%	51,563
361.21 8" ACP		1967	97,966	0.00%	97,966
361.21 8" ACP		1970	215,037	0.00%	215,037
361.21 8" ACP		1971	79,916	0.00%	79,916
361.21 8" ACP		1972	70,669	0.00%	70,669
361.21 8" ACP		1973	295,535	0.00%	295,535
361.21 8" ACP		1974	292,951	0.00%	292,951
361.21 8" ACP		1975	2,202,883	0.00%	2,202,883
361.21 8" ACP		1977	353,556	0.00%	353,556
361.21 8" ACP		1978	843,996	0.00%	843,996
361.21 8" ACP		1979	245,132	0.00%	245,132
361.21 8" ACP		1981	398,439	0.00%	398,439
361.21 8" ACP		2012	32,876	0.00%	32,876
361.21 8" PVC		1970	12,614	0.00%	12,614
361.21 8" PVC		1983	87,265	0.00%	87,265
361.21 8" PVC		1984	232,279	0.00%	232,279
361.21 8" PVC		1985	48,717	0.00%	48,717
361.21 8" PVC		1987	827,953	0.00%	827,953
361.21 8" PVC		1988	959,561	0.00%	959,561

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Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
361.21 8" PVC		1990	512,871	0.00%	512,871
361.21 8" PVC		1991	224,853	0.00%	224,853
361.21 8" PVC		1992	127,972	0.00%	127,972
361.21 8" PVC		1993	202,027	0.00%	202,027
361.21 8" PVC		1994	84,448	0.00%	84,448
361.21 8" PVC		1996	29,246	0.00%	29,246
361.21 8" PVC		1997	323,982	0.00%	323,982
361.21 8" PVC		1998	267,458	0.00%	267,458
361.21 8" PVC		1999	318,173	0.00%	318,173
361.21 8" PVC		2000	1,354,170	0.00%	1,354,170
361.21 8" PVC		2001	53,246	0.00%	53,246
361.21 8" PVC		2002	883,264	0.00%	883,264
361.21 8" PVC		2003	202,445	0.00%	202,445
361.21 8" PVC		2004	223,177	0.00%	223,177
361.21 8" PVC		2005	1,504,703	0.00%	1,504,703
361.21 8" PVC		2006	32,122	0.00%	32,122
361.21 8" PVC		2007	57,823	0.00%	57,823
361.21 8" PVC		2011	145,614	0.00%	145,614
361.21 8" PVC		2012	222,506	0.00%	222,506
361.21 8" PVC		2013	30,882	0.00%	30,882
361.21 8" PVC		2014	9,350	0.00%	9,350
361.21 8" PVC		2017	301,256	0.00%	301,256
361.21 8" PVC		2018	132,144	0.00%	132,144
361.21 8" DIP		1954	15,259	0.00%	15,259
361.21 8" DIP		1975	12,123	0.00%	12,123
361.21 8" CIP		1975	5,417	0.00%	5,417
361.21 20" ACP		1975	336,487	0.00%	336,487
361.21 16" ACP		1975	23,571	0.00%	23,571
361.21 12" PVC		1970	78,313	0.00%	78,313
361.21 12" PVC		2012	8,878	0.00%	8,878
361.21 12" PVC		2016	171,591	0.00%	171,591
361.21 15" PVC		2013	90,925	0.00%	90,925
361.21 15" PVC		2017	254,850	0.00%	254,850

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Account	Description	Placement Year	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
361.21	18" PVC	1988	158,341	0.00%	158,341
361.21	18" PVC	2013	430,153	0.00%	430,153
361.21	18" PVC	2014	21,823	0.00%	21,823
361.21	18" PVC	2017	107,513	0.00%	107,513
361.21	10" DI	2020	8,609	0.00%	8,609
361.21	8" CSP	1978	52,102	0.00%	52,102
361.21	8" CSP	1983	145,650	0.00%	145,650
361.21	20" PVC	2014	13,834	0.00%	13,834
361.21	21" PVC	2014	10,413	0.00%	10,413
			18,623,208		**18,623,208**
361.23	Manholes	1951	7,682	0.00%	7,682
361.23	Manholes	1954	30,990	0.00%	30,990
361.23	Manholes	1967	84,291	0.00%	84,291
361.23	Manholes	1970	74,532	0.00%	74,532
361.23	Manholes	1971	25,395	0.00%	25,395
361.23	Manholes	1972	15,253	0.00%	15,253
361.23	Manholes	1973	128,378	0.00%	128,378
361.23	Manholes	1974	93,472	0.00%	93,472
361.23	Manholes	1975	924,996	0.00%	924,996
361.23	Manholes	1977	171,559	0.00%	171,559
361.23	Manholes	1978	291,870	0.00%	291,870
361.23	Manholes	1979	83,186	0.00%	83,186
361.23	Manholes	1980	6,805	0.00%	6,805
361.23	Manholes	1981	124,004	0.00%	124,004
361.23	Manholes	1983	62,496	0.00%	62,496
361.23	Manholes	1984	88,506	0.00%	88,506
361.23	Manholes	1985	18,288	0.00%	18,288
361.23	Manholes	1987	258,601	0.00%	258,601
361.23	Manholes	1988	351,559	0.00%	351,559
361.23	Manholes	1990	170,455	0.00%	170,455
361.23	Manholes	1991	127,929	0.00%	127,929

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			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
361.23 Manholes		1992	70,749	0.00%	70,749
361.23 Manholes		1993	87,649	0.00%	87,649
361.23 Manholes		1994	33,062	0.00%	33,062
361.23 Manholes		1996	9,491	0.00%	9,491
361.23 Manholes		1997	115,585	0.00%	115,585
361.23 Manholes		1998	147,532	0.00%	147,532
361.23 Manholes		1999	100,171	0.00%	100,171
361.23 Manholes		2000	565,738	0.00%	565,738
361.23 Manholes		2001	20,312	0.00%	20,312
361.23 Manholes		2002	310,886	0.00%	310,886
361.23 Manholes		2003	67,581	0.00%	67,581
361.23 Manholes		2004	84,596	0.00%	84,596
361.23 Manholes		2005	553,842	0.00%	553,842
361.23 Manholes		2006	23,092	0.00%	23,092
361.23 Manholes		2007	201,565	0.00%	201,565
361.23 Manholes		2011	55,651	0.00%	55,651
361.23 Manholes		2012	107,729	0.00%	107,729
361.23 Manholes		2013	91,857	0.00%	91,857
361.23 Manholes		2014	26,627	0.00%	26,627
361.23 Manholes		2016	34,376	0.00%	34,376
361.23 Manholes		2017	255,115	0.00%	255,115
361.23 Manholes		2018	80,369	0.00%	80,369
361.23 Manholes		2019	14,895	0.00%	14,895
361.23 Manholes		2020	59,177	0.00%	59,177
361.23 Manholes		2021	14,624	0.00%	14,624
			6,272,518		**6,272,518**
363.2 4" PVC		1982	174,914	0.00%	174,914
363.2 4" PVC		1985	86,115	0.00%	86,115
363.2 4" PVC		1986	78,843	0.00%	78,843
363.2 4" PVC		1987	61,246	0.00%	61,246
363.2 4" PVC		1988	179,638	0.00%	179,638

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			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
363.2	4" PVC	1989	335,987	0.00%	335,987
363.2	4" PVC	1993	107,157	0.00%	107,157
363.2	4" PVC	1995	43,084	0.00%	43,084
363.2	4" PVC	1996	15,590	0.00%	15,590
363.2	4" PVC	1997	67,459	0.00%	67,459
363.2	4" PVC	1998	157,115	0.00%	157,115
363.2	4" PVC	1999	120,236	0.00%	120,236
363.2	4" PVC	2000	47,303	0.00%	47,303
363.2	4" PVC	2001	577,906	0.00%	577,906
363.2	4" PVC	2002	199,730	0.00%	199,730
363.2	4" PVC	2003	38,008	0.00%	38,008
363.2	4" PVC	2004	571,950	0.00%	571,950
363.2	4" PVC	2012	4,484,913	0.00%	4,484,913
363.2	4" ACP	1970	212,582	0.00%	212,582
363.2	4" ACP	1976	588,268	0.00%	588,268
363.2	4" ACP	1978	133,896	0.00%	133,896
363.2	4" ACP	1980	146,847	0.00%	146,847
			8,428,787		**8,428,787**
365.2	Meter Pits	1976	58,401	0.00%	58,401
			58,401		**58,401**
390.7	PIPE TECH SOFTWARE AND DU	2008	3,763	0.00%	3,763
			3,763		**3,763**
391.7	2001 FORD E350 TRUCK	2001	6,982	0.00%	6,982
391.7	2003 GMC PICKUP TRUCK	2003	4,669	0.00%	4,669
391.7	2018 Carmate 20' Custom Cargo T	2018	5,536	0.00%	5,536
391.7	2010 FORD F550 TRUCK	2010	10,839	0.00%	10,839
391.7	2011 GMC PICKUP TRUCK	2011	5,182	0.00%	5,182

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			CORLD $s	% of Preliminary Cost Approach	Appraisal Date Value $s
Input	Input	Input	Calculation	Input	Calculation
Eng Assmnt	Eng Assmnt	Eng Assmnt	Col (31)	AUS Economic Obsolescence Analysis	(39) * [1.00-Col (40)]
Account	Description	Year	Prelim CORLD	EO%	FMV
391.7	2011 GMC PICKUP TRUCK	2011	4,469	0.00%	4,469
391.7	2019 Ford F-150 Unit	2019	28,350	0.00%	28,350
			66,027		**66,027**
			46,235,606		**46,235,606**
354.2	Sewer Capacity Rights	2017	2,291,383	0.00%	2,291,383
354.2	VFSA Capacity Rights	2013	9,551,350	0.00%	9,551,350
			11,842,733		**11,842,733**
			58,078,339		**58,078,339**

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Original Cost less Depreciation

AUS Consultants
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Office Telephone: 414-529-5755
J. Weinert's Cell: 414-698-8371
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Determination of the Depreciated Original Cost

(43)	(44)	(46)	(47)	(48)	(49)	(53)	(54)	(55)	(56)	(57)
Account	Description	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost
Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input			Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)
Acct	Descrip	Original Cost	Iowa	Normal Life	age	Rem Life	Total Life	Theo%	Theo Reserve	Net Book
353.20	Land & Land Rights - Original Basin	668	ZNonDep	-	32.06	-	-	0.00%	-	668
353.30	Land & Land Rights - Pumping	13	ZNonDep	-	20.77	-	-	0.00%	-	13
354.30	Stuctures & Improvements - Pumping	8,005,275	R4.0	45.00	10.35	35.02	45.37	22.00%	1,800,950	6,204,325
360.21	Collection Sewers - Force - Mains	2,304,355	R3.0	75.00	23.91	52.62	76.52	31.00%	712,885	1,591,470
361.21	Collection Sewers - Gravity - Mains	10,767,738	R2.5	80.00	25.14	57.61	82.74	30.00%	3,226,805	7,540,933
361.23	Collection Sewers - Gravity - Manholes	4,350,867	R2.5	80.00	24.70	57.94	82.64	30.00%	1,283,915	3,066,952
363.20	Service Laterals	6,619,976	R3.0	70.00	15.43	55.45	70.88	22.00%	1,424,567	5,195,409
365.20	Flow Measuring Installations Meter Pits	78,670	S2.0	30.00	44.50	4.50	49.00	85.00%	66,870	11,800
354.20	Stuctures & Improvements - Treatment	11,085,242	R4.0	55.00	6.72	48.18	54.89	12.00%	1,357,375	9,727,867
390.70	Office Furniture and Equipment	21,550	R3.0	12.00	12.50	2.20	14.70	85.00%	18,318	3,232
391.70	Transportation Equipment	212,956	R3.0	10.00	11.16	3.04	14.20	71.00%	151,652	61,304
Grand Total		43,447,309		64.92	16.08	50.09	66.17	23.12%	10,043,337	33,403,972

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

Summary of Account Costing and Depreciation Parameters Used in the Depreciation Original Cost and the Depreciated Replacement Cost New Studies

(1)	(2)	(4)		(5)	(6)	
		(4a)	(4b)		(6a)	(6b)
Account Number	Description	Iowa Survivor / Retirement Curve	Normal Service Life	Economic Obsolescence	Tax Depreciation	
			years	% of CORLD	Table	Life
353.20	Land & Land Rights - Original Basin	ZNonDep	0.00	0.00%	Non-Depr	0.00
353.30	Land & Land Rights - Pumping	ZNonDep	0.00	0.00%	Non-Depr	0.00
354.20	Stuctures & Improvements - Treatment	R4.0	55.00	0.00%	MACRS	25.00
354.30	Stuctures & Improvements - Pumping	R4.0	45.00	0.00%	MACRS	25.00
360.21	Collection Sewers - Force - Mains	R3.0	75.00	0.00%	MACRS	25.00
361.21	Collection Sewers - Gravity - Mains	R2.5	80.00	0.00%	MACRS	25.00
361.23	Collection Sewers - Gravity - Manholes	R2.5	80.00	0.00%	MACRS	25.00
363.20	Service Laterals	R3.0	70.00	0.00%	MACRS	25.00
365.20	Flow Measuring Installations Meter Pits	S2.0	30.00	0.00%	MACRS	25.00
390.70	Office Furniture and Equipment	R3.0	12.00	0.00%	MACRS	12.00
391.70	Transportation Equipment	R3.0	10.00	0.00%	MACRS	10.00

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	DEER RUN DRAINAGE AREA (DR)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	DEER RUN DRAINAGE AREA (DR)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	DEER RUN DRAINAGE AREA (DR)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	DEER RUN DRAINAGE AREA (DR)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	DEER RUN DRAINAGE AREA (DR)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	DEER RUN DRAINAGE AREA (DR)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	DEER RUN DRAINAGE AREA (DR)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	FLAT ROAD DRAINAGE AREA (FR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	FLAT ROAD DRAINAGE AREA (FR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	FLAT ROAD DRAINAGE AREA (FR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	FLAT ROAD DRAINAGE AREA (FR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	FLAT ROAD DRAINAGE AREA (FR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AF	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AF	2000	-	ZNonDep	0	20.50	0	ZNonDep000	0.00000	0	0	0	-	-	-	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AF	2000	-	ZNonDep	0	20.50	0	ZNonDep000	0.00000	0	0	0	-	-	-	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AF	2000	-	ZNonDep	0	20.50	0	ZNonDep000	0.00000	0	0	0	-	-	-	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AF	2000	-	ZNonDep	0	20.50	0	ZNonDep000	0.00000	0	0	0	-	-	-	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AF	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AF	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AF	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AF	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	HILLBROOK CIRCLE DRAINAGE AF	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	KING ROAD DRAINAGE AREA (KR)	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.2	LEE BOULEVARD DRAINAGE ARE/	2007	1	ZNonDep	0	13.50	7	ZNonDep000	0.00000	0	0	0	-	1	14	-	-	-
353.2	LEE BOULEVARD DRAINAGE ARE/	2007	1	ZNonDep	0	13.50	7	ZNonDep000	0.00000	0	0	0	-	1	14	-	-	-
353.2	LEE BOULEVARD DRAINAGE ARE/	2007	1	ZNonDep	0	13.50	7	ZNonDep000	0.00000	0	0	0	-	1	14	-	-	-
353.2	LEE BOULEVARD DRAINAGE ARE/	2007	1	ZNonDep	0	13.50	7	ZNonDep000	0.00000	0	0	0	-	1	14	-	-	-
353.2	LEE BOULEVARD DRAINAGE ARE/	2007	1	ZNonDep	0	13.50	7	ZNonDep000	0.00000	0	0	0	-	1	14	-	-	-
353.2	LEE BOULEVARD DRAINAGE ARE/	2007	1	ZNonDep	0	13.50	7	ZNonDep000	0.00000	0	0	0	-	1	14	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS input	AUS input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	-	ZNonDep	0	32.50	0	ZNonDep000	0.00000	0	0	0	-	-	-	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	-	ZNonDep	0	32.50	0	ZNonDep000	0.00000	0	0	0	-	-	-	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	-	ZNonDep	0	32.50	0	ZNonDep000	0.00000	0	0	0	-	-	-	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MATTHEWS ROAD DRAINAGE ARE	1988	1	ZNonDep	0	32.50	3	ZNonDep000	0.00000	0	0	0	-	1	33	-	-	-
353.2	MEADOW VIEW DRAINAGE AREA (	1980	1	ZNonDep	0	40.50	2	ZNonDep000	0.00000	0	0	0	-	1	41	-	-	-
353.2	MEADOW VIEW DRAINAGE AREA (	1980	1	ZNonDep	0	40.50	2	ZNonDep000	0.00000	0	0	0	-	1	41	-	-	-
353.2	MEADOW VIEW DRAINAGE AREA (	1980	1	ZNonDep	0	40.50	2	ZNonDep000	0.00000	0	0	0	-	1	41	-	-	-
353.2	MEADOW VIEW DRAINAGE AREA (	1980	1	ZNonDep	0	40.50	2	ZNonDep000	0.00000	0	0	0	-	1	41	-	-	-
353.2	MEADOW VIEW DRAINAGE AREA (	1980	1	ZNonDep	0	40.50	2	ZNonDep000	0.00000	0	0	0	-	1	41	-	-	-
353.2	MEADOW VIEW DRAINAGE AREA (	1980	1	ZNonDep	0	40.50	2	ZNonDep000	0.00000	0	0	0	-	1	41	-	-	-
353.2	MEADOW VIEW DRAINAGE AREA (	1980	1	ZNonDep	0	40.50	2	ZNonDep000	0.00000	0	0	0	-	1	41	-	-	-
353.2	MEADOW VIEW DRAINAGE AREA (	1980	1	ZNonDep	0	40.50	2	ZNonDep000	0.00000	0	0	0	-	1	41	-	-	-
353.2	MEADOW VIEW DRAINAGE AREA (	1980	-	ZNonDep	0	40.50	0	ZNonDep000	0.00000	0	0	0	-	-	-	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	-	ZNonDep	0	44.50	0	ZNonDep000	0.00000	0	0	0	-	-	-	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	-	ZNonDep	0	44.50	0	ZNonDep000	0.00000	0	0	0	-	-	-	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
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As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	-	ZNonDep	0	2.50	0	ZNonDep000	0.00000	0	0	0	-	-	-	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
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Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-

East Whiteland Township, Pennsylvania
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Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.2	WILBURDALE ROAD DRAINAGE AF	2017	1	ZNonDep	0	3.50	29	ZNonDep000	0.00000	0	0	0	-	1	4	-	-	-
353.2	WILBURDALE ROAD DRAINAGE AF	2017	1	ZNonDep	0	3.50	29	ZNonDep000	0.00000	0	0	0	-	1	4	-	-	-
353.2	WILBURDALE ROAD DRAINAGE AF	2017	1	ZNonDep	0	3.50	29	ZNonDep000	0.00000	0	0	0	-	1	4	-	-	-
353.2	WILBURDALE ROAD DRAINAGE AF	2017	1	ZNonDep	0	3.50	29	ZNonDep000	0.00000	0	0	0	-	1	4	-	-	-
353.2	WILBURDALE ROAD DRAINAGE AF	2017	1	ZNonDep	0	3.50	29	ZNonDep000	0.00000	0	0	0	-	1	4	-	-	-
			668										**-**	**668**	**21,417**	**-**	**-**	**-**
353.3	DEER RUN DRAINAGE AREA (DR)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.3	HILLBROOK CIRCLE DRAINAGE AF	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.3	KING ROAD DRAINAGE AREA (KR)	2004	1	ZNonDep	0	16.50	6	ZNonDep000	0.00000	0	0	0	-	1	17	-	-	-
353.3	LAPP ROAD DRAINAGE AREA (LR)	1987	1	ZNonDep	0	33.50	3	ZNonDep000	0.00000	0	0	0	-	1	34	-	-	-
353.3	LEE BOULEVARD DRAINAGE ARE/	2007	1	ZNonDep	0	13.50	7	ZNonDep000	0.00000	0	0	0	-	1	14	-	-	-
353.3	MALVERN HUNT DRAINAGE AREA	2000	1	ZNonDep	0	20.50	5	ZNonDep000	0.00000	0	0	0	-	1	21	-	-	-
353.3	MEADOW VIEW DRAINAGE AREA (	1980	1	ZNonDep	0	40.50	2	ZNonDep000	0.00000	0	0	0	-	1	41	-	-	-
353.3	MILL LANE DRAINAGE AREA (ML)	1976	1	ZNonDep	0	44.50	2	ZNonDep000	0.00000	0	0	0	-	1	45	-	-	-
353.3	0	2020	1	ZNonDep	0	0.50	200	ZNonDep000	0.00000	0	0	0	-	1	1	-	-	-
353.3	PLANEBROOK DRAINAGE AREA (F	2018	1	ZNonDep	0	2.50	40	ZNonDep000	0.00000	0	0	0	-	1	3	-	-	-
353.3	0	2020	1	ZNonDep	0	0.50	200	ZNonDep000	0.00000	0	0	0	-	1	1	-	-	-
353.3	WESTGATE DRAINAGE AREA (WG	1998	1	ZNonDep	0	22.50	4	ZNonDep000	0.00000	0	0	0	-	1	23	-	-	-
353.3	WILBURDALE ROAD DRAINAGE AF	2017	1	ZNonDep	0	3.50	29	ZNonDep000	0.00000	0	0	0	-	1	4	-	-	-
			13										**-**	**13**	**270**	**-**	**-**	**-**
354.3	(P.S. 1) Deer Run	1976	78,670	R4.0	45	44.50	99	R4.0099	0.15108	6.8	51.3	0.85000	66,870	11,800	3,500,815	534,956	4,035,771	3,540,150
354.3	(P.S. 1) Deer Run	2018	51,550	R4.0	45	2.50	6	R4.0006	0.94008	42.3	44.8	0.05580	2,876	48,674	128,875	2,180,565	2,309,440	2,319,750
354.3	(P.S. 11) Hillbrook Circle	2000	464,526	R4.0	45	20.50	46	R4.0046	0.54887	24.7	45.2	0.45354	210,681	253,845	9,522,786	11,473,796	20,996,582	20,903,676
354.3	(P.S. 12) King Road	2004	233,129	R4.0	45	16.50	37	R4.0037	0.63414	28.54	45.04	0.36634	85,404	147,725	3,846,629	6,653,502	10,500,130	10,490,805

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
354.3	(P.S. 13) Malvern Hunt	2000	374,100	R4.0	45	20.50	46	R4.0046	0.54887	24.7	45.2	0.45354	169,669	204,431	7,669,050	9,240,270	16,909,320	16,834,500
354.3	(P.S. 14) Planebrook Road	2018	353,800	R4.0	45	2.50	6	R4.0006	0.94008	42.3	44.8	0.05580	19,742	334,058	884,500	14,965,740	15,850,240	15,921,000
354.3	(P.S. 14) Planebrook Road	2018	79,730	R4.0	45	2.50	6	R4.0006	0.94008	42.3	44.8	0.05580	4,449	75,281	199,325	3,372,579	3,571,904	3,587,850
354.3	(P.S. 2) Mill Lane	2014	3,001,023	R4.0	45	6.50	14	R4.0014	0.86031	38.71	45.21	0.14377	431,457	2,569,566	19,506,650	116,169,600	135,676,250	135,046,035
354.3	(P.S. 2) Mill Lane	1976	40,000	R4.0	45	44.50	99	R4.0099	0.15108	6.8	51.3	0.85000	34,000	6,000	1,780,000	272,000	2,052,000	1,800,000
354.3	(P.S. 3) Wilburdale	2017	469,600	R4.0	45	3.50	8	R4.0008	0.92012	41.41	44.91	0.07793	36,596	433,004	1,643,600	19,446,136	21,089,736	21,132,000
354.3	(P.S. 3) Wilburdale	2017	95,500	R4.0	45	3.50	8	R4.0008	0.92012	41.41	44.91	0.07793	7,442	88,058	334,250	3,954,655	4,288,905	4,297,500
354.3	(P.S. 4) Lee Boulevard	2007	556,117	R4.0	45	13.50	30	R4.0030	0.70211	31.59	45.09	0.29940	166,501	389,616	7,507,580	17,567,736	25,075,316	25,025,265
354.3	0	2002	49,664	R4.0	45	18.50	41	R4.0041	0.59589	26.82	45.32	0.40821	20,274	29,390	918,792	1,332,001	2,250,793	2,234,900
354.3	(P.S. 5) Meadowview	1980	106,067	R4.0	45	40.50	90	R4.0090	0.20092	9.04	49.54	0.81752	86,712	19,355	4,295,714	958,846	5,254,559	4,773,015
354.3	(P.S. 6) Flat Road	2019	352,000	R4.0	45	1.50	3	R4.0003	0.97003	43.65	45.15	0.03322	11,693	340,307	528,000	15,364,800	15,892,800	15,840,000
354.3	(P.S. 7) Lapp Road	1987	179,265	R4.0	45	33.50	74	R4.0074	0.31142	14.01	47.51	0.70511	126,402	52,863	6,005,378	2,511,503	8,516,880	8,066,925
354.3	(P.S. 7) Lapp Road	2006	131,120	R4.0	45	14.50	32	R4.0032	0.68258	30.72	45.22	0.32065	42,043	89,077	1,901,234	4,027,993	5,929,227	5,900,380
354.3	(P.S. 8) Westgate	1988	78,824	R4.0	45	32.50	72	R4.0072	0.32657	14.7	47.2	0.68856	54,275	24,549	2,561,791	1,158,718	3,720,509	3,547,096
354.3	(P.S. 8) Westgate	2001	89,972	R4.0	45	19.50	43	R4.0043	0.57696	25.96	45.46	0.42895	38,593	51,379	1,754,454	2,335,673	4,090,127	4,048,740
354.3	0	2007	23,866	R4.0	45	13.50	30	R4.0030	0.70211	31.59	45.09	0.29940	7,145	16,721	322,191	753,927	1,076,118	1,073,970
354.3	0	2009	53,908	R4.0	45	11.50	26	R4.0026	0.74138	33.36	44.86	0.25635	13,819	40,089	619,936	1,798,354	2,418,290	2,425,838
354.3	0	2014	1,142,844	R4.0	45	6.50	14	R4.0014	0.86031	38.71	45.21	0.14377	164,307	978,537	7,428,488	44,239,506	51,667,994	51,427,997
			8,005,275										**1,800,950**	**6,204,325**	**82,860,038**	**280,312,856**	**363,172,891**	**360,237,392**
360.21	(P.S. 1) Deer Run FM - 4" ACP	1976	31,269	R3.0	75	44.50	59	R3.0059	0.4653	34.9	79.4	0.56045	17,525	13,744	1,391,488	1,091,302	2,482,790	2,345,205
360.21	(P.S. 11) Hillbrook Circle FM - 4" PVC	2000	85,965	R3.0	75	20.50	27	R3.0027	0.74058	55.54	76.04	0.26959	23,175	62,790	1,762,280	4,774,488	6,536,768	6,447,364
360.21	(P.S. 12) King Road FM - 4" PVC	2004	286,022	R3.0	75	16.50	22	R3.0022	0.78729	59.05	75.55	0.21840	62,467	223,555	4,719,355	16,889,570	21,608,924	21,451,613
360.21	(P.S. 13) Malvern Hunt FM - 6" DIP	2000	279,123	R3.0	75	20.50	27	R3.0027	0.74058	55.54	76.04	0.26959	75,249	203,874	5,722,020	15,502,488	21,224,508	20,934,220
360.21	(P.S. 14) Planebrook FM - 8" PVC	2017	443,455	R3.0	75	3.50	5	R3.0005	0.9509	71.32	74.82	0.04678	20,745	422,710	1,552,092	31,627,193	33,179,284	33,259,106
360.21	(P.S. 2) Mill Lane FM - 14" DIP	1976	193,322	R3.0	75	44.50	59	R3.0059	0.4653	34.9	79.4	0.56045	108,347	84,975	8,602,834	6,746,942	15,349,776	14,499,158
360.21	(P.S. 3) Wilburdale Rd FM - 10" PVC	2016	89,428	R3.0	75	4.50	6	R3.0006	0.94112	70.58	75.08	0.05994	5,360	84,068	402,428	6,311,861	6,714,289	6,707,135
360.21	(P.S. 4) Lee Blvd FM - 8" DIP	1987	276,128	R3.0	75	33.50	45	R3.0045	0.58001	43.5	77	0.43506	120,132	155,996	9,250,288	12,011,567	21,261,855	20,709,599
360.21	(P.S. 5) Meadow View FM - 4" ACP	1980	63,237	R3.0	75	40.50	54	R3.0054	0.50513	37.88	78.38	0.51671	32,675	30,562	2,561,116	2,395,434	4,956,551	4,742,808
360.21	(P.S. 6) Flat Rd FM - 6" ACP	1979	77,969	R3.0	75	41.50	55	R3.0055	0.49706	37.28	78.78	0.52678	41,073	36,896	3,235,718	2,906,689	6,142,407	5,847,684
360.21	(P.S. 7) Lapp Rd FM - 6" PVC	1987	340,443	R3.0	75	33.50	45	R3.0045	0.58001	43.5	77	0.43506	148,113	192,330	11,404,854	14,809,288	26,214,142	25,533,256
360.21	(P.S. 8) Westgate FM - 8" PVC	1988	137,993	R3.0	75	32.50	43	R3.0043	0.59718	44.79	77.29	0.42049	58,024	79,969	4,484,758	6,180,687	10,665,446	10,349,443
			2,304,355										**712,885**	**1,591,470**	**55,089,231**	**121,247,509**	**176,336,740**	**172,826,591**
361.21	18" ACP	1975	58,356	R2.5	80	45.50	57	R2.5057	0.50654	40.52	86.02	0.52895	30,867	27,489	2,655,202	2,364,588	5,019,790	4,668,486
361.21	12" ACP	1975	68,677	R2.5	80	45.50	57	R2.5057	0.50654	40.52	86.02	0.52895	36,327	32,350	3,124,817	2,782,804	5,907,621	5,494,183
361.21	12" ACP	1978	61,740	R2.5	80	42.50	53	R2.5053	0.53711	42.97	85.47	0.49725	30,700	31,040	2,623,971	2,652,989	5,276,960	4,939,239
361.21	10" ACP	1975	75,582	R2.5	80	45.50	57	R2.5057	0.50654	40.52	86.02	0.52895	39,979	35,603	3,438,985	3,062,586	6,501,571	6,046,567
361.21	10" ACP	1977	45,057	R2.5	80	43.50	54	R2.5054	0.5294	42.35	85.85	0.50670	22,830	22,227	1,959,981	1,908,166	3,868,147	3,604,563
361.21	10" ACP	2012	7,711	R2.5	80	8.50	11	R2.5011	0.89711	71.77	80.27	0.10589	817	6,894	65,547	553,445	618,991	616,909
361.21	36" ACP	1967	3,626	R2.5	80	53.50	67	R2.5067	0.43365	34.69	88.19	0.60664	2,200	1,426	193,984	125,782	319,766	290,070
361.21	27" ACP	1967	67,280	R2.5	80	53.50	67	R2.5067	0.43365	34.69	88.19	0.60664	40,815	26,465	3,599,468	2,333,935	5,933,403	5,382,382
361.21	24" ACP	1967	3,557	R2.5	80	53.50	67	R2.5067	0.43365	34.69	88.19	0.60664	2,158	1,399	190,307	123,397	313,705	284,572

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

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(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
361.21	24" ACP	1975	19,082	R2.5	80	45.50	57	R2.5057	0.50654	40.52	86.02	0.52895	10,093	8,989	868,219	773,192	1,641,411	1,526,539
361.21	10" PVC	1991	52,555	R2.5	80	29.50	37	R2.5037	0.66661	53.33	82.83	0.35615	18,717	33,838	1,550,375	2,802,763	4,353,138	4,204,407
361.21	10" PVC	1992	40,012	R2.5	80	28.50	36	R2.5036	0.67506	54	82.5	0.34545	13,822	26,190	1,140,354	2,160,671	3,301,025	3,200,994
361.21	10" PVC	1993	7,274	R2.5	80	27.50	34	R2.5034	0.69207	55.37	82.87	0.33185	2,414	4,860	200,035	402,761	602,795	581,919
361.21	10" PVC	2007	524,647	R2.5	80	13.50	17	R2.5017	0.84214	67.37	80.87	0.16693	87,579	437,068	7,082,734	35,345,464	42,428,197	41,971,754
361.21	10" PVC	2019	42,281	R2.5	80	1.50	2	R2.5002	0.98112	78.49	79.99	0.01875	793	41,488	63,422	3,318,666	3,382,088	3,382,511
361.21	10" PVC	2020	111,336	R2.5	80	0.50	1	R2.5001	0.99055	79.24	79.74	0.00627	698	110,638	55,668	8,822,271	8,877,939	8,906,886
361.21	8" ACP	1951	2,995	R2.5	80	69.50	87	R2.5087	0.30585	24.47	93.97	0.73960	2,215	780	208,173	73,295	281,468	239,623
361.21	8" ACP	1954	14,038	R2.5	80	66.50	83	R2.5083	0.3292	26.34	92.84	0.71629	10,056	3,982	933,556	369,772	1,303,328	1,123,074
361.21	8" ACP	1967	27,177	R2.5	80	53.50	67	R2.5067	0.43365	34.69	88.19	0.60664	16,487	10,690	1,453,973	942,772	2,396,745	2,174,165
361.21	8" ACP	1970	62,533	R2.5	80	50.50	63	R2.5063	0.46218	36.97	87.47	0.57734	36,103	26,430	3,157,932	2,311,857	5,469,789	5,002,665
361.21	8" ACP	1971	25,403	R2.5	80	49.50	62	R2.5062	0.46944	37.56	87.06	0.56857	14,443	10,960	1,257,429	954,122	2,211,551	2,032,208
361.21	8" ACP	1972	23,205	R2.5	80	48.50	61	R2.5061	0.47676	38.14	86.64	0.55979	12,990	10,215	1,125,449	885,044	2,010,493	1,856,411
361.21	8" ACP	1973	96,746	R2.5	80	47.50	59	R2.5059	0.49155	39.32	86.82	0.54711	52,931	43,815	4,595,429	3,804,048	8,399,476	7,739,670
361.21	8" ACP	1974	105,875	R2.5	80	46.50	58	R2.5058	0.49902	39.92	86.42	0.53807	56,968	48,907	4,923,174	4,226,519	9,149,693	8,469,977
361.21	8" ACP	1975	845,814	R2.5	80	45.50	57	R2.5057	0.50654	40.52	86.02	0.52895	447,393	398,421	38,484,530	34,272,377	72,756,907	67,665,107
361.21	8" ACP	1977	145,673	R2.5	80	43.50	54	R2.5054	0.5294	42.35	85.85	0.50670	73,813	71,860	6,336,780	6,169,256	12,506,036	11,653,848
361.21	8" ACP	1978	361,880	R2.5	80	42.50	53	R2.5053	0.53711	42.97	85.47	0.49725	179,945	181,935	15,379,884	15,549,967	30,929,851	28,950,370
361.21	8" ACP	1979	113,877	R2.5	80	41.50	52	R2.5052	0.54488	43.59	85.09	0.48772	55,540	58,337	4,725,894	4,963,897	9,689,792	9,110,158
361.21	8" ACP	1981	204,755	R2.5	80	39.50	49	R2.5049	0.56844	45.48	84.98	0.46482	95,174	109,581	8,087,826	9,312,261	17,400,087	16,380,407
361.21	8" ACP	2012	30,744	R2.5	80	8.50	11	R2.5011	0.89711	71.77	80.27	0.10589	3,255	27,489	261,324	2,206,499	2,467,823	2,459,522
361.21	8" PVC	1970	3,668	R2.5	80	50.50	63	R2.5063	0.46218	36.97	87.47	0.57734	2,118	1,550	185,244	135,613	320,857	293,456
361.21	8" PVC	1983	46,541	R2.5	80	37.50	47	R2.5047	0.58438	46.75	84.25	0.44510	20,715	25,826	1,745,294	2,175,800	3,921,094	3,723,294
361.21	8" PVC	1984	122,230	R2.5	80	36.50	46	R2.5046	0.59241	47.39	83.89	0.43509	53,181	69,049	4,461,385	5,792,467	10,253,852	9,778,378
361.21	8" PVC	1985	25,549	R2.5	80	35.50	44	R2.5044	0.60861	48.69	84.19	0.42167	10,773	14,776	906,996	1,243,990	2,150,986	2,043,935
361.21	8" PVC	1987	445,308	R2.5	80	33.50	42	R2.5042	0.62498	50	83.5	0.40120	178,658	266,650	14,917,824	22,265,409	37,183,233	35,624,654
361.21	8" PVC	1988	586,648	R2.5	80	32.50	41	R2.5041	0.63322	50.66	83.16	0.39081	229,268	357,380	19,066,056	29,719,581	48,785,637	46,931,829
361.21	8" PVC	1990	322,292	R2.5	80	30.50	38	R2.5038	0.65821	52.66	83.16	0.36676	118,204	204,088	9,829,912	16,971,907	26,801,819	25,783,376
361.21	8" PVC	1991	136,366	R2.5	80	29.50	37	R2.5037	0.66661	53.33	82.83	0.35615	48,567	87,799	4,022,790	7,272,386	11,295,176	10,909,261
361.21	8" PVC	1992	73,418	R2.5	80	28.50	36	R2.5036	0.67506	54	82.5	0.34545	25,362	48,056	2,092,422	3,964,589	6,057,011	5,873,465
361.21	8" PVC	1993	118,574	R2.5	80	27.50	34	R2.5034	0.69207	55.37	82.87	0.33185	39,349	79,225	3,260,794	6,565,461	9,826,256	9,485,947
361.21	8" PVC	1994	48,812	R2.5	80	26.50	33	R2.5033	0.70063	56.05	82.55	0.32102	15,670	33,142	1,293,530	2,735,939	4,029,469	3,904,997
361.21	8" PVC	1996	17,626	R2.5	80	24.50	31	R2.5031	0.71785	57.43	81.93	0.29904	5,271	12,355	431,846	1,012,281	1,444,127	1,410,108
361.21	8" PVC	1997	195,693	R2.5	80	23.50	29	R2.5029	0.73522	58.82	82.32	0.28547	55,865	139,828	4,598,794	11,510,682	16,109,476	15,655,467
361.21	8" PVC	1998	161,226	R2.5	80	22.50	28	R2.5028	0.74396	59.52	82.02	0.27432	44,228	116,998	3,627,588	9,596,179	13,223,767	12,898,090
361.21	8" PVC	1999	191,812	R2.5	80	21.50	27	R2.5027	0.75273	60.22	81.72	0.26309	50,464	141,348	4,123,955	11,550,911	15,674,867	15,344,950
361.21	8" PVC	2000	841,402	R2.5	80	20.50	26	R2.5026	0.76153	60.92	81.42	0.25178	211,848	629,554	17,248,749	51,258,235	68,506,984	67,312,193
361.21	8" PVC	2001	33,917	R2.5	80	19.50	24	R2.5024	0.77923	62.34	81.84	0.23827	8,081	25,836	661,375	2,114,364	2,775,739	2,713,332
361.21	8" PVC	2002	573,797	R2.5	80	18.50	23	R2.5023	0.78813	63.05	81.55	0.22685	130,166	443,631	10,615,239	36,177,882	46,793,121	45,903,736
361.21	8" PVC	2003	130,439	R2.5	80	17.50	22	R2.5022	0.79706	63.76	81.26	0.21536	28,091	102,348	2,282,685	8,316,799	10,599,484	10,435,131
361.21	8" PVC	2004	150,692	R2.5	80	16.50	21	R2.5021	0.80602	64.48	80.98	0.20375	30,703	119,989	2,486,416	9,716,613	12,203,029	12,055,351
361.21	8" PVC	2005	1,084,944	R2.5	80	15.50	19	R2.5019	0.82402	65.92	81.42	0.19037	206,541	878,403	16,816,635	71,519,521	88,336,156	86,795,535
361.21	8" PVC	2006	25,136	R2.5	80	14.50	18	R2.5018	0.83306	66.64	81.14	0.17870	4,492	20,644	364,468	1,675,044	2,039,512	2,010,857
361.21	8" PVC	2007	47,935	R2.5	80	13.50	17	R2.5017	0.84214	67.37	80.87	0.16693	8,002	39,933	647,127	3,229,401	3,876,527	3,834,824
361.21	8" PVC	2011	132,177	R2.5	80	9.50	12	R2.5012	0.88789	71.03	80.53	0.11797	15,593	116,584	1,255,684	9,388,552	10,644,236	10,574,182

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
361.21 8" PVC		2012	208,075	R2.5	80	8.50	11	R2.5011	0.89711	71.77	80.27	0.10589	22,033	186,042	1,768,642	14,933,577	16,702,219	16,646,039
361.21 8" PVC		2013	27,837	R2.5	80	7.50	9	R2.5009	0.91563	73.25	80.75	0.09288	2,585	25,252	208,776	2,039,050	2,247,826	2,226,949
361.21 8" PVC		2014	8,385	R2.5	80	6.50	8	R2.5008	0.92492	73.99	80.49	0.08076	677	7,708	54,503	620,409	674,912	670,803
361.21 8" PVC		2017	267,817	R2.5	80	3.50	4	R2.5004	0.96231	76.98	80.48	0.04349	11,647	256,170	937,360	20,616,553	21,553,912	21,425,360
361.21 8" PVC		2018	118,707	R2.5	80	2.50	3	R2.5003	0.9717	77.74	80.24	0.03116	3,699	115,008	296,767	9,228,258	9,525,025	9,496,536
361.21 8" DIP		1954	4,154	R2.5	80	66.50	83	R2.5083	0.3292	26.34	92.84	0.71629	2,976	1,178	276,274	109,429	385,703	332,359
361.21 8" DIP		1975	4,655	R2.5	80	45.50	57	R2.5057	0.50654	40.52	86.02	0.52895	2,462	2,193	211,790	188,609	400,399	372,378
361.21 8" CIP		1975	2,080	R2.5	80	45.50	57	R2.5057	0.50654	40.52	86.02	0.52895	1,100	980	94,639	84,281	178,920	166,399
361.21 20" ACP		1975	129,197	R2.5	80	45.50	57	R2.5057	0.50654	40.52	86.02	0.52895	68,339	60,858	5,878,460	5,235,059	11,113,519	10,335,754
361.21 16" ACP		1975	9,050	R2.5	80	45.50	57	R2.5057	0.50654	40.52	86.02	0.52895	4,787	4,263	411,792	366,721	778,513	724,029
361.21 12" PVC		1970	22,774	R2.5	80	50.50	63	R2.5063	0.46218	36.97	87.47	0.57734	13,148	9,626	1,150,071	841,943	1,992,015	1,821,895
361.21 12" PVC		2012	8,302	R2.5	80	8.50	11	R2.5011	0.89711	71.77	80.27	0.10589	879	7,423	70,564	595,808	666,371	664,130
361.21 12" PVC		2016	152,919	R2.5	80	4.50	6	R2.5006	0.94357	75.49	79.99	0.05626	8,603	144,316	688,135	11,543,841	12,231,976	12,233,505
361.21 15" PVC		2013	81,958	R2.5	80	7.50	9	R2.5009	0.91563	73.25	80.75	0.09288	7,612	74,346	614,685	6,003,423	6,618,108	6,556,639
361.21 15" PVC		2017	226,562	R2.5	80	3.50	4	R2.5004	0.96231	76.98	80.48	0.04349	9,853	216,709	792,969	17,440,780	18,233,748	18,124,998
361.21 18" PVC		1988	96,805	R2.5	80	32.50	41	R2.5041	0.63322	50.66	83.16	0.39081	37,832	58,973	3,146,155	4,904,130	8,050,284	7,744,381
361.21 18" PVC		2013	387,731	R2.5	80	7.50	9	R2.5009	0.91563	73.25	80.75	0.09288	36,012	351,719	2,907,986	28,401,326	31,309,312	31,018,513
361.21 18" PVC		2014	19,571	R2.5	80	6.50	8	R2.5008	0.92492	73.99	80.49	0.08076	1,581	17,990	127,215	1,448,094	1,575,308	1,565,718
361.21 18" PVC		2017	95,579	R2.5	80	3.50	4	R2.5004	0.96231	76.98	80.48	0.04349	4,157	91,422	334,527	7,357,685	7,692,212	7,646,334
361.21 10" DI		2020	8,119	R2.5	80	0.50	1	R2.5001	0.99055	79.24	79.74	0.00627	51	8,068	4,059	643,322	647,381	649,492
361.21 8" CSP		1978	22,340	R2.5	80	42.50	53	R2.5053	0.53711	42.97	85.47	0.49725	11,108	11,232	949,439	959,939	1,909,378	1,787,179
361.21 8" CSP		1983	77,680	R2.5	80	37.50	47	R2.5047	0.58438	46.75	84.25	0.44510	34,576	43,104	2,913,015	3,631,559	6,544,574	6,214,432
361.21 20" PVC		2014	12,407	R2.5	80	6.50	8	R2.5008	0.92492	73.99	80.49	0.08076	1,002	11,405	80,644	917,980	998,624	992,545
361.21 21" PVC		2014	9,339	R2.5	80	6.50	8	R2.5008	0.92492	73.99	80.49	0.08076	754	8,585	60,704	691,003	751,708	747,132
			10,767,738			**25.14**							**3,226,805**	**7,540,933**	**270,666,401**	**620,287,551**	**890,953,948**	**861,419,033**
361.23 Manholes		1951	2,078	R2.5	80	69.50	87	R2.5087	0.30585	24.47	93.97	0.73960	1,537	541	144,401	50,842	195,242	166,217
361.23 Manholes		1954	8,811	R2.5	80	66.50	83	R2.5083	0.3292	26.34	92.84	0.71629	6,311	2,500	585,919	232,077	817,995	704,865
361.23 Manholes		1967	23,972	R2.5	80	53.50	67	R2.5067	0.43365	34.69	88.19	0.60664	14,542	9,430	1,282,506	831,591	2,114,098	1,917,766
361.23 Manholes		1970	24,660	R2.5	80	50.50	63	R2.5063	0.46218	36.97	87.47	0.57734	14,237	10,423	1,245,307	911,664	2,156,971	1,972,764
361.23 Manholes		1971	9,074	R2.5	80	49.50	62	R2.5062	0.46944	37.56	87.06	0.56857	5,159	3,915	449,172	340,827	789,999	725,935
361.23 Manholes		1972	5,590	R2.5	80	48.50	61	R2.5061	0.47676	38.14	86.64	0.55979	3,129	2,461	271,098	213,190	484,288	447,173
361.23 Manholes		1973	48,340	R2.5	80	47.50	59	R2.5059	0.49155	39.32	86.82	0.54711	26,447	21,893	2,296,129	1,900,711	4,196,840	3,867,164
361.23 Manholes		1974	38,646	R2.5	80	46.50	58	R2.5058	0.49902	39.92	86.42	0.53807	20,794	17,852	1,797,045	1,542,754	3,339,799	3,091,691
361.23 Manholes		1975	418,962	R2.5	80	45.50	57	R2.5057	0.50654	40.52	86.02	0.52895	221,610	197,352	19,062,786	16,976,354	36,039,140	33,516,987
361.23 Manholes		1977	82,139	R2.5	80	43.50	54	R2.5054	0.5294	42.35	85.85	0.50670	41,620	40,519	3,573,045	3,478,586	7,051,631	6,571,118
361.23 Manholes		1978	146,937	R2.5	80	42.50	53	R2.5053	0.53711	42.97	85.47	0.49725	73,064	73,873	6,244,820	6,313,880	12,558,699	11,754,954
361.23 Manholes		1979	45,962	R2.5	80	41.50	52	R2.5052	0.54488	43.59	85.09	0.48772	22,417	23,545	1,907,428	2,003,488	3,910,916	3,676,969
361.23 Manholes		1980	4,129	R2.5	80	40.50	51	R2.5051	0.55269	44.22	84.72	0.47805	1,974	2,155	167,210	182,568	349,778	330,291
361.23 Manholes		1981	81,157	R2.5	80	39.50	49	R2.5049	0.56844	45.48	84.98	0.46482	37,723	43,434	3,205,697	3,691,015	6,896,711	6,492,550
361.23 Manholes		1983	44,081	R2.5	80	37.50	47	R2.5047	0.58438	46.75	84.25	0.44510	19,620	24,461	1,653,031	2,060,779	3,713,809	3,526,466
361.23 Manholes		1984	63,456	R2.5	80	36.50	46	R2.5046	0.59241	47.39	83.89	0.43509	27,609	35,847	2,316,151	3,007,189	5,323,339	5,076,495
361.23 Manholes		1985	13,376	R2.5	80	35.50	44	R2.5044	0.60861	48.69	84.19	0.42167	5,640	7,736	474,858	651,291	1,126,149	1,070,102
361.23 Manholes		1987	188,258	R2.5	80	33.50	42	R2.5042	0.62498	50	83.5	0.40120	75,529	112,729	6,306,632	9,412,884	15,719,516	15,060,615

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
361.23 Manholes		1988	256,487	R2.5	80	32.50	41	R2.5041	0.63322	50.66	83.16	0.39081	100,238	156,249	8,335,835	12,993,643	21,329,479	20,518,979
361.23 Manholes		1990	120,709	R2.5	80	30.50	38	R2.5038	0.65821	52.66	83.16	0.36676	44,271	76,438	3,681,612	6,356,514	10,038,125	9,656,686
361.23 Manholes		1991	92,502	R2.5	80	29.50	37	R2.5037	0.66661	53.33	82.83	0.35615	32,945	59,557	2,728,809	4,933,132	7,661,941	7,400,160
361.23 Manholes		1992	50,865	R2.5	80	28.50	36	R2.5036	0.67506	54	82.5	0.34545	17,571	33,294	1,449,651	2,746,707	4,196,358	4,069,195
361.23 Manholes		1993	63,128	R2.5	80	27.50	34	R2.5034	0.69207	55.37	82.87	0.33185	20,949	42,179	1,736,031	3,495,419	5,231,450	5,050,271
361.23 Manholes		1994	24,142	R2.5	80	26.50	33	R2.5033	0.70063	56.05	82.55	0.32102	7,750	16,392	639,755	1,353,143	1,992,899	1,931,337
361.23 Manholes		1996	7,168	R2.5	80	24.50	31	R2.5031	0.71785	57.43	81.93	0.29904	2,144	5,024	175,617	411,660	587,277	573,442
361.23 Manholes		1997	85,454	R2.5	80	23.50	29	R2.5029	0.73522	58.82	82.32	0.28547	24,395	61,059	2,008,166	5,026,397	7,034,562	6,836,309
361.23 Manholes		1998	113,260	R2.5	80	22.50	28	R2.5028	0.74396	59.52	82.02	0.27432	31,069	82,191	2,548,349	6,741,232	9,289,581	9,060,796
361.23 Manholes		1999	77,280	R2.5	80	21.50	27	R2.5027	0.75273	60.22	81.72	0.26309	20,331	56,949	1,661,509	4,653,772	6,315,282	6,182,361
361.23 Manholes		2000	440,369	R2.5	80	20.50	26	R2.5026	0.76153	60.92	81.42	0.25178	110,876	329,493	9,027,561	26,827,270	35,854,832	35,229,508
361.23 Manholes		2001	16,180	R2.5	80	19.50	24	R2.5024	0.77923	62.34	81.84	0.23827	3,855	12,325	315,517	1,008,683	1,324,200	1,294,429
361.23 Manholes		2002	254,336	R2.5	80	18.50	23	R2.5023	0.78813	63.05	81.55	0.22685	57,696	196,640	4,705,220	16,035,897	20,741,116	20,346,895
361.23 Manholes		2003	55,496	R2.5	80	17.50	22	R2.5022	0.79706	63.76	81.26	0.21536	11,952	43,544	971,182	3,538,431	4,509,613	4,439,688
361.23 Manholes		2004	68,061	R2.5	80	16.50	21	R2.5021	0.80602	64.48	80.98	0.20375	13,867	54,194	1,123,010	4,388,586	5,511,596	5,444,896
361.23 Manholes		2005	465,353	R2.5	80	15.50	19	R2.5019	0.82402	65.92	81.42	0.19037	88,589	376,764	7,212,972	30,676,070	37,889,041	37,228,240
361.23 Manholes		2006	19,772	R2.5	80	14.50	18	R2.5018	0.83306	66.64	81.14	0.17870	3,533	16,239	286,694	1,317,608	1,604,302	1,581,762
361.23 Manholes		2007	182,884	R2.5	80	13.50	17	R2.5017	0.84214	67.37	80.87	0.16693	30,529	152,355	2,468,937	12,320,909	14,789,846	14,630,737
361.23 Manholes		2011	52,057	R2.5	80	9.50	12	R2.5012	0.88789	71.03	80.53	0.11797	6,141	45,916	494,546	3,697,643	4,192,190	4,164,599
361.23 Manholes		2012	100,911	R2.5	80	8.50	11	R2.5011	0.89711	71.77	80.27	0.10589	10,685	90,226	857,744	7,242,386	8,100,130	8,072,884
361.23 Manholes		2013	85,237	R2.5	80	7.50	9	R2.5009	0.91563	73.25	80.75	0.09288	7,917	77,320	639,278	6,243,613	6,882,891	6,818,963
361.23 Manholes		2014	25,014	R2.5	80	6.50	8	R2.5008	0.92492	73.99	80.49	0.08076	2,020	22,994	162,592	1,850,795	2,013,387	2,001,130
361.23 Manholes		2016	32,964	R2.5	80	4.50	6	R2.5006	0.94357	75.49	79.99	0.05626	1,855	31,109	148,338	2,488,453	2,636,791	2,637,120
361.23 Manholes		2017	246,501	R2.5	80	3.50	4	R2.5004	0.96231	76.98	80.48	0.04349	10,720	235,781	862,754	18,975,655	19,838,409	19,720,088
361.23 Manholes		2018	77,600	R2.5	80	2.50	3	R2.5003	0.9717	77.74	80.24	0.03116	2,418	75,182	193,999	6,032,597	6,226,596	6,207,972
361.23 Manholes		2019	14,388	R2.5	80	1.50	2	R2.5002	0.98112	78.49	79.99	0.01875	270	14,118	21,583	1,129,342	1,150,924	1,151,068
361.23 Manholes		2020	58,497	R2.5	80	0.50	1	R2.5001	0.99055	79.24	79.74	0.00627	367	58,130	29,249	4,635,321	4,664,569	4,679,779
361.23 Manholes		2021	14,624	R2.5	80	0.00	0	R2.5000	1	80	80	0.00000	-	14,624	-	1,169,945	1,169,945	1,169,945
			4,350,867										**1,283,915**	**3,066,952**	**107,469,745**	**252,092,513**	**359,562,252**	**348,069,361**
363.2 4" PVC		1982	102,469	R3.0	70	38.50	55	R3.0055	0.49706	34.79	73.29	0.52531	53,828	48,641	3,945,073	3,564,911	7,509,984	7,172,860
363.2 4" PVC		1985	52,316	R3.0	70	35.50	51	R3.0051	0.52965	37.08	72.58	0.48912	25,589	26,727	1,857,201	1,939,860	3,797,061	3,662,087
363.2 4" PVC		1986	47,611	R3.0	70	34.50	49	R3.0049	0.54624	38.24	72.74	0.47429	22,582	25,029	1,642,587	1,820,653	3,463,240	3,332,785
363.2 4" PVC		1987	36,853	R3.0	70	33.50	48	R3.0048	0.55461	38.82	72.32	0.46322	17,071	19,782	1,234,585	1,430,644	2,665,228	2,579,729
363.2 4" PVC		1988	112,029	R3.0	70	32.50	46	R3.0046	0.5715	40.01	72.51	0.44821	50,213	61,816	3,640,946	4,482,285	8,123,231	7,842,038
363.2 4" PVC		1989	216,183	R3.0	70	31.50	45	R3.0045	0.58001	40.6	72.1	0.43689	94,448	121,735	6,809,778	8,777,047	15,586,825	15,132,840
363.2 4" PVC		1993	71,274	R3.0	70	27.50	39	R3.0039	0.63205	44.24	71.74	0.38333	27,321	43,953	1,960,034	3,153,161	5,113,195	4,989,178
363.2 4" PVC		1995	28,854	R3.0	70	25.50	36	R3.0036	0.65866	46.11	71.61	0.35610	10,275	18,579	735,764	1,330,435	2,066,199	2,019,745
363.2 4" PVC		1996	10,714	R3.0	70	24.50	35	R3.0035	0.66761	46.73	71.23	0.34396	3,685	7,029	262,483	500,645	763,128	749,950
363.2 4" PVC		1997	45,795	R3.0	70	23.50	34	R3.0034	0.6766	47.36	70.86	0.33164	15,187	30,608	1,076,184	2,168,853	3,245,037	3,205,653
363.2 4" PVC		1998	106,491	R3.0	70	22.50	32	R3.0032	0.69469	48.63	71.13	0.31632	33,685	72,806	2,396,050	5,178,663	7,574,713	7,454,378
363.2 4" PVC		1999	81,006	R3.0	70	21.50	31	R3.0031	0.7038	49.27	70.77	0.30380	24,610	56,396	1,741,625	3,991,157	5,732,782	5,670,407
363.2 4" PVC		2000	32,495	R3.0	70	20.50	29	R3.0029	0.72212	50.55	71.05	0.28853	9,376	23,119	666,157	1,642,646	2,308,803	2,274,683
363.2 4" PVC		2001	340,756	R3.0	70	19.50	28	R3.0028	0.73133	51.19	70.69	0.27585	93,997	246,759	6,644,738	17,443,289	24,088,027	23,852,905

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Determination of the Depreciated Original Cost

(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)
Account	Description	Placement Year	Original Costs	Retirement Dispersion Iowa-type	Normal Service Life (NSL)	Age at January 8, 2021 Appraisal Date	Age as % of NSL	Iowa Lookup	Iowa Condition Percent of Percent New	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Normal Remaining Life	OC Weighted Total Life Expectancy	Normal Service Life (NSL)
Input	Input	Input	Input	Input	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation	Calculation
AUS Input	Eng Assmnt	Eng Assmnt	Eng Assmnt	AUS Input	AUS Input	2021-[(45)+0.5]	Col (49) / (48)	Col (47) & (50)	Lookup Iowa Curves Life Tables @ col (51)	Col (48) * (52)	Col (46) + (53)	Col (53) / (54)	Col (46) * (55)	Col (46) - (56)	Col (46) * (49)	Col (46) * (53)	Col (46) * (54)	Col (46) * (48)
Acct	Descrip	Year	Original Cost	Iowa	Normal Life	age	AgeP	IowaLookup	Iowa Condition	Rem Life	Total Life	Theo%	Theo Reserve	Net Book	OC wtd Age	OC wtd Rem Life	OC wtd Total Life	OC wtd Normal Life
363.2	4" PVC	2002	136,495	R3.0	70	18.50	26	R3.0026	0.74986	52.49	70.99	0.26060	35,571	100,924	2,525,166	7,164,647	9,689,813	9,554,683
363.2	4" PVC	2003	26,084	R3.0	70	17.50	25	R3.0025	0.75917	53.14	70.64	0.24773	6,462	19,622	456,472	1,386,109	1,842,581	1,825,887
363.2	4" PVC	2004	407,504	R3.0	70	16.50	24	R3.0024	0.76851	53.8	70.3	0.23471	95,645	311,859	6,723,810	21,923,694	28,647,504	28,525,253
363.2	4" PVC	2012	4,283,602	R3.0	70	8.50	12	R3.0012	0.88279	61.8	70.3	0.12091	517,930	3,765,672	36,410,617	264,726,605	301,137,222	299,852,142
363.2	4" ACP	1970	69,771	R3.0	70	50.50	72	R3.0072	0.36837	25.79	76.29	0.66195	46,185	23,586	3,523,425	1,799,389	5,322,814	4,883,956
363.2	4" ACP	1976	267,367	R3.0	70	44.50	64	R3.0064	0.42683	29.88	74.38	0.59828	159,960	107,407	11,897,833	7,988,927	19,886,760	18,715,693
363.2	4" ACP	1978	64,086	R3.0	70	42.50	61	R3.0061	0.44974	31.48	73.98	0.57448	36,816	27,270	2,723,675	2,017,442	4,741,117	4,486,053
363.2	4" ACP	1980	80,220	R3.0	70	40.50	58	R3.0058	0.47316	33.12	73.62	0.55012	44,131	36,089	3,248,921	2,656,895	5,905,816	5,615,419
			6,619,976										**1,424,567**	**5,195,409**	**102,123,124**	**367,087,957**	**469,211,080**	**463,398,324**
365.2	Meter Pits	1976	78,670	S2.0	30	44.50	148	S2.0148	0.15	4.5	49	0.85000	66,870	11,800	3,500,815	354,015	3,854,830	2,360,100
			78,670										**66,870**	**11,800**	**3,500,815**	**354,015**	**3,854,830**	**2,360,100**
390.7	PIPE TECH SOFTWARE AND DUR/	2008	21,550	R3.0	12	12.50	104	R3.0104	0.18372	2.2	14.7	0.85000	18,318	3,232	269,375	47,410	316,785	258,600
			21,550										**18,318**	**3,232**	**269,375**	**47,410**	**316,785**	**258,600**
391.7	2001 FORD E350 TRUCK	2001	39,952	R3.0	10	19.50	195	R3.0195	0.15	1.5	21	0.85000	33,959	5,993	779,064	59,928	838,992	399,520
391.7	2003 GMC PICKUP TRUCK	2003	25,808	R3.0	10	17.50	175	R3.0175	0.15	1.5	19	0.85000	21,937	3,871	451,640	38,712	490,352	258,080
391.7	2018 Carmate 20' Custom Cargo Tra	2018	7,265	R3.0	10	2.50	25	R3.0025	0.75917	7.59	10.09	0.24777	1,800	5,465	18,161	55,138	73,299	72,645
391.7	2010 FORD F550 TRUCK	2010	62,723	R3.0	10	10.50	105	R3.0105	0.17945	1.79	12.29	0.85000	53,314	9,409	658,590	112,274	770,864	627,229
391.7	2011 GMC PICKUP TRUCK	2011	23,738	R3.0	10	9.50	95	R3.0095	0.22643	2.26	11.76	0.80782	19,176	4,562	225,511	53,648	279,159	237,380
391.7	2011 GMC PICKUP TRUCK	2011	20,470	R3.0	10	9.50	95	R3.0095	0.22643	2.26	11.76	0.80782	16,536	3,934	194,469	46,263	240,732	204,705
391.7	2019 Ford F-150 Unit	2019	33,000	R3.0	10	1.50	15	R3.0015	0.85389	8.54	10.04	0.14940	4,930	28,070	49,500	281,820	331,320	330,000
			212,956										**151,652**	**61,304**	**2,376,935**	**647,783**	**3,024,718**	**2,129,559**
			32,362,068										**8,685,962**	**23,676,106**	**624,377,351**	**1,642,077,594**	**2,266,433,244**	**2,210,698,960**
354.2	Sewer Capacity Rights	2017	2,168,888	R4.0	55	3.50	6	R4.0006	0.94008	51.7	55.2	0.06341	137,529	2,031,359	7,591,108	112,131,510	119,722,618	119,288,840
354.2	VFSA Capacity Rights	2013	8,916,354	R4.0	55	7.50	14	R4.0014	0.86031	47.32	54.82	0.13681	1,219,846	7,696,508	66,872,651	421,921,848	488,794,499	490,399,443
			11,085,242										**1,357,375**	**9,727,867**	**74,463,759**	**534,053,358**	**608,517,117**	**609,688,283**
			43,447,309										**10,043,337**	**33,403,972**	**698,841,110**	**2,176,130,952**	**2,874,950,361**	**2,820,387,243**

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Income Approach

AUS Consultants
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Greenfield, Wisconsin 53228
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J. Weinert's Cell: 414-698-8371
J. Weinert's E-Mail:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021
Discounted Cash Flow Analysis

Discount Rate: 7.57%
Capitalization Rate: 5.65%

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Period	Age	Revenues	O&M Expenses	Tax Depreciation	Cash Flow from Operations	Taxable Income before State & Federal Taxes	State and Federal Taxes @ 28.89%	Capital Expenditures	Change in Working Capital	Net Cash Flows	Period Present Worth Factor (PW)	PW of Cashflow	Accumulated PW of Cashflows
					(3)-(4)	(6)-(5)	(7) *28.89%			(3)-(4)-(8)-(9)-(10)		(11)*(12)	Sum (13)
1	0.5	5,759,816	3,305,486	2,193,634	2,454,330	260,696	75,315	806,090	(78,093)	1,651,018	0.964	1,591,581	1,591,581
2	1.5	5,759,816	3,371,594	2,218,239	2,388,222	169,983	49,108	812,135	-	1,526,979	0.896	1,368,173	2,959,754
3	2.5	5,759,816	3,439,026	2,243,274	2,320,790	77,516	22,394	818,227	-	1,480,169	0.833	1,232,981	4,192,735
4	3.5	7,775,752	3,507,806	2,268,741	4,267,946	1,999,205	577,570	824,363	(27,334)	2,893,347	0.775	2,242,344	6,435,079
5	4.5	7,775,752	3,577,962	2,294,647	4,197,790	1,903,143	549,818	830,547	-	2,817,425	0.720	2,028,546	8,463,625
6	5.5	9,719,690	3,649,522	2,320,996	6,070,168	3,749,172	1,083,136	836,776	(26,356)	4,176,612	0.669	2,794,153	11,257,778
7	6.5	9,719,690	3,722,512	2,315,050	5,997,178	3,682,128	1,063,767	721,779	-	4,211,632	0.622	2,619,635	13,877,413
8	7.5	9,719,690	3,796,962	2,338,381	5,922,728	3,584,347	1,035,518	727,193	-	4,160,017	0.579	2,408,650	16,286,063
9	8.5	10,691,659	3,872,902	2,362,106	6,818,757	4,456,651	1,287,526	732,647	(13,178)	4,811,762	0.538	2,588,728	18,874,791
10	9.5	10,691,659	3,950,359	2,386,228	6,741,300	4,355,072	1,258,180	738,141	-	4,744,979	0.500	2,372,490	21,247,281
11	10.5	10,691,659	4,029,366	2,410,754	6,662,293	4,251,539	1,228,270	743,679	-	4,690,344	0.465	2,181,010	23,428,291
12	11.5	11,333,159	4,109,952	2,435,686	7,223,207	4,787,521	1,383,115	749,257	(8,698)	5,099,533	0.432	2,202,998	25,631,289
13	12.5	11,333,159	4,192,151	2,461,029	7,141,008	4,679,979	1,352,046	754,875	-	5,034,087	0.402	2,023,703	27,654,992
14	13.5	11,333,159	4,275,994	2,486,788	7,057,165	4,570,377	1,320,382	760,535	-	4,976,248	0.373	1,856,141	29,511,133
15	14.5	12,013,149	4,361,513	2,512,970	7,651,636	5,138,666	1,484,561	766,240	(9,219)	5,410,054	0.347	1,877,289	31,388,422
16	15.5	12,013,149	4,448,744	2,539,579	7,564,405	5,024,826	1,451,672	771,988	-	5,340,745	0.323	1,725,061	33,113,483
17	16.5	12,013,149	4,537,720	2,566,617	7,475,429	4,908,812	1,418,156	777,777	-	5,279,496	0.300	1,583,849	34,697,332
18	17.5	12,733,938	4,628,474	2,594,092	8,105,464	5,511,372	1,592,235	783,611	(9,773)	5,739,391	0.279	1,601,290	36,298,622
19	18.5	12,733,938	4,721,044	2,622,008	8,012,894	5,390,886	1,557,427	789,487	-	5,665,980	0.259	1,467,489	37,766,111
20 and beyond	19.5	12,733,938	4,815,465	2,650,370	7,918,473	5,268,103	1,521,955	795,408	-	5,601,110	3.184	17,833,934	55,600,045
								15,540,755					

Age				19.5									
PW(Age) = 1/(1+Discount Rate)$^{(Age)}$				0.241									
PW to Perpetuity = 1/Capitalization Rate				13.210									
$PW_{(20and\ Beyond)}$ = PW to Perpetuity * $PW\ Factor_{(19.5)}$				3.184									
								Net Plant		44,551,804			
								ADIT		(6,443,119)			
								Rate Base		38,108,685	0.241	9,184,193	46,950,304
								Annual Plant Construction Inflation Rate		0.0422 Input			
								Plant Inflation over 19.5 years		87,105,453	0.241	20,992,414	58,758,525
								PP	54,930,000				
								OCLD	33,403,972				
								PP/OCLD	1.644				
								RCNLD	58,078,339				
								RCNLD/PP		1.057315474			
										40,292,902.78	0.241	9,710,590	47,476,701
								Average					52,196,394

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021
Calculated Rates of Return on Rate Base and Equity
(Years 1 through 20)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Period	Age	Revenues	O&M Expenses	Book Depreciation	Ratemaking Interest Expense	Book Taxable Income (Current + Deferred)	State and Federal Taxes @ 28.89%	Net Operating Income	Net (Equity) Income	Net Plant	Working Capital	Accumulated Deferred Income Taxes (ADIT)	Rate Base	Return on Rate Base	Net Equity	Return on Equity
						(3)-(4)-(5)-(6)	(7) *28.89%	(7)-(8)=(6)	(9) - (6)				(11)+(12)+(13)	(9)/(14)		(10)/(16)
1	0.5	5,759,816	3,305,486	1,258,810	657,820	537,700	155,341	1,040,179	382,359	54,477,279	(78,093)	(270,070)	54,129,116	1.92%	58,107,277	0.66%
2	1.5	5,759,816	3,371,594	1,235,592	637,528	515,102	148,813	1,003,817	366,289	54,053,822	(78,093)	(553,957)	53,421,772	1.88%	58,473,566	0.63%
3	2.5	5,759,816	3,439,026	1,238,242	618,311	464,237	134,118	948,430	330,119	53,633,807	(78,093)	(844,311)	52,711,403	1.80%	58,803,685	0.56%
4	3.5	7,775,752	3,507,806	1,243,980	597,701	2,426,265	700,948	2,323,018	1,725,317	53,214,190	(105,427)	(1,140,364)	51,968,399	4.47%	60,529,002	2.85%
5	4.5	7,775,752	3,577,962	1,253,783	577,777	2,366,230	683,604	2,260,403	1,682,626	52,790,953	(105,427)	(1,441,070)	51,244,456	4.41%	62,211,627	2.70%
6	5.5	9,719,690	3,649,522	1,266,757	558,518	4,244,893	1,226,350	3,577,061	3,018,543	52,360,973	(131,783)	(1,745,640)	50,483,550	7.09%	65,230,171	4.63%
7	6.5	9,719,690	3,722,512	1,263,283	539,901	4,193,994	1,211,645	3,522,250	2,982,349	51,819,469	(131,783)	(2,049,496)	49,638,190	7.10%	68,212,520	4.37%
8	7.5	9,719,690	3,796,962	1,272,326	521,904	4,128,498	1,192,723	3,457,679	2,935,775	51,274,335	(131,783)	(2,357,479)	48,785,073	7.09%	71,148,294	4.13%
9	8.5	10,691,659	3,872,902	1,283,163	504,507	5,031,087	1,453,481	4,082,113	3,577,606	50,723,819	(144,961)	(2,669,186)	47,909,672	8.52%	74,725,900	4.79%
10	9.5	10,691,659	3,950,359	1,294,982	487,690	4,958,628	1,432,548	4,013,770	3,526,080	50,166,978	(144,961)	(2,984,447)	47,037,570	8.53%	78,251,980	4.51%
11	10.5	10,691,659	4,029,366	1,301,010	471,434	4,889,849	1,412,677	3,948,606	3,477,172	49,609,648	(144,961)	(3,305,052)	46,159,635	8.55%	81,729,153	4.25%
12	11.5	11,333,159	4,109,952	1,304,247	455,720	5,463,240	1,578,330	4,340,630	3,884,910	49,054,657	(153,659)	(3,631,925)	45,269,073	9.59%	85,614,062	4.54%
13	12.5	11,333,159	4,192,151	1,317,942	440,529	5,382,537	1,555,015	4,268,051	3,827,522	48,491,590	(153,659)	(3,962,163)	44,375,768	9.62%	89,441,584	4.28%
14	13.5	11,333,159	4,275,994	1,325,816	425,845	5,305,504	1,532,760	4,198,589	3,772,744	47,926,309	(153,659)	(4,297,568)	43,475,082	9.66%	93,214,328	4.05%
15	14.5	12,013,149	4,361,513	1,324,075	411,650	5,915,911	1,709,107	4,618,454	4,206,804	47,368,474	(162,878)	(4,641,040)	42,564,556	10.85%	97,421,132	4.32%
16	15.5	12,013,149	4,448,744	1,333,017	397,928	5,833,460	1,685,287	4,546,101	4,148,173	46,807,445	(162,878)	(4,989,616)	41,654,951	10.91%	101,569,305	4.08%
17	16.5	12,013,149	4,537,720	1,341,466	384,664	5,749,299	1,660,972	4,472,991	4,088,327	46,243,756	(162,878)	(5,343,562)	40,737,316	10.98%	105,657,632	3.87%
18	17.5	12,733,938	4,628,474	1,352,522	371,842	6,381,100	1,843,500	4,909,442	4,537,600	45,674,846	(172,651)	(5,702,252)	39,799,943	12.34%	110,195,233	4.12%
19	18.5	12,733,938	4,721,044	1,349,227	359,447	6,304,220	1,821,289	4,842,378	4,482,931	45,115,106	(172,651)	(6,069,958)	38,872,497	12.46%	114,678,164	3.91%
20	19.5	12,733,938	4,815,465	1,358,709	347,465	6,212,299	1,794,733	4,765,031	4,417,566	44,551,804	(172,651)	(6,443,119)	37,936,034	12.56%	119,095,729	3.71%
										10,736,984.86						

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021
Discounted Cash Flow Analysis

Discount Rate: 7.57%
Capitalization Rate: 5.65%

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Period	Age	Revenues	O&M Expenses	Tax Depreciation	Cash Flow from Operations	Taxable Income before State & Federal Taxes	State and Federal Taxes @ 28.89%	Capital Expenditures	Change in Working Capital	Net Cash Flows	Period Present Worth Factor (PW)	PW of Cashflow	Accumulated PW of Cashflows
					(3)-(4)	(6)-(5)	(7) *28.89%			(3)-(4)-(8)-(9)-(10)		(11)*(12)	Sum (13)
20	19.5	12,733,938	4,815,465	2,650,370	7,918,473	5,268,103	1,521,955	795,408	-	5,601,110	0.241	1,349,868	39,115,979
21	20.5	13,497,974	4,911,774	2,679,185	8,586,200	5,907,015	1,706,537	801,375	(10,359)	6,088,647	0.224	1,363,857	40,479,836
22	21.5	13,497,974	5,010,009	2,708,454	8,487,965	5,779,511	1,669,701	807,384	-	6,010,880	0.208	1,250,263	41,730,099
23	22.5	13,497,974	5,110,209	2,738,187	8,387,765	5,649,578	1,632,163	813,440	-	5,942,162	0.194	1,152,779	42,882,878
24	23.5	14,307,852	5,212,413	2,768,387	9,095,439	6,327,052	1,827,885	819,542	(10,981)	6,458,993	0.180	1,162,619	44,045,497
25	24.5	14,307,852	5,316,662	2,799,057	8,991,190	6,192,133	1,788,907	825,688	-	6,376,595	0.167	1,064,891	45,110,388
26	25.5	14,307,852	5,422,995	831,880	8,884,857	8,052,977	2,326,505	831,880	-	5,726,472	0.156	893,330	46,003,718
27	26.5	15,166,323	5,531,456	838,118	9,634,867	8,796,749	2,541,381	838,118	(11,639)	6,267,007	0.145	908,716	46,912,434
28	27.5	15,166,323	5,642,086	844,404	9,524,237	8,679,833	2,507,604	844,404	-	6,172,229	0.134	827,079	47,739,513
29	28.5	15,166,323	5,754,928	850,737	9,411,395	8,560,658	2,473,174	850,737	-	6,087,484	0.125	760,936	48,500,449
30	29.5	15,166,323	5,870,025	857,118	9,296,298	8,439,180	2,438,079	857,118	-	6,001,101	0.116	696,128	49,196,577
31	30.5	15,166,323	5,987,426	863,547	9,178,897	8,315,350	2,402,305	863,547	-	5,913,045	0.108	638,609	49,835,186
32	31.5	15,166,323	6,107,174	870,023	9,059,149	8,189,126	2,365,839	870,023	-	5,823,287	0.100	582,329	50,417,515
33	32.5	15,166,323	6,229,318	876,548	8,937,005	8,060,457	2,328,666	876,548	-	5,731,791	0.093	533,057	50,950,572
34	33.5	15,166,323	6,353,904	883,122	8,812,419	7,929,297	2,290,774	883,122	-	5,638,523	0.087	490,552	51,441,124
35	34.5	15,166,323	6,480,982	889,746	8,685,341	7,795,595	2,252,147	889,746	-	5,543,448	0.081	449,019	51,890,143
36	35.5	15,166,323	6,610,601	896,419	8,555,722	7,659,303	2,212,773	896,419	-	5,446,530	0.075	408,490	52,298,633
37	36.5	15,166,323	6,742,813	903,142	8,423,510	7,520,368	2,172,634	903,142	-	5,347,734	0.070	374,341	52,672,974
38	37.5	15,166,323	6,877,669	909,916	8,288,654	7,378,738	2,131,717	909,916	-	5,247,021	0.065	341,056	53,014,030
39	38.5	15,166,323	7,015,223	916,739	8,151,100	7,234,361	2,090,007	916,739	-	5,144,354	0.060	308,661	53,322,691
40	39.5	15,166,323	7,155,528	923,616	8,010,795	7,087,179	2,047,486	923,616	-	5,039,693	0.056	282,223	53,604,914
41	40.5	15,166,323	7,298,639	930,542	7,867,684	6,937,142	2,004,140	930,542	-	4,933,002	0.052	256,516	53,861,430
42	41.5	15,166,323	7,444,612	937,521	7,721,711	6,784,190	1,959,952	937,521	-	4,824,238	0.048	231,563	54,092,993
43	42.5	15,166,323	7,593,504	982,336	7,572,819	6,590,483	1,903,990	944,554	-	4,724,275	0.045	212,592	54,305,585
44	43.5	15,166,323	7,745,376	1,027,770	7,420,947	6,393,177	1,846,989	951,639	-	4,622,319	0.042	194,137	54,499,722
45	44.5	15,166,323	7,900,284	1,035,477	7,266,039	6,230,562	1,800,009	958,775	-	4,507,255	0.039	175,783	54,675,505
46	45.5	15,166,323	8,058,289	1,043,243	7,108,034	6,064,791	1,752,118	965,966	-	4,389,950	0.036	158,038	54,833,543
47	46.5	15,166,323	8,219,456	1,051,067	6,946,867	5,895,800	1,703,297	973,210	-	4,270,360	0.034	145,192	54,978,735
48	47.5	15,166,323	8,383,846	1,058,950	6,782,477	5,723,527	1,653,527	980,509	-	4,148,441	0.031	128,602	55,107,337
49	48.5	15,166,323	8,551,523	1,066,893	6,614,800	5,547,907	1,602,790	987,864	-	4,024,146	0.029	116,700	55,224,037
50	49.5	15,166,323	8,722,554	1,074,894	6,443,769	5,368,875	1,551,068	995,272	-	3,897,429	0.027	105,231	55,329,268
51	50.5	15,166,323	8,897,006	1,082,956	6,269,317	5,186,361	1,498,340	1,002,737	-	3,768,240	0.025	94,206	55,423,474
52	51.5	15,166,323	9,074,946	1,091,076	6,091,377	5,000,301	1,444,587	1,010,256	-	3,636,534	0.023	83,640	55,507,114
53	52.5	15,166,323	9,256,446	1,099,260	5,909,877	4,810,617	1,389,787	1,017,833	-	3,502,257	0.022	77,050	55,584,164
54	53.5	15,166,323	9,441,576	1,107,507	5,724,747	4,617,240	1,333,921	1,025,469	-	3,365,357	0.020	67,307	55,651,471
55	54.5	15,166,323	9,630,407	1,115,812	5,535,916	4,420,104	1,276,968	1,033,159	-	3,225,789	0.019	61,290	55,712,761
56	55.5	15,166,323	9,823,016	1,124,182	5,343,307	4,219,125	1,218,905	1,040,909	-	3,083,493	0.017	52,419	55,765,180
57	56.5	15,166,323	10,019,477	1,132,612	5,146,846	4,014,234	1,159,712	1,048,715	-	2,938,419	0.016	47,015	55,812,195
58	57.5	15,166,323	10,219,867	1,141,107	4,946,456	3,805,349	1,099,365	1,056,581	-	2,790,510	0.015	41,858	55,854,053
59	58.5	15,166,323	10,424,265	1,149,665	4,742,058	3,592,393	1,037,842	1,064,505	-	2,639,711	0.014	36,956	55,891,009
60	59.5	15,166,323	10,632,751	1,158,287	4,533,572	3,375,285	975,120	1,072,488	-	2,485,964	0.172	427,586	56,318,595
								38,016,416					

Age	59.5
PW(Age) = 1/(1+Discount Rate)$^{(Age)}$	0.013
PW to Perpetuity = 1/Capitalization Rate	13.210
$PW_{(20and Beyond)}$ = PW to Perpetuity * PW Factor$_{(19.5)}$	0.172

Net Plant		26,481,778			
ADIT		(4,411,713)			
Rate Base		22,070,065	0.013	286,911	56,177,920
Plant Construction Inflation Rate		0.0422 Input			
Plant Inflation over 59.5 years		258,161,931	0.013	3,356,105	59,247,114
PP	54,930,000				
RCNLD	58,078,339				
RCNLD/PP		1.057315474			
		23,335,020.85	0.013	303,355	56,194,364

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021
Calculated Rates of Return on Rate Base and Equity
(Years 1 through 20)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Period	Age	Revenues	O&M Expenses	Book Depreciation	Ratemaking Interest Expense	Book Taxable Income (Current + Deferred)	State and Federal Taxes @ 28.89%	Net Operating Income	Net (Equity) Income	Net Plant	Working Capital	Accumulated Deferred Income Taxes (ADIT)	Rate Base	Return on Rate Base	Net Equity	Return on Equity
						(3)-(4)-(5)-(6)	(7) *28.89%	(7)-(8)=(6)	(9) - (6)				(11)+(12)+(13)	(9)/(14)		(10)/(16)
20	19.5	12,733,938	4,815,465	1,358,709	347,465	6,212,299	1,794,733	4,765,031	4,417,566	44,551,804	(172,651)	(6,443,119)	37,936,034	12.56%	119,095,729	3.71%
20	20.5	13,497,974	4,911,774	1,366,549	335,883	6,883,768	1,988,721	5,230,930	4,895,047	43,986,630	(183,010)	(6,822,340)	36,981,280	14.14%	123,990,776	3.95%
20	21.5	13,497,974	5,010,009	1,362,390	324,687	6,800,888	1,964,777	5,160,798	4,836,111	43,431,625	(183,010)	(7,211,218)	36,037,397	14.32%	128,826,888	3.75%
20	22.5	13,497,974	5,110,209	1,374,124	313,864	6,699,777	1,935,566	5,078,075	4,764,211	42,870,941	(183,010)	(7,605,296)	35,082,635	14.47%	133,591,099	3.57%
20	23.5	14,307,852	5,212,413	1,374,966	303,402	7,417,071	2,142,792	5,577,681	5,274,279	42,315,517	(193,991)	(8,007,855)	34,113,671	16.35%	138,865,378	3.80%
20	24.5	14,307,852	5,316,662	1,382,034	293,289	7,315,867	2,113,554	5,495,602	5,202,313	41,759,171	(193,991)	(8,417,233)	33,147,947	16.58%	144,067,691	3.61%
20	25.5	14,307,852	5,422,995	1,382,866	283,512	7,218,479	2,085,419	5,416,572	5,133,060	41,208,185	(193,991)	(8,258,054)	32,756,140	16.54%	149,200,751	3.44%
20	26.5	15,166,323	5,531,456	1,394,024	274,062	7,966,781	2,301,603	5,939,240	5,665,178	40,652,279	(205,630)	(8,097,453)	32,349,196	18.36%	154,865,929	3.66%
20	27.5	15,166,323	5,642,086	1,391,056	264,927	7,868,254	2,273,138	5,860,043	5,595,116	40,105,627	(205,630)	(7,939,525)	31,960,472	18.34%	160,461,045	3.49%
20	28.5	15,166,323	5,754,928	1,396,962	256,096	7,758,337	2,241,384	5,773,049	5,516,953	39,559,402	(205,630)	(7,781,721)	31,572,051	18.29%	165,977,998	3.32%
20	29.5	15,166,323	5,870,025	1,398,780	247,559	7,649,959	2,210,073	5,687,445	5,439,886	39,017,740	(205,630)	(7,625,235)	31,186,875	18.24%	171,417,884	3.17%
20	30.5	15,166,323	5,987,426	1,400,275	239,307	7,539,315	2,178,108	5,600,514	5,361,207	38,481,012	(205,630)	(7,470,174)	30,805,208	18.18%	176,779,091	3.03%
20	31.5	15,166,323	6,107,174	1,405,611	231,330	7,422,208	2,144,276	5,509,262	5,277,932	37,945,424	(205,630)	(7,315,443)	30,424,351	18.11%	182,057,023	2.90%
20	32.5	15,166,323	6,229,318	1,398,379	223,619	7,315,007	2,113,305	5,425,321	5,201,702	37,423,593	(205,630)	(7,164,686)	30,053,277	18.05%	187,258,725	2.78%
20	33.5	15,166,323	6,353,904	1,405,952	216,165	7,190,302	2,077,278	5,329,189	5,113,024	36,900,763	(205,630)	(7,013,640)	29,681,493	17.95%	192,371,749	2.66%
20	34.5	15,166,323	6,480,982	1,405,849	208,960	7,070,532	2,042,677	5,236,815	5,027,855	36,384,660	(205,630)	(6,864,538)	29,314,492	17.86%	197,399,604	2.55%
20	35.5	15,166,323	6,610,601	1,405,176	201,994	6,948,552	2,007,437	5,143,109	4,941,115	35,875,903	(205,630)	(6,717,558)	28,952,715	17.76%	202,340,719	2.44%
20	36.5	15,166,323	6,742,813	1,409,408	195,261	6,818,841	1,969,963	5,044,139	4,848,878	35,369,636	(205,630)	(6,571,298)	28,592,708	17.64%	207,189,596	2.34%
20	37.5	15,166,323	6,877,669	1,401,253	188,753	6,698,648	1,935,239	4,952,162	4,763,409	34,878,299	(205,630)	(6,429,350)	28,243,319	17.53%	211,953,005	2.25%
20	38.5	15,166,323	7,015,223	1,412,498	182,461	6,556,141	1,894,069	4,844,533	4,662,072	34,382,540	(205,630)	(6,286,125)	27,890,785	17.37%	216,615,077	2.15%
20	39.5	15,166,323	7,155,528	1,405,954	176,379	6,428,462	1,857,183	4,747,658	4,571,279	33,900,202	(205,630)	(6,146,778)	27,547,794	17.23%	221,186,356	2.07%
20	40.5	15,166,323	7,298,639	1,399,524	170,499	6,297,661	1,819,394	4,648,766	4,478,267	33,431,220	(205,630)	(6,011,289)	27,214,301	17.08%	225,664,623	1.98%
20	41.5	15,166,323	7,444,612	1,392,677	164,816	6,164,218	1,780,843	4,548,191	4,383,375	32,976,064	(205,630)	(5,879,795)	26,890,639	16.91%	230,047,998	1.91%
20	42.5	15,166,323	7,593,504	1,399,178	159,322	6,014,319	1,737,537	4,436,104	4,276,782	32,521,440	(205,630)	(5,759,370)	26,556,440	16.70%	234,324,780	1.83%
20	43.5	15,166,323	7,745,376	1,399,404	154,012	5,867,531	1,695,130	4,326,413	4,172,401	32,073,675	(205,630)	(5,652,005)	26,216,040	16.50%	238,497,181	1.75%
20	44.5	15,166,323	7,900,284	1,386,508	148,878	5,730,653	1,655,586	4,223,945	4,075,067	31,645,943	(205,630)	(5,550,592)	25,889,721	16.32%	242,572,249	1.68%
20	45.5	15,166,323	8,058,289	1,387,556	143,915	5,576,563	1,611,069	4,109,409	3,965,494	31,224,353	(205,630)	(5,451,120)	25,567,603	16.07%	246,537,743	1.61%
20	46.5	15,166,323	8,219,456	1,384,304	139,118	5,423,445	1,566,833	3,995,730	3,856,612	30,813,259	(205,630)	(5,354,848)	25,252,781	15.82%	250,394,355	1.54%
20	47.5	15,166,323	8,383,846	1,382,505	134,481	5,265,491	1,521,200	3,878,772	3,744,291	30,411,263	(205,630)	(5,261,373)	24,944,260	15.55%	254,138,646	1.47%
20	48.5	15,166,323	8,551,523	1,373,723	129,998	5,111,079	1,476,591	3,764,486	3,634,488	30,025,404	(205,630)	(5,172,730)	24,647,044	15.27%	257,773,134	1.41%
20	49.5	15,166,323	8,722,554	1,373,892	125,665	4,944,212	1,428,383	3,641,494	3,515,829	29,646,784	(205,630)	(5,086,350)	24,354,804	14.95%	261,288,963	1.35%
20	50.5	15,166,323	8,897,006	1,371,200	121,476	4,776,641	1,379,971	3,518,146	3,396,670	29,278,321	(205,630)	(5,003,076)	24,069,615	14.62%	264,685,633	1.28%
20	51.5	15,166,323	9,074,946	1,359,051	117,427	4,614,899	1,333,244	3,399,082	3,281,655	28,929,526	(205,630)	(4,925,658)	23,798,238	14.28%	267,967,288	1.22%
20	52.5	15,166,323	9,256,446	1,370,652	113,513	4,425,712	1,278,588	3,260,637	3,147,124	28,576,706	(205,630)	(4,847,253)	23,523,823	13.86%	271,114,411	1.16%
20	53.5	15,166,323	9,441,576	1,357,387	109,729	4,257,631	1,230,030	3,137,330	3,027,601	28,244,788	(205,630)	(4,775,063)	23,264,095	13.49%	274,142,012	1.10%
20	54.5	15,166,323	9,630,407	1,352,196	106,071	4,077,649	1,178,033	3,005,687	2,899,616	27,925,751	(205,630)	(4,706,772)	23,013,349	13.06%	277,041,628	1.05%
20	55.5	15,166,323	9,823,016	1,351,772	102,536	3,888,999	1,123,532	2,868,003	2,765,467	27,614,888	(205,630)	(4,641,021)	22,768,237	12.60%	279,807,095	0.99%
20	56.5	15,166,323	10,019,477	1,348,237	99,118	3,699,491	1,068,783	2,729,826	2,630,708	27,315,366	(205,630)	(4,578,727)	22,531,009	12.12%	282,437,803	0.93%
20	57.5	15,166,323	10,219,867	1,344,043	95,814	3,506,599	1,013,057	2,589,356	2,493,542	27,027,904	(205,630)	(4,520,099)	22,302,175	11.61%	284,931,345	0.88%
20	58.5	15,166,323	10,424,265	1,337,385	92,620	3,312,053	956,852	2,447,821	2,355,201	26,755,024	(205,630)	(4,465,867)	22,083,527	11.08%	287,286,546	0.82%
20	59.5	15,166,323	10,632,751	1,345,734	89,533	3,098,305	895,100	2,292,738	2,203,205	26,481,778	(205,630)	(4,411,713)	21,864,435	10.49%	289,489,751	0.76%

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Discount Rate)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	After-tax Market Capital Cost (2)*(3)*(4a)
Debt	29%	Market	2.79%	Market	28.89%	71.11%	0.58%
Equity	71%	Market	9.85%	Market	0.0%	100.0%	6.99%
Total Capital r	100.0%						7.57%
Growth (g)							1.82%
Rate without Growth: [(1+r)/(1+g)]-1							5.65%

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Capitlization Rate)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	Market Capital Cost (2)*(3)
Debt	29%	Market	2.79%	Market	Not Applicable	Not Applicable	0.81%
Equity	71%	Market	9.85%	Market	Not Applicable	Not Applicable	6.99%
Total Capital r	100.0%						7.80%
Growth (g)							1.82%
Rate without Growth: [(1+r)/(1+g)]-1							5.87%

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Rate of Return on Rate Base)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	Required Return on Rate Base (2)*(3)
Debt	44%	Embedded	3.84%	Embedded	Not Applicable	Not Applicable	1.69%
Equity	56%	Embedded	9.85%	Market	Not Applicable	Not Applicable	5.52%
Total Capital r	100.0%						7.21%
Growth (g)						Not Applicable	0.00%
Rate without Growth: [(1+r)/(1+g)]-1							7.21%

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods: 1-5	6-15	16 - 19	20-26	27-33	34-40	41-46	47-53	54-60	0	1	2	3	4	5	6	7	8	9
Income Statement																				
Revenues																				
Annual Revenue Growth rate																				
Subscriber Growth Rate (Annually)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Periodic Subscriber Growth																				
Growth	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%						0.0%				
Period for Periodic Growth	5																			
Rate Case Activities																				
Periodic Rate Case (years)	typically 3 years																			
Required Rate Increase	Calculated in DCF										78.05%	78.00%	77.25%	76.99%	30.91%	30.81%	4.59%	4.31%	4.17%	-5.41%
Proposed Rate Increase	Calculated in DCF										0.0%	0.0%	0.0%	0.0%	35.0%	0.0%	25.0%	0.0%	0.0%	10.0%
Total Revenue Adjustments	Calculated										0.0%	0.0%	0.0%	0.0%	35.0%	0.0%	25.0%	0.0%	0.0%	10.0%
Base and Forecast	5,759,816										5,759,816	5,759,816	5,759,816	5,759,816	7,775,752	7,775,752	9,719,690	9,719,690	9,719,690	10,691,659
Operating Expenses											33%	33%	34%	35%	26%	27%	22%	22%	23%	21%
Expense Level 1: Sewer & Collection Fees	1,888,488										1,888,488	1,926,258	1,964,783	2,004,079	2,044,161	2,085,044	2,126,745	2,169,280	2,212,666	2,256,919
Expense Level 1: Sewer & Collection Fees Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 2: Wages & Benefits	729,237										743,822	743,822	758,698	773,872	789,349	805,136	821,239	837,664	854,417	871,505
Expense Level 2: Wages & Benefits Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 3: Repair & Maintenance	250,824										255,840	255,840	260,957	266,176	271,500	276,930	282,469	288,118	293,880	299,758
Expense Level 3: Repair & Maintenance Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 4: Contracted Services	43,650										44,523	44,523	45,413	46,321	47,247	48,192	49,156	50,139	51,142	52,165
Expense Level 4: Contracted Services Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 5: Utilities	86,097										87,819	87,819	89,575	91,367	93,194	95,058	96,959	98,898	100,876	102,894
Expense Level 5: Utilities Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 6: Insurance & Other	242,376										247,224	247,224	252,168	257,211	262,355	267,602	272,954	278,413	283,981	289,661
Expense Level 6: Insurance & Other Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Property Taxes	81,302,701										-	-	-	-	-	-	-	-	-	-
Begin Plant											54,929,999	54,929,999	54,477,279	54,053,822	53,633,807	53,214,190	52,790,953	52,360,973	51,819,469	51,274,335
PT Rate % of beginning net plant	0.000%										0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Book Depreciation (based on Beginning Year Property Plant & Equipment)	-										1,258,810	1,258,810	1,235,592	1,238,242	1,243,980	1,253,783	1,266,757	1,263,283	1,272,326	1,283,163
Total Operating Expenses											4,526,526	4,564,296	4,607,186	4,677,268	4,751,786	4,831,745	4,916,279	4,985,795	5,069,288	5,156,065
Cost of Operation as % of Revenues (Calculation)											78.6%	79.2%	80.0%	81.2%	61.1%	62.1%	50.6%	51.3%	52.2%	48.2%
Operating Expenses less Depreciation											3,267,716	3,305,486	3,371,594	3,439,026	3,507,806	3,577,962	3,649,522	3,722,512	3,796,962	3,872,902
Operating Income											1,233,290	1,195,520	1,152,630	1,082,548	3,023,966	2,944,007	4,803,411	4,733,895	4,650,402	5,535,594
Nonoperating Revenues (Expenses)																				
Interest Income																				
Interest Expense											657,820	657,820	637,528	618,311	597,701	577,777	558,518	539,901	521,904	504,507
Interest Exp as % of Debt	2.79%										2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%
Total nonoperating revenues (expenses)	-										657,820.00	657,820.00	637,528.00	618,311.00	597,701.00	577,777.00	558,518.00	539,901.00	521,904.00	504,507.00
Income (loss) before State and Federal Taxes	-										575,470	537,700	515,102	464,237	2,426,265	2,366,230	4,244,893	4,193,994	4,128,498	5,031,087
State and Federal Taxes	-										166,253	155,341	148,813	134,118	700,948	683,604	1,226,350	1,211,645	1,192,723	1,453,481
State and Federal Tax Rate	28.89%										28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%
Income After Taxes	-										409,217	382,359	366,289	330,119	1,725,317	1,682,626	3,018,543	2,982,349	2,935,775	3,577,606
Income After Taxes plus Interest											1,067,037	1,040,179	1,003,817	948,430	2,323,018	2,260,403	3,577,061	3,522,250	3,457,679	4,082,113
Earnings before Interest, Taxes, Depreciation, & Amortization	-										2,159,594	2,143,648	2,090,596	2,052,554	2,866,050	2,830,582	3,617,468	3,573,888	3,537,282	3,911,795
									EBITDA P1	2,143,648	EBITDA Periods 1-5	2,396,686								
									EBITDA P1-5	2,396,686										
									EBITDA P1-13	3,264,195										
Income (loss) before State and Federal Taxes											575,470	537,700	515,102	464,237	2,426,265	2,366,230	4,244,893	4,193,994	4,128,498	5,031,087
Book Depreciation											(1,258,810)	(1,258,810)	(1,235,592)	(1,238,242)	(1,243,980)	(1,253,783)	(1,266,757)	(1,263,283)	(1,272,326)	(1,283,163)
Tax Depreciation											-	(2,193,634)	(2,218,239)	(2,243,274)	(2,268,741)	(2,294,647)	(2,320,996)	(2,315,050)	(2,338,381)	(2,362,106)
Difference Tax over Book Depreciation											1,258,810	(934,823)	(982,647)	(1,005,032)	(1,024,761)	(1,040,863)	(1,054,239)	(1,051,767)	(1,066,055)	(1,078,943)
Income Adjusted for Tax Depreciation											1,834,280	(397,124)	(467,545)	(540,795)	1,401,504	1,325,366	3,190,654	3,142,227	3,062,443	3,952,144
Income Tax Rate											28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%
Income Taxes											529,923	(114,729)	(135,074)	(156,236)	404,895	382,898	921,780	907,789	884,740	1,141,774
Income After Tax											1,304,357	(282,395)	(332,471)	(384,559)	996,609	942,468	2,268,874	2,234,438	2,177,703	2,810,370
Deferred Income Taxes											363,670	(270,070)	(283,887)	(290,354)	(296,053)	(300,706)	(304,570)	(303,856)	(307,983)	(311,707)
Accumulated Deferred Income Taxes											93,600	(270,070)	(553,957)	(844,311)	(1,140,364)	(1,441,070)	(1,745,640)	(2,049,496)	(2,357,479)	(2,669,186)
Income After Taxes (Book Depreciation)											409,217	382,359	366,289	330,119	1,725,317	1,682,626	3,018,543	2,982,349	2,935,775	3,577,606
Plus Deferred Taxes											363,670	(270,070)	(283,887)	(290,354)	(296,053)	(300,706)	(304,570)	(303,856)	(307,983)	(311,707)
Plus Interest											657,820	657,820	637,528	618,311	597,701	577,777	558,518	539,901	521,904	504,507
After Tax Income Debt Free											703,367	1,310,249	1,287,704	1,238,784	2,619,071	2,561,109	3,881,631	3,826,106	3,765,662	4,393,820
Balance Statement																				
Assets																				
Current Assets																				
Current Asset Balance	2,139,868										2,139,868	2,139,868	2,139,868	2,139,868	2,888,821	2,888,821	3,611,027	3,611,027	3,611,027	3,972,130
CA as % of Revenues	37.15%	37.15%	37.15%	37.15%	37.15%	37.15%	37.15%	37.15%	37.15%	37.15%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%
Balance Statement																				
Property Plant & Equipment																				
Total PP&E																				
Begin Balance											-	81,302,701.00	81,907,268.00	82,516,369.00	83,130,041.00	83,748,312.00	84,371,222.00	84,998,803.00	85,540,138.00	86,085,532.00
Additions											-	806,090.00	812,135.00	818,227.00	824,363.00	830,547.00	836,776.00	721,779.00	727,193.00	732,647.00
											-	-	-	-	-	-	-	-	-	-
Retirements											-	(201,523.00)	(203,034.00)	(204,555.00)	(206,092.00)	(207,637.00)	(209,195.00)	(180,444.00)	(181,799.00)	(183,160.00)
											-	-	-	-	-	-	-	-	-	-
End Balance	81,302,701.00										-	81,907,268.00	82,516,369.00	83,130,041.00	83,748,312.00	84,371,222.00	84,998,803.00	85,540,138.00	86,085,532.00	86,635,019.00
End Balance Check											-	81,907,268.00	82,516,369.00	83,130,041.00	83,748,312.00	84,371,222.00	84,998,803.00	85,540,138.00	86,085,532.00	86,635,019.00
Book Depreciation of Property, Plant, & Equipment																				
Total Book Depreciation																				

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods: 1-5	6-15	16 - 19	20-26	27-33	34-40	41-46	47-53	54-60	0	1	2	3	4	5	6	7	8	9
Begin Balance											-	(26,372,702.00)	(27,429,989.14)	(28,462,547.44)	(29,496,234.28)	(30,534,122.14)	(31,580,268.60)	(32,637,830.17)	(33,720,669.21)	(34,811,196.60)
Depreciation											-	(1,258,810.14)	(1,235,592.30)	(1,238,241.84)	(1,243,979.86)	(1,253,783.46)	(1,266,756.57)	(1,263,283.04)	(1,272,326.39)	(1,283,163.07)
Retirements											-	201,523.00	203,034.00	204,555.00	206,092.00	207,637.00	209,195.00	180,444.00	181,799.00	183,160.00
End Balance											-	(27,429,989.14)	(28,462,547.44)	(29,496,234.28)	(30,534,122.14)	(31,580,268.60)	(32,637,830.17)	(33,720,669.21)	(34,811,196.60)	(35,911,199.67)
End Balance Check											-	(27,429,989.14)	(28,462,547.44)	(29,496,234.28)	(30,534,122.14)	(31,580,268.60)	(32,637,830.17)	(33,720,669.21)	(34,811,196.60)	(35,911,199.67)
Net Plant																				
Begin Balance											-	54,929,999.00	54,477,278.86	54,053,821.56	53,633,806.72	53,214,189.86	52,790,953.40	52,360,972.83	51,819,468.79	51,274,335.40
End Balance											-	54,477,278.86	54,053,821.56	53,633,806.72	53,214,189.86	52,790,953.40	52,360,972.83	51,819,468.79	51,274,335.40	50,723,819.33
Total Assest																				
Tax Depreciation of Property, Plant, & Equipment											2,139,868.00	56,617,146.86	56,193,689.56	55,773,674.72	56,103,010.86	55,679,774.40	55,971,999.83	55,430,495.79	54,885,362.40	54,695,949.33
Total MACRS Depreciation																				
Begin Balance											-	-	-	-	-	-	-	-	-	-
Depreciation											-	(2,193,633.56)	(2,218,239.40)	(2,243,273.64)	(2,268,740.80)	(2,294,646.64)	(2,320,995.68)	(2,315,049.80)	(2,338,381.48)	(2,362,106.24)
Retirements											-	201,523.00	203,034.00	204,555.00	206,092.00	207,637.00	209,195.00	180,444.00	181,799.00	183,160.00
End Balance											-	(1,992,110.56)	(2,015,205.40)	(2,038,718.64)	(2,062,648.80)	(2,087,009.64)	(2,111,800.68)	(2,134,605.80)	(2,156,582.48)	(2,178,946.24)
End Balance Check											-	(1,992,110.56)	(2,015,205.40)	(2,038,718.64)	(2,062,648.80)	(2,087,009.64)	(2,111,800.68)	(2,134,605.80)	(2,156,582.48)	(2,178,946.24)
Net Plant																				
Begin Balance											-	81,302,701.00	81,907,268.00	82,516,369.00	83,130,041.00	83,748,312.00	84,371,222.00	84,998,803.00	85,540,138.00	86,085,532.00
End Balance											-	79,915,157.44	80,501,163.60	81,091,322.36	81,685,663.20	82,284,212.36	82,887,002.32	83,405,532.20	83,928,949.52	84,456,072.76
Tax											-	(2,193,633.56)	(2,218,239.40)	(2,243,273.64)	(2,268,740.80)	(2,294,646.64)	(2,320,995.68)	(2,315,049.80)	(2,338,381.48)	(2,362,106.24)
Book											-	(1,258,810.14)	(1,235,592.30)	(1,238,241.84)	(1,243,979.86)	(1,253,783.46)	(1,266,756.57)	(1,263,283.04)	(1,272,326.39)	(1,283,163.07)
											-	(934,823.42)	(982,647.10)	(1,005,031.80)	(1,024,760.94)	(1,040,863.18)	(1,054,239.11)	(1,051,766.76)	(1,066,055.09)	(1,078,943.17)

Balance Statement

Liabilities																				
Current Liabilities																				
Current Liabilities	2,217,961										2,217,961	2,217,961	2,217,961	2,217,961	2,994,248	2,994,248	3,742,810	3,742,810	3,742,810	4,117,091
CL as % of Revenues	38.51%	38.51%	38.51%	38.51%	38.51%	38.51%	38.51%	38.51%	38.51%	38.51%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%
Noncurrent Liabilities																				
Long Term Debt, Notes payable, net of current portion Beg	23,577,783.00										23,577,783.00	23,577,783.00	22,850,478.00	22,161,685.00	21,422,962.00	20,708,863.00	20,018,568.00	19,351,282.00	18,706,239.00	18,082,698.00
Additional Debt	-										-	58,621.00	72,890.00	-	-	-	-	-	-	-
Debt Repayment											(785,926)	(785,926)	(761,683)	(738,723)	(714,099)	(690,295)	(667,286)	(645,043)	(623,541)	(602,757)
Debt Repayment years	30.00										30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
End Long Term Debt, Notes payable, net of current portion End											22,791,857.00	22,850,478.00	22,161,685.00	21,422,962.00	20,708,863.00	20,018,568.00	19,351,282.00	18,706,239.00	18,082,698.00	17,479,941.00
Total noncurrent liabilities																				
Deferred Tax Liabilities																				
Begin Balance													270,070	553,957	844,311	1,140,364	1,441,070	1,745,640	2,049,496	2,357,479
Additions to Deferred Asset																				
Total Deferred Tax Liability											(363,670)	270,070	283,887	290,354	296,053	300,706	304,570	303,856	307,983	311,707
											(363,670)	270,070	553,957	844,311	1,140,364	1,441,070	1,745,640	2,049,496	2,357,479	2,669,186
Total Liabilities											24,646,148.00	25,338,509.00	24,933,603.00	24,485,234.00	24,843,475.00	24,453,886.00	24,839,732.00	24,498,545.00	24,182,987.00	24,266,218.00
Equity																				
Proportion of Capital	71%																			
Beginning Equity Capital	57,724,918										57,724,918	57,724,918	58,107,277	58,473,566	58,803,685	60,529,002	62,211,627	65,230,171	68,212,520	71,148,294
Additions to Equity (Retained Earnings)											409,217	382,359	366,289	330,119	1,725,317	1,682,626	3,018,543	2,982,349	2,935,775	3,577,606
Deductions form Equity Dividends	0										0	-	-	0	0	0	0	0	0	0
Additional Paid In Capital											0	0	0	0	0	0	0	0	0	0
Ending Equity Capital											58,134,135	58,107,277	58,473,566	58,803,685	60,529,002	62,211,627	65,230,171	68,212,520	71,148,294	74,725,900
Operating Income											1,233,790	1,195,520	1,152,630	1,082,548	3,023,966	2,944,007	4,803,411	4,733,895	4,650,402	5,535,594
Return On Equity											2.12%	2.06%	1.97%	1.84%	5.00%	4.73%	7.36%	6.94%	6.54%	7.41%
Total Liabilities & Stockholders Equity											82,780,283	83,445,786	83,407,169	83,288,919	85,372,477	86,665,513	90,069,903	92,711,065	95,331,281	98,992,118
Assets											2,139,868	56,617,147	56,193,690	55,773,675	56,103,011	55,679,774	55,972,000	55,430,496	54,885,362	54,695,949
Liabilities & Stockholders Equity less Assets												26,828,639	27,213,479	27,515,244	29,269,466	30,985,739	34,097,903	37,280,569	40,445,919	44,296,169
Dividend												26,828,639	27,213,479	27,515,244	29,269,466	30,985,739	34,097,903	37,280,569	40,445,919	44,296,169
Final Stockholder Equity											82,780,283	56,617,147	56,193,690	55,773,675	56,103,011	55,679,774	55,972,000	55,430,496	54,885,362	54,695,949
Capital Expenditures and Changes in Working Capital																				
Capital Expenditures											-	806,090.00	812,135.00	818,227.00	824,363.00	830,547.00	836,776.00	721,779.00	727,193.00	732,647.00
Changes to Working Capital																				
Current Assets	2,139,868										-	2,139,868	2,139,868	2,139,868	2,888,821	2,888,821	3,611,027	3,611,027	3,611,027	3,972,130
Current Liabilities	2,217,961										-	2,217,961	2,217,961	2,217,961	2,994,248	2,994,248	3,742,810	3,742,810	3,742,810	4,117,091
Working Capital	(78,093)										-	(78,093)	(78,093)	(78,093)	(105,427)	(105,427)	(131,783)	(131,783)	(131,783)	(144,961)
Changes to Working Capital											-	(78,093)	-	-	(27,334)	-	(26,356)	-	-	(13,178)
CASH FLOW																				
Income from Operations											1,067,037	1,040,179	1,003,817	948,430	2,323,018	2,260,403	3,577,061	3,522,250	3,457,679	4,082,113
Non Cash Expense (depreciation)											1,258,810	1,258,810	1,235,592	1,238,242	1,243,980	1,253,783	1,266,757	1,263,283	1,272,326	1,283,163
Capital Expenditures											-	806,090	812,135	818,227	824,363	830,547	836,776	721,779	727,193	732,647
Change in Working Capital											-	(78,093)	-	-	(27,334)	-	(26,356)	-	-	(13,178)
Net Cash Flows											2,325,847	1,570,992	1,427,274	1,368,445	2,769,969	2,683,639	4,033,398	4,063,754	4,002,812	4,645,807
Period											0.5	0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5
PW Factor																				
Discount Rate with growth	7.80%										7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods 1-5	6-15	16 - 19	20-26	27-33	34-40	41-46	47-53	54-60	0	1	2	3	4	5	6	7	8	9
Discount Rate without growth	5.87%										5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%
Period Present Worth Factor (PW)											0.963	0.963	0.893	0.829	0.769	0.713	0.662	0.614	0.569	0.528
PW of Cashflow											2,239,791	1,512,865	1,274,566	1,134,441	2,130,308	1,913,435	2,670,109	2,495,145	2,277,600	2,452,986
Accumulated PW of Cashflows	56,426,092										2,752,656	1,512,865	2,787,421	3,921,862	6,051,968	7,965,403	10,635,512	13,130,657	15,408,257	17,861,243
CASH FLOW																				
Income from Operations											1,304,357	(282,395)	(332,471)	(384,559)	996,609	942,468	2,268,874	2,234,428	2,177,703	2,810,370
Depreciation											-	(2,193,634)	(2,218,239)	(2,243,274)	(2,268,741)	(2,294,647)	(2,320,996)	(2,315,050)	(2,338,381)	(2,362,106)
Capital Expenditures												806,090	812,135	838,227	824,363	830,547	836,776	721,779	727,193	732,647
Change in Working Capital											-	(78,093)			(27,334)		(26,356)			(13,178)
Net Cash Flows											1,304,357	1,183,242	1,073,633	1,040,488	2,468,321	2,406,568	3,779,450	3,827,709	3,788,891	4,453,007
Period											0.5	0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5
PW Factor																				
Discount Rate with growth	7.80%										7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%
Discount Rate without growth	5.87%										5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%
Period Present Worth Factor (PW)											0.963	0.963	0.893	0.829	0.769	0.713	0.662	0.614	0.569	0.528
PW of Cashflow											1,256,096	1,139,462	958,754	862,565	1,898,139	1,715,883	2,501,996	2,350,213	2,156,875	2,351,188
Accumulated PW of Cashflows	54,267,994										2,395,558	1,139,462	2,098,216	2,960,781	4,858,920	6,574,803	9,076,799	11,427,012	13,582,891	15,934,079
Rate Case Forecasts																				
Rate Base																				
Plant In Service											81,907,268.00	81,907,268.00	82,516,369.00	83,130,041.00	83,748,312.00	84,371,222.00	84,998,803.00	85,540,138.00	86,085,532.00	86,635,019.00
Accumulated Book Depreciation											(27,429,989.14)	(27,429,989.14)	(28,462,547.44)	(29,496,234.28)	(30,534,122.14)	(31,580,268.60)	(32,637,830.17)	(33,720,669.21)	(34,811,196.60)	(35,911,199.67)
Working Capital												(78,093.00)	(78,093.00)	(78,093.00)	(105,427.00)	(105,427.00)	(131,783.00)	(131,783.00)	(131,783.00)	(144,961.00)
Accumulated Deferred Income Tax											93,600	(270,070)	(553,957)	(844,311)	(1,140,364)	(1,441,070)	(1,745,540)	(2,049,496)	(2,357,479)	(2,669,186)
Rate Base											54,570,878.86	54,129,115.86	53,421,771.56	52,711,402.72	51,968,398.86	51,244,456.40	50,483,549.83	49,638,189.79	48,785,073.40	47,909,672.33
Authorized Return on Rate Base	7.21%										3,934,560.00	3,902,709.00	3,851,710.00	3,800,492.00	3,746,922.00	3,694,725.00	3,639,864.00	3,578,913.00	3,517,404.00	3,454,287.00
O&M Expenses											3,267,716.00	3,305,486.00	3,371,594.00	3,439,026.00	3,507,806.00	3,577,962.00	3,649,522.00	3,722,512.00	3,796,962.00	3,872,902.00
Book Depreciation											1,258,810.14	1,258,810.14	1,235,592.30	1,238,241.84	1,243,979.86	1,253,783.46	1,266,756.57	1,263,283.04	1,272,326.39	1,283,163.07
Remaining Interest Expense											657,820.00	657,820.00	637,528.00	618,311.00	597,701.00	577,777.00	558,518.00	539,901.00	521,904.00	504,507.00
Revenue Requirement											9,118,906.14	9,124,825.14	9,096,424.30	9,096,070.84	9,096,408.86	9,104,247.46	9,114,660.57	9,104,609.04	9,108,596.39	9,114,859.07
O&M Expenses											3,267,716.00	3,305,486.00	3,371,594.00	3,439,026.00	3,507,806.00	3,577,962.00	3,649,522.00	3,722,512.00	3,796,962.00	3,872,902.00
Depreciation Expense											1,258,810.14	1,258,810.14	1,235,592.30	1,238,241.84	1,243,979.86	1,253,783.46	1,266,756.57	1,263,283.04	1,272,326.39	1,283,163.07
Interest											657,820.00	657,820.00	637,528.00	618,311.00	597,701.00	577,777.00	558,518.00	539,901.00	521,904.00	504,507.00
Pretax Income											3,934,560.00	3,902,709.00	3,851,710.00	3,800,492.00	3,746,922.00	3,694,725.00	3,639,864.00	3,578,913.00	3,517,404.00	3,454,287.00
State & Federal Taxes @ 28.89%											1,136,694.00	1,127,493.00	1,112,759.00	1,097,962.00	1,082,486.00	1,067,406.00	1,051,557.00	1,033,968.00	1,016,178.00	997,944.00
After Tax Income											2,797,866.00	2,775,216.00	2,738,951.00	2,702,530.00	2,664,436.00	2,627,319.00	2,588,307.00	2,544,965.00	2,501,226.00	2,456,343.00
Current Revenue											5,759,816.00	5,759,816.00	5,759,816.00	5,759,816.00	7,775,752.00	7,775,752.00	9,719,690.00	9,719,690.00	9,719,690.00	10,691,659.00
Revenue Requirement											10,255,500.14	10,257,318.14	10,209,383.30	10,194,032.84	10,178,894.86	10,177,634.46	10,166,217.57	10,138,557.04	10,124,774.39	10,112,803.07
Required Revenue Increase											78%	78%	77%	77%	31%	31%	5%	4%	4%	4%
Income from Operations											1,067,037	1,040,179	1,003,817	948,430	2,323,018	2,260,403	3,577,061	3,522,250	3,457,679	4,082,113
Return on Rate Base											1.96%	1.92%	1.88%	1.80%	4.47%	4.41%	7.09%	7.10%	7.09%	8.52%
Required Return	7.21%										7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%
Authorized Return											3,934,560	3,902,709	3,851,710	3,800,492	3,746,922	3,694,725	3,639,864	3,578,913	3,517,404	3,454,287
After tax Net Income											409,217	382,359	366,289	330,119	1,725,317	1,682,626	1,018,543	2,982,349	2,935,775	3,977,606
Taxes											166,253	155,341	148,813	146,118	700,948	683,604	1,226,350	1,211,645	1,192,723	1,453,681
Pre-tax Net Income											575,470	537,700	515,102	464,237	2,426,265	2,366,230	4,244,893	4,193,994	4,128,498	5,431,287
Interest Expense											(657,820)	(657,820)	(637,528)	618,311	597,701	577,777	558,518	539,901	521,904	504,507
Operating Income											1,233,290	1,195,520	1,152,630	1,082,548	3,023,966	2,944,007	4,803,411	4,733,895	4,650,402	5,535,594
Operating Expenses											4,526,526	4,564,296	4,607,186	4,677,268	4,751,786	4,831,745	4,916,279	4,985,795	5,069,288	5,156,065
Revenue Requirement											5,759,816	5,759,816	5,759,816	5,759,816	7,775,752	7,775,752	9,719,690	9,719,690	9,719,690	10,691,659
Required Return											3,934,560	3,902,709	3,851,710	3,800,492	3,746,922	3,694,725	3,639,864	3,578,913	3,517,404	3,454,287
Operating Expenses											4,526,526	4,564,296	4,607,186	4,677,268	4,751,786	4,831,745	4,916,279	4,985,795	5,069,288	5,156,065
Revenue Requirement											8,461,086	8,467,005	8,458,896	8,477,760	8,498,708	8,526,470	8,556,143	8,564,708	8,586,692	8,610,352
Required Rate Increase											78.05%	78.00%	77.25%	76.99%	30.91%	30.81%	4.59%	4.31%	4.17%	5.41%
Proposed Rate Increase											0	1	2	3	4	5	6	7	8	9
Rate Increase Scenario	6										0%	0%	0%	0%	35%	0%	25%	0%	0%	10%
	0										0	1	2	3	4	5	6	7	8	9
No increases (Input 2)	7										0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
No Rate Increases (Input 2)	3																			
Modest Rate Increases 6% every 3 year period starting in period 3 (Input 4)	4										0.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%
Modest Rate Increases (Input 4)	5																			
Required Rate Increases 80% period 4,25% period 6, 10% period 9, 6% period 12, and 6% every 3rd year beginning in period 15 (Input 6)	6							55,600,045.00			0.0%	0.0%	0.0%	0.0%	35.0%	0.0%	25.0%	0.0%	0.0%	10.0%
Required Rate Increases (Input 6)	7										100.0%	100.0%	100.0%	100.0%	135.0%	135.0%	168.8%	168.8%	168.8%	185.6%
	4										0.0%	0.0%	0.0%	0.0%	7.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Changes in Balance Sheet Accounts																				
Assets																				
Change in Current Assets (Source negative / Use positive)													-		748,953		722,206			361,103
Plant & Equipment																				
Additions (Source negative / Use positive)												806,090	812,135	838,227	824,363	830,547	836,776	721,779	727,193	732,647
Liabilities																				

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods 1-5	6-15	16 - 19	20-26	27-33	34-40	41-46	47-53	54-60	0	1	2	3	4	5	6	7	8	9
Change in Current Liabilities (Source Positive / Use negative)												-	-	-	776,287		748,562			374,281
Long Term Debt																				
Additional Long Term Debt Source Positive / Use Negative												(58,621.00)	(72,890.00)		-		-	-		
Principal Paid Long term Debt (Source positive / Use negative)												785,926	761,683	738,723	714,099	690,295	667,286	645,043	623,541	602,757
Equity																				
Additions to Equity (Source Positive / Use Negative)																				
Dividend (Source negative / Use Positive)																				
Funds Provided from Operations																				
Sources of Funds																				
Net Income (Use Negative / Source Positive)												382,359	366,289	330,119	1,725,317	1,682,626	3,018,543	2,982,349	2,935,775	3,577,606
Depreciation (Source positive use negative)												1,258,810	1,235,592	1,238,242	1,243,980	1,253,783	1,266,757	1,264,283	1,272,326	1,283,163
Current Liabilities (Source Positive)															776,287		748,562	-		374,281
												1,641,169	1,601,881	1,568,361	3,745,584	2,936,409	5,033,852	4,246,632	4,208,101	5,235,050
Sources and Uses of Funds																				
Sources of Funds																				
Current Liabilities (Source Positive)																				
Uses of Funds																				
Current Assets: Increase (Use)															748,954		722,206			361,103
Fixed Assets: Assets: Increase (Use)												806,090	812,135	818,227	824,363	830,547	836,776	721,779	727,193	732,647
Total Uses of Funds												806,090	812,135	818,227	1,573,316	830,547	1,558,982	721,779	727,193	1,093,750
Funds from Financing Activities																				
Changes in Debt																				
Increase in Long Term Debt												(58,621.00)	(72,890.00)		-					
Repayment of Long Term Debt												(785,926)	(761,683)	(738,723)	(714,099)	(690,295)	(667,286)	(645,043)	(623,541)	(602,757)
Funds tom Equity																				
Dividends Paid (Use)												0	0	0	0	0	0	0	0	0
Additional Paid in Capital (source)																				
Total Funds from Financing Activities												(844,547.00)	(834,573.00)	(738,723.00)	(714,099.00)	(690,295.00)	(667,286.00)	(645,043.00)	(623,541.00)	(602,757.00)
Total Funds Needed												(9,468.00)	(44,827.00)	11,411.00	1,458,169.00	1,415,567.00	2,807,594.00	2,878,810.00	2,857,367.00	3,538,543.00
Financing																				
Debt	29%											2,746.00	13,000.00	(3,309.00)	(422,869.00)	(410,514.00)	(814,202.00)	(834,855.00)	(828,636.00)	(1,026,177.00)
Equity	71%											6,722.00	31,827.00	(8,102.00)	(1,035,300.00)	(1,005,053.00)	(1,993,392.00)	(2,043,955.00)	(2,028,731.00)	(2,512,366.00)
Funds Provided by Financing												9,468.00	44,827.00	(11,411.00)	(1,458,169.00)	(1,415,567.00)	(2,807,594.00)	(2,878,810.00)	(2,857,367.00)	(3,538,543.00)
												58,621.00	72,890.00							
												166,843.00	207,455.00							

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods: 1-5	6-15	16 - 19	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Income Statement																				
Revenues																				
Annual Revenue Growth rate																				
Subscriber Growth Rate (Annually)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Periodic Subscriber Growth																				
Growth	0.0%	0.0%	0.0%	0.0%	0.0%					0.0%					0.0%					0.0%
Period for Periodic Growth	5																			
Rate Case Activities																				
Periodic Rate Case (years)	typically 3 years																			
Required Rate Increase	Calculated in DCF				-5.49%	-5.61%	-11.09%	-11.11%	-11.17%	-16.32%	-16.34%	-16.35%	-21.07%	-21.14%	-21.10%	-25.54%	-25.57%	-25.48%	-29.68%	-29.60%
Proposed Rate Increase	Calculated in DCF				0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%
Total Revenue Adjustments	Calculated				0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%
Base and Forecast	5,759,816				10,691,659	10,691,659	11,333,159	11,333,159	11,333,159	12,013,149	12,013,149	12,013,149	12,733,938	12,733,938	12,733,938	13,497,974	13,497,974	13,497,974	14,307,852	14,307,852
Operating Expenses					22%	22%	21%	22%	22%	21%	22%	22%	21%	22%	22%	21%	22%	22%	21%	22%
Expense Level 1: Sewer & Collection Fees	1,888,488				2,302,057	2,348,098	2,395,060	2,442,961	2,491,820	2,541,656	2,592,489	2,644,339	2,697,226	2,751,171	2,806,194	2,862,318	2,919,564	2,977,955	3,037,514	3,098,264
Expense Level 1: Sewer & Collection Fees Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 2: Wages & Benefits	729,237				888,935	906,714	924,848	943,345	962,212	981,456	1,001,085	1,021,107	1,041,529	1,062,360	1,083,607	1,105,279	1,127,385	1,149,933	1,172,932	1,196,391
Expense Level 2: Wages & Benefits Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 3: Repair & Maintenance	250,824				305,753	311,868	318,105	324,467	330,956	337,575	344,327	351,214	358,238	365,403	372,711	380,165	387,768	395,523	403,433	411,502
Expense Level 3: Repair & Maintenance Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 4: Contracted Services	43,650				53,208	54,272	55,357	56,464	57,593	58,745	59,920	61,118	62,340	63,587	64,859	66,156	67,479	68,829	70,206	71,610
Expense Level 4: Contracted Services Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 5: Utilities	86,097				104,952	107,051	109,192	111,376	113,604	115,876	118,194	120,558	122,969	125,428	127,937	130,496	133,106	135,768	138,483	141,253
Expense Level 5: Utilities Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 6: Insurance & Other	242,376				295,454	301,363	307,390	313,538	319,809	326,205	332,729	339,384	346,172	353,095	360,157	367,360	374,707	382,201	389,845	397,642
Expense Level 6: Insurance & Other Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Property Taxes	81,302,701				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Begin Plant					50,723,819	50,166,978	49,609,648	49,054,657	48,491,590	47,926,309	47,368,474	46,807,445	46,243,756	45,674,846	45,115,106	44,551,804	43,986,630	43,431,625	42,870,941	42,315,517
PT Rate % of beginning net plant	0.000%				0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Book Depreciation (based on Beginning Year Property Plant & Equipment)	-				1,294,982	1,301,010	1,304,247	1,317,942	1,325,816	1,324,075	1,333,017	1,341,466	1,352,522	1,349,227	1,358,709	1,366,549	1,362,390	1,374,124	1,374,966	1,382,034
Total Operating Expenses					5,245,341	5,330,376	5,414,199	5,510,093	5,601,810	5,685,588	5,781,761	5,879,186	5,980,996	6,070,271	6,174,174	6,278,323	6,372,399	6,484,333	6,587,379	6,698,696
Cost of Operation as % of Revenues (Calculation)					49.1%	49.9%	47.8%	48.6%	49.4%	47.3%	48.1%	48.9%	47.0%	47.7%	48.5%	46.5%	47.2%	48.0%	46.0%	46.8%
Operating Expenses less Depreciation					3,950,359	4,029,366	4,109,952	4,192,151	4,275,994	4,361,513	4,448,744	4,537,720	4,628,474	4,721,044	4,815,465	4,911,774	5,010,009	5,110,209	5,212,413	5,316,662
Operating Income					5,446,318	5,361,283	5,918,960	5,823,066	5,731,349	6,327,561	6,231,388	6,133,963	6,752,942	6,663,667	6,559,764	7,219,651	7,125,575	7,013,641	7,720,473	7,609,156
Nonoperating Revenues (Expenses)																				
Interest Income																				
Interest Expense					487,690	471,434	455,720	440,529	425,845	411,650	397,928	384,664	371,842	359,447	347,465	335,883	324,687	313,864	303,402	293,289
Interest Exp as % of Debt	2.79%				2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%
Total nonoperating revenues (expenses)	-				487,690.00	471,434.00	455,720.00	440,529.00	425,845.00	411,650.00	397,928.00	384,664.00	371,842.00	359,447.00	347,465.00	335,883.00	324,687.00	313,864.00	303,402.00	293,289.00
Income (loss) before State and Federal Taxes	-				4,958,628	4,889,849	5,463,240	5,382,537	5,305,504	5,915,911	5,833,460	5,749,299	6,381,100	6,304,220	6,212,299	6,883,768	6,800,888	6,699,777	7,417,071	7,315,867
State and Federal Taxes																				
State and Federal Tax Rate	28.89%				1,432,548	1,412,677	1,578,330	1,555,015	1,532,760	1,709,107	1,685,287	1,660,972	1,843,500	1,821,289	1,794,733	1,988,721	1,964,777	1,935,566	2,142,792	2,113,554
					28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%
Income After Taxes	-				3,526,080	3,477,172	3,884,910	3,827,522	3,772,744	4,206,804	4,148,173	4,088,327	4,537,600	4,482,931	4,417,566	4,895,047	4,836,111	4,764,211	5,274,279	5,202,313
Income After Taxes plus Interest	-				4,013,770	3,948,606	4,340,630	4,268,051	4,198,589	4,618,454	4,546,101	4,472,991	4,909,442	4,842,378	4,765,031	5,230,930	5,160,798	5,078,075	5,577,681	5,495,602
Earnings before Interest, Taxes, Depreciation, & Amortization	-				3,876,204	3,836,939	4,066,547	4,030,978	3,991,645	4,233,422	4,193,831	4,153,485	4,418,464	4,370,316	4,329,007	4,608,758	4,558,411	4,516,633	4,809,855	4,764,082
Income (loss) before State and Federal Taxes					4,958,628	4,889,849	5,463,240	5,382,537	5,305,504	5,915,911	5,833,460	5,749,299	6,381,100	6,304,220	6,212,299	6,883,768	6,800,888	6,699,777	7,417,071	7,315,867
Book Depreciation					(1,294,982)	(1,301,010)	(1,304,247)	(1,317,942)	(1,325,816)	(1,324,075)	(1,333,017)	(1,341,466)	(1,352,522)	(1,349,227)	(1,358,709)	(1,366,549)	(1,362,390)	(1,374,124)	(1,374,966)	(1,382,034)
Tax Depreciation					(2,386,228)	(2,410,754)	(2,435,686)	(2,461,029)	(2,486,788)	(2,512,970)	(2,539,579)	(2,566,617)	(2,594,092)	(2,622,008)	(2,650,370)	(2,679,185)	(2,708,454)	(2,738,187)	(2,768,387)	(2,799,057)
Difference Tax over Book Depreciation					(1,091,246)	(1,109,744)	(1,131,439)	(1,143,087)	(1,160,972)	(1,188,895)	(1,206,562)	(1,225,151)	(1,241,571)	(1,272,781)	(1,291,661)	(1,312,636)	(1,346,064)	(1,364,062)	(1,393,421)	(1,417,023)
Income Adjusted for Tax Depreciation					3,867,382	3,780,105	4,331,801	4,239,450	4,144,532	4,727,016	4,626,898	4,524,148	5,139,530	5,031,439	4,920,638	5,571,132	5,454,824	5,335,714	6,023,650	5,898,844
Income Tax Rate					28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%
Income Taxes					1,117,287	1,092,072	1,251,457	1,224,777	1,197,355	1,366,635	1,336,711	1,307,026	1,484,810	1,453,583	1,421,572	1,609,500	1,575,899	1,541,488	1,740,233	1,704,176
Income After Tax					2,750,095	2,688,033	3,080,344	3,014,673	2,947,177	3,361,381	3,290,187	3,217,122	3,654,720	3,577,856	3,499,066	3,961,632	3,878,925	3,794,226	4,283,417	4,194,668
Deferred Income Taxes					(315,261)	(320,605)	(326,873)	(330,238)	(335,405)	(343,472)	(348,576)	(353,946)	(358,690)	(367,706)	(373,161)	(379,221)	(388,878)	(394,078)	(402,559)	(409,378)
Accumulated Deferred Income Taxes					(2,984,447)	(3,305,052)	(3,631,925)	(3,962,163)	(4,297,568)	(4,641,040)	(4,989,616)	(5,343,562)	(5,702,252)	(6,069,958)	(6,443,119)	(6,822,340)	(7,211,218)	(7,605,296)	(8,007,855)	(8,417,233)
Income After Taxes (Book Depreciation)					3,526,080	3,477,172	3,884,910	3,827,522	3,772,744	4,206,804	4,148,173	4,088,327	4,537,600	4,482,931	4,417,566	4,895,047	4,836,111	4,764,211	5,274,279	5,202,313
Plus Deferred Taxes					(315,261)	(320,605)	(326,873)	(330,238)	(335,405)	(343,472)	(348,576)	(353,946)	(358,690)	(367,706)	(373,161)	(379,221)	(388,878)	(394,078)	(402,559)	(409,378)
Plus Interest					487,690	471,434	455,720	440,529	425,845	411,650	397,928	384,664	371,842	359,447	347,465	335,883	324,687	313,864	303,402	293,289
After Tax Income Debt Free					4,329,031	4,269,211	4,667,503	4,598,289	4,533,994	4,961,926	4,894,677	4,826,937	5,268,132	5,210,084	5,138,192	5,610,151	5,549,676	5,472,153	5,980,240	5,904,980
Balance Statement																				
Assets																				
Current Assets																				
Current Asset Balance	2,139,868				3,972,130	3,972,130	4,210,457	4,210,457	4,210,457	4,463,085	4,463,085	4,463,085	4,730,870	4,730,870	4,730,870	5,014,722	5,014,722	5,014,722	5,315,605	5,315,605
CA as % of Revenues	37.15%	37.15%	37.15%	37.15%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%
Balance Statement																				
Property Plant & Equipment																				
Total PP&E																				
Begin Balance					86,635,019.00	87,188,624.00	87,746,384.00	88,308,328.00	88,874,485.00	89,444,887.00	90,019,567.00	90,598,559.00	91,181,892.00	91,769,602.00	92,361,717.00	92,958,274.00	93,559,306.00	94,164,845.00	94,774,926.00	95,389,583.00
Additions					738,141.00	743,679.00	749,257.00	754,875.00	760,535.00	766,240.00	771,988.00	777,777.00	783,611.00	789,487.00	795,408.00	801,375.00	807,384.00	813,440.00	819,542.00	825,688.00
Retirements					(184,536.00)	(185,919.00)	(187,313.00)	(188,718.00)	(190,133.00)	(191,560.00)	(192,996.00)	(194,444.00)	(195,901.00)	(197,372.00)	(198,851.00)	(200,343.00)	(201,845.00)	(203,359.00)	(204,885.00)	(206,422.00)
End Balance	81,302,701.00				87,188,624.00	87,746,384.00	88,308,328.00	88,874,485.00	89,444,887.00	90,019,567.00	90,598,559.00	91,181,892.00	91,769,602.00	92,361,717.00	92,958,274.00	93,559,306.00	94,164,845.00	94,774,926.00	95,389,583.00	96,008,849.00
End Balance Check					87,188,624.00	87,746,384.00	88,308,328.00	88,874,485.00	89,444,887.00	90,019,567.00	90,598,559.00	91,181,892.00	91,769,602.00	92,361,717.00	92,958,274.00	93,559,306.00	94,164,845.00	94,774,926.00	95,389,583.00	96,008,849.00
Book Depreciation of Property, Plant, & Equipment																				
Total Book Depreciation																				

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods: 1-5	6-15	16 - 19	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Begin Balance					(35,911,199.67)	(37,021,645.66)	(38,136,736.40)	(39,253,670.86)	(40,382,894.79)	(41,518,577.75)	(42,651,092.60)	(43,791,113.71)	(44,938,135.78)	(46,094,756.36)	(47,246,611.47)	(48,406,469.60)	(49,572,675.63)	(50,733,220.16)	(51,903,985.26)	(53,074,066.05)
Depreciation					(1,294,981.99)	(1,301,009.74)	(1,304,247.46)	(1,317,941.93)	(1,325,815.96)	(1,324,074.85)	(1,333,017.11)	(1,341,466.07)	(1,352,521.58)	(1,349,227.11)	(1,358,709.13)	(1,366,549.03)	(1,362,389.53)	(1,374,124.10)	(1,374,965.79)	(1,382,034.21)
Retirements					184,536.00	185,919.00	187,313.00	188,718.00	190,133.00	191,560.00	192,996.00	194,444.00	195,901.00	197,372.00	198,851.00	200,343.00	201,845.00	203,359.00	204,885.00	206,422.00
End Balance					(37,021,645.66)	(38,136,736.40)	(39,253,670.86)	(40,382,894.79)	(41,518,577.75)	(42,651,092.60)	(43,791,113.71)	(44,938,135.78)	(46,094,756.36)	(47,246,611.47)	(48,406,469.60)	(49,572,675.63)	(50,733,220.16)	(51,903,985.26)	(53,074,066.05)	(54,249,678.26)
End Balance Check					(37,021,645.66)	(38,136,736.40)	(39,253,670.86)	(40,382,894.79)	(41,518,577.75)	(42,651,092.60)	(43,791,113.71)	(44,938,135.78)	(46,094,756.36)	(47,246,611.47)	(48,406,469.60)	(49,572,675.63)	(50,733,220.16)	(51,903,985.26)	(53,074,066.05)	(54,249,678.26)
Net Plant																				
Begin Balance					50,723,819.33	50,166,978.34	49,609,647.60	49,054,657.14	48,491,590.21	47,926,309.25	47,368,474.40	46,807,445.29	46,243,756.22	45,674,845.64	45,115,105.53	44,551,804.40	43,986,630.37	43,431,624.84	42,870,940.74	42,315,516.95
End Balance					50,166,978.34	49,609,647.60	49,054,657.14	48,491,590.21	47,926,309.25	47,368,474.40	46,807,445.29	46,243,756.22	45,674,845.64	45,115,105.53	44,551,804.40	43,986,630.37	43,431,624.84	42,870,940.74	42,315,516.95	41,759,170.74
Total Assest					54,139,108.34	53,581,777.60	53,265,114.14	52,702,047.21	52,136,766.25	51,831,559.40	51,270,530.29	50,706,841.22	50,405,715.64	49,845,975.53	49,282,674.40	49,001,352.37	48,446,346.84	47,885,662.74	47,631,121.95	47,074,775.74
Tax Depreciation of Property, Plant, & Equipment																				
Total MACRS Depreciation																				
Begin Balance					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Depreciation					(2,386,228.28)	(2,410,753.88)	(2,435,685.96)	(2,461,028.88)	(2,486,788.16)	(2,512,970.16)	(2,539,578.64)	(2,566,616.92)	(2,594,092.44)	(2,622,007.76)	(2,650,370.00)	(2,679,184.88)	(2,708,454.00)	(2,738,186.52)	(2,768,386.64)	(2,799,057.44)
Retirements					184,536.00	185,919.00	187,313.00	188,718.00	190,133.00	191,560.00	192,996.00	194,444.00	195,901.00	197,372.00	198,851.00	200,343.00	201,845.00	203,359.00	204,885.00	206,422.00
End Balance					(2,201,692.28)	(2,224,834.88)	(2,248,372.96)	(2,272,310.88)	(2,296,655.16)	(2,321,410.16)	(2,346,582.64)	(2,372,172.92)	(2,398,191.44)	(2,424,635.76)	(2,451,519.00)	(2,478,841.88)	(2,506,609.00)	(2,534,827.52)	(2,563,501.64)	(2,592,635.44)
End Balance Check					(2,201,692.28)	(2,224,834.88)	(2,248,372.96)	(2,272,310.88)	(2,296,655.16)	(2,321,410.16)	(2,346,582.64)	(2,372,172.92)	(2,398,191.44)	(2,424,635.76)	(2,451,519.00)	(2,478,841.88)	(2,506,609.00)	(2,534,827.52)	(2,563,501.64)	(2,592,635.44)
Net Plant																				
Begin Balance					86,635,019.00	87,188,624.00	87,746,384.00	88,308,328.00	88,874,485.00	89,444,887.00	90,019,567.00	90,598,559.00	91,181,892.00	91,769,602.00	92,361,717.00	92,958,274.00	93,559,306.00	94,164,845.00	94,774,926.00	95,389,583.00
End Balance					84,986,931.72	85,521,549.12	86,059,955.04	86,602,174.12	87,148,231.84	87,698,156.84	88,251,976.36	88,809,719.08	89,371,410.56	89,937,081.24	90,506,755.00	91,080,464.12	91,658,236.00	92,240,098.48	92,826,081.36	93,416,213.56
Tax					(2,386,228.28)	(2,410,753.88)	(2,435,685.96)	(2,461,028.88)	(2,486,788.16)	(2,512,970.16)	(2,539,578.64)	(2,566,616.92)	(2,594,092.44)	(2,622,007.76)	(2,650,370.00)	(2,679,184.88)	(2,708,454.00)	(2,738,186.52)	(2,768,386.64)	(2,799,057.44)
Book					(1,294,981.99)	(1,301,009.74)	(1,304,247.46)	(1,317,941.93)	(1,325,815.96)	(1,324,074.85)	(1,333,017.11)	(1,341,466.07)	(1,352,521.58)	(1,349,227.11)	(1,358,709.13)	(1,366,549.03)	(1,362,389.53)	(1,374,124.10)	(1,374,965.79)	(1,382,034.21)
					(1,091,246.29)	(1,109,744.14)	(1,131,438.50)	(1,143,086.95)	(1,160,972.20)	(1,188,895.31)	(1,206,561.53)	(1,225,150.85)	(1,241,570.86)	(1,272,780.65)	(1,291,660.87)	(1,312,635.85)	(1,346,064.47)	(1,364,062.42)	(1,393,420.85)	(1,417,023.23)
Balance Statement																				
Liabilities																				
Current Liabilities																				
Current Liabilities	2,217,961				4,117,091	4,117,091	4,364,116	4,364,116	4,364,116	4,625,963	4,625,963	4,625,963	4,903,521	4,903,521	4,903,521	5,197,732	5,197,732	5,197,732	5,509,596	5,509,596
CL as % of Revenues	38.51%	38.51%	38.51%	38.51%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%
Noncurrent Liabilities																				
Long Term Debt, Notes payable, net of current portion Bec	23,577,783.00				17,479,941.00	16,897,276.00	16,334,033.00	15,789,565.00	15,263,246.00	14,754,471.00	14,262,655.00	13,787,233.00	13,327,659.00	12,883,404.00	12,453,957.00	12,038,825.00	11,637,531.00	11,249,613.00	10,874,626.00	10,512,138.00
Additional Debt	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt Repayment	-				(582,665)	(563,243)	(544,468)	(526,319)	(508,775)	(491,816)	(475,422)	(459,574)	(444,255)	(429,447)	(415,132)	(401,294)	(387,918)	(374,987)	(362,488)	(350,405)
Debt Repayment years	30.00				30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
End Long Term Debt, Notes payable, net of current portion End					16,897,276.00	16,334,033.00	15,789,565.00	15,263,246.00	14,754,471.00	14,262,655.00	13,787,233.00	13,327,659.00	12,883,404.00	12,453,957.00	12,038,825.00	11,637,531.00	11,249,613.00	10,874,626.00	10,512,138.00	10,161,733.00
Total noncurrent liabilities																				
Deferred Tax Liabilities																				
Begin Balance					2,669,186	2,984,447	3,305,052	3,631,925	3,962,163	4,297,568	4,641,040	4,989,616	5,343,562	5,702,252	6,069,958	6,443,119	6,822,340	7,211,218	7,605,296	8,007,855
Additions to Deferred Asset					315,261	320,605	326,873	330,238	335,405	343,472	348,576	353,946	358,690	367,706	373,161	379,221	388,878	394,078	402,559	409,378
Total Deferred Tax Liability					2,984,447	3,305,052	3,631,925	3,962,163	4,297,568	4,641,040	4,989,616	5,343,562	5,702,252	6,069,958	6,443,119	6,822,340	7,211,218	7,605,296	8,007,855	8,417,233
Total Liabilities					23,998,814.00	23,756,176.00	23,785,606.00	23,589,525.00	23,416,155.00	23,529,658.00	23,402,812.00	23,297,184.00	23,489,177.00	23,427,436.00	23,385,465.00	23,657,603.00	23,658,563.00	23,677,654.00	24,029,589.00	24,088,562.00
Equity																				
Proportion of Capital	71%																			
Beginning Equity Capital	57,724,918				74,725,900	78,251,980	81,729,153	85,614,062	89,441,584	93,214,328	97,421,132	101,569,305	105,657,632	110,195,233	114,678,164	119,095,729	123,990,776	128,826,888	133,591,099	138,865,378
Additions to Equity (Retained Earnings)					3,526,080	3,477,172	3,884,910	3,827,522	3,772,744	4,206,804	4,148,173	4,088,327	4,537,600	4,482,931	4,417,566	4,895,047	4,836,111	4,764,211	5,274,279	5,202,313
Deductions form Equity Dividends	0				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Paid In Capital					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ending Equity Capital					78,251,980	81,729,153	85,614,062	89,441,584	93,214,328	97,421,132	101,569,305	105,657,632	110,195,233	114,678,164	119,095,729	123,990,776	128,826,888	133,591,099	138,865,378	144,067,691
Operating Income					5,446,318	5,361,283	5,918,960	5,823,066	5,731,349	6,327,561	6,231,388	6,133,963	6,752,942	6,663,667	6,559,764	7,219,651	7,125,575	7,013,641	7,720,473	7,609,156
Return On Equity					6.96%	6.56%	6.91%	6.51%	6.15%	6.50%	6.14%	5.81%	6.13%	5.81%	5.51%	5.82%	5.53%	5.25%	5.56%	5.28%
Total Liabilities & Stockholders Equity					102,250,794	105,485,329	109,399,668	113,031,109	116,630,483	120,950,790	124,972,117	128,954,816	133,684,410	138,105,600	142,481,194	147,648,379	152,485,451	157,268,753	162,894,967	168,156,253
Assets					54,139,108	53,581,778	53,265,114	52,702,047	52,136,766	51,831,559	51,270,530	50,706,841	50,405,716	49,845,976	49,282,674	49,001,352	48,446,347	47,885,663	47,631,122	47,074,776
Liabilities & Stockholders Equity less Assets					48,111,686	51,903,551	56,134,554	60,329,062	64,493,717	69,119,231	73,701,587	78,247,975	83,278,694	88,259,624	93,198,520	98,647,027	104,039,104	109,383,090	115,263,845	121,081,477
Dividend					48,111,686	51,903,551	56,134,554	60,329,062	64,493,717	69,119,231	73,701,587	78,247,975	83,278,694	88,259,624	93,198,520	98,647,027	104,039,104	109,383,090	115,263,845	121,081,477
Final Stockholder Equity					54,139,108	53,581,778	53,265,114	52,702,047	52,136,766	51,831,559	51,270,530	50,706,841	50,405,716	49,845,976	49,282,674	49,001,352	48,446,347	47,885,663	47,631,122	47,074,776
Capital Expenditures and Changes in Working Capital																				
Capital Expenditures					738,141.00	743,679.00	749,257.00	754,875.00	760,535.00	766,240.00	771,988.00	777,777.00	783,611.00	789,487.00	795,408.00	801,375.00	807,384.00	813,440.00	819,542.00	825,688.00
Changes to Working Capital																				
Current Assets	2,139,868				3,972,130	3,972,130	4,210,457	4,210,457	4,210,457	4,463,085	4,463,085	4,463,085	4,730,870	4,730,870	4,730,870	5,014,722	5,014,722	5,014,722	5,315,605	5,315,605
Current Liabilities	2,217,961				4,117,091	4,117,091	4,364,116	4,364,116	4,364,116	4,625,963	4,625,963	4,625,963	4,903,521	4,903,521	4,903,521	5,197,732	5,197,732	5,197,732	5,509,596	5,509,596
Working Capital	(78,093)				(144,961)	(144,961)	(153,659)	(153,659)	(153,659)	(162,878)	(162,878)	(162,878)	(172,651)	(172,651)	(172,651)	(183,010)	(183,010)	(183,010)	(193,991)	(193,991)
Changes to Working Capital					-	-	(8,698)	-	-	(9,219)	-	-	(9,773)	-	-	(10,359)	-	-	(10,981)	-
CASH FLOW																				
Income from Operations					4,013,770	3,948,606	4,340,630	4,268,051	4,198,589	4,618,454	4,546,101	4,472,991	4,909,442	4,842,378	4,765,031	5,230,930	5,160,798	5,078,075	5,577,681	5,495,602
Non Cash Expense (depreciation)					1,294,982	1,301,010	1,304,247	1,317,942	1,325,816	1,324,075	1,333,017	1,341,466	1,352,522	1,349,227	1,358,709	1,366,549	1,362,390	1,374,124	1,374,966	1,382,034
Capital Expenditures					738,141	743,679	749,257	754,875	760,535	766,240	771,988	777,777	783,611	789,487	795,408	801,375	807,384	813,440	819,542	825,688
Change in Working Capital					-	-	(8,698)	-	-	(9,219)	-	-	(9,773)	-	-	(10,359)	-	-	(10,981)	-
Net Cash Flows					4,570,611	4,505,937	4,904,318	4,831,118	4,763,870	5,185,508	5,107,130	5,036,680	5,488,126	5,402,118	5,328,332	5,806,463	5,715,804	5,638,759	6,144,086	6,051,948
Period					9.5	10.5	11.5	12.5	13.5	14.5	15.5	16.5	17.5	18.5	19.5	20.5	21.5	22.5	23.5	24.5
PW Factor																				
Discount Rate with growth	7.80%				7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods: 1-5	6-15	16 - 19	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Discount Rate without growth	5.87%				5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%
Period Present Worth Factor (PW)					0.49	0.454	0.422	0.391	0.363	0.337	0.312	0.29	0.269	0.249	17.036 0.231	17.036 0.214	17.036 0.199	17.036 0.185	17.036 0.171	17.036 0.159
PW of Cashflow					2,239,599	2,045,695	2,069,622	1,888,967	1,729,285	1,747,516	1,593,425	1,460,637	1,476,306	1,345,127	20,968,670	21,168,645	19,377,513	17,771,451	17,898,681	16,393,057
Accumulated PW of Cashflows	56,426,092				20,100,842	22,146,537	24,216,159	26,105,126	27,834,411	29,581,927	31,175,352	32,635,989	34,112,295	35,457,422	56,426,092	77,594,737	96,972,250	114,743,701	132,642,382	149,035,439
CASH FLOW																				
Income from Operations					2,750,095	2,688,033	3,080,344	3,014,673	2,947,177	3,361,381	3,290,187	3,217,122	3,654,720	3,577,856	3,499,066	3,961,632	3,878,925	3,794,226	4,283,417	4,194,668
Depreciation					(2,386,228)	(2,410,754)	(2,435,686)	(2,461,029)	(2,486,788)	(2,512,970)	(2,539,579)	(2,566,617)	(2,594,092)	(2,622,008)	(2,650,370)	(2,679,185)	(2,708,454)	(2,738,187)	(2,768,387)	(2,799,057)
Capital Expenditures					738,141	743,679	749,257	754,875	760,535	766,240	771,988	777,777	783,611	789,487	795,408	801,375	807,384	813,440	819,542	825,688
Change in Working Capital					-	-	(8,698)	-	-	(9,219)	-	-	(9,773)	-	-	(10,359)	-	-	(10,981)	-
Net Cash Flows					4,398,182	4,355,108	4,775,471	4,720,827	4,673,430	5,117,330	5,057,778	5,005,962	5,474,974	5,410,377	5,354,028	5,849,801	5,779,995	5,718,973	6,243,243	6,168,037
Period					9.5	10.5	11.5	12.5	13.5	14.5	15.5	16.5	17.5	18.5	19.5	20.5	21.5	22.5	23.5	24.5
PW Factor																				
Discount Rate with growth	7.80%				7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%
Discount Rate without growth	5.87%				5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%
Period Present Worth Factor (PW)					0.49	0.454	0.422	0.391	0.363	0.337	0.312	0.29	0.269	0.249	17.036 0.231	17.036 0.214	17.036 0.199	17.036 0.185	17.036 0.171	17.036 0.159
PW of Cashflow					2,155,109	1,977,219	2,015,249	1,845,843	1,696,455	1,724,540	1,578,027	1,451,729	1,472,768	1,347,184	21,069,792	21,326,643	19,595,131	18,024,258	18,187,541	16,707,510
Accumulated PW of Cashflows	54,267,994				18,089,188	20,066,407	22,081,656	23,927,499	25,623,954	27,348,494	28,926,521	30,378,250	31,851,018	33,198,202	54,267,994	75,594,637	95,189,768	113,214,026	131,401,567	148,109,077
Rate Case Forecasts																				
Rate Base																				
Plant In Service					87,186,624.00	87,746,384.00	88,308,328.00	88,874,485.00	89,444,887.00	90,019,567.00	90,598,559.00	91,181,892.00	91,769,602.00	92,361,717.00	92,958,274.00	93,559,306.00	94,164,845.00	94,774,926.00	95,389,583.00	96,008,849.00
Accumulated Book Depreciation					(37,021,645.66)	(38,136,736.40)	(39,253,670.86)	(40,382,894.79)	(41,518,577.75)	(42,651,092.60)	(43,791,113.71)	(44,938,135.78)	(46,094,756.36)	(47,246,611.47)	(48,406,469.60)	(49,572,675.63)	(50,733,220.16)	(51,903,985.26)	(53,074,066.05)	(54,249,678.26)
Working Capital					(144,961.00)	(144,961.00)	(153,659.00)	(153,659.00)	(153,659.00)	(162,878.00)	(162,878.00)	(162,878.00)	(172,651.00)	(172,651.00)	(172,651.00)	(183,010.00)	(183,010.00)	(183,010.00)	(193,991.00)	(193,991.00)
Accumulated Deferred Income Tax					(2,984,447)	(3,305,052)	(3,631,925)	(3,962,163)	(4,297,568)	(4,641,040)	(4,989,616)	(5,343,562)	(5,702,252)	(6,069,958)	(6,443,119)	(6,822,340)	(7,211,218)	(7,605,296)	(8,007,855)	(8,417,233)
Rate Base					47,037,570.34	46,159,634.60	45,269,073.14	44,375,768.21	43,475,082.25	42,564,556.40	41,654,951.29	40,737,316.22	39,799,942.64	38,872,496.53	37,936,034.40	36,981,280.37	36,037,396.84	35,082,634.74	34,113,670.95	33,147,946.74
Authorized Return on Rate Base	7.21%				3,391,409.00	3,328,110.00	3,263,900.00	3,199,493.00	3,134,553.00	3,068,905.00	3,003,322.00	2,937,160.00	2,869,576.00	2,802,707.00	2,735,188.00	2,666,350.00	2,598,296.00	2,529,458.00	2,459,596.00	2,389,967.00
O&M Expenses					3,950,359.00	4,029,366.00	4,109,952.00	4,192,151.00	4,275,994.00	4,361,513.00	4,448,744.00	4,537,720.00	4,628,474.00	4,721,044.00	4,815,465.00	4,911,774.00	5,010,009.00	5,110,209.00	5,212,413.00	5,316,662.00
Book Depreciation					1,294,981.99	1,301,009.74	1,304,247.46	1,317,941.93	1,325,815.96	1,324,074.85	1,333,017.11	1,341,466.07	1,352,521.58	1,349,227.11	1,358,709.13	1,366,549.03	1,362,389.53	1,374,124.10	1,374,965.79	1,382,034.21
Ratemaking Interest Expense					487,690.00	471,434.00	455,720.00	440,529.00	425,845.00	411,650.00	397,928.00	384,664.00	371,842.00	359,447.00	347,465.00	335,883.00	324,687.00	313,864.00	303,402.00	293,289.00
Revenue Requirement					9,124,439.99	9,129,919.74	9,133,819.46	9,150,114.93	9,162,207.96	9,166,142.85	9,183,011.11	9,201,010.07	9,222,413.58	9,232,425.11	9,256,827.13	9,280,556.03	9,295,381.53	9,327,655.10	9,350,376.79	9,381,952.21
O&M Expenses					3,950,359.00	4,029,366.00	4,109,952.00	4,192,151.00	4,275,994.00	4,361,513.00	4,448,744.00	4,537,720.00	4,628,474.00	4,721,044.00	4,815,465.00	4,911,774.00	5,010,009.00	5,110,209.00	5,212,413.00	5,316,662.00
Depreciation Expense					1,294,981.99	1,301,009.74	1,304,247.46	1,317,941.93	1,325,815.96	1,324,074.85	1,333,017.11	1,341,466.07	1,352,521.58	1,349,227.11	1,358,709.13	1,366,549.03	1,362,389.53	1,374,124.10	1,374,965.79	1,382,034.21
Interest					487,690.00	471,434.00	455,720.00	440,529.00	425,845.00	411,650.00	397,928.00	384,664.00	371,842.00	359,447.00	347,465.00	335,883.00	324,687.00	313,864.00	303,402.00	293,289.00
Pretax Income					3,391,409.00	3,328,110.00	3,263,900.00	3,199,493.00	3,134,553.00	3,068,905.00	3,003,322.00	2,937,160.00	2,869,576.00	2,802,707.00	2,735,188.00	2,666,350.00	2,598,296.00	2,529,458.00	2,459,596.00	2,389,967.00
State & Federal Taxes @ 28.89%					979,778.00	961,491.00	942,941.00	924,334.00	905,572.00	886,607.00	867,660.00	848,546.00	829,021.00	809,702.00	790,196.00	770,309.00	750,648.00	730,760.00	710,577.00	690,461.00
After Tax Income					2,411,631.00	2,366,619.00	2,320,959.00	2,275,159.00	2,228,981.00	2,182,298.00	2,135,662.00	2,088,614.00	2,040,555.00	1,993,005.00	1,944,992.00	1,896,041.00	1,847,648.00	1,798,698.00	1,749,019.00	1,699,506.00
Current Revenue					10,691,659.00	10,691,659.00	11,333,159.00	11,333,159.00	11,333,159.00	12,013,149.00	12,013,149.00	12,013,149.00	12,733,938.00	12,733,938.00	12,733,938.00	13,497,974.00	13,497,974.00	13,497,974.00	14,307,852.00	14,307,852.00
Revenue Requirement					10,104,217.99	10,091,410.74	10,076,760.46	10,074,448.93	10,067,779.96	10,052,749.85	10,050,671.11	10,049,556.07	10,051,434.58	10,042,127.11	10,047,023.13	10,050,865.03	10,046,029.53	10,058,415.10	10,060,963.79	10,072,413.21
Required Revenue Increase					-5%	-6%	-11%	-11%	-11%	-16%	-16%	-16%	-21%	-21%	-21%	-26%	-26%	-25%	-30%	-30%
Income from Operations					4,013,770	3,948,606	4,340,630	4,268,051	4,198,589	4,618,454	4,546,101	4,472,991	4,909,442	4,842,378	4,765,031	5,230,930	5,160,798	5,078,075	5,577,681	5,495,602
Return on Rate Base					8.53%	8.55%	9.59%	9.62%	9.66%	10.85%	10.91%	10.98%	12.34%	12.46%	12.56%	14.14%	14.32%	14.47%	16.35%	16.58%
Required Return	7.21%				7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%
Authorized Return					3,391,409	3,328,110	3,263,900	3,199,493	3,134,553	3,068,905	3,003,322	2,937,160	2,869,576	2,802,707	2,735,188	2,666,350	2,598,296	2,529,458	2,459,596	2,389,967
After-tax Net Income					3,526,080	3,477,172	3,884,910	3,827,522	3,772,744	4,206,804	4,148,173	4,088,327	4,537,600	4,482,931	4,417,566	4,895,047	4,836,121	4,764,211	5,274,279	5,202,313
Taxes					1,432,548	1,412,677	1,578,330	1,555,015	1,532,760	1,709,107	1,685,287	1,660,972	1,843,500	1,821,289	1,794,733	1,988,721	1,964,777	1,935,566	2,142,792	2,113,554
Pre-tax Net Income					4,958,628	4,889,849	5,463,240	5,382,537	5,305,504	5,915,911	5,833,460	5,749,299	6,381,100	6,304,220	6,212,299	6,883,768	6,800,888	6,699,777	7,417,071	7,315,867
Interest Expense					487,690	471,434	455,720	440,529	425,845	411,650	397,928	384,664	371,842	359,447	347,465	335,883	324,687	313,864	303,402	293,289
Operating Income					5,446,318	5,361,283	5,918,960	5,823,066	5,731,349	6,327,561	6,231,388	6,133,963	6,752,942	6,663,667	6,559,764	7,219,651	7,125,575	7,013,641	7,720,473	7,609,156
Operating Expenses					5,245,341	5,330,376	5,414,199	5,510,093	5,601,810	5,685,588	5,781,761	5,879,186	5,980,996	6,070,271	6,174,174	6,278,323	6,372,399	6,484,333	6,587,379	6,698,696
Revenue Requirement					10,691,659	10,691,659	11,333,159	11,333,159	11,333,159	12,013,149	12,013,149	12,013,149	12,733,938	12,733,938	12,733,938	13,497,974	13,497,974	13,497,974	14,307,852	14,307,852
Required Return					3,391,409	3,328,110	3,263,900	3,199,493	3,134,553	3,068,905	3,003,322	2,937,160	2,869,576	2,802,707	2,735,188	2,666,350	2,598,296	2,529,458	2,459,596	2,389,967
Operating Expenses					5,245,341	5,330,376	5,414,199	5,510,093	5,601,810	5,685,588	5,781,761	5,879,186	5,980,996	6,070,271	6,174,174	6,278,323	6,372,399	6,484,333	6,587,379	6,698,696
Revenue Requirement					8,636,750	8,658,486	8,678,099	8,709,586	8,736,363	8,754,493	8,785,083	8,816,346	8,850,572	8,872,978	8,909,362	8,944,673	8,970,695	9,013,791	9,046,975	9,088,663
Required Rate Increase					-5.49%	-5.61%	-11.09%	-11.11%	-11.17%	-16.32%	-16.34%	-16.35%	-21.07%	-21.14%	-21.10%	-25.54%	-25.57%	-25.48%	-29.68%	-29.60%
Proposed Rate Increase					10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Rate Increase Scenario	6				0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%
	0				10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
No increases (Input 2)	2				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
No Rate Increases (Input 2)	3																			
Modest Rate Increases: 6% every 3 year period starting in period 3 (Input 4)	4				0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%
Modest Rate Increases: (Input 4)	5																			
Required Rate Increases: 30% period 4,25% period 6, 10% period 9, 6% period 12, and 6% every 3rd year beginning in period 15 (Input 6)	6				0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%
Required Rate Increases: (Input 6)	7				185.6%	185.6%	196.8%	196.8%	196.8%	208.6%	208.6%	208.6%	221.1%	221.1%	221.1%	234.3%	234.3%	234.3%	248.4%	248.4%
	4				0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Changes In Balance Sheet Accounts																				
Assets																				
Change in Current Assets (Source negative / Use positive)					-	-	238,327	-	-	252,628	-	-	267,785	-	-	283,852	-	-	300,883	-
Plant & Equipment																				
Additions (Source negative / Use positive)					738,141	743,679	749,257	754,875	760,535	766,240	771,988	777,777	783,611	789,487	795,408	801,375	807,384	813,440	819,542	825,688
Liabilities																				

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods 1-5	6-15	16 - 19	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Change in Current Liabilities (Source Positive / Use negative)						-	247,025	-		261,847	-	-	277,558			294,211		-	311,864	
Long Term Debt																				
Additional Long Term Debt Source Positive / Use Negative					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Principal Paid Long term Debt (Source positive / Use negative)					582,665	563,243	544,468	526,319	508,775	491,816	475,422	459,574	444,255	429,447	415,132	401,294	387,918	374,987	362,488	350,405
Equity																				
Additions to Equity (Source Positive / Use Negative)																				
Dividend (Source negative / Use Positive)																				
Funds Provided from Operations																				
Sources of Funds																				
Net Income (Use Negative / Source Positive)					3,526,080	3,477,172	3,884,930	3,827,522	3,772,744	4,206,804	4,148,173	4,088,327	4,537,600	4,482,931	4,417,566	4,895,047	4,836,111	4,764,211	5,276,279	5,202,313
Depreciation (Source positive /use negative)					1,296,982	1,301,010	1,304,247	1,317,942	1,325,816	1,324,075	1,333,017	1,341,466	1,352,522	1,349,227	1,358,709	1,366,549	1,362,490	1,374,124	1,374,966	1,382,034
Current Liabilities (Source Positive)							247,025	-		261,847			277,558			294,211		-	311,864	-
					4,823,062	4,778,182	5,436,182	5,145,464	5,098,560	5,792,726	5,481,190	5,429,793	6,367,680	5,832,158	5,776,275	6,555,807	6,198,601	6,138,335	6,961,109	6,584,347
Sources and Uses of Funds																				
Sources of Funds																				
Current Liabilities (Source Positive)																				
Uses of Funds																				
Current Assets. Increase (Use)						-	238,327			252,628	-		267,785			283,852	-		300,883	
Fixed Assets. Assets. Increase (Use)					738,141	743,679	749,257	754,875	760,535	766,240	771,988	777,777	783,611	789,487	795,408	801,375	807,384	813,440	819,542	825,688
Total Uses of Funds					738,141	743,679	987,584	754,875	760,535	1,018,868	771,988	777,777	1,051,396	789,487	795,408	1,085,227	807,384	813,440	1,120,425	825,688
Funds from Financing Activities																				
Changes in Debt																				
Increase in Long Term Debt																				
Repayment of Long Term Debt					(582,665)	(563,243)	(544,468)	(526,319)	(508,775)	(491,816)	(475,422)	(459,574)	(444,255)	(429,447)	(415,132)	(401,294)	(387,918)	(374,987)	(362,488)	(350,405)
Funds fom Equity																				
Dividends Paid (Use)					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Paid in Capital (source)																				
Total Funds from Financing Activities					(582,665.00)	(563,243.00)	(544,468.00)	(526,319.00)	(508,775.00)	(491,816.00)	(475,422.00)	(459,574.00)	(444,255.00)	(429,447.00)	(415,132.00)	(401,294.00)	(387,918.00)	(374,987.00)	(362,488.00)	(350,405.00)
Total Funds Needed					4,500,256.00	4,471,260.00	4,904,130.00	4,864,270.00	4,829,250.00	4,282,042.00	4,233,780.00	4,192,442.00	4,672,029.00	4,613,224.00	4,565,735.00	5,069,286.00	5,003,199.00	4,949,908.00	5,478,196.00	5,408,254.00
Financing																				
Debt	29%				(1,015,074.00)	(1,006,665.00)	(1,132,198.00)	(1,120,638.00)	(1,110,483.00)	(1,241,792.00)	(1,227,796.00)	(1,215,808.00)	(1,354,888.00)	(1,337,835.00)	(1,324,063.00)	(1,470,093.00)	(1,450,928.00)	(1,435,473.00)	(1,588,677.00)	(1,568,394.00)
Equity	71%				(2,485,182.00)	(2,464,595.00)	(2,771,932.00)	(2,743,632.00)	(2,718,768.00)	(3,040,250.00)	(3,005,984.00)	(2,976,634.00)	(3,317,141.00)	(3,275,389.00)	(3,241,672.00)	(3,599,193.00)	(3,552,271.00)	(3,514,435.00)	(3,889,519.00)	(3,839,860.00)
Funds Provided by Financing					(3,500,256.00)	(3,471,260.00)	(3,904,130.00)	(3,864,270.00)	(3,829,251.00)	(4,282,042.00)	(4,233,780.00)	(4,192,442.00)	(4,672,029.00)	(4,613,224.00)	(4,565,735.00)	(5,069,286.00)	(5,003,199.00)	(4,949,908.00)	(5,478,196.00)	(5,408,254.00)

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods: 1-5	6-15	16 - 19	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Income Statement																				
Revenues																				
Annual Revenue Growth rate																				
Subscriber Growth Rate (Annually)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Periodic Subscriber Growth																				
Growth	0.0%	0.0%	0.0%	0.0%					0.0%					0.0%					0.0%	
Period for Periodic Growth	5																			
Rate Case Activities																				
Periodic Rate Case (years)	typically 3 years																			
Required Rate Increase	Calculated in DCF				-29.18%	-32.71%	-32.30%	-31.81%	-31.33%	-30.84%	-30.30%	-29.82%	-29.22%	-28.66%	-28.08%	-27.44%	-26.86%	-26.14%	-25.51%	-24.85%
Proposed Rate Increase	Calculated in DCF				0.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Revenue Adjustments	Calculated				0.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Base and Forecast	5,759,816				14,307,852	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323
Operating Expenses					22%	21%	22%	22%	23%	23%	23%	24%	24%	25%	25%	26%	26%	27%	27%	28%
Expense Level 1: Sewer & Collection Fees	1,888,488				3,160,229	3,223,434	3,287,903	3,353,661	3,420,734	3,489,149	3,558,932	3,630,111	3,702,713	3,776,767	3,852,302	3,929,348	4,007,935	4,088,094	4,169,856	4,253,253
Expense Level 1: Sewer & Collection Fees Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 2: Wages & Benefits	729,237				1,220,319	1,244,725	1,269,620	1,295,012	1,320,912	1,347,330	1,374,277	1,401,763	1,429,798	1,458,394	1,487,562	1,517,313	1,547,659	1,578,612	1,610,184	1,642,388
Expense Level 2: Wages & Benefits Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 3: Repair & Maintenance	250,824				419,732	428,127	436,690	445,424	454,332	463,419	472,687	482,141	491,784	501,620	511,652	521,885	532,323	542,969	553,828	564,905
Expense Level 3: Repair & Maintenance Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 4: Contracted Services	43,650				73,042	74,503	75,993	77,513	79,063	80,644	82,257	83,902	85,580	87,292	89,038	90,819	92,635	94,488	96,378	98,306
Expense Level 4: Contracted Services Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 5: Utilities	86,097				144,078	146,960	149,899	152,897	155,955	159,074	162,255	165,500	168,810	172,186	175,630	179,143	182,726	186,381	190,109	193,911
Expense Level 5: Utilities Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 6: Insurance & Other	242,376				405,595	413,707	421,981	430,421	439,029	447,810	456,766	465,901	475,219	484,723	494,417	504,305	514,391	524,679	535,173	545,876
Expense Level 6: Insurance & Other Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Property Taxes	81,302,701				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Begin Plant					41,759,171	41,208,185	40,652,279	40,105,627	39,559,402	39,017,740	38,481,012	37,945,424	37,423,593	36,900,763	36,384,660	35,875,903	35,369,636	34,878,299	34,382,540	33,900,202
PT Rate % of beginning net plant	0.000%				0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Book Depreciation (based on Beginning Year Property Plant & Equipment)	-				1,382,866	1,394,024	1,391,056	1,396,962	1,398,780	1,400,275	1,405,611	1,398,379	1,405,952	1,405,849	1,405,176	1,409,408	1,401,253	1,412,498	1,405,954	1,399,524
Total Operating Expenses					6,805,861	6,925,480	7,033,142	7,151,890	7,268,805	7,387,701	7,512,785	7,627,697	7,759,856	7,886,831	8,015,777	8,152,221	8,278,922	8,427,721	8,561,482	8,698,163
Cost of Operation as % of Revenues (Calculation)					47.6%	45.7%	46.4%	47.2%	47.9%	48.7%	49.5%	50.3%	51.2%	52.0%	52.9%	53.8%	54.6%	55.6%	56.5%	57.4%
Operating Expenses less Depreciation					5,422,995	5,531,456	5,642,086	5,754,928	5,870,025	5,987,426	6,107,174	6,229,318	6,353,904	6,480,982	6,610,601	6,742,813	6,877,669	7,015,223	7,155,528	7,298,639
Operating Income					7,501,991	8,240,843	8,133,181	8,014,433	7,897,518	7,778,622	7,653,538	7,538,626	7,406,467	7,279,492	7,150,546	7,014,102	6,887,401	6,738,602	6,604,841	6,468,160
Nonoperating Revenues (Expenses)																				
Interest Income																				
Interest Expense					283,512	274,062	264,927	256,096	247,559	239,307	231,330	223,619	216,165	208,960	201,994	195,261	188,753	182,461	176,379	170,499
Interest Exp as % of Debt	2.79%				2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%
Total nonoperating revenues (expenses)	-				283,512.00	274,062.00	264,927.00	256,096.00	247,559.00	239,307.00	231,330.00	223,619.00	216,165.00	208,960.00	201,994.00	195,261.00	188,753.00	182,461.00	176,379.00	170,499.00
Income (loss) before State and Federal Taxes	-				7,218,479	7,966,781	7,868,254	7,758,337	7,649,959	7,539,315	7,422,208	7,315,007	7,190,302	7,070,532	6,948,552	6,818,841	6,698,648	6,556,141	6,428,462	6,297,661
State and Federal Taxes	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
State and Federal Tax Rate	28.89%				2,085,419	2,301,603	2,273,138	2,241,384	2,210,073	2,178,108	2,144,276	2,113,305	2,077,278	2,042,677	2,007,437	1,969,963	1,935,239	1,894,069	1,857,183	1,819,394
					28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%
Income After Taxes	-				5,133,060	5,665,178	5,595,116	5,516,953	5,439,886	5,361,207	5,277,932	5,201,702	5,113,024	5,027,855	4,941,115	4,848,878	4,763,409	4,662,072	4,571,279	4,478,267
Income After Taxes plus Interest	-				5,416,572	5,939,240	5,860,043	5,773,049	5,687,445	5,600,514	5,509,262	5,425,321	5,329,189	5,236,815	5,143,109	5,044,139	4,952,162	4,844,533	4,747,658	4,648,766
Earnings before Interest, Taxes, Depreciation, & Amortization	-				4,714,019	5,031,661	4,977,961	4,928,627	4,876,152	4,822,681	4,770,597	4,710,395	4,657,863	4,599,987	4,540,848	4,483,584	4,418,176	4,362,962	4,296,429	4,228,896
Income (loss) before State and Federal Taxes					7,218,479	7,966,781	7,868,254	7,758,337	7,649,959	7,539,315	7,422,208	7,315,007	7,190,302	7,070,532	6,948,552	6,818,841	6,698,648	6,556,141	6,428,462	6,297,661
Book Depreciation					(1,382,866)	(1,394,024)	(1,391,056)	(1,396,962)	(1,398,780)	(1,400,275)	(1,405,611)	(1,398,379)	(1,405,952)	(1,405,849)	(1,405,176)	(1,409,408)	(1,401,253)	(1,412,498)	(1,405,954)	(1,399,524)
Tax Depreciation					(831,880)	(838,118)	(844,404)	(850,737)	(857,118)	(863,547)	(870,023)	(876,548)	(883,122)	(889,746)	(896,419)	(903,142)	(909,916)	(916,739)	(923,616)	(930,542)
Difference Tax over Book Depreciation					550,986	555,906	546,652	546,225	541,662	536,728	535,588	521,831	522,830	516,103	508,757	506,266	491,337	495,759	482,338	468,982
Income Adjusted for Tax Depreciation					7,769,465	8,522,687	8,414,906	8,304,562	8,191,621	8,076,043	7,957,796	7,836,838	7,713,132	7,586,635	7,457,309	7,325,107	7,189,985	7,051,900	6,910,800	6,766,643
Income Tax Rate					28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%
Income Taxes					2,244,598	2,462,204	2,431,066	2,399,188	2,366,559	2,333,169	2,299,007	2,264,062	2,228,324	2,191,779	2,154,417	2,116,223	2,077,187	2,037,294	1,996,530	1,954,883
Income After Tax					5,524,867	6,060,483	5,983,840	5,905,374	5,825,062	5,742,874	5,658,789	5,572,776	5,484,808	5,394,856	5,302,892	5,208,884	5,112,798	5,014,606	4,914,270	4,811,760
Deferred Income Taxes					159,179	160,601	157,928	157,804	156,486	155,061	154,731	150,757	151,046	149,102	146,980	146,260	141,948	143,225	139,347	135,489
Accumulated Deferred Income Taxes					(8,258,054)	(8,097,453)	(7,939,525)	(7,781,721)	(7,625,235)	(7,470,174)	(7,315,443)	(7,164,686)	(7,013,640)	(6,864,538)	(6,717,558)	(6,571,298)	(6,429,350)	(6,286,125)	(6,146,778)	(6,011,289)
Income After Taxes (Book Depreciation)					5,133,060	5,665,178	5,595,116	5,516,953	5,439,886	5,361,207	5,277,932	5,201,702	5,113,024	5,027,855	4,941,115	4,848,878	4,763,409	4,662,072	4,571,279	4,478,267
Plus Deferred Taxes					159,179	160,601	157,928	157,804	156,486	155,061	154,731	150,757	151,046	149,102	146,980	146,260	141,948	143,225	139,347	135,489
Plus Interest					283,512	274,062	264,927	256,096	247,559	239,307	231,330	223,619	216,165	208,960	201,994	195,261	188,753	182,461	176,379	170,499
After Tax Income Debt Free					5,257,393	5,778,639	5,702,115	5,615,245	5,530,959	5,445,453	5,354,531	5,274,564	5,178,143	5,087,713	4,996,129	4,897,879	4,810,214	4,701,308	4,608,311	4,513,277
Balance Statement																				
Assets																				
Current Assets																				
Current Asset Balance	2,139,868				5,315,605	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542
CA as % of Revenues	37.15%	37.15%	37.15%	37.15%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%
Balance Statement																				
Property Plant & Equipment																				
Total PP&E																				
Begin Balance					96,008,849.00	96,632,759.00	97,261,348.00	97,894,649.00	98,532,702.00	99,175,541.00	99,823,202.00	100,475,718.00	101,133,130.00	101,795,471.00	102,462,781.00	103,135,095.00	103,812,451.00	104,494,888.00	105,182,443.00	105,875,155.00
Additions					831,880.00	838,118.00	844,404.00	850,737.00	857,118.00	863,547.00	870,023.00	876,548.00	883,122.00	889,746.00	896,419.00	903,142.00	909,916.00	916,739.00	923,616.00	930,542.00
Retirements					(207,970.00)	(209,529.00)	(211,103.00)	(212,684.00)	(214,279.00)	(215,886.00)	(217,507.00)	(219,136.00)	(220,781.00)	(222,436.00)	(224,105.00)	(225,786.00)	(227,479.00)	(229,184.00)	(230,904.00)	(232,635.00)
End Balance	81,302,701.00				96,632,759.00	97,261,348.00	97,894,649.00	98,532,702.00	99,175,541.00	99,823,202.00	100,475,718.00	101,133,130.00	101,795,471.00	102,462,781.00	103,135,095.00	103,812,451.00	104,494,888.00	105,182,443.00	105,875,155.00	106,573,062.00
End Balance Check					96,632,759.00	97,261,348.00	97,894,649.00	98,532,702.00	99,175,541.00	99,823,202.00	100,475,718.00	101,133,130.00	101,795,471.00	102,462,781.00	103,135,095.00	103,812,451.00	104,494,888.00	105,182,443.00	105,875,155.00	106,573,062.00
Book Depreciation of Property, Plant, & Equipment																				
Total Book Depreciation																				

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base		Periods:																	
		1-5	6-15	16 - 19	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Begin Balance					(54,249,678.26)	(55,424,573.91)	(56,609,069.03)	(57,789,022.39)	(58,973,300.06)	(60,157,801.10)	(61,342,189.70)	(62,530,294.09)	(63,709,537.42)	(64,894,708.27)	(66,078,121.17)	(67,259,192.02)	(68,442,814.51)	(69,616,588.52)	(70,799,902.98)	(71,974,953.12)
Depreciation					(1,382,865.65)	(1,394,024.12)	(1,391,056.36)	(1,396,961.67)	(1,398,780.04)	(1,400,274.60)	(1,405,611.39)	(1,398,379.33)	(1,405,951.85)	(1,405,848.90)	(1,405,175.85)	(1,409,408.49)	(1,401,253.01)	(1,412,498.46)	(1,405,954.14)	(1,399,524.01)
Retirements					207,970.00	209,529.00	211,103.00	212,684.00	214,279.00	215,886.00	217,507.00	219,136.00	220,781.00	222,436.00	224,105.00	225,786.00	227,479.00	229,184.00	230,904.00	232,635.00
End Balance					(55,424,573.91)	(56,609,069.03)	(57,789,022.39)	(58,973,300.06)	(60,157,801.10)	(61,342,189.70)	(62,530,294.09)	(63,709,537.42)	(64,894,708.27)	(66,078,121.17)	(67,259,192.02)	(68,442,814.51)	(69,616,588.52)	(70,799,902.98)	(71,974,953.12)	(73,141,842.13)
End Balance Check					(55,424,573.91)	(56,609,069.03)	(57,789,022.39)	(58,973,300.06)	(60,157,801.10)	(61,342,189.70)	(62,530,294.09)	(63,709,537.42)	(64,894,708.27)	(66,078,121.17)	(67,259,192.02)	(68,442,814.51)	(69,616,588.52)	(70,799,902.98)	(71,974,953.12)	(73,141,842.13)
Net Plant																				
Begin Balance					41,759,170.74	41,208,185.09	40,652,278.97	40,105,626.61	39,559,401.94	39,017,739.90	38,481,012.30	37,945,423.91	37,423,592.58	36,900,762.73	36,384,659.83	35,875,902.98	35,369,636.49	34,878,299.48	34,382,540.02	33,900,201.88
End Balance					41,208,185.09	40,652,278.97	40,105,626.61	39,559,401.94	39,017,739.90	38,481,012.30	37,945,423.91	37,423,592.58	36,900,762.73	36,384,659.83	35,875,902.98	35,369,636.49	34,878,299.48	34,382,540.02	33,900,201.88	33,431,219.87
Total Assest					46,523,790.09	46,286,820.97	45,740,168.61	45,193,943.94	44,652,281.90	44,115,554.30	43,579,965.91	43,058,134.58	42,535,304.73	42,019,201.83	41,510,444.98	41,004,178.49	40,512,841.48	40,017,082.02	39,534,743.88	39,065,761.87
Tax Depreciation of Property, Plant, & Equipment																				
Total MACRS Depreciation					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Begin Balance					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Depreciation					(831,880.00)	(838,118.00)	(844,404.00)	(850,737.00)	(857,118.00)	(863,547.00)	(870,023.00)	(876,548.00)	(883,122.00)	(889,746.00)	(896,419.00)	(903,142.00)	(909,916.00)	(916,739.00)	(923,616.00)	(930,542.00)
Retirements					207,970.00	209,529.00	211,103.00	212,684.00	214,279.00	215,886.00	217,507.00	219,136.00	220,781.00	222,436.00	224,105.00	225,786.00	227,479.00	229,184.00	230,904.00	232,635.00
End Balance					(623,910.00)	(628,589.00)	(633,301.00)	(638,053.00)	(642,839.00)	(647,661.00)	(652,516.00)	(657,412.00)	(662,341.00)	(667,310.00)	(672,314.00)	(677,356.00)	(682,437.00)	(687,555.00)	(692,712.00)	(697,907.00)
End Balance Check					(623,910.00)	(628,589.00)	(633,301.00)	(638,053.00)	(642,839.00)	(647,661.00)	(652,516.00)	(657,412.00)	(662,341.00)	(667,310.00)	(672,314.00)	(677,356.00)	(682,437.00)	(687,555.00)	(692,712.00)	(697,907.00)
Net Plant																				
Begin Balance					96,008,849.00	96,632,759.00	97,261,348.00	97,894,649.00	98,532,702.00	99,175,541.00	99,823,202.00	100,475,718.00	101,133,130.00	101,795,471.00	102,462,781.00	103,135,095.00	103,812,451.00	104,494,888.00	105,182,443.00	105,875,155.00
End Balance					96,008,849.00	96,632,759.00	97,261,348.00	97,894,649.00	98,532,702.00	99,175,541.00	99,823,202.00	100,475,718.00	101,133,130.00	101,795,471.00	102,462,781.00	103,135,095.00	103,812,451.00	104,494,888.00	105,182,443.00	105,875,155.00
Tax					(831,880.00)	(838,118.00)	(844,404.00)	(850,737.00)	(857,118.00)	(863,547.00)	(870,023.00)	(876,548.00)	(883,122.00)	(889,746.00)	(896,419.00)	(903,142.00)	(909,916.00)	(916,739.00)	(923,616.00)	(930,542.00)
Book					(1,382,865.65)	(1,394,024.12)	(1,391,056.36)	(1,396,961.67)	(1,398,780.04)	(1,400,274.60)	(1,405,611.39)	(1,398,379.33)	(1,405,951.85)	(1,405,848.90)	(1,405,175.85)	(1,409,408.49)	(1,401,253.01)	(1,412,498.46)	(1,405,954.14)	(1,399,524.01)
					550,985.65	555,906.12	546,652.36	546,224.67	541,662.04	536,727.60	535,588.39	521,831.33	522,829.85	516,102.90	508,756.85	506,266.49	491,337.01	495,759.46	482,338.14	468,982.01
Balance Statement																				
Liabilities																				
Current Liabilities																				
Current Liabilities	2,217,961				5,509,596	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172
CL as % of Revenues	38.51%	38.51%	38.51%	38.51%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%
Noncurrent Liabilities																				
Long Term Debt, Notes payable, net of current portion Beg	23,577,783.00				10,161,733.00	9,823,009.00	9,495,575.00	9,179,056.00	8,873,087.00	8,577,317.00	8,291,406.00	8,015,026.00	7,747,858.00	7,489,596.00	7,239,943.00	6,998,612.00	6,765,325.00	6,539,814.00	6,321,820.00	6,111,093.00
Additional Debt	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt Repayment					(338,724)	(327,434)	(316,519)	(305,969)	(295,770)	(285,911)	(276,380)	(267,168)	(258,262)	(249,653)	(241,331)	(233,287)	(225,511)	(217,994)	(210,727)	(203,703)
Debt Repayment years	30.00				30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
End Long Term Debt, Notes payable, net of current portion End					9,823,009.00	9,495,575.00	9,179,056.00	8,873,087.00	8,577,317.00	8,291,406.00	8,015,026.00	7,747,858.00	7,489,596.00	7,239,943.00	6,998,612.00	6,765,325.00	6,539,814.00	6,321,820.00	6,111,093.00	5,907,390.00
Total noncurrent liabilities																				
Deferred Tax Liabilities																				
Begin Balance					8,417,233	8,258,054	8,097,453	7,939,525	7,781,721	7,625,235	7,470,174	7,315,443	7,164,686	7,013,640	6,864,538	6,717,558	6,571,298	6,429,350	6,286,125	6,146,778
Additions to Deferred Asset					(159,179)	(160,601)	(157,928)	(157,804)	(156,486)	(155,061)	(154,731)	(150,757)	(151,046)	(149,102)	(146,980)	(146,260)	(141,948)	(143,225)	(139,347)	(135,489)
Total Deferred Tax Liability					8,258,054	8,097,453	7,939,525	7,781,721	7,625,235	7,470,174	7,315,443	7,164,686	7,013,640	6,864,538	6,717,558	6,571,298	6,429,350	6,286,125	6,146,778	6,011,289
Total Liabilities					23,590,659.00	23,433,200.00	22,958,753.00	22,494,980.00	22,042,724.00	21,601,752.00	21,170,641.00	20,752,716.00	20,343,408.00	19,944,653.00	19,556,342.00	19,176,795.00	18,809,336.00	18,448,117.00	18,098,043.00	17,758,851.00
Equity																				
Proportion of Capital	71%																			
Beginning Equity Capital	57,724,918				144,067,691	149,200,751	154,865,929	160,461,045	165,977,998	171,417,884	176,779,091	182,057,023	187,258,725	192,371,749	197,399,604	202,340,719	207,189,596	211,953,005	216,615,077	221,186,356
Additions to Equity (Retained Earnings)					5,133,060	5,665,178	5,595,116	5,516,953	5,439,886	5,361,207	5,277,932	5,201,702	5,113,024	5,027,855	4,941,115	4,848,878	4,763,409	4,662,072	4,571,279	4,478,267
Deductions form Equity Dividends	0				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Paid In Capital					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ending Equity Capital					149,200,751	154,865,929	160,461,045	165,977,998	171,417,884	176,779,091	182,057,023	187,258,725	192,371,749	197,399,604	202,340,719	207,189,596	211,953,005	216,615,077	221,186,356	225,664,623
Operating Income					7,501,991	8,240,843	8,133,181	8,014,433	7,897,518	7,778,622	7,653,538	7,538,626	7,406,467	7,279,492	7,150,546	7,014,102	6,887,401	6,738,602	6,604,841	6,468,160
Return On Equity					5.03%	5.32%	5.07%	4.83%	4.61%	4.40%	4.20%	4.03%	3.85%	3.69%	3.53%	3.39%	3.25%	3.11%	2.99%	2.87%
Total Liabilities & Stockholders Equity					172,791,410	178,299,129	183,419,798	188,472,978	193,460,608	198,380,843	203,227,664	208,011,441	212,715,157	217,344,257	221,897,061	226,366,391	230,762,341	235,063,194	239,284,399	243,423,474
Assets					46,523,790	46,286,821	45,740,169	45,193,944	44,652,282	44,115,554	43,579,966	43,058,135	42,535,305	42,019,202	41,510,445	41,004,178	40,512,841	40,017,082	39,534,744	39,065,762
Liabilities & Stockholders Equity less Assets					126,267,620	132,012,308	137,679,629	143,279,034	148,808,326	154,265,289	159,647,698	164,953,306	170,179,852	175,325,055	180,386,616	185,362,213	190,249,500	195,046,112	199,749,655	204,357,712
Dividend					126,267,620	132,012,308	137,679,629	143,279,034	148,808,326	154,265,289	159,647,698	164,953,306	170,179,852	175,325,055	180,386,616	185,362,213	190,249,500	195,046,112	199,749,655	204,357,712
Final Stockholder Equity					46,523,790	46,286,821	45,740,169	45,193,944	44,652,282	44,115,554	43,579,966	43,058,135	42,535,305	42,019,202	41,510,445	41,004,178	40,512,841	40,017,082	39,534,744	39,065,762
Capital Expenditures and Changes in Working Capital																				
Capital Expenditures					831,880.00	838,118.00	844,404.00	850,737.00	857,118.00	863,547.00	870,023.00	876,548.00	883,122.00	889,746.00	896,419.00	903,142.00	909,916.00	916,739.00	923,616.00	930,542.00
Changes to Working Capital																				
Current Assets	2,139,868				5,315,605	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542
Current Liabilities	2,217,961				5,509,596	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172
Working Capital	(78,093)				(193,991)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)
Changes to Working Capital					-	(11,639)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CASH FLOW																				
Income from Operations					5,416,572	5,939,240	5,860,043	5,773,049	5,687,445	5,600,514	5,509,262	5,425,321	5,329,189	5,236,815	5,143,109	5,044,139	4,952,162	4,844,533	4,747,658	4,648,766
Non Cash Expense (depreciation)					1,382,866	1,394,024	1,391,056	1,396,962	1,398,780	1,400,275	1,405,611	1,398,379	1,405,952	1,405,849	1,405,176	1,409,408	1,401,253	1,412,498	1,405,954	1,399,524
Capital Expenditures					831,880	838,118	844,404	850,737	857,118	863,547	870,023	876,548	883,122	889,746	896,419	903,142	909,916	916,739	923,616	930,542
Change in Working Capital					-	(11,639)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash Flows					5,967,558	6,506,785	6,406,695	6,319,274	6,229,107	6,137,242	6,044,850	5,947,152	5,852,019	5,752,918	5,651,866	5,550,405	5,443,499	5,340,292	5,229,996	5,117,748
Period					25.5	26.5	27.5	28.5	29.5	30.5	31.5	32.5	33.5	34.5	35.5	36.5	37.5	38.5	39.5	40.5
PW Factor																				
Discount Rate with growth	7.80%				7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods: 1-5	6-15	16 - 19	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Discount Rate without growth	5.87%				5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%
Period Present Worth Factor (PW)					17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036
PW of Cashflow					0.147	0.137	0.127	0.118	0.109	0.101	0.094	0.087	0.081	0.075	0.07	0.064	0.06	0.055	0.051	0.048
Accumulated PW of Cashflows	56,426,092				14,944,508 163,979,947	15,186,394 179,166,341	13,861,346 193,027,687	12,703,308 205,730,995	11,566,978 217,297,973	10,559,960 227,857,933	9,680,126 237,538,059	8,814,464 246,352,523	8,075,295 254,427,818	7,350,503 261,778,321	6,739,963 268,518,284	6,051,629 274,569,913	5,564,127 280,134,040	5,003,747 285,137,787	4,544,009 289,681,796	4,184,926 293,866,722
CASH FLOW																				
Income from Operations					5,524,867	6,060,483	5,983,840	5,905,374	5,825,062	5,742,874	5,658,789	5,572,776	5,484,808	5,394,856	5,302,892	5,208,884	5,112,798	5,014,606	4,914,270	4,811,760
Depreciation					(831,880)	(838,118)	(844,404)	(850,737)	(857,118)	(863,547)	(870,023)	(876,548)	(883,122)	(889,746)	(896,419)	(903,142)	(909,916)	(916,739)	(923,616)	(930,542)
Capital Expenditures					831,880	838,118	844,404	850,737	857,118	863,547	870,023	876,548	883,122	889,746	896,419	903,142	909,916	916,739	923,616	930,542
Change in Working Capital						(11,639)														
Net Cash Flows					5,524,867	6,072,122	5,983,840	5,905,374	5,825,062	5,742,874	5,658,789	5,572,776	5,484,808	5,394,856	5,302,892	5,208,884	5,112,798	5,014,606	4,914,270	4,811,760
Period					25.5	26.5	27.5	28.5	29.5	30.5	31.5	32.5	33.5	34.5	35.5	36.5	37.5	38.5	39.5	40.5
PW Factor																				
Discount Rate with growth	7.80%				7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%
Discount Rate without growth	5.87%				5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%
Period Present Worth Factor (PW)					17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036
PW of Cashflow					0.147	0.137	0.127	0.118	0.109	0.101	0.094	0.087	0.081	0.075	0.07	0.064	0.06	0.055	0.051	0.048
Accumulated PW of Cashflows	54,267,994				13,835,880 161,944,957	14,171,920 176,116,877	12,946,469 189,063,346	11,871,266 200,934,612	10,816,697 211,751,309	9,881,396 221,632,705	9,061,894 230,694,599	8,259,590 238,954,189	7,568,574 246,522,763	6,893,008 253,415,771	6,323,805 259,739,576	5,679,267 265,418,843	5,226,098 270,644,941	4,698,586 275,343,527	4,269,695 279,613,222	3,934,711 283,547,933

Rate Case Forecasts																				
Rate Base																				
Plant In Service					96,632,759.00	97,261,348.00	97,894,649.00	98,532,702.00	99,175,541.00	99,823,202.00	100,475,718.00	101,133,130.00	101,795,471.00	102,462,781.00	103,135,095.00	103,812,451.00	104,494,888.00	105,182,443.00	105,875,155.00	106,573,062.00
Accumulated Book Depreciation					(55,424,573.91)	(56,609,069.03)	(57,789,022.39)	(58,973,300.06)	(60,157,801.10)	(61,342,189.70)	(62,530,294.09)	(63,709,537.42)	(64,894,708.27)	(66,078,121.17)	(67,259,192.02)	(68,442,814.51)	(69,616,588.52)	(70,799,902.98)	(71,974,953.12)	(73,141,842.13)
Working Capital					(193,991.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)
Accumulated Deferred Income Tax					(8,258,054)	(8,097,453)	(7,939,525)	(7,781,721)	(7,625,235)	(7,470,174)	(7,315,443)	(7,164,686)	(7,013,640)	(6,864,538)	(6,717,558)	(6,571,298)	(6,429,350)	(6,286,125)	(6,146,778)	(6,011,289)
Rate Base					32,756,140.09	32,349,195.97	31,960,471.61	31,572,050.94	31,186,874.90	30,805,208.30	30,424,350.91	30,053,276.58	29,681,492.73	29,314,491.83	28,952,714.98	28,592,708.49	28,243,319.48	27,890,785.02	27,547,793.88	27,214,300.87
Authorized Return on Rate Base	7.21%				2,361,718.00	2,332,377.00	2,304,350.00	2,276,345.00	2,248,574.00	2,221,056.00	2,193,596.00	2,166,841.00	2,140,036.00	2,113,575.00	2,087,491.00	2,061,534.00	2,036,343.00	2,010,926.00	1,986,196.00	1,962,151.00
O&M Expenses					5,422,995.00	5,531,456.00	5,642,086.00	5,754,928.00	5,870,025.00	5,987,426.00	6,107,174.00	6,229,318.00	6,353,904.00	6,480,982.00	6,610,601.00	6,742,813.00	6,877,669.00	7,015,223.00	7,155,528.00	7,298,639.00
Book Depreciation					1,382,865.65	1,394,024.12	1,391,056.36	1,396,961.67	1,398,780.04	1,400,274.60	1,405,611.39	1,398,379.33	1,405,951.85	1,405,848.90	1,405,175.85	1,409,408.49	1,401,253.01	1,412,498.46	1,405,954.14	1,399,524.01
Ratemaking Interest Expense					283,512.00	274,062.00	264,927.00	256,096.00	247,559.00	239,307.00	231,330.00	223,619.00	216,165.00	208,960.00	201,994.00	195,261.00	188,753.00	182,461.00	176,379.00	170,499.00
Revenue Requirement					9,451,090.65	9,531,919.12	9,602,419.36	9,684,330.67	9,764,938.04	9,848,063.60	9,937,711.39	10,018,157.33	10,116,056.85	10,209,365.90	10,305,261.85	10,409,016.49	10,504,018.01	10,621,108.46	10,724,057.14	10,830,813.01
O&M Expenses					5,422,995.00	5,531,456.00	5,642,086.00	5,754,928.00	5,870,025.00	5,987,426.00	6,107,174.00	6,229,318.00	6,353,904.00	6,480,982.00	6,610,601.00	6,742,813.00	6,877,669.00	7,015,223.00	7,155,528.00	7,298,639.00
Depreciation Expense					1,382,865.65	1,394,024.12	1,391,056.36	1,396,961.67	1,398,780.04	1,400,274.60	1,405,611.39	1,398,379.33	1,405,951.85	1,405,848.90	1,405,175.85	1,409,408.49	1,401,253.01	1,412,498.46	1,405,954.14	1,399,524.01
Interest					283,512.00	274,062.00	264,927.00	256,096.00	247,559.00	239,307.00	231,330.00	223,619.00	216,165.00	208,960.00	201,994.00	195,261.00	188,753.00	182,461.00	176,379.00	170,499.00
Pretax Income					2,361,718.00	2,332,377.00	2,304,350.00	2,276,345.00	2,248,574.00	2,221,056.00	2,193,596.00	2,166,841.00	2,140,036.00	2,113,575.00	2,087,491.00	2,061,534.00	2,036,343.00	2,010,926.00	1,986,196.00	1,962,151.00
State & Federal Taxes @ 28.89%					682,300.00	673,824.00	665,727.00	657,636.00	649,613.00	641,663.00	633,730.00	626,000.00	618,256.00	610,612.00	603,076.00	595,577.00	588,299.00	580,957.00	573,812.00	566,865.00
After Tax Income					1,679,418.00	1,658,553.00	1,638,623.00	1,618,709.00	1,598,961.00	1,579,393.00	1,559,866.00	1,540,841.00	1,521,780.00	1,502,963.00	1,484,415.00	1,465,957.00	1,448,044.00	1,429,969.00	1,412,384.00	1,395,286.00
Current Revenue					14,307,852.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00
Revenue Requirement					10,133,390.65	10,205,743.12	10,268,146.36	10,341,966.67	10,414,551.04	10,489,726.60	10,571,441.39	10,644,157.33	10,734,312.85	10,819,977.90	10,908,337.85	11,004,593.49	11,092,317.01	11,202,065.46	11,297,869.14	11,397,678.01
Required Revenue Increase					-29%	-33%	-32%	-32%	-31%	-31%	-30%	-30%	-29%	-29%	-28%	-27%	-27%	-26%	-26%	-25%
Income from Operations					5,416,572	5,939,240	5,860,043	5,773,049	5,687,445	5,600,514	5,509,262	5,425,321	5,329,189	5,236,815	5,143,109	5,044,139	4,952,162	4,844,533	4,747,658	4,648,766
Return on Rate Base					16.54%	18.36%	18.34%	18.29%	18.24%	18.18%	18.11%	18.05%	17.95%	17.86%	17.76%	17.64%	17.53%	17.37%	17.23%	17.08%
Required Return	7.21%				7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%
Authorized Return					2,361,718	2,332,377	2,304,350	2,276,345	2,248,574	2,221,056	2,193,596	2,166,841	2,140,036	2,113,575	2,087,491	2,061,534	2,036,343	2,010,926	1,986,196	1,962,151
After-tax Net Income					5,133,060	5,665,178	5,595,116	5,516,953	5,439,886	5,361,207	5,277,932	5,201,702	5,113,024	5,027,855	4,941,115	4,848,878	4,763,409	4,662,072	4,571,279	4,478,267
Taxes					2,085,419	2,301,603	2,273,138	2,241,384	2,210,073	2,178,108	2,144,276	2,113,305	2,077,278	2,042,677	2,007,437	1,969,963	1,935,239	1,894,069	1,857,183	1,819,394
Pre-tax Net Income					7,218,479	7,966,781	7,868,254	7,758,337	7,649,959	7,539,315	7,422,208	7,315,007	7,190,302	7,070,532	6,948,552	6,818,841	6,698,648	6,556,141	6,428,462	6,297,661
Interest Expense					283,512	274,062	264,927	256,096	247,559	239,307	231,330	223,619	216,165	208,960	201,994	195,261	188,753	182,461	176,379	170,499
Operating Income					7,501,991	8,240,843	8,133,181	8,014,433	7,897,518	7,778,622	7,653,538	7,538,626	7,406,467	7,279,492	7,150,546	7,014,102	6,887,401	6,738,602	6,604,841	6,468,160
Operating Expenses					6,805,861	6,925,480	7,033,142	7,151,890	7,268,805	7,387,701	7,512,785	7,627,697	7,759,856	7,886,831	8,015,777	8,152,221	8,278,922	8,427,721	8,561,482	8,698,163
Revenue Requirement					14,307,852	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323
Required Return					2,361,718	2,332,377	2,304,350	2,276,345	2,248,574	2,221,056	2,193,596	2,166,841	2,140,036	2,113,575	2,087,491	2,061,534	2,036,343	2,010,926	1,986,196	1,962,151
Operating Expenses					6,805,861	6,925,480	7,033,142	7,151,890	7,268,805	7,387,701	7,512,785	7,627,697	7,759,856	7,886,831	8,015,777	8,152,221	8,278,922	8,427,721	8,561,482	8,698,163
Revenue Requirement					9,167,579	9,257,857	9,337,492	9,428,235	9,517,379	9,608,757	9,706,381	9,794,538	9,899,892	10,000,406	10,103,268	10,213,755	10,315,265	10,438,647	10,547,678	10,660,314
Required Rate Increase					-29.18%	-32.71%	-32.30%	-31.81%	-31.33%	-30.84%	-30.30%	-29.82%	-29.22%	-28.66%	-28.08%	-27.44%	-26.86%	-26.14%	-25.51%	-24.85%
Proposed Rate Increase					26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Rate Increase Scenario	6				0%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	0				26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
No increases (Input 2)	2				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
No Rate Increases (Input 2)	3																			
Modest Rate Increases: 6% every 3 year period starting in period 3 (Input 4)	4				0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%
Modest Rate Increases: (Input 4)	5																			
Required Rate Increases: 30% period 4,25% period 6, 10% period 9, 6% period 12, and 6% every 3rd year beginning in period 15 (Input 6)	6				0.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Required Rate Increases: (Input 6)	7				248.4%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%
	4				0.0%	0.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%
Changes In Balance Sheet Accounts																				
Assets																				
Change in Current Assets (Source negative / Use positive)					-	318,937	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant & Equipment																				
Additions (Source negative / Use positive)					831,880	838,118	844,404	850,737	857,118	863,547	870,023	876,548	883,122	889,746	896,419	903,142	909,916	916,739	923,616	930,542
Liabilities																				

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods																
	1-5	6-15	16 - 19	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Change in Current Liabilities (Source Positive / Use negative)				-	330,576	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Term Debt																			
Additional Long Term Debt Source Positive / Use Negative				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Principal Paid Long term Debt (Source positive / Use negative)				338,724	327,434	316,519	305,969	295,770	285,911	276,380	267,168	258,262	249,653	241,331	233,287	225,511	217,994	210,727	203,703
Equity																			
Additions to Equity (Source Positive / Use Negative)																			
Dividend (Source negative / Use Positive)																			
Funds Provided from Operations																			
Sources of Funds																			
Net Income (Use Negative / Source Positive)				5,133,060	5,665,178	5,595,116	5,516,953	5,439,886	5,361,207	5,277,932	5,201,702	5,113,024	5,027,855	4,941,115	4,848,878	4,763,409	4,662,072	4,571,279	4,478,267
Depreciation (Source positive /use negative)				1,382,866	1,394,024	1,391,056	1,396,962	1,398,780	1,400,275	1,405,611	1,398,379	1,405,952	1,405,849	1,405,176	1,409,408	1,401,253	1,412,498	1,406,964	1,399,524
Current Liabilities (Source Positive)					330,576	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				6,515,926	7,389,778	6,986,172	6,913,915	6,838,666	6,761,482	6,683,543	6,600,081	6,518,975	6,433,704	6,346,291	6,258,286	6,164,662	6,074,570	5,977,233	5,877,791
Sources and Uses of Funds																			
Sources of Funds																			
Current Liabilities (Source Positive)																			
Uses of Funds																			
Current Assets. Increase (Use)					318,937														
Fixed Assets. Assets. Increase (Use)				831,880	838,118	844,404	850,737	857,118	863,547	870,023	876,548	883,122	889,746	896,419	903,142	909,916	916,739	923,616	930,542
Total Uses of Funds				831,880	1,157,055	844,404	850,737	857,118	863,547	870,023	876,548	883,122	889,746	896,419	903,142	909,916	916,739	923,616	930,542
Funds from Financing Activities																			
Changes in Debt																			
Increase in Long Term Debt																			
Repayment of Long Term Debt				(338,724)	(327,434)	(316,519)	(305,969)	(295,770)	(285,911)	(276,380)	(267,168)	(258,262)	(249,653)	(241,331)	(233,287)	(225,511)	(217,994)	(210,727)	(203,703)
Funds fom Equity																			
Dividends Paid (Use)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Paid in Capital (source)																			
Total Funds from Financing Activities				(338,724.00)	(327,434.00)	(316,519.00)	(305,969.00)	(295,770.00)	(285,911.00)	(276,380.00)	(267,168.00)	(258,262.00)	(249,653.00)	(241,331.00)	(233,287.00)	(225,511.00)	(217,994.00)	(210,727.00)	(203,703.00)
Total Funds Needed				5,345,322.00	5,905,289.00	5,825,249.00	5,757,209.00	5,685,778.00	5,612,024.00	5,537,140.00	5,456,365.00	5,377,592.00	5,294,305.00	5,208,541.00	5,121,857.00	5,029,235.00	4,939,837.00	4,842,890.00	4,743,546.00
Financing																			
Debt	29%			(1,550,143.00)	(1,712,534.00)	(1,689,322.00)	(1,669,591.00)	(1,648,876.00)	(1,627,487.00)	(1,605,771.00)	(1,582,346.00)	(1,559,502.00)	(1,535,348.00)	(1,510,477.00)	(1,485,339.00)	(1,458,478.00)	(1,432,553.00)	(1,404,438.00)	(1,375,628.00)
Equity	71%			(3,795,179.00)	(4,192,755.00)	(4,135,927.00)	(4,087,618.00)	(4,036,902.00)	(3,984,537.00)	(3,931,369.00)	(3,874,019.00)	(3,818,090.00)	(3,758,957.00)	(3,698,064.00)	(3,636,518.00)	(3,570,757.00)	(3,507,284.00)	(3,438,452.00)	(3,367,918.00)
Funds Provided by Financing				(5,345,322.00)	(5,905,289.00)	(5,825,249.00)	(5,757,209.00)	(5,685,778.00)	(5,612,024.00)	(5,537,140.00)	(5,456,365.00)	(5,377,592.00)	(5,294,305.00)	(5,208,541.00)	(5,121,857.00)	(5,029,235.00)	(4,939,837.00)	(4,842,890.00)	(4,743,546.00)

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods 1-5	6-15	16 - 19	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
Income Statement																				
Revenues																				
Annual Revenue Growth rate																				
Subscriber Growth Rate (Annually)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Periodic Subscriber Growth																				
Growth	0.0%	0.0%	0.0%	0.0%				0.0%					0.0%					0.0%		
Period for Periodic Growth	5																			
Rate Case Activities																				
Periodic Rate Case (years)	typically 3 years																			
Required Rate Increase	Calculated in DCF				-24.17%	-23.38%	-22.62%	-21.92%	-21.10%	-20.29%	-19.43%	-18.60%	-17.68%	-16.75%	-15.85%	-14.77%	-13.82%	-12.79%	-11.69%	-10.59%
Proposed Rate Increase	Calculated in DCF				0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Revenue Adjustments	Calculated				0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Base and Forecast	5,759,816				15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323
Operating Expenses					29%	29%	30%	30%	31%	32%	32%	33%	34%	34%	35%	36%	36%	37%	38%	38%
Expense Level 1: Sewer & Collection Fees	1,888,488				4,338,318	4,425,084	4,513,586	4,603,858	4,695,935	4,789,854	4,885,651	4,983,364	5,083,031	5,184,692	5,288,386	5,394,154	5,502,037	5,612,078	5,724,320	5,838,806
Expense Level 1: Sewer & Collection Fees Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 2: Wages & Benefits	729,237				1,675,236	1,708,741	1,742,916	1,777,774	1,813,329	1,849,596	1,886,588	1,924,320	1,962,806	2,002,062	2,042,103	2,082,945	2,124,604	2,167,096	2,210,438	2,254,647
Expense Level 2: Wages & Benefits Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 3: Repair & Maintenance	250,824				576,203	587,727	599,482	611,472	623,701	636,175	648,899	661,877	675,115	688,617	702,389	716,437	730,766	745,381	760,289	775,495
Expense Level 3: Repair & Maintenance Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 4: Contracted Services	43,650				100,272	102,277	104,323	106,409	108,537	110,708	112,922	115,180	117,484	119,834	122,231	124,676	127,170	129,713	132,307	134,953
Expense Level 4: Contracted Services Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 5: Utilities	86,097				197,789	201,745	205,780	209,896	214,094	218,376	222,744	227,199	231,743	236,378	241,106	245,928	250,847	255,864	260,981	266,201
Expense Level 5: Utilities Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 6: Insurance & Other	242,376				556,794	567,930	579,289	590,875	602,693	614,747	627,042	639,583	652,375	665,423	678,731	692,306	706,152	720,275	734,681	749,375
Expense Level 6: Insurance & Other Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Property Taxes	81,302,701				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Begin Plant					33,431,220	32,976,064	32,521,440	32,073,675	31,645,943	31,224,353	30,813,259	30,411,263	30,025,404	29,646,784	29,278,321	28,929,526	28,576,706	28,244,788	27,925,751	27,614,888
PT Rate % of beginning net plant	0.000%				0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Book Depreciation (based on Beginning Year Property Plant & Equipment)	-				1,392,677	1,399,178	1,399,404	1,386,508	1,387,556	1,384,304	1,382,505	1,373,723	1,373,892	1,371,200	1,359,051	1,370,652	1,357,387	1,352,196	1,351,772	1,348,237
Total Operating Expenses					8,837,289	8,992,682	9,144,780	9,286,792	9,445,845	9,603,760	9,766,351	9,925,246	10,096,446	10,268,206	10,433,997	10,627,098	10,798,963	10,982,603	11,174,788	11,367,714
Cost of Operation as % of Revenues (Calculation)					58.3%	59.3%	60.3%	61.2%	62.3%	63.3%	64.4%	65.4%	66.6%	67.7%	68.8%	70.1%	71.2%	72.4%	73.7%	75.0%
Operating Expenses less Depreciation					7,444,612	7,593,504	7,745,376	7,900,284	8,058,289	8,219,456	8,383,846	8,551,523	8,722,554	8,897,006	9,074,946	9,256,446	9,441,576	9,630,407	9,823,016	10,019,477
Operating Income					6,329,034	6,173,641	6,021,543	5,879,531	5,720,478	5,562,563	5,399,972	5,241,077	5,069,877	4,898,117	4,732,326	4,539,225	4,367,360	4,183,720	3,991,535	3,798,609
Nonoperating Revenues (Expenses)																				
Interest Income																				
Interest Expense					164,816	159,322	154,012	148,878	143,915	139,118	134,481	129,998	125,665	121,476	117,427	113,513	109,729	106,071	102,536	99,118
Interest Exp as % of Debt	2.79%				2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%
Total nonoperating revenues (expenses)	-				164,816.00	159,322.00	154,012.00	148,878.00	143,915.00	139,118.00	134,481.00	129,998.00	125,665.00	121,476.00	117,427.00	113,513.00	109,729.00	106,071.00	102,536.00	99,118.00
Income (loss) before State and Federal Taxes	-				6,164,218	6,014,319	5,867,531	5,730,653	5,576,563	5,423,445	5,265,491	5,111,079	4,944,212	4,776,641	4,614,899	4,425,712	4,257,631	4,077,649	3,888,999	3,699,491
State and Federal Taxes	-				1,780,843	1,737,537	1,695,130	1,655,586	1,611,069	1,566,833	1,521,200	1,476,591	1,428,383	1,379,971	1,333,244	1,278,588	1,230,030	1,178,033	1,123,532	1,068,783
State and Federal Tax Rate	28.89%				28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%
Income After Taxes	-				4,383,375	4,276,782	4,172,401	4,075,067	3,965,494	3,856,612	3,744,291	3,634,488	3,515,829	3,396,670	3,281,655	3,147,124	3,027,601	2,899,616	2,765,467	2,630,708
Income After Taxes plus Interest	-				4,548,191	4,436,104	4,326,413	4,223,945	4,109,409	3,995,730	3,878,772	3,764,486	3,641,494	3,518,146	3,399,082	3,260,637	3,137,330	3,005,687	2,868,003	2,729,826
Earnings before Interest, Taxes, Depreciation, & Amortization	-				4,160,025	4,097,745	4,030,687	3,954,867	3,885,896	3,813,201	3,740,077	3,661,618	3,587,003	3,509,375	3,424,889	3,352,701	3,264,687	3,179,850	3,096,243	3,009,280
Income (loss) before State and Federal Taxes					6,164,218	6,014,319	5,867,531	5,730,653	5,576,563	5,423,445	5,265,491	5,111,079	4,944,212	4,776,641	4,614,899	4,425,712	4,257,631	4,077,649	3,888,999	3,699,491
Book Depreciation					(1,392,677)	(1,399,178)	(1,399,404)	(1,386,508)	(1,387,556)	(1,384,304)	(1,382,505)	(1,373,723)	(1,373,892)	(1,371,200)	(1,359,051)	(1,370,652)	(1,357,387)	(1,352,196)	(1,351,772)	(1,348,237)
Tax Depreciation					(937,521)	(982,336)	(1,027,770)	(1,035,477)	(1,043,243)	(1,051,067)	(1,058,950)	(1,066,893)	(1,074,894)	(1,082,956)	(1,091,076)	(1,099,260)	(1,107,507)	(1,115,812)	(1,124,182)	(1,132,612)
Difference Tax over Book Depreciation					455,156	416,841	371,634	351,031	344,312	333,237	323,556	306,830	298,998	288,244	267,975	271,393	249,881	236,384	227,590	215,625
Income Adjusted for Tax Depreciation					6,619,374	6,431,161	6,239,165	6,081,684	5,920,876	5,756,682	5,589,046	5,417,909	5,243,210	5,064,885	4,882,874	4,697,104	4,507,511	4,314,033	4,116,589	3,915,116
Income Tax Rate					28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%	28.89%
Income Taxes					1,912,337	1,857,962	1,802,495	1,756,999	1,710,541	1,663,105	1,614,675	1,565,234	1,514,763	1,463,245	1,410,662	1,356,993	1,302,220	1,246,324	1,189,283	1,131,077
Income After Tax					4,707,037	4,573,199	4,436,670	4,324,685	4,210,335	4,093,577	3,974,371	3,852,675	3,728,447	3,601,640	3,472,212	3,340,131	3,205,291	3,067,709	2,927,306	2,784,039
Deferred Income Taxes					131,494	120,425	107,365	101,413	99,472	96,272	93,475	88,643	86,380	83,274	77,418	78,405	72,190	68,291	65,751	62,294
Accumulated Deferred Income Taxes					(5,879,795)	(5,759,370)	(5,652,005)	(5,550,592)	(5,451,120)	(5,354,848)	(5,261,373)	(5,172,730)	(5,086,350)	(5,003,076)	(4,925,658)	(4,847,253)	(4,775,063)	(4,706,772)	(4,641,021)	(4,578,727)
Income After Taxes (Book Depreciation)					4,383,375	4,276,782	4,172,401	4,075,067	3,965,494	3,856,612	3,744,291	3,634,488	3,515,829	3,396,670	3,281,655	3,147,124	3,027,601	2,899,616	2,765,467	2,630,708
Plus Deferred Taxes					131,494	120,425	107,365	101,413	99,472	96,272	93,475	88,643	86,380	83,274	77,418	78,405	72,190	68,291	65,751	62,294
Plus Interest					164,816	159,322	154,012	148,878	143,915	139,118	134,481	129,998	125,665	121,476	117,427	113,513	109,729	106,071	102,536	99,118
After Tax Income Debt Free					4,416,697	4,315,679	4,219,048	4,122,532	4,009,937	3,899,458	3,785,297	3,675,843	3,555,114	3,434,872	3,321,664	3,182,232	3,065,140	2,937,396	2,802,252	2,667,532
Balance Statement																				
Assets																				
Current Assets																				
Current Asset Balance	2,139,868				5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542
CA as % of Revenues	37.15%	37.15%	37.15%	37.15%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%
Balance Statement																				
Property Plant & Equipment																				
Total PP&E																				
Begin Balance					106,573,062.00	107,276,202.00	107,984,618.00	108,698,348.00	109,417,430.00	110,141,903.00	110,871,810.00	111,607,192.00	112,348,089.00	113,094,542.00	113,846,595.00	114,604,287.00	115,367,660.00	116,136,762.00	116,911,633.00	117,692,316.00
Additions					937,521.00	944,554.00	951,639.00	958,775.00	965,966.00	973,210.00	980,509.00	987,864.00	995,272.00	1,002,737.00	1,010,256.00	1,017,833.00	1,025,469.00	1,033,159.00	1,040,909.00	1,048,715.00
Retirements					(234,381.00)	(236,138.00)	(237,909.00)	(239,693.00)	(241,493.00)	(243,303.00)	(245,127.00)	(246,967.00)	(248,819.00)	(250,684.00)	(252,564.00)	(254,460.00)	(256,367.00)	(258,288.00)	(260,226.00)	(262,178.00)
End Balance	81,302,701.00				107,276,202.00	107,984,618.00	108,698,348.00	109,417,430.00	110,141,903.00	110,871,810.00	111,607,192.00	112,348,089.00	113,094,542.00	113,846,595.00	114,604,287.00	115,367,660.00	116,136,762.00	116,911,633.00	117,692,316.00	118,478,853.00
End Balance Check					107,276,202.00	107,984,618.00	108,698,348.00	109,417,430.00	110,141,903.00	110,871,810.00	111,607,192.00	112,348,089.00	113,094,542.00	113,846,595.00	114,604,287.00	115,367,660.00	116,136,762.00	116,911,633.00	117,692,316.00	118,478,853.00
Book Depreciation of Property, Plant, & Equipment																				
Total Book Depreciation					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods: 1-5	6-15	16 - 19	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
Begin Balance					(73,141,842.13)	(74,300,137.95)	(75,463,177.51)	(76,624,672.79)	(77,771,487.50)	(78,917,550.21)	(80,058,550.91)	(81,195,929.21)	(82,322,685.10)	(83,447,757.97)	(84,568,274.40)	(85,674,761.42)	(86,790,953.83)	(87,891,974.16)	(88,985,881.80)	(90,077,427.99)
Depreciation					(1,392,676.82)	(1,399,177.56)	(1,399,404.28)	(1,386,507.71)	(1,387,555.71)	(1,384,303.70)	(1,382,505.30)	(1,373,722.89)	(1,373,891.87)	(1,371,200.43)	(1,359,051.02)	(1,370,652.41)	(1,357,387.33)	(1,352,195.64)	(1,351,772.19)	(1,348,237.16)
Retirements					234,381.00	236,138.00	237,909.00	239,693.00	241,493.00	243,303.00	245,127.00	246,967.00	248,819.00	250,684.00	252,564.00	254,460.00	256,367.00	258,288.00	260,226.00	262,178.00
End Balance					(74,300,137.95)	(75,463,177.51)	(76,624,672.79)	(77,771,487.50)	(78,917,550.21)	(80,058,550.91)	(81,195,929.21)	(82,322,685.10)	(83,447,757.97)	(84,568,274.40)	(85,674,761.42)	(86,790,953.83)	(87,891,974.16)	(88,985,881.80)	(90,077,427.99)	(91,163,487.15)
End Balance Check					(74,300,137.95)	(75,463,177.51)	(76,624,672.79)	(77,771,487.50)	(78,917,550.21)	(80,058,550.91)	(81,195,929.21)	(82,322,685.10)	(83,447,757.97)	(84,568,274.40)	(85,674,761.42)	(86,790,953.83)	(87,891,974.16)	(88,985,881.80)	(90,077,427.99)	(91,163,487.15)
Net Plant																				
Begin Balance					33,431,219.87	32,976,064.05	32,521,440.49	32,073,675.21	31,645,942.50	31,224,352.79	30,813,259.09	30,411,262.79	30,025,403.90	29,646,784.03	29,278,320.60	28,929,525.58	28,576,706.17	28,244,787.84	27,925,751.20	27,614,888.01
End Balance					32,976,064.05	32,521,440.49	32,073,675.21	31,645,942.50	31,224,352.79	30,813,259.09	30,411,262.79	30,025,403.90	29,646,784.03	29,278,320.60	28,929,525.58	28,576,706.17	28,244,787.84	27,925,751.20	27,614,888.01	27,315,365.85
Total Assest					38,610,606.05	38,155,982.49	37,708,217.21	37,280,484.50	36,858,894.79	36,447,801.09	36,045,804.79	35,659,945.90	35,281,326.03	34,912,862.60	34,564,067.58	34,211,248.17	33,879,329.84	33,560,293.20	33,249,430.01	32,949,907.85
Tax Depreciation of Property, Plant, & Equipment																				
Total MACRS Depreciation																				
Begin Balance					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Depreciation					(937,521.00)	(982,336.16)	(1,027,770.12)	(1,035,477.00)	(1,043,243.28)	(1,051,066.80)	(1,058,949.72)	(1,066,893.12)	(1,074,893.76)	(1,082,955.96)	(1,091,076.48)	(1,099,259.64)	(1,107,506.52)	(1,115,811.72)	(1,124,181.72)	(1,132,612.20)
Retirements					234,381.00	236,138.00	237,909.00	239,693.00	241,493.00	243,303.00	245,127.00	246,967.00	248,819.00	250,684.00	252,564.00	254,460.00	256,367.00	258,288.00	260,226.00	262,178.00
End Balance					(703,140.00)	(746,198.16)	(789,861.12)	(795,784.00)	(801,750.28)	(807,763.80)	(813,822.72)	(819,926.12)	(826,074.76)	(832,271.96)	(838,512.48)	(844,799.64)	(851,139.52)	(857,523.72)	(863,955.72)	(870,434.20)
End Balance Check					(703,140.00)	(746,198.16)	(789,861.12)	(795,784.00)	(801,750.28)	(807,763.80)	(813,822.72)	(819,926.12)	(826,074.76)	(832,271.96)	(838,512.48)	(844,799.64)	(851,139.52)	(857,523.72)	(863,955.72)	(870,434.20)
Net Plant																				
Begin Balance					106,573,062.00	107,276,202.00	107,984,618.00	108,698,348.00	109,417,430.00	110,141,903.00	110,871,810.00	111,607,192.00	112,348,089.00	113,094,542.00	113,846,595.00	114,604,287.00	115,367,660.00	116,136,762.00	116,911,633.00	117,692,316.00
End Balance					106,573,062.00	107,238,419.84	107,908,486.88	108,621,646.00	109,340,152.72	110,064,046.20	110,793,369.28	111,528,162.88	112,268,467.24	114,014,323.04	113,765,774.52	114,522,860.36	115,285,622.48	116,054,109.28	116,828,360.28	117,608,418.80
Tax					(937,521.00)	(982,336.16)	(1,027,770.12)	(1,035,477.00)	(1,043,243.28)	(1,051,066.80)	(1,058,949.72)	(1,066,893.12)	(1,074,893.76)	(1,082,955.96)	(1,091,076.48)	(1,099,259.64)	(1,107,506.52)	(1,115,811.72)	(1,124,181.72)	(1,132,612.20)
Book					(1,392,676.82)	(1,399,177.56)	(1,399,404.28)	(1,386,507.71)	(1,387,555.71)	(1,384,303.70)	(1,382,505.30)	(1,373,722.89)	(1,373,891.87)	(1,371,200.43)	(1,359,051.02)	(1,370,652.41)	(1,357,387.33)	(1,352,195.64)	(1,351,772.19)	(1,348,237.16)
					455,155.82	416,841.40	371,634.16	351,030.71	344,312.43	333,236.90	323,555.58	306,829.77	298,998.11	288,244.47	267,974.54	271,392.77	249,880.81	236,383.92	227,590.47	215,624.96
Balance Statement																				
Liabilities																				
Current Liabilities																				
Current Liabilities	2,217,961				5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172
CL as % of Revenues	38.51%	38.51%	38.51%	38.51%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%
Noncurrent Liabilities																				
Long Term Debt, Notes payable, net of current portion Beg	23,577,783.00				5,907,390.00	5,710,477.00	5,520,128.00	5,336,124.00	5,158,253.00	4,986,311.00	4,820,101.00	4,659,431.00	4,504,117.00	4,353,980.00	4,208,847.00	4,068,552.00	3,932,934.00	3,801,836.00	3,675,108.00	3,552,604.00
Additional Debt	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt Repayment					(196,913)	(190,349)	(184,004)	(177,871)	(171,942)	(166,210)	(160,670)	(155,314)	(150,137)	(145,133)	(140,295)	(135,618)	(131,098)	(126,728)	(122,504)	(118,420)
Debt Repayment years	30.00				30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
End Long Term Debt, Notes payable, net of current portion End					5,710,477.00	5,520,128.00	5,336,124.00	5,158,253.00	4,986,311.00	4,820,101.00	4,659,431.00	4,504,117.00	4,353,980.00	4,208,847.00	4,068,552.00	3,932,934.00	3,801,836.00	3,675,108.00	3,552,604.00	3,434,184.00
Total noncurrent liabilities																				
Deferred Tax Liabilities																				
Begin Balance					6,011,289	5,879,795	5,759,370	5,652,005	5,550,592	5,451,120	5,354,848	5,261,373	5,172,730	5,086,350	5,003,076	4,925,658	4,847,253	4,775,063	4,706,772	4,641,021
Additions to Deferred Asset					(131,494)	(120,425)	(107,365)	(101,413)	(99,472)	(96,272)	(93,475)	(88,643)	(86,380)	(83,274)	(77,418)	(78,405)	(72,190)	(68,291)	(65,751)	(62,294)
Total Deferred Tax Liability					5,879,795	5,759,370	5,652,005	5,550,592	5,451,120	5,354,848	5,261,373	5,172,730	5,086,350	5,003,076	4,925,658	4,847,253	4,775,063	4,706,772	4,641,021	4,578,727
Total Liabilities					17,430,444.00	17,119,670.00	16,828,301.00	16,549,017.00	16,277,603.00	16,015,121.00	15,760,976.00	15,517,019.00	15,280,502.00	15,052,095.00	14,834,382.00	14,620,359.00	14,417,071.00	14,222,052.00	14,033,797.00	13,853,083.00
Equity																				
Proportion of Capital	71%																			
Beginning Equity Capital	57,724,918				225,664,623	230,047,998	234,324,780	238,497,181	242,572,249	246,537,743	250,394,355	254,138,646	257,773,134	261,288,963	264,685,633	267,967,288	271,114,411	274,142,012	277,041,628	279,807,095
Additions to Equity (Retained Earnings)					4,383,375	4,276,782	4,172,401	4,075,067	3,965,494	3,856,612	3,744,291	3,634,488	3,515,829	3,396,670	3,281,655	3,147,124	3,027,601	2,899,616	2,765,467	2,630,708
Deductions form Equity Dividends	0				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Paid In Capital					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ending Equity Capital					230,047,998	234,324,780	238,497,181	242,572,249	246,537,743	250,394,355	254,138,646	257,773,134	261,288,963	264,685,633	267,967,288	271,114,411	274,142,012	277,041,628	279,807,095	282,437,803
Operating Income					6,329,034	6,173,641	6,021,543	5,879,531	5,720,478	5,562,563	5,399,972	5,241,077	5,069,877	4,898,117	4,732,326	4,539,225	4,367,360	4,183,720	3,991,535	3,798,609
Return On Equity					2.75%	2.63%	2.52%	2.42%	2.32%	2.22%	2.12%	2.03%	1.94%	1.85%	1.77%	1.67%	1.59%	1.51%	1.43%	1.34%
Total Liabilities & Stockholders Equity					247,478,442	251,444,450	255,325,482	259,121,266	262,815,346	266,409,476	269,899,622	273,290,153	276,569,465	279,737,728	282,801,670	285,734,770	288,559,083	291,263,680	293,840,892	296,290,886
Assets					38,610,606	38,155,982	37,708,217	37,280,485	36,858,895	36,447,801	36,045,805	35,659,946	35,281,326	34,912,863	34,564,068	34,211,248	33,879,330	33,560,293	33,249,430	32,949,908
Liabilities & Stockholders Equity less Assets					208,867,836	213,288,468	217,617,265	221,840,781	225,956,451	229,961,675	233,853,817	237,630,207	241,288,139	244,824,865	248,237,602	251,523,522	254,679,753	257,703,387	260,591,462	263,340,978
Dividend					208,867,836	213,288,468	217,617,265	221,840,781	225,956,451	229,961,675	233,853,817	237,630,207	241,288,139	244,824,865	248,237,602	251,523,522	254,679,753	257,703,387	260,591,462	263,340,978
Final Stockholder Equity					38,610,606	38,155,982	37,708,217	37,280,485	36,858,895	36,447,801	36,045,805	35,659,946	35,281,326	34,912,863	34,564,068	34,211,248	33,879,330	33,560,293	33,249,430	32,949,908
Capital Expenditures and Changes in Working Capital																				
Capital Expenditures					937,521.00	944,554.00	951,639.00	958,775.00	965,966.00	973,210.00	980,509.00	987,864.00	995,272.00	1,002,737.00	1,010,256.00	1,017,833.00	1,025,469.00	1,033,159.00	1,040,909.00	1,048,715.00
Changes to Working Capital																				
Current Assets	2,139,868				5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542	5,634,542
Current Liabilities	2,217,961				5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172	5,840,172
Working Capital	(78,093)				(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)	(205,630)
Changes to Working Capital					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CASH FLOW																				
Income from Operations					4,548,191	4,436,104	4,326,413	4,223,945	4,109,409	3,995,730	3,878,772	3,764,486	3,641,494	3,518,146	3,399,082	3,260,637	3,137,330	3,005,687	2,868,003	2,729,826
Non Cash Expense (depreciation)					1,392,677	1,399,178	1,399,404	1,386,508	1,387,556	1,384,304	1,382,505	1,373,723	1,373,892	1,371,200	1,359,051	1,370,652	1,357,387	1,352,196	1,351,772	1,348,237
Capital Expenditures					937,521	944,554	951,639	958,775	965,966	973,210	980,509	987,864	995,272	1,002,737	1,010,256	1,017,833	1,025,469	1,033,159	1,040,909	1,048,715
Change in Working Capital					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash Flows					5,003,347	4,890,728	4,774,178	4,651,678	4,530,999	4,406,824	4,280,768	4,150,345	4,020,114	3,886,609	3,747,877	3,613,456	3,469,248	3,324,724	3,178,866	3,029,348
Period					41.5	42.5	43.5	44.5	45.5	46.5	47.5	48.5	49.5	50.5	51.5	52.5	53.5	54.5	55.5	56.5
PW Factor																				
Discount Rate with growth	7.80%				7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods: 1-5	6-15	16 - 19	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
Discount Rate without growth	5.87%				5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%
Period Present Worth Factor (PW)					17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036
PW of Cashflow					0.044	0.041	0.038	0.035	0.033	0.03	0.028	0.026	0.024	0.023	0.021	0.019	0.018	0.017	0.015	0.014
Accumulated PW of Cashflows	56,426,092				3,750,429	3,416,056	3,090,650	2,773,610	2,547,273	2,252,240	2,041,961	1,838,337	1,643,680	1,522,882	1,340,825	1,169,618	1,063,838	962,880	812,327	722,512
					297,617,151	301,033,207	304,123,857	306,897,467	309,444,740	311,696,980	313,738,941	315,577,278	317,220,958	318,743,840	320,084,665	321,254,283	322,318,121	323,281,001	324,093,328	324,815,840
CASH FLOW																				
Income from Operations					4,707,037	4,573,199	4,436,670	4,324,685	4,210,335	4,093,577	3,974,371	3,852,675	3,728,447	3,601,640	3,472,212	3,340,111	3,205,291	3,067,709	2,927,306	2,784,039
Depreciation					(937,521)	(982,336)	(1,027,770)	(1,035,477)	(1,043,243)	(1,051,067)	(1,058,950)	(1,066,893)	(1,074,894)	(1,082,956)	(1,091,076)	(1,099,260)	(1,107,507)	(1,115,812)	(1,124,182)	(1,132,612)
Capital Expenditures					937,521	944,554	951,639	958,775	965,966	973,210	980,509	987,864	995,272	1,002,737	1,010,256	1,017,833	1,025,469	1,033,159	1,040,909	1,048,715
Change in Working Capital					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash Flows					4,707,037	4,610,981	4,512,801	4,401,387	4,287,612	4,171,434	4,052,812	3,931,704	3,808,069	3,681,859	3,553,032	3,421,538	3,287,329	3,150,362	3,010,579	2,867,936
Period					41.5	42.5	43.5	44.5	45.5	46.5	47.5	48.5	49.5	50.5	51.5	52.5	53.5	54.5	55.5	56.5
PW Factor																				
Discount Rate with growth	7.80%				7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%
Discount Rate without growth	5.87%				5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%
Period Present Worth Factor (PW)					17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036	17.036
PW of Cashflow					0.044	0.041	0.038	0.035	0.033	0.03	0.028	0.026	0.024	0.023	0.021	0.019	0.018	0.017	0.015	0.014
Accumulated PW of Cashflows	54,267,994				3,528,320	3,220,660	2,921,443	2,624,371	2,410,444	2,131,936	1,933,224	1,741,493	1,556,982	1,442,655	1,271,119	1,107,497	1,008,053	912,383	769,323	684,014
					287,076,253	290,296,913	293,218,356	295,842,727	298,253,171	300,385,107	302,318,331	304,059,824	305,616,806	307,059,461	308,330,580	309,438,077	310,446,130	311,358,513	312,127,836	312,811,850

Rate Case Forecasts																				
Rate Base																				
Plant In Service					107,276,202.00	107,984,618.00	108,698,348.00	109,417,430.00	110,141,903.00	110,871,810.00	111,607,192.00	112,348,089.00	113,094,542.00	113,846,595.00	114,604,287.00	115,367,660.00	116,136,762.00	116,911,633.00	117,692,316.00	118,478,853.00
Accumulated Book Depreciation					(74,300,137.95)	(75,463,177.51)	(76,624,672.79)	(77,771,487.50)	(78,917,550.21)	(80,058,550.91)	(81,195,929.21)	(82,322,685.10)	(83,447,757.97)	(84,568,274.40)	(85,674,761.42)	(86,790,953.83)	(87,891,974.16)	(88,985,881.80)	(90,077,427.99)	(91,163,487.15)
Working Capital					(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)	(205,630.00)
Accumulated Deferred Income Tax					(5,879,795)	(5,759,370)	(5,652,005)	(5,550,592)	(5,451,120)	(5,354,848)	(5,261,373)	(5,172,730)	(5,086,350)	(5,003,076)	(4,926,658)	(4,847,253)	(4,775,063)	(4,706,772)	(4,641,021)	(4,578,727)
Rate Base					26,890,639.05	26,556,440.49	26,216,040.21	25,889,720.50	25,567,602.79	25,252,781.09	24,944,259.79	24,647,043.90	24,354,804.03	24,069,614.60	23,798,237.58	23,523,823.17	23,264,094.84	23,013,349.20	22,768,237.01	22,531,008.85
Authorized Return on Rate Base	7.21%				1,938,815.00	1,914,719.00	1,890,176.00	1,866,649.00	1,843,424.00	1,820,726.00	1,798,481.00	1,777,052.00	1,755,981.00	1,735,419.00	1,715,853.00	1,696,068.00	1,677,341.00	1,659,262.00	1,641,590.00	1,624,486.00
O&M Expenses					7,444,612.00	7,593,504.00	7,745,376.00	7,900,284.00	8,058,289.00	8,219,456.00	8,383,846.00	8,551,523.00	8,722,554.00	8,897,006.00	9,074,946.00	9,256,446.00	9,441,576.00	9,630,407.00	9,823,016.00	10,019,477.00
Book Depreciation					1,392,676.82	1,399,177.56	1,399,404.28	1,386,507.71	1,387,555.71	1,384,303.70	1,382,505.30	1,373,722.89	1,373,891.87	1,371,200.43	1,359,051.02	1,370,652.41	1,357,387.33	1,352,195.64	1,351,772.19	1,348,237.16
Ratemaking Interest Expense					164,816.00	159,322.00	154,012.00	148,878.00	143,915.00	139,118.00	134,481.00	129,998.00	125,665.00	121,476.00	117,427.00	113,513.00	109,729.00	106,071.00	102,536.00	99,118.00
Revenue Requirement					10,940,919.82	11,066,722.56	11,188,968.28	11,302,318.71	11,433,183.71	11,563,603.70	11,699,313.30	11,832,295.89	11,978,091.87	12,125,101.43	12,267,277.02	12,436,679.41	12,586,033.33	12,747,935.64	12,918,914.19	13,091,318.16
O&M Expenses					7,444,612.00	7,593,504.00	7,745,376.00	7,900,284.00	8,058,289.00	8,219,456.00	8,383,846.00	8,551,523.00	8,722,554.00	8,897,006.00	9,074,946.00	9,256,446.00	9,441,576.00	9,630,407.00	9,823,016.00	10,019,477.00
Depreciation Expense					1,392,676.82	1,399,177.56	1,399,404.28	1,386,507.71	1,387,555.71	1,384,303.70	1,382,505.30	1,373,722.89	1,373,891.87	1,371,200.43	1,359,051.02	1,370,652.41	1,357,387.33	1,352,195.64	1,351,772.19	1,348,237.16
Interest					164,816.00	159,322.00	154,012.00	148,878.00	143,915.00	139,118.00	134,481.00	129,998.00	125,665.00	121,476.00	117,427.00	113,513.00	109,729.00	106,071.00	102,536.00	99,118.00
Pretax Income					1,938,815.00	1,914,719.00	1,890,176.00	1,866,649.00	1,843,424.00	1,820,726.00	1,798,481.00	1,777,052.00	1,755,981.00	1,735,419.00	1,715,853.00	1,696,068.00	1,677,341.00	1,659,262.00	1,641,590.00	1,624,486.00
State & Federal Taxes @ 28.89%					560,124.00	553,162.00	546,072.00	539,275.00	532,565.00	526,008.00	519,581.00	513,390.00	507,303.00	501,363.00	495,710.00	489,994.00	484,584.00	479,361.00	474,255.00	469,314.00
After Tax Income					1,378,691.00	1,361,557.00	1,344,104.00	1,327,374.00	1,310,859.00	1,294,718.00	1,278,900.00	1,263,662.00	1,248,678.00	1,234,056.00	1,220,143.00	1,206,074.00	1,192,757.00	1,179,901.00	1,167,335.00	1,155,172.00
Current Revenue					15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00	15,166,323.00
Revenue Requirement					11,501,043.82	11,619,884.56	11,735,040.28	11,841,593.71	11,965,748.71	12,089,611.70	12,218,894.30	12,345,685.89	12,485,394.87	12,626,464.43	12,762,987.02	12,926,673.41	13,070,617.33	13,227,296.64	13,393,169.19	13,560,632.16
Required Revenue Increase					-24%	-23%	-23%	-22%	-21%	-20%	-19%	-19%	-18%	-17%	-16%	-15%	-14%	-13%	-12%	-11%
Income from Operations					4,548,191	4,436,104	4,326,413	4,223,945	4,109,409	3,995,730	3,878,772	3,764,486	3,641,494	3,518,146	3,399,082	3,260,637	3,137,330	3,005,687	2,868,003	2,729,826
Return on Rate Base					16.91%	16.70%	16.50%	16.32%	16.07%	15.82%	15.55%	15.27%	14.95%	14.62%	14.28%	13.86%	13.49%	13.06%	12.60%	12.12%
Required Return	7.21%				7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%	7.21%
Authorized Return					1,938,815	1,914,719	1,890,176	1,866,649	1,843,424	1,820,726	1,798,481	1,777,052	1,755,981	1,735,419	1,715,853	1,696,068	1,677,341	1,659,262	1,641,590	1,624,486
After-tax Net Income					4,383,375	4,276,782	4,172,401	4,075,067	3,965,494	3,856,612	3,744,291	3,634,488	3,515,829	3,396,670	3,281,655	3,147,124	3,027,601	2,899,616	2,765,467	2,630,708
Taxes					1,780,843	1,737,537	1,695,130	1,655,586	1,611,069	1,566,833	1,521,200	1,476,991	1,428,383	1,379,971	1,333,244	1,278,588	1,230,030	1,178,033	1,123,532	1,068,783
Pre-tax Net Income					6,164,218	6,014,319	5,867,531	5,730,653	5,576,563	5,423,445	5,265,491	5,111,079	4,944,212	4,776,641	4,614,899	4,425,712	4,257,631	4,077,649	3,888,999	3,699,491
Interest Expense					164,816	159,322	154,012	148,878	143,915	139,118	134,481	129,998	125,665	121,476	117,427	113,513	109,729	106,071	102,536	99,118
Operating Income					6,329,034	6,173,641	6,021,543	5,879,531	5,720,478	5,562,563	5,399,972	5,241,077	5,069,877	4,898,117	4,732,326	4,539,225	4,367,360	4,183,720	3,991,535	3,798,609
Operating Expenses					8,837,289	8,992,682	9,144,780	9,286,792	9,445,845	9,603,760	9,766,351	9,925,246	10,096,446	10,268,206	10,433,997	10,627,098	10,798,963	10,982,603	11,174,788	11,367,714
Revenue Requirement					15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323	15,166,323
Required Return					1,938,815	1,914,719	1,890,176	1,866,649	1,843,424	1,820,726	1,798,481	1,777,052	1,755,981	1,735,419	1,715,853	1,696,068	1,677,341	1,659,262	1,641,590	1,624,486
Operating Expenses					8,837,289	8,992,682	9,144,780	9,286,792	9,445,845	9,603,760	9,766,351	9,925,246	10,096,446	10,268,206	10,433,997	10,627,098	10,798,963	10,982,603	11,174,788	11,367,714
Revenue Requirement					10,776,104	10,907,401	11,034,956	11,153,441	11,289,269	11,424,486	11,564,832	11,702,298	11,852,427	12,003,625	12,149,850	12,323,166	12,476,304	12,641,865	12,816,378	12,992,200
Required Rate Increase					-24.17%	-23.38%	-22.62%	-21.92%	-21.10%	-20.29%	-19.43%	-18.60%	-17.68%	-16.75%	-15.85%	-14.77%	-13.82%	-12.79%	-11.69%	-10.59%
Proposed Rate Increase					42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
Rate Increase Scenario	6				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	0				42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
No increases (Input 2)	2				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
No Rate Increases (Input 2)	3																			
Modest Rate Increases: 6% every 3 year period starting in period 3 (Input 4)	4				6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%
Modest Rate Increases: (Input 4)	5																			
Required Rate Increases: 30% period 4,25% period 6, 10% period 9, 6% period 12, and 6% every 3rd year beginning in period 15 (Input 6)	6				0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Required Rate Increases: (Input 6)	7				263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%	263.3%
	4				6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%
Changes In Balance Sheet Accounts																				
Assets																				
Change in Current Assets (Source negative / Use positive)					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant & Equipment																				
Additions (Source negative / Use positive)					937,521	944,554	951,639	958,775	965,966	973,210	980,509	987,864	995,272	1,002,737	1,010,256	1,017,833	1,025,469	1,033,159	1,040,909	1,048,715
Liabilities																				

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods																
	1-5	6-15	16 - 19	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
Change in Current Liabilities (Source Positive / Use negative)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long Term Debt																			
Additional Long Term Debt Source Positive / Use Negative				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Principal Paid Long term Debt (Source positive / Use negative)				196,913	190,349	184,004	177,871	171,942	166,210	160,670	155,314	150,137	145,133	140,295	135,618	131,098	126,728	122,504	118,420
Equity																			
Additions to Equity (Source Positive / Use Negative)																			
Dividend (Source negative / Use Positive)																			
Funds Provided from Operations																			
Sources of Funds																			
Net Income (Use Negative / Source Positive)				4,383,375	4,276,782	4,172,401	4,075,067	3,965,494	3,856,612	3,744,291	3,634,488	3,515,829	3,396,670	3,281,635	3,147,124	4,027,601	2,899,816	2,765,467	2,630,708
Depreciation (Source positive /use negative)				1,392,677	1,399,178	1,399,404	1,386,508	1,387,556	1,384,304	1,382,505	1,373,723	1,373,892	1,371,200	1,359,051	1,370,652	1,357,387	1,352,196	1,351,772	1,348,237
Current Liabilities (Source Positive)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				5,776,052	5,675,960	5,571,805	5,461,575	5,353,050	5,240,916	5,126,796	5,008,211	4,889,721	4,767,870	4,640,706	4,517,776	4,384,988	4,251,812	4,117,239	3,978,945
Sources and Uses of Funds																			
Sources of Funds																			
Current Liabilities (Source Positive)																			
Uses of Funds																			
Current Assets. Increase/ (Use)				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fixed Assets. Assets. Increase/ (Use)				937,521	944,554	951,639	958,775	965,966	973,210	980,509	987,864	995,272	1,002,737	1,010,256	1,017,833	1,025,469	1,033,159	1,040,909	1,048,715
Total Uses of Funds				937,521	944,554	951,639	958,775	965,966	973,210	980,509	987,864	995,272	1,002,737	1,010,256	1,017,833	1,025,469	1,033,159	1,040,909	1,048,715
Funds from Financing Activities																			
Changes in Debt																			
Increase in Long Term Debt				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repayment of Long Term Debt				(196,913)	(190,349)	(184,004)	(177,871)	(171,942)	(166,210)	(160,670)	(155,314)	(150,137)	(145,133)	(140,295)	(135,618)	(131,098)	(126,728)	(122,504)	(118,420)
Funds fom Equity																			
Dividends Paid (Use)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Additional Paid in Capital (source)																			
Total Funds from Financing Activities				(196,913.00)	(190,349.00)	(184,004.00)	(177,871.00)	(171,942.00)	(166,210.00)	(160,670.00)	(155,314.00)	(150,137.00)	(145,133.00)	(140,295.00)	(135,618.00)	(131,098.00)	(126,728.00)	(122,504.00)	(118,420.00)
Total Funds Needed				4,641,618.00	4,541,057.00	4,436,162.00	4,324,929.00	4,215,142.00	4,101,496.00	3,985,617.00	3,865,033.00	3,744,312.00	3,620,000.00	3,490,155.00	3,364,325.00	3,228,421.00	3,091,925.00	2,953,826.00	2,811,810.00
Financing																			
Debt	29%			(1,346,089.00)	(1,316,907.00)	(1,286,487.00)	(1,254,229.00)	(1,222,391.00)	(1,189,434.00)	(1,155,829.00)	(1,120,860.00)	(1,085,850.00)	(1,049,800.00)	(1,012,145.00)	(975,654.00)	(936,242.00)	(896,658.00)	(856,610.00)	(815,425.00)
Equity	71%			(3,295,529.00)	(3,224,150.00)	(3,149,675.00)	(3,070,700.00)	(2,992,751.00)	(2,912,062.00)	(2,829,788.00)	(2,744,173.00)	(2,658,462.00)	(2,570,200.00)	(2,478,010.00)	(2,388,671.00)	(2,292,179.00)	(2,195,267.00)	(2,097,216.00)	(1,996,385.00)
Funds Provided by Financing				(4,641,618.00)	(4,541,057.00)	(4,436,162.00)	(4,324,929.00)	(4,215,142.00)	(4,101,496.00)	(3,985,617.00)	(3,865,033.00)	(3,744,312.00)	(3,620,000.00)	(3,490,155.00)	(3,364,325.00)	(3,228,421.00)	(3,091,925.00)	(2,953,826.00)	(2,811,810.00)

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods: 1-5	6-15	16 - 19	58	59	60
Income Statement							
Revenues							
Annual Revenue Growth rate							
Subscriber Growth Rate (Annually)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Periodic Subscriber Growth							
Growth	0.0%	0.0%	0.0%	0.0%			0.0%
Period for Periodic Growth	5						
Rate Case Activities							
Periodic Rate Case (years)	typically 3 years						
Required Rate Increase	Calculated in DCF				-9.46%	-8.31%	-7.03%
Proposed Rate Increase	Calculated in DCF				0.0%	0.0%	0.0%
Total Revenue Adjustments	Calculated				0.0%	0.0%	0.0%
Base and Forecast	5,759,816				15,166,323	15,166,323	15,166,323
Operating Expenses					39%	40%	41%
Expense Level 1: Sewer & Collection Fees	1,888,488				5,955,582	6,074,694	6,196,188
Expense Level 1: Sewer & Collection Fees Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 2: Wages & Benefits	729,237				2,299,740	2,345,735	2,392,650
Expense Level 2: Wages & Benefits Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 3: Repair & Maintenance	250,824				791,005	806,825	822,962
Expense Level 3: Repair & Maintenance Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 4: Contracted Services	43,650				137,652	140,405	143,213
Expense Level 4: Contracted Services Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 5: Utilities	86,097				271,525	276,956	282,495
Expense Level 5: Utilities Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 6: Insurance & Other	242,376				764,363	779,650	795,243
Expense Level 6: Insurance & Other Rate of Change		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Property Taxes	81,302,701				-	-	-
Begin Plant					27,315,366	27,027,904	26,755,024
PT Rate % of beginning net plant	0.000%				0.000%	0.000%	0.000%
Book Depreciation (based on Beginning Year Property Plant & Equipment)	-				1,344,043	1,337,385	1,345,734
Total Operating Expenses					11,563,910	11,761,650	11,978,485
Cost of Operation as % of Revenues (Calculation)					76.2%	77.6%	79.0%
Operating Expenses less Depreciation					10,219,867	10,424,265	10,632,751
Operating Income					3,602,413	3,404,673	3,187,838
Nonoperating Revenues (Expenses)							
Interest Income							
Interest Expense					95,814	92,620	89,533
Interest Exp as % of Debt	2.79%				2.79%	2.79%	2.79%
Total nonoperating revenues (expenses)	-				95,814.00	92,620.00	89,533.00
Income (loss) before State and Federal Taxes	-				3,506,599	3,312,053	3,098,305
State and Federal Taxes	-				1,013,057	956,852	895,100
State and Federal Tax Rate	28.89%				28.89%	28.89%	28.89%
Income After Taxes	-				2,493,542	2,355,201	2,203,205
Income After Taxes plus Interest					2,589,356	2,447,821	2,292,738
Earnings before Interest, Taxes, Depreciation, & Amortization	-				2,920,342	2,828,354	2,743,372
Income (loss) before State and Federal Taxes					3,506,599	3,312,053	3,098,305
Book Depreciation					(1,344,043)	(1,337,385)	(1,345,734)
Tax Depreciation					(1,141,107)	(1,149,665)	(1,158,287)
Difference Tax over Book Depreciation					202,935	187,720	187,447
Income Adjusted for Tax Depreciation					3,709,535	3,499,773	3,285,752
Income Tax Rate	-				28.89%	28.89%	28.89%
Income Taxes					1,071,685	1,011,084	949,254
Income After Tax					2,637,850	2,488,689	2,336,498
Deferred Income Taxes					58,628	54,232	54,154
Accumulated Deferred Income Taxes					(4,520,099)	(4,465,867)	(4,411,713)
Income After Taxes (Book Depreciation)					2,493,542	2,355,201	2,203,205
Plus Deferred Taxes					58,628	54,232	54,154
Plus Interest					95,814	92,620	89,533
After Tax Income Debt Free					2,530,728	2,393,589	2,238,584
Balance Statement							
Assets							
Current Assets							
Current Asset Balance	2,139,868				5,634,542	5,634,542	5,634,542
CA as % of Revenues	37.15%	37.15%	37.15%	37.15%	37.2%	37.2%	37.2%
Balance Statement							
Property Plant & Equipment							
Total PP&E							
Begin Balance					118,478,853.00	119,271,290.00	120,069,670.00
Additions					1,056,581.00	1,064,505.00	1,072,488.00
Retirements					(264,144.00)	(266,125.00)	(268,122.00)
End Balance	81,302,701.00				119,271,290.00	120,069,670.00	120,874,036.00
End Balance Check					119,271,290.00	120,069,670.00	120,874,036.00
Book Depreciation of Property, Plant, & Equipment							
Total Book Depreciation							

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods: 1-5	6-15	16 - 19	58	59	60
Begin Balance					(91,163,487.15)	(92,243,385.93)	(93,314,646.11)
Depreciation					(1,344,042.78)	(1,337,385.18)	(1,345,734.26)
Retirements					264,144.00	266,125.00	268,122.00
End Balance					(92,243,385.93)	(93,314,646.11)	(94,392,258.37)
End Balance Check					(92,243,385.93)	(93,314,646.11)	(94,392,258.37)
Net Plant							
Begin Balance					27,315,365.85	27,027,904.07	26,755,023.89
End Balance					27,027,904.07	26,755,023.89	26,481,777.63
Total Assest					32,662,446.07	32,389,565.89	32,116,319.63
Tax Depreciation of Property, Plant, & Equipment							
Total MACRS Depreciation							
Begin Balance					-		
Depreciation					(1,141,107.48)	(1,149,665.40)	(1,158,287.04)
Retirements					264,144.00	266,125.00	268,122.00
End Balance					(876,963.48)	(883,540.40)	(890,165.04)
End Balance Check					(876,963.48)	(883,540.40)	(890,165.04)
Net Plant							
Begin Balance					118,478,853.00	119,271,290.00	120,069,670.00
End Balance					118,394,326.52	119,186,129.60	119,983,870.96
Tax					(1,141,107.48)	(1,149,665.40)	(1,158,287.04)
Book					(1,344,042.78)	(1,337,385.18)	(1,345,734.26)
					202,935.30	187,719.78	187,447.22

Balance Statement

Liabilities							
Current Liabilities							
Current Liabilities	2,217,961				5,840,172	5,840,172	5,840,172
CL as % of Revenues	38.51%	38.51%	38.51%	38.51%	38.5%	38.5%	38.5%
Noncurrent Liabilities							
Long Term Debt, Notes payable, net of current portion Beg	23,577,783.00				3,434,184.00	3,319,711.00	3,209,054.00
Additional Debt	-				-	-	-
Debt Repayment					(114,473)	(110,657)	(106,968)
Debt Repayment years	30.00				30.00	30.00	30.00
End Long Term Debt, Notes payable, net of current portion End					3,319,711.00	3,209,054.00	3,102,086.00
Total noncurrent liabilities							
Deferred Tax Liabilities							
Begin Balance					4,578,727	4,520,099	4,465,867
Additions to Deferred Asset					(58,628)	(54,232)	(54,154)
Total Deferred Tax Liability					4,520,099	4,465,867	4,411,713
Total Liabilities					13,679,982.00	13,515,093.00	13,353,971.00
Equity							
Proportion of Capital	71%						
Beginning Equity Capital	57,724,918				282,437,803	284,931,345	287,286,546
Additions to Equity (Retained Earnings)					2,493,542	2,355,201	2,203,205
Deductions form Equity Dividends	0				0	0	0
Additional Paid In Capital					0	0	0
Ending Equity Capital					284,931,345	287,286,546	289,489,751
Operating Income					3,602,413	3,404,673	3,187,838
Return On Equity					1.26%	1.19%	1.10%
Total Liabilities & Stockholders Equity					298,611,327	300,801,639	302,843,722
Assets					32,662,446	32,389,566	32,116,320
Liabilities & Stockholders Equity less Assets					265,948,881	268,412,073	270,727,402
Dividend					265,948,881	268,412,073	270,727,402
Final Stockholder Equity					32,662,446	32,389,566	32,116,320
Capital Expenditures and Changes in Working Capital							
Capital Expenditures					1,056,581.00	1,064,505.00	1,072,488.00
Changes to Working Capital							
Current Assets	2,139,868				5,634,542	5,634,542	5,634,542
Current Liabilities	2,217,961				5,840,172	5,840,172	5,840,172
Working Capital	(78,093)				(205,630)	(205,630)	(205,630)
Changes to Working Capital					-	-	-
CASH FLOW							
Income from Operations					2,589,356	2,447,821	2,292,738
Non Cash Expense (depreciation)					1,344,043	1,337,385	1,345,734
Capital Expenditures					1,056,581	1,064,505	1,072,488
Change in Working Capital					-	-	-
Net Cash Flows					2,876,818	2,720,701	2,565,984
Period					57.5	58.5	59.5
PW Factor							
Discount Rate with growth	7.80%				7.80%	7.80%	7.80%

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
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As of January 8, 2021

	Base	Periods 1-5	6-15	16 - 19	58	59	60
Discount Rate without growth	5.87%				5.87%	5.87%	5.87%
					17.036	17.036	17.036
Period Present Worth Factor (PW)					0.013	0.012	0.011
PW of Cashflow					637,123	556,198	480,855
Accumulated PW of Cashflows	56,426,092				325,452,963	326,009,161	326,490,016
CASH FLOW							
Income from Operations					2,637,890	2,488,689	2,336,498
Depreciation					(1,141,107)	(1,149,665)	(1,158,287)
Capital Expenditures					1,056,581	1,064,505	1,072,488
Change in Working Capital					-	-	-
Net Cash Flows					2,722,376	2,573,849	2,422,297
Period					57.5	58.5	59.5
PW Factor							
Discount Rate with growth	7.80%				7.80%	7.80%	7.80%
Discount Rate without growth	5.87%				5.87%	5.87%	5.87%
					17.036	17.036	17.036
Period Present Worth Factor (PW)					0.013	0.012	0.011
PW of Cashflow					602,919	526,177	453,929
Accumulated PW of Cashflows	54,267,994				313,414,769	313,940,946	314,394,875
Rate Case Forecasts							
Rate Base							
Plant in Service					119,271,290.00	120,069,670.00	120,874,036.00
Accumulated Book Depreciation					(92,243,385.93)	(93,314,646.11)	(94,392,258.37)
Working Capital					(205,630.00)	(205,630.00)	(205,630.00)
Accumulated Deferred Income Tax					(4,520,099)	(4,465,867)	(4,411,713)
Rate Base					22,302,175.07	22,083,526.89	21,864,434.63
Authorized Return on Rate Base	7.21%				1,607,987.00	1,592,222.00	1,576,426.00
O&M Expenses					10,219,867.00	10,424,265.00	10,632,751.00
Book Depreciation					1,344,042.78	1,337,385.18	1,345,734.26
Ratemaking Interest Expense					95,814.00	92,620.00	89,533.00
Revenue Requirement					13,267,710.78	13,446,492.18	13,644,444.26
O&M Expenses					10,219,867.00	10,424,265.00	10,632,751.00
Depreciation Expense					1,344,042.78	1,337,385.18	1,345,734.26
Interest					95,814.00	92,620.00	89,533.00
Pretax Income					1,607,987.00	1,592,222.00	1,576,426.00
State & Federal Taxes @ 28.89%					464,547.00	459,993.00	455,429.00
After Tax Income					1,143,440.00	1,132,229.00	1,120,997.00
Current Revenue					15,156,323.00	15,166,323.00	15,166,323.00
Revenue Requirement					13,732,257.78	13,906,485.18	14,099,873.26
Required Revenue Increase					-9%	-8%	-7%
Income from Operations					2,589,356	2,447,821	2,292,738
Return on Rate Base					11.61%	11.08%	10.49%
Required Return	7.21%				7.21%	7.21%	7.21%
Authorized Return					1,607,987	1,592,222	1,576,426
After-tax Net Income					2,493,542	2,355,201	2,203,205
Taxes					1,013,057	956,852	895,100
Pre-tax Net Income					3,506,599	3,312,053	3,098,305
Interest Expense					95,814	92,620	89,533
Operating Income					3,602,413	3,404,673	3,187,838
Operating Expenses					11,563,910	11,761,650	11,978,485
Revenue Requirement					15,166,323	15,166,323	15,166,323
Required Return					1,607,987	1,592,222	1,576,426
Operating Expenses					11,563,910	11,761,650	11,978,485
Revenue Requirement					13,171,897	13,353,872	13,554,911
Required Rate Increase					-9.46%	-8.31%	-7.03%
					58	59	60
Proposed Rate Increase							
Rate Increase Scenario	b				0%	0%	0%
	0				58	59	60
No increases (Input 2)	2				0%	0%	0%
No Rate Increases (Input 2)	3						
Modest Rate Increases 6% every 3 year period starting in period 3 (Input 4)	4				0.0%	0.0%	6.0%
Modest Rate Increases (Input 4)	5						
Required Rate Increases 30% period 4, 25% period 6, 10% period 9, 6% period 12, and 6% every 3rd year beginning in period 15 (Input 6)	b				0.0%	0.0%	0.0%
Required Rate Increases (Input 6)	7				264.3%	263.3%	263.3%
	4				0.0%	0.0%	0.0%
Changes in Balance Sheet Accounts							
Assets							
Change in Current Assets (Source negative / Use positive)					-		
Plant & Equipment							
Additions (Source negative / Use positive)					1,056,581	1,064,505	1,072,488
Liabilities							

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Potential Purchaser: Investor-Owned Utility
As of January 8, 2021

	Base	Periods 1-5	6-15	16 - 19	58	59	60
Change in Current Liabilities (Source Positive / Use negative)						-	-
Long Term Debt							
Additional Long Term Debt Source Positive / Use Negative							-
Principal Paid Long term Debt (Source positive / Use negative)					114,473	110,657	106,968
Equity							
Additions to Equity (Source Positive / Use Negative)							
Dividend (Source negative / Use Positive)							
Funds Provided from Operations							
Sources of Funds							
Net Income (Use Negative / Source Positive)					2,493,542	2,355,201	2,203,205
Depreciation (Source positive /use negative)					1,344,043	1,337,385	1,345,734
Current Liabilities (Source Positive)					-	-	-
					3,837,585	3,692,586	3,548,939
Sources and Uses of Funds							
Sources of Funds							
Current Liabilities (Source Positive)							
Uses of Funds							
Current Assets. Increase (Use)						-	-
Fixed Assets. Assets. Increase (Use)					1,056,581	1,064,505	1,072,488
Total Uses of Funds					1,056,581	1,064,505	1,072,488
Funds from Financing Activities							
Changes in Debt							
Increase in Long Term Debt							-
Repayment of Long Term Debt					(114,473)	(110,657)	(106,968)
Funds fom Equity							
Dividends Paid (Use)					0	0	0
Additional Paid in Capital (source)							
Total Funds from Financing Activities					(114,473.00)	(110,657.00)	(106,968.00)
Total Funds Needed					2,666,531.00	2,517,424.00	2,369,483.00
Financing							
Debt	29%				(773,294.00)	(730,053.00)	(687,150.00)
Equity	71%				(1,893,237.00)	(1,787,371.00)	(1,682,333.00)
Funds Provided by Financing					(2,666,531.00)	(2,517,424.00)	(2,369,483.00)

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

DCF Calculated
57,229,706

DCF Forecast Parameters

	Forecast Base	use	Forecast Parameters for Periods 1-5	6-15	16-19	20-26	27-33	34-40	40-46	47-53	54-60
Revenue Base											
Revenue Base	5,759,816	5,759,816									
Year over Year Growth											
Total Revenues	5,759,816	5,759,816									
								56,398,141			
2020 Revenues	5,759,816	5,759,816									
Increase in period 1											
Use	0%	AUS Input									
Revenue Forecast			1-5	6-15	16-19	20-26	27-33	34-40	40-46	47-53	54-60
Annual Subscriber Growth	Annual Subscriber Growth: All Periods 0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Periodic Subscriber Growth	Periodic Customer Growth: All period 0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth	0%										
Period every 7 years	5										

Rate Adjustment		Periodic Customer Growth: All Periods5 0.0%																					
Rate Adjustment Periods	typically 3 years		1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Rate Adjustment based on Rate Case		Based on Authorized Return on Rate Base	0.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	6.0%
Rate Increase Scenario			3																					
	2 No Rate Increases	No increases (Input 2)	4	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
		Indicated Rate Increase		72.18%	71.32%	70.93%	31.20%	31.01%	4.67%	4.30%	4.07%	-5.58%	-5.74%	-5.95%	-11.48%	-11.58%	-11.72%	-16.92%	-17.01%	-17.10%	-21.85%	-22.00%	-22.04%	
		Indicated Rate Increase (saved)		19.85%	19.89%	20.55%	21.32%	21.94%	23.12%	24.23%	25.57%	27.28%	29.18%	31.47%	33.67%	36.59%	39.55%	43.11%	48.02%	53.52%	59.31%	65.71%	72.68%	
	4 Modest Rate Increases	Modest Rate Increases: 6% every 3 year period starting in period 3 (Input 4)	5	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%
		Indicated Rate Increase		72.18%	71.32%	70.93%	31.20%	31.01%	4.67%	4.30%	4.07%	-5.58%	-5.74%	-5.95%	-11.48%	-11.58%	-11.72%	-16.92%	-17.01%	-17.10%	-21.85%	-22.00%	-22.04%	
		Indicated Rate Increase (saved)		13.13%	13.17%	13.79%	14.52%	8.65%	9.70%	10.69%	11.88%	7.05%	8.65%	10.58%	12.42%	8.44%	10.79%	13.62%	17.51%	14.99%	19.32%	24.11%	29.34%	
	6 Required Rate Increases	Required Rate Increases: 30% period 4,25% period 6, 10% period 9, 6% period 12, and 6% every 3rd year beginning in period 15 (Input 6)	6	0%	0%	0%	30%	0%	25%	0%	0%	10%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	
		Indicated Rate Increase		72.18%	71.32%	70.93%	31.20%	31.01%	4.67%	4.30%	4.07%	-5.58%	-5.74%	-5.95%	-11.48%	-11.58%	-11.72%	-16.92%	-17.01%	-17.10%	-21.85%	-22.00%	-22.04%	
		Indicated Rate Increase (saved)																						
Rate Increase Scenario Input	Rate Increase Scenario Input	6 Input																						

56,398,141 64,577,011

Operating Expenses

		Use	Expenses as % of Revenues	Investor Owned Deferred Tax Forecast Parameters for Periods 1-5	6-15	16-19	20-26	27-33	34-40	40-46	47-53	54-60
Expense Level 1: Sewer & Collection Fees	1,888,488.00	1,888,488	32.79%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
	Sewer & Collection Expense Growth Rate: Periods 1-5 -2%; all remaining Periods 2.0%											
Expense Level 2: Wages & Benefits	729,237.00	729,237	12.66%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
	Wages & Benefits Expense Growth Rate: Periods 1-5 2.0%; all remaining Periods 0.0%											
Expense Level 7: Depreciation	822,045.00	822,045		Based on Plant and Depreciation Parameters								
	Book Depreciation Expense Based on CORLD, Plant Depreciation Parameters, and CORLD Aging; Tax Depreciation based on CORLD and MACRS											
Expense Level 3: Repair & Maintenance	250,824.00	250,824	4.35%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
	Repair & Maintenance Expense Growth Rate: All Periods 2.0%											
Expense Level 4: Contracted Services	43,650.00	43,650	0.76%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
	Contracted Services Expense Growth Rate: All Periods 2.0%											
Expense Level 5: Utilities	91,349.00	91,349	1.59%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
	Utilitiesr Expense Growth Rate: Periods 1-5 2.0%; all remaining Periods 2.0%											
Expense Level 6: Insurance & Other	257,161	257,161	4.46%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
	Insurance & Other Expense Growth Rate: Periods 1-5 2.0% all remaining Periods 2.0%											
Total Operating Expenses	4,082,754	4,082,754	70.88%									
Total Operating Expenses Check	4,082,754											
Difference	-											
OpEX less: Depreciation	3,260,709	3,260,709										
OpEX as % of Revenues	56.61%											
Total Operating Expenses												
Total Operating Expenses Check												
Operating Expenses less Depreciation												
Net Operating Income before Non-operating Revenue and Expenses	1,677,062	1,677,062										
Non-Operating Income (Expenses)												
Interest Income			2%	2%	2%							
Interest Rate on Investments												
Gain on the Sale of Assets												
Long term Debt Interest			-2.79%	-2.79%								
Interest Rate on Long term Debt			Calculated									
Total Non-Operating Income												

Depreciation		Calculated based on Plant			
Property Taxes	0.000%	of Assessed (Beginning Net Book Value) Value of Taxable Property		0.00%	
Taxes			Reference to Spreadsheet Location		
Federal	21.00%	of Pretax Income	='ValueLine Data'!AW30	21.00%	
State	9.99%	of Pretax Income	='ValueLine Data'!AW32	9.99%	
State & Federal Tax Rate	28.89%	of Pretax Income	='ValueLine Data'!AW33	28.89%	

Cost of Capital Required Return

Valuation Cost of Capital	Cost of Capital (Debt-free)	Cost of Capital	Return on Rate Base Cost of Capital

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

DCF Calculated
57,229,706

DCF Forecast Parameters

	Forecast Base	use	Forecast Parameters for Periods 1-5	6-15	16-19	20-26	27-33	34-40	40-46	47-53	54-60
Debt - Market		January 8, 2021	January 8, 2021	January 8, 2021							
Capital Structure Debt			29%	29.0%							
Cost of Debt			2.79%	2.79%							
Tax Rate			28.85%	Not Applicable	Not Applicable						
Wtd Cost of Debt			0.58%	0.81%	1.69%						
Equity - Market											
Capital Structure Equity			71%	71%	56%						
Cost of Equity			9.85%	9.85%	9.85%						
Wtd Cost of Equity			6.99%	6.99%	5.52%						
Required Return											
Capital Structure Total			100%	100%	100%						
Cost of Capital Total			7.57%	7.80%	7.21%						
Growth Rate (inflation)			1.82%	1.82%	0.00%						
Cost of Capital without growth			5.65%	5.87%	7.21%						

Working Capital — Investor Owned Deferred Tax

		Forecast Parameters for Periods 1-5	6-15	16-19	20-26	27-33	34-40	40-46	47-53	54-60
Current Assets										
CA as % of Revenues	Input	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%
Current Liabilities										
CL as % of Revenues	Input	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%

Use OCLD (1), RCNLD (2), FMV (3)
Cost_Approach 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Property, Plant, and Equipment			Financials					Original Cost Study								Appraisal							Other Cost Allocation
Data Looked up from Cost Approach Summary Tab	MACRS Depreciation (Lives)	Plant OC	Depreciation OC	OC LD	OC	Iowa Curve	Life	Age	RL	TL	Depreciation	OCLD	RCN	Iowa Curve	Life	Age	RL	TL	Depreciation	RCNLD	EO %	FMV	RCNLD
353.20 Land & Land Rights - Original Basin	Non-Depr				668	ZNonDep	-	32.06	-	-	-	668	720,020	ZNonDep	-	31.62	-	-	-	720,020	-	720,020	720,020
353.30 Land & Land Rights - Pumping	Non-Depr				13	ZNonDep	-	20.77	-	-	-	13	13,468	ZNonDep	-	20.27	-	-	-	13,468	-	13,468	13,468
354.30 Stuctures & Improvements - Pumping	25				8,005,275	R4.0	45.00	10.35	35.02	45.37	1,800,950	6,204,325	12,142,235	R4.0	45.00	14.58	31.23	45.82	3,762,682	8,379,553	-	8,379,553	8,379,553
360.21 Collection Sewers - Force - Mains	25				2,304,355	R3.0	75.00	23.91	52.62	76.52	712,885	1,591,470	5,971,267	R3.0	75.00	29.95	47.21	77.16	2,301,406	3,669,861	-	3,669,861	3,669,861
361.21 Collection Sewers - Gravity - Mains	25				10,767,738	R2.5	80.00	25.14	57.61	82.74	3,226,805	7,540,933	30,582,161	R2.5	80.00	33.23	50.80	84.03	11,958,953	18,623,208	-	18,623,208	18,623,208
361.23 Collection Sewers - Gravity - Manholes	25				4,350,867	R2.5	80.00	24.70	57.94	82.64	1,283,915	3,066,952	10,108,723	R2.5	80.00	32.21	51.66	83.87	3,836,205	6,272,518	-	6,272,518	6,272,518
363.20 Service Laterals	25				6,619,976	R3.0	70.00	15.43	55.45	70.88	1,424,567	5,195,409	12,259,833	R3.0	70.00	22.75	48.95	71.70	3,831,046	8,428,787	-	8,428,787	8,428,787
365.20 Flow Measuring Installations Meter Pits	25				78,670	S2.0	30.00	44.50	4.50	49.00	66,870	11,800	389,338	S2.0	30.00	44.50	4.50	49.00	330,937	58,401	-	58,401	58,401
354.20 Stuctures & Improvements - Treatment	25				11,085,242	R4.0	55.00	6.72	48.18	54.89	1,357,375	9,727,867	13,511,701	R4.0	55.00	6.78	48.11	54.89	1,668,968	11,842,733	-	11,842,733	11,842,733
390.70 Office Furniture and Equipment	25				21,550	R3.0	12.00	12.50	2.20	14.70	18,318	3,232	25,084	R3.0	12.00	12.50	2.20	14.70	21,321	3,763	-	3,763	3,763
391.70 Transportation Equipment	25				212,956	R3.0	10.00	11.16	3.04	14.20	151,652	61,304	240,834	R3.0	10.00	11.45	2.91	14.35	174,807	66,027	-	66,027	66,027
400.00 Not Used	15				-	R2.0	30.00	-	30.00	30.00	-	-	-	R2.0	30.00	-	30.00	30.00	-	-	-	-	-
401.00 Not Used	25				-	R2.0	30.00	-	30.00	30.00	-	-	-	R2.0	30.00	-	30.00	30.00	-	-	-	-	-
402.00 Not Used	25				-	R2.0	30.00	-	30.00	30.00	-	-	-	R2.0	30.00	-	30.00	30.00	-	-	-	-	-
403.00 Not Used	25				-	R2.0	30.00	-	30.00	30.00	-	-	-	R2.0	30.00	-	30.00	30.00	-	-	-	-	-
413.00 Not Used	25				-	R2.0	30.00	-	30.00	30.00	-	-	-	R2.0	30.00	-	30.00	30.00	-	-	-	-	-
423.00 Not Used	25				-	R2.0	30.00	-	30.00	30.00	-	-	-	R2.0	30.00	-	30.00	30.00	-	-	-	-	-
433.00 Not Used	25				-	R2.0	30.00	-	30.00	30.00	-	-	-	R2.0	30.00	-	30.00	30.00	-	-	-	-	-
443.00 Not Used	25				-	R2.0	30.00	-	30.00	30.00	-	-	-	R2.0	30.00	-	30.00	30.00	-	-	-	-	-
Total Total Plant	Total	-	-	-	43,447,309						10,043,337	33,403,972	85,964,664						27,886,325	58,078,339		58,078,339	58,078,339
Column Reference Cost Approach Summary Tab	3	6	9	10	46	47	48	49	53	54		57	22	23	24	21	28	29		31	40	41	

Asset	Forecast Base	Forecast Parameters for Periods 1-5	6-15	16-19	20-26	27-33	34-40	40-46	47-53	54-60
Current Assets										
Cash & Cash Equivalents	% of Revenues	2%	2%	2%	2%	2%	2%	2%	2%	2%
Cash & Cash Equivalents as % of Revenues										
Account Receivables	% of Revenues									
Account Receivables as % of Revenues										
Others										
Total Current Assets										
Investments		Input								
Liabilities										
Current Liabilities										
Accounts Payable	Input	2%	2%	2%	2%	2%	2%	2%	2%	2%
Accounts Payable as % of Revenues	Input	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Accrued Payroll										
Current Portion of Debt	Input	2%	2%	2%	2%	2%	2%	2%	2%	2%
Total Current Liabilities										
Long Term Debt										
Proportion of Acquistion & CapX		29%								
Acquistion		81,302,701	23,577,783							
Current Portion Retired	Total of Fixed Assets	2%	2%	2%	2%	2%	2%	2%	2%	2%
Equity										
Proportion of Acquistion		71%								
Acquistion		81,302,701	57,724,918			0%				
		56,398,141.00	16,966,940			0	-			

						29,013,447
						29,015,055
						(1,608)

Use Financials (1), OCLD (2), RCNLD (3), FMV (4), Plant (RCN)and Reserve (RCN-Depr (5), o 6 Input Selection

Lookup	Basis	Plant Book	Reserve Book	Plant Tax
1	Financials	6	6	
2	OCLD	14	14	
3	RCNLD	22	22	
4	FMV	24	24	
5	RCN for Plant & RCN Dep for Reserve	15	21	
6	APA Allocated RCN for Plant & APA Allocated I	30	31	34
7	Defalt	27	27	

Plant Book 30 =VLOOKUP(C171,Plant Depr Basis,3,FALSE)
Reserve Book 31 =VLOOKUP(C171,Plant Depr Basis,4,FALSE)
Plant Tax 34

Plant	Life	1 to 6	7 to 15	16 to 20	21-26	27-33	34-40	41-46	47-53	54-60
353.2 - Land & Land Rights - Original Basin		353.20	Input Account for lookup on Cost Approach							

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DCF Calculated
57,229,706

DCF Forecast Parameters

	Forecast Base	use	Forecast Parameters for Periods 1-5	6-15	16-19	20-26	27-33	34-40	40-46	47-53	54-60
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Retirements											
Retirement Rate	Input Negative or Zero		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
End Balance - Calculated			680,989								
353.3 - Land & Land Rights - Pumping			353.30 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Retirements											
Retirement Rate	Input Negative or Zero		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
End Balance - Calculated			12,738								
354.3 - Stuctures & Improvements - Pumping			354.30 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Retirements											
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%
End Balance - Calculated			11,484,292								
360.21 - Collection Sewers - Force - Mains			360.21 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Retirements											
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%
End Balance - Calculated			5,647,450								
361.21 - Collection Sewers - Gravity - Mains			361.21 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Retirements											
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%
End Balance - Calculated			28,922,286								
361.23 - Collection Sewers - Gravity - Manholes			361.23 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Retirements											
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%
End Balance - Calculated			9,560,828								
363.2 - Service Laterals			363.20 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Retirements											
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%
End Balance - Calculated			11,595,455								
365.2 - Flow Measuring Installations Meter Pits			365.20 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Retirements											
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%
End Balance - Calculated			368,233								
354.2 - Stuctures & Improvements - Treatment			354.20 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Retirements											
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%
End Balance - Calculated			12,778,957								
390.7 - Office Furniture and Equipment			390.70 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Retirements											
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%
End Balance - Calculated			23,727								
391.7 - Transportation Equipment			391.70 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Retirements											
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%
End Balance - Calculated			227,746								
400 - Not Used			400.00 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Retirements											
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%
End Balance - Calculated			-								
401 - Not Used			401.00 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Retirements											
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%
End Balance - Calculated			-								
402 - Not Used			402.00 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Retirements											
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%
End Balance - Calculated			-								
403 - Not Used			403.00 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Retirements											

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Wastewater Collection System and Purchased Treatment Capacity
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DCF Calculated
57,229,706

DCF Forecast Parameters

	Forecast Base	use	Forecast Parameters for Periods 1-5	6-15	16-19	20-26	27-33	34-40	40-46	47-53	54-60
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	
End Balance - Calculated			-								
413 - Not Used			413.00 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	
Retirements			-								
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	
End Balance - Calculated			-								
423 - Not Used			423.00 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	
Retirements			-								
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	
End Balance - Calculated			-								
433 - Not Used			433.00 Input Account for lookup on Cost Approach								
Begin Balance											
Additions											
Addition Rate	Input Positive or Zero		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	
Retirements			-								
Retirement Rate	Input Negative or Zero		-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%	
End Balance - Calculated			-								
Total - Total Plant		Total									
Begin Balance											
Additions											
Addition Rate	Calculated										
Retirements											
Retirement Rate	Calculated										
End Balance - lookup			81,302,701								
End Balance - Calculated			81,302,701								
End Balance Check			-								

			1 to 6	7 to 15	16 to 20	21-26	27-33	34-40	41-46	47-53	54-60
Depreciation - Book											
Use Depreciation Life Projection (1), Total (2) or Remaining (3)			27		1	2	3				
Use Depreciation Life Projection (1), Total (2) or Remaining (3)					17	20	19				
			3	3							
			19								
353.2 - Land & Land Rights - Original Basin	Book Depreciation Life 0 yrs		353.2 Referenced to Plant C157								
Begin Balance		0									
Depreciation - Book											
Survivor/Retirement Curve			ZNonDep								
Projection Life			0								
Average Age			31.62								
Remaining Life			0								
Depreciation Rate	Input Positive or Zero		0.00%	0.00%	0.00%						
Depreciation - Tax		Non-Depr									
Retirements Calculated in Plant											
End Balance - Calculated			-								
353.3 - Land & Land Rights - Pumping	Book Depreciation Life 0 yrs		353.3 Referenced to Plant C164								
Begin Balance		0									
Depreciation - Book											
Survivor/Retirement Curve			ZNonDep								
Projection Life			0								
Average Age			20.27								
Remaining Life			0								
Depreciation Rate	Input Positive or Zero		0.00%	0.00%	0.00%						
Retirements Calculated in Plant											
End Balance - Calculated			-								
354.3 - Structures & Improvements - Pumping	Book Depreciation Life 31.23 yrs		354.3 Referenced to Plant C171								
Begin Balance		0.032									
Depreciation - Book											
Survivor/Retirement Curve			R4.0								
Projection Life			45								
Average Age			14.58								
Remaining Life			31.23								
Depreciation Rate	Input Positive or Zero		3.20%	3.20%	3.20%						
Retirements Calculated in Plant											
End Balance - Calculated			(3,558,982)								
360.21 - Collection Sewers - Force - Mains	Book Depreciation Life 47.21 yrs		360.21 Referenced to Plant C178								
Begin Balance		0.0212									
Depreciation - Book											
Survivor/Retirement Curve			R3.0								
Projection Life			75								
Average Age			29.95								
Remaining Life			47.21								
Depreciation Rate	Input Positive or Zero		2.12%	2.12%	2.12%						
Retirements Calculated in Plant											
End Balance - Calculated			(2,176,527)								
361.21 - Collection Sewers - Gravity - Mains	Book Depreciation Life 50.8 yrs		361.2 Referenced to Plant C185								
Begin Balance		0.0197									
Depreciation - Book											
Survivor/Retirement Curve			R2.5								
Projection Life			80								
Average Age			33.23								
Remaining Life			50.8								
Depreciation Rate	Input Positive or Zero		1.97%	1.97%	1.97%						
Retirements Calculated in Plant											
End Balance - Calculated			(11,308,614)								
361.23 - Collection Sewers - Gravity - Manhole	Book Depreciation Life 51.66 yrs		361.23 Referenced to Plant C192								
Begin Balance		0.0194									
Depreciation - Book											
Survivor/Retirement Curve			R2.5								
Projection Life			80								
Average Age			32.21								
Remaining Life			51.66								
Depreciation Rate	Input Positive or Zero		1.94%	1.94%	1.94%						

East Whiteland Township, Pennsylvania
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Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

DCF Calculated
57,229,706

DCF Forecast Parameters

	Forecast Base	use		Forecast Parameters for Periods 1-5	6-15	16-19	20-26	27-33	34-40	40-46	47-53	54-60
Retirements Calculated in Plant												
End Balance - Calculated			(3,628,334)									
363.2 - Service Laterals	Book Depreciation Life 48.95 yrs		363.2	Referenced to Plant C199								
Begin Balance		0.0204										
Depreciation - Book												
Survivor/Retirement Curve			R3.0									
Projection Life			70									
Average Age			22.75									
Remaining Life			48.95									
Depreciation Rate	Input Positive or Zero		2.04%	2.04%	2.04%							
Retirements Calculated in Plant												
End Balance - Calculated			(3,623,580)									
365.2 - Flow Measuring Installations Meter Pit	Book Depreciation Life 4.5 yrs		365.2	Referenced to Plant C206								
Begin Balance		0.2222										
Depreciation - Book												
Survivor/Retirement Curve			S2.0									
Projection Life			30									
Average Age			44.5									
Remaining Life			4.5									
Depreciation Rate	Input Positive or Zero		22.22%	22.22%	22.22%							
Retirements Calculated in Plant												
End Balance - Calculated			(312,998)									
354.2 - Structures & Improvements - Treatmen	Book Depreciation Life 48.11 yrs		354.2	Referenced to Plant C171								
Begin Balance		0.0208										
Depreciation - Book												
Survivor/Retirement Curve			R4.0									
Projection Life			55									
Average Age			6.78									
Remaining Life			48.11									
Depreciation Rate	Input Positive or Zero		2.08%	2.08%	2.08%							
Retirements Calculated in Plant												
End Balance - Calculated			(1,578,201)									
390.7 - Office Furniture and Equipment	Book Depreciation Life 2.2 yrs		390.7	Referenced to Plant C220								
Begin Balance		0.4545										
Depreciation - Book												
Survivor/Retirement Curve			R3.0									
Projection Life			12									
Average Age			12.5									
Remaining Life			2.2									
Depreciation Rate	Input Positive or Zero		45.45%	45.45%	45.45%							
Retirements Calculated in Plant												
End Balance - Calculated			(20,168)									
391.7 - Transportation Equipment	Book Depreciation Life 2.91 yrs		391.7	Referenced to Plant C227								
Begin Balance		0.3436										
Depreciation - Book												
Survivor/Retirement Curve			R3.0									
Projection Life			10									
Average Age			11.45									
Remaining Life			2.91									
Depreciation Rate	Input Positive or Zero		34.36%	34.36%	34.36%							
Retirements Calculated in Plant												
End Balance - Calculated			(165,298)									
400 - Not Used	Book Depreciation Life 30 yrs		400	Referenced to Plant C234								
Begin Balance		0.0333										
Depreciation - Book												
Survivor/Retirement Curve			R2.0									
Projection Life			30									
Average Age			0									
Remaining Life			30									
Depreciation Rate	Input Positive or Zero		3.33%	3.33%	3.33%							
Retirements Calculated in Plant												
End Balance - Calculated			-									
401 - Not Used	Book Depreciation Life 30 yrs		401	Referenced to Plant C241								
Begin Balance		0.0333										
Depreciation - Book												
Survivor/Retirement Curve			R2.0									
Projection Life			30									
Average Age			0									
Remaining Life			30									
Depreciation Rate	Input Positive or Zero		3.33%	3.33%	3.33%							
Retirements Calculated in Plant												
End Balance - Calculated			-									
402 - Not Used	Book Depreciation Life 30 yrs		402	Referenced to Plant C248								
Begin Balance		0.0333										
Depreciation - Book												
Survivor/Retirement Curve			R2.0									
Projection Life			30									
Average Age			0									
Remaining Life			30									
Depreciation Rate	Input Positive or Zero		3.33%	3.33%	3.33%							
Retirements Calculated in Plant												
End Balance - Calculated			-									
403 - Not Used	Book Depreciation Life 30 yrs		403	Referenced to Plant C255								
Begin Balance		0.0333										
Depreciation - Book												
Survivor/Retirement Curve			R2.0									
Projection Life			30									
Average Age			0									
Remaining Life			30									
Depreciation Rate	Input Positive or Zero		3.33%	3.33%	3.33%							
Retirements Calculated in Plant												
End Balance - Calculated			-									
413 - Not Used	Book Depreciation Life 30 yrs		413	Referenced to Plant C262								
Begin Balance		0.0333										

East Whiteland Township, Pennsylvania
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Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
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DCF Calculated
57,229,706

DCF Forecast Parameters

	Forecast Base	use	Forecast Parameters for Periods 1-5	6-15	16-19	20-26	27-33	34-40	40-46	47-53	54-60
Depreciation - Book											
Survivor/Retirement Curve			R2.0								
Projection Life			30								
Average Age			0								
Remaining Life			30								
Depreciation Rate	Input Positive or Zero		3.33%	3.33%	3.33%						
Retirements Calculated in Plant											
End Balance - Calculated			-								
423 - Not Used	Book Depreciation Life 30 yrs		423	Referenced to Plant C269							
Begin Balance		0.0333									
Depreciation - Book											
Survivor/Retirement Curve			R2.0								
Projection Life			30								
Average Age			0								
Remaining Life			30								
Depreciation Rate	Input Positive or Zero		3.33%	3.33%	3.33%						
Retirements Calculated in Plant											
End Balance - Calculated			-								
433 - Not Used	Book Depreciation Life 30 yrs		433	Referenced to Plant C276							
Begin Balance		0.0333									
Depreciation - Book											
Survivor/Retirement Curve			R2.0								
Projection Life			30								
Average Age			0								
Remaining Life			30								
Depreciation Rate	Input Positive or Zero		3.33%	3.33%	3.33%						
Retirements Calculated in Plant											
End Balance - Calculated			-								
Total Balances - Calculted			(26,372,702)								
Balance Check			(26,372,702)								
Difference		-	-								

Depreciation - MACRS

			1 to 6	7 to 15	16 to 20	21-26	27-33	34-40	41-46	47-53	54-60
Use Depreciation Life: MACRS (1)			1								
			3								
353.2 - Land & Land Rights - Original Basin	Book Depreciation Life Non-Depr yrs		353.2	Referenced to Plant C157							
Begin Balance		0									
Depreciation											
Depreciation Rate	Input Positive or Zero		0.00%	0.00%	0.00%						
Retirements Calculated in Plant											
End Balance - Calculated			680,989								
353.3 - Land & Land Rights - Pumping	Book Depreciation Life Non-Depr yrs		353.3	Referenced to Plant C164							
Begin Balance		0									
Depreciation											
Depreciation Rate	Input Positive or Zero		0.00%	0.00%	0.00%						
Retirements Calculated in Plant											
End Balance - Calculated			12,738								
354.3 - Stuctures & Improvements - Pumping	Book Depreciation Life 25 yrs		354.3	Referenced to Plant C171							
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			7,925,310								
360.21 - Collection Sewers - Force - Mains	Book Depreciation Life 25 yrs		360.21	Referenced to Plant C178							
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			3,470,923								
361.21 - Collection Sewers - Gravity - Mains	Book Depreciation Life 25 yrs		361.21	Referenced to Plant C185							
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			17,613,672								
361.23 - Collection Sewers - Gravity - Manhole	Book Depreciation Life 25 yrs		361.23	Referenced to Plant C192							
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			5,932,494								
363.2 - Service Laterals	Book Depreciation Life 25 yrs		363.2	Referenced to Plant C199							
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			7,971,875								
365.2 - Flow Measuring Installations Meter Pit	Book Depreciation Life 25 yrs		365.2	Referenced to Plant C206							
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			55,235								
354.2 - Stuctures & Improvements - Treatmen	Book Depreciation Life 25 yrs		354.2	Referenced to Plant C213							
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			11,200,756								
390.7 - Office Furniture and Equipment	Book Depreciation Life 25 yrs		390.7	Referenced to Plant C220							
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			3,559								
391.7 - Transportation Equipment	Book Depreciation Life 25 yrs		391.7	Referenced to Plant C227							
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			62,448								

East Whiteland Township, Pennsylvania
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Investor-Owned Utility
January 8, 2021

DCF Calculated
57,229,706

DCF Forecast Parameters

	Forecast Base	use	Forecast Parameters for Periods 1-5	6-15	16-19	20-26	27-33	34-40	40-46	47-53	54-60
400 - Not Used	Book Depreciation Life 15 yrs		400 Referenced to Plant C234								
Begin Balance		0.0667									
Depreciation											
Depreciation Rate	Input Positive or Zero		6.67%	6.67%	6.67%						
Retirements Calculated in Plant											
End Balance - Calculated			-								
401 - Not Used	Book Depreciation Life 25 yrs		401 Referenced to Plant C241								
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			-								
402 - Not Used	Book Depreciation Life 25 yrs		402 Referenced to Plant C248								
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			-								
403 - Not Used	Book Depreciation Life 25 yrs		403 Referenced to Plant C248								
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			-								
413 - Not Used	Book Depreciation Life 25 yrs		413 Referenced to Plant C262								
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			-								
423 - Not Used	Book Depreciation Life 25 yrs		423 Referenced to Plant C269								
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			-								
433 - Not Used	Book Depreciation Life 25 yrs		433 Referenced to Plant C276								
Begin Balance		0.04									
Depreciation											
Depreciation Rate	Input Positive or Zero		4.00%	4.00%	4.00%						
Retirements Calculated in Plant											
End Balance - Calculated			-								
Total Balance											
Begin Balance											
Depreciation											
Depreciation Rate											
Retirements Calculated in Plant											
End Balance - Calculated			54,929,999								
Difference			54,929,999								

DCF Forecast Parameters

	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%	0.0%	0.0%	6.0%
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%	0%	0%	6%

24	25	26	27	28	29	30	31	32
	Input Cost to Allocate below	Account	Description	Allocated RCN	Allocated Depreciation	Condition	%RCNLD	Allocated APA
%RCNLD	54,930,000							54,930,000
1.24%	680,967	353.2	Land & Land Rights - Orig	680,989	-	100.00%	1.24%	680,989
0.02%	12,744	353.3	Land & Land Rights - Pum	12,738	-	100.00%	0.02%	12,738
14.43%	7,925,300	354.3	Stuctures & Improvemen	11,484,292	3,558,982	69.01%	14.43%	7,925,310
6.32%	3,470,917	360.2	Collection Sewers - Force	5,647,450	2,176,527	61.46%	6.32%	3,470,923
32.07%	17,613,689	361.2	Collection Sewers - Gravit	28,922,286	11,308,614	60.90%	32.07%	17,613,672
10.80%	5,932,495	361.2	Collection Sewers - Gravit	9,560,828	3,628,334	62.05%	10.80%	5,932,494
14.51%	7,971,881	363.2	Service Laterals	11,595,455	3,623,580	68.75%	14.51%	7,971,875
0.10%	55,260	365.2	Flow Measuring Installati	368,233	312,998	15.00%	0.10%	55,235
20.39%	11,200,776	354.2	Stuctures & Improvemen	12,778,957	1,578,201	87.65%	20.39%	11,200,756
0.01%	3,570	390.7	Office Furniture and Equi	23,727	20,168	15.00%	0.01%	3,559
0.11%	62,455	391.7	Transportation Equipmen	227,746	165,298	27.42%	0.11%	62,448
0.00%	-	400.0	Not Used	-	-	0.00%	0.00%	-
0.00%	-	401.0	Not Used	-	-	0.00%	0.00%	-
0.00%	-	402.0	Not Used	-	-	0.00%	0.00%	-
0.00%	-	403.0	Not Used	-	-	0.00%	0.00%	-
0.00%	-	413.0	Not Used	-	-	0.00%	0.00%	-
0.00%	-	423.0	Not Used	-	-	0.00%	0.00%	-
0.00%	-	433.0	Not Used	-	-	0.00%	0.00%	-
0.00%	-	443.0	Not Used	-	-	0.00%	0.00%	-
100.00%	54,930,054			81,302,701	26,372,702			54,929,999

S:\water\industry\Kalt Whitehurst Township\Kalt Whitehurst Wastewater System Valuation\as of 1-8-2021

DCF Forecast Parameters

S:\water-industry\East Whiteland Township\East Whiteland Wastewater System Valuation as of 1-8-2021

DCF Forecast Parameters

S:\water industry\East Whiteland Township\East Whiteland Wastewater System Valuation as of 1-8-2021

DCF Forecast Parameters

S:\Water Industry\East Whiteland Township\East Whiteland Wastewater System Valuation as of 1 6 2021

DCF Forecast Parameters

S:\water\industry\East Whiteland Township\East Whiteland Wastewater System Valuation as of 1 8 2021

DCF Forecast Parameters

East Whiteland Financials
Sewer Fund

	2016	2017	2018	2019	
Assets					
Current Assets					
Cash and Cash Equivalents	6,580,678	7,518,955	9,567,007	10,083,775	
		938,277	2,048,052	516,768	
		17.98%	**30.66%**	**9.52%**	**19.39%**
Account Receivables	1,161,871	683,599	848,468	1,151,871	
	24.04%	**13.10%**	**12.70%**	**21.22%**	**17.77%**
Due from other Fund		11,339	147,915		**37.15%**
Total Current Assets	**7,742,549**	**8,213,893**	**10,563,390**	**11,235,646**	
Noncurrent Assets					
Capital Assets	32,785,377	34,244,259	36,333,876	37,387,925	
Other Capital	11,538,573	11,085,242	11,417,162	11,285,015	
Accumulated Depreciation	(12,377,360)	(13,065,252)	(13,754,484)	(14,529,267)	
Total Noncurrent Assets	**31,946,590**	**32,264,249**	**33,996,554**	**34,143,673**	
Total Assets	**39,689,139**	**40,478,142**	**44,559,944**	**45,379,319**	
Deferred Outflows of Resources					
Deferred Amounts related to Pensions	70,666	109,842	183,740	113,838	
Deferred amount on Refunding	215,921	190,519	28,363	130,298	
Deferred amount on refunding				139,715	
Total Deferred Outflows of Resources	**286,587**	**300,361**	**165,117**	**383,851**	
Liabilities					
Current Liabilities					
Accounts Payable	123,100	138,497	82,760	417,065	
Accrued Liabilities	13,831	10,221	10,708	13,689	
Due to other funds	371	210,243	78	18,493	
			12,396		
Compensated absences	6,015	5,417	4,953	3,114	
Unearned Revenues	830,898	917,045	931,069	971,503	
Accrued Interest	188,258	197,363	191,523	185,646	
Bond Payable	725,000	745,000	715,000	735,000	
Totl Current Libilities	**1,887,473**	**2,223,786**	**1,948,487**	**2,344,510**	
	39.05%	**42.62%**	**29.17%**	**43.19%**	**38.51%**
Noncurrent Liabilities					
Compensated absences	34,085	30,694	28,065	17,649	
Bonds Payable	17,466,860	16,741,396	16,045,932	15,330,468	
Net Pension Liability	137,571	163,903	333,457	192,049	
Other post-employment benefits and obligatons	232,724	294,321	1,239,417	921,823	
Total Noncurrent Liabilities	**17,871,240**	**17,230,314**	**17,646,871**	**16,461,989**	
Total Liabilities	**19,758,713**	**19,454,100**	**19,595,358**	**18,806,499**	
Deferred inflow of Resource					
Deferred amount related to pensions	11,356	44,990	6,206	82,821	
Deferred amount related to OPEB			59,866	426,073	
Total Deferred inflow of Resource	**11,356**	**44,990**	**66,072**	**508,894**	
Net Position					
Net investment in Capital Assets	13,970,651	14,968,372	17,400,739	18,217,920	
Unrestricted	6,232,006	6,311,041	7,874,995	8,229,857	
Total Net Position	**20,202,657**	**21,279,413**	**25,275,734**	**26,447,777**	

Statement of Revenues. Expenses, and Change in Net Position

Operating Revenues					
Charge for Services					
Sewer Service	3,312,268	3,294,177	3,809,229	3,761,787	
Tapping fees	844,300	1,706,800	1,306,657	984,100	
Miscellaneous	677,340	216,471	1,563,159	682,780	
Total Operating Revenues	**4,833,908**	**5,217,448**	**6,679,045**	**5,428,667**	
		7.93%	28.01%	-18.72%	5.74%
Operating Expenses					
Sewer and collection fees	1,484,102	1,155,032	1,174,936	1,779,913	19.93%
Salaries. Wages and benefits	651,954	731,028	867,750	687,311	5.42%
Repair and Maintenance	140,341	643,587	57,793	236,403	68.45%
Contracted Services	85,418	57,917	96,819	41,140	-51.84%
Utilities	95,347	84,883	85,609	86,097	-9.70%
Insurance	38,276	35,780	37,641	40,288	5.26%
Depreciation	673,195	687,892	718,700	774,783	15.09%
Other	57,227	156,422	86,958	202,088	253.13%
Total Operating Expenses	**3,225,860**	**3,552,541**	**3,126,206**	**3,848,023**	19.29%
		10.13%	-12.00%	23.09%	7.07%
Operating Income	**1,608,048**	**1,664,907**	**3,552,839**	**1,580,644**	
NonOpertating Revenues (Expenses)					
Interest Income	15,300	19,510	27,696	137,057	
Interest expense	(605,904)	(607,118)	(578,450)	(561,324)	
Transfers Out	(30,000)	(3,543)	(166,320)	(166,165)	
Total NonOpertating Revenues (Expenses)	**(620,604)**	**(591,151)**	**(717,074)**	**(590,432)**	
Capital Contribution			2,057,746	181,831	
Change in Net Position	**987,444**	**1,073,756**	**4,893,511**	**1,172,043**	
Net Position at Beginning of Year	19,218,213	**20,205,657**	**20,382,223**	**25,275,734**	
Net Position at end of Year	**20,205,657**	**21,279,413**	**25,275,734**	**26,447,777**	

Projections

			Forecast Parameters for Periods									
			1-5	6-15	6-15	16-20	21-26	27-33	34-40	40-46	47-53	54-60
See Rate Increase Schedule on tab: DCF Investor Owned Cells: L263:BS263												
	Inflation since 3.0%											
Revenue Forecast	1.061		1-5	6-15	16-19	20-26	27-33	34-40	40-46	47-53	54-60	
Annual Subscriber Growth	Annual Subscriber Growth: All Periods (		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Periodic Subscriber Growth	Periodic Customer Growth: All period 0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Growth	0%											
Period every ? years	5											
	2019	2021										
Revenues	5,428,667	1.061 5,759,816	3.0%	3.0%	3.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 1: Sewer & Collection Fees	1,779,913	1.061 1,888,488	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 2: Wages & Benefits	687,311	1.061 729,237	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 3: Repair & Maintenance	236,403	1.061 250,824	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 4: Contracted Services	41,140	1.061 43,650	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 5: Utilities	86,097	1.061 91,349	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 6: Insurance & Other	242,376	1.061 257,161	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 7: Depreciation	774,783	1.061 822,045										
Total Expenses	3,848,023	4,082,754										
check												
Operating Income	1,580,644	1,677,062										
Working Capital		Use										
Current Assets	**37.15%**	28.0% 37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	
Current Liabilities	**38.51%**	22.6% 38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	

Account	Year	Begin Plant Balance	Increases	Decreases	End Balance	Begin Plant Balance	Increases	Decreases	End Balance	Net Plant	
Capacity Rights	2016	11,085,242	-	-	**11,085,242**	-	-	-	-	**11,085,242**	
Capacity Rights	2017	11,085,242	-	-	**11,085,242**	-	-	-	-	**11,085,242**	
Capacity Rights	2018	11,085,242	-	-	**11,085,242**	-	-	-	-	**11,085,242**	
Capacity Rights	2019	11,085,242	306,995	(439,142)	**10,953,095**	-	-	-	-	**10,953,095**	
Construction in Progress	2016	-	453,331	-	**453,331**	-	-	-	-	**453,331**	
Construction in Progress	2017	453,331	-	(453,331)	**-**	-	-	-	-	**-**	
Construction in Progress	2018	-	-	-	**-**	-	-	-	-	**-**	
Construction in Progress	2019	331,920	-	-	**331,920**	-	-	-	-	**331,920**	
Machinery & Equipment	2016	99,324	-	-	**99,324**	(68,275)	(6,481)	-	**(74,756)**	**24,568**	
Machinery & Equipment	2017	99,324	-	-	**99,324**	(74,756)	(6,481)	-	**(81,237)**	**18,087**	
Machinery & Equipment	2018	99,324	-	-	**99,324**	(81,237)	(6,481)	-	**(87,718)**	**11,606**	
Machinery & Equipment	2019	99,324	-	-	**99,324**	(87,718)	(4,493)	-	**(92,211)**	**7,113**	
Sewer Infrastructure	2016	31,749,001	734,844	-	**32,483,845**	(11,490,881)	(657,803)	-	**(12,148,684)**	**20,335,161**	**2.31%**
Sewer Infrastructure	2017	32,483,845	1,458,882	-	**33,942,727**	(12,148,684)	(672,500)	-	**(12,821,184)**	**21,121,543**	**4.49%**
Sewer Infrastructure	2018	33,942,727	2,111,820	-	**36,054,547**	(12,821,184)	(702,804)	-	**(13,523,988)**	**22,530,559**	**6.22%**
Sewer Infrastructure	2019	36,054,547	1,021,158	-	**37,075,705**	(13,523,988)	(758,947)	-	**(14,282,935)**	**22,792,770**	**2.83%**
											3.96%
Vehicles	2016	202,208	-	-	**202,208**	(145,009)	(8,911)	-	**(153,920)**	**48,288**	
Vehicles	2017	202,208	-	-	**202,208**	(153,920)	(8,911)	-	**(162,831)**	**39,377**	
Vehicles	2018	202,208	7,265	(29,468)	**180,005**	(162,831)	(9,415)	29,468	**(142,778)**	**37,227**	
Vehicles	2019	180,005	32,891	-	**212,896**	(142,778)	(11,343)	-	**(154,121)**	**58,775**	

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Market Approach

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East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Data

Central Tendancy and Reliability Analysis

Market Sales Analysis - PP/OCLD

	Simple	Weighted	
Mean	1.7594	1.8494	
Standard Deviation	0.5882	0.4204	
Median	1.49	1.4355	
Mode	1.4418	1.4418	
Conclusion		1.8494	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity OCLD		35,172,804	Cost Approach - OCLD
Market Value Indication		**65,048,584**	

Market Sales Analysis - PP/CORLD

	Simple	Weighted	
Mean	0.8087	0.9337	
Standard Deviation	0.1746	0.1695	
Median	0.8229	0.7558	
Mode	0.6918	0.6918	
Conclusion		0.9387	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity CORLD		59,847,171	Cost Approach - CORLD
Market Value Indication		**56,178,539**	

Market Sales Analysis - PP/Customer

	Simple	Weighted	
Water Tretment & Distribution			
Mean	6,123	10,962	
Standard Deviation		4,613	
Median	5,021	4,963	
Wastewater Collection & Treatment		16,785	
Mean	9,579		
Standard Deviation		-	AUS Input
Median	8,754		
Wastewater Collection			
Mean	6,507		
Standard Deviation			
Median	6,636		
Watewater Treatment Only			
Mean	3,072		
Standard Deviation			
Median	2,118		
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity Customers		3,918	AUS Input
Wastewater Collection & Treatment PP/Customer		8,754	AUS Input
Collection and Treatement Customers Market Value Indic		**34,298,172**	
Treatement Only Market Value Indication			
Treatment Only PP/customer		2,118	AUS Input
Treatment Only Customers		-	AUS Input
Market Value Indication Treatment Only		-	
Total Market Value Indication		**34,298,172**	

Financial Basis[1]

Financial Markets	Market Value per Share to Book Value per Share	
Market to Book (equity)	3.40	
Market to Book (equity and debt)	2.11	
Use (equity and debt)	2.11	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity OCLD	33,403,972	Cost Approach - OCLD
Market Value Indication	**70,482,381**	

Market Sales Analysis - PP/Cash Flows (EBITDA Period 1-5)

	Simple	Weighted	
Mean	17.48	15.32	
Standard Deviation	5.71	5.10	
Median	17.41	18.13	
Mode	Not Applicable	Not Applicable	
Forecast			
Conclusion		18.00	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity Cash Flows		2,396,686	Income Approach
Market Value Indication		**43,140,348**	

Market Sales Analysis - PP/Cash Flows (EBITDA Period 1-13)

	Simple	Weighted	
Mean	11.62	11.45	
Standard Deviation	2.67	2.14	
Median	11.65	12.07	
Mode	Not Applicable	Not Applicable	
Forecast			
Conclusion		12.00	AUS Input
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity Cash		3,264,195	Income Approach
Market Value Indication		**39,170,336**	

Summary of Market Analyses

Indicators	
OCLD	65,048,584
CORLD	56,178,539
Customers	34,298,172
Cash Flows	
EBITDA Periods 1-5	43,140,348
EBITDA Periods 1-13	39,170,336
Value Line	70,482,381
Mean	51,386,393
Median	49,659,444
Conclusion	**56,178,539**

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Analysis - PP/OCLD

Property Acquired	Type of System and Attributes	Purchase Price (PP)	Proportion of Purchase Price to Total	Depreciated Original Cost (OCLD) (AUS Consultants Determination	Purchase Price to (PP/OCLD)	Variance to Simple Mean	Variance to Wtd Mean	(Variance to Wtd Mean)^2
City of McKeesport	Wastewater Collection and Treatment	159,000,000	19%	80,085,602	1.9854	0.226	0.136	0.0185
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	29,500,000	3%	18,567,728	1.5888	-0.1706	-0.2606	0.0679
Limerick Township	Wastewater Collection and Treatment System	64,373,378	8%	46,153,867	1.3948	-0.3646	-0.4546	0.2067
East Bradford Township	Wastewater Collection and paid for treatment Capacity	5,000,000	1%	5,383,591	0.9287	-0.8307	-0.9207	0.8477
Mahoning	Water Distribution System	4,734,800	1%	3,507,138	1.3500	-0.4094	-0.4994	0.2494
Mahoning	Wastewater Collection	4,765,200	1%	3,234,859	1.4731	-0.2863	-0.3763	0.1416
Cheltenham	Wastewater Collection	50,250,000	6%	15,784,463	3.1835	1.4241	1.3341	1.7798
Steelton	Water Distribution and Treatment	21,750,000	3%	14,433,435	1.5069	-0.2525	-0.3425	0.1173
Sadsbury	Wastewater Collection	8,600,000	1%	6,128,876	1.4032	-0.3562	-0.4462	0.1991
Exeter	Wastewater Collection and Treatment	93,500,000	11%	40,057,634	2.3341	0.5747	0.4847	0.2349
East Norriton	Wastewater Collection	21,000,000	2%	8,407,007	2.4979	0.7385	0.6485	0.4206
Kane	Wastewater Collection and Treatment	17,560,000	2%	12,070,455	1.4548	-0.3046	-0.3946	0.1557
Royersford	Wastewater Collection and Treatment	13,000,000	2%	5,173,559	2.5128	0.7534	0.6634	0.4401
Valley	Water Treatment and Distribution System	7,325,000	1%	5,370,438	1.3639	-0.3955	-0.4855	0.2357
Valley	Wastewater Collection System	13,950,000	2%	9,214,738	1.5139	-0.2455	-0.3355	0.1126
Delaware County Regional Water Quality A	Wastewater Collection and Treatment	276,500,000	32%	191,774,486	1.4418	-0.3176	-0.4076	0.1661
Upper Pottsgrove	Wastewater Collection	13,750,000	2%	11,769,925	1.1682	-0.5912	-0.6812	0.464
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	53,000,000	6%	20,644,920	2.5672	0.8078	0.7178	0.5152
		857,558,378	100%	497,762,721	1.7228			6.3729

Simple Mean				Square Root[(Variance to Wtd Mean)^2]/Count
			1.7594	
Standard Deviation			0.5882	2.52446
SimpleMedian			1.4900	18
Simple Mode		DELCOR	1.4418	0.140248
Weighted Mean			1.849	
Standard Deviation			0.4204	
Wtd Median			1.4355	
Wtd Mode		DELCOR	1.4418	

Property Acquired		Depreciated Original Cost (OCLD) (AUS Consultants Determination	Purchase Price to (PP/OCLD)	Accummulated OCLD
East Bradford Township	Wastewater Collection and paid for treatment Capacity	5,383,591	0.9287	5,383,591
Upper Pottsgrove	Wastewater Collection	11,769,925	1.1682	17,153,516
Mahoning	Water Distribution System	3,507,138	1.35	20,660,654
Valley	Water Treatment and Distribution System	5,370,438	1.3639	26,031,092
Limerick Township	Wastewater Collection and Treatment System	46,153,867	1.3948	72,184,959
Sadsbury	Wastewater Collection	6,128,876	1.4032	78,313,835
Delaware County Regional Water Quality A	Wastewater Collection and Treatment	191,774,486	1.4418	270,088,321
Kane	Wastewater Collection and Treatment	12,070,455	1.4548	282,158,776
Mahoning	Wastewater Collection	3,234,859	1.4731	285,393,635
Steelton	Water Distribution and Treatment	14,433,435	1.5069	299,827,070
Valley	Wastewater Collection System	9,214,738	1.5139	309,041,808
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	18,567,728	1.5888	327,609,536
City of McKeesport	Wastewater Collection and Treatment	80,085,602	1.9854	407,695,138
Exeter	Wastewater Collection and Treatment	40,057,634	2.3965	447,752,772
East Norriton	Wastewater Collection	8,407,007	2.4979	456,159,779
Royersford	Wastewater Collection and Treatment	5,173,559	2.5128	461,333,338
Cheltenham	Wastewater Collection	15,784,463	3.1835	477,117,801
		477,117,801	2.5672	

Middle OCLD		238,558,901
Bottomvalue of the range containng the Middle Value	1.4032	78,313,835
Top value of the range containing the Middle Value	1.4418	270,088,321
Range containng the middle value	0.0386	191,774,486
Range from bottom value to middle value	0.0323	160,245,066
Median Value	1.4355	

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Analysis - PP/CORLD

Property Acquired	Type of System and Attributes	Purchase Price (PP)	Proportion of Purchase Price to Total	Replacement Cost New less Depreciation (CORLD)	Purchase Price to CORLD	Variance to Simple Mean	Variance to Wtd Mean	(Variance to Wtd Mean)^2
City of McKeesport	Wastewater Collection and Treatment	159,000,000	19%	156,524,909	1.0158	0.2071	0.0821	0.0067
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	29,500,000	3%	30,615,410	0.9636	0.1549	0.0299	0.0009
Limerick Township	Wastewater Collection and Treatment System	64,373,378	8%	73,068,377	0.881	0.0723	-0.0527	0.0028
East Bradford Township	Wastewater Collection and paid for treatment Capacity	5,000,000	1%	9,236,581	0.5413	-0.2674	-0.3924	0.154
Mahoning	Water Distribution System	4,734,800	1%	8,899,336	0.532	-0.2767	-0.4017	0.1614
Mahoning	Wastewater Collection	4,765,200	1%	7,991,234	0.5963	-0.2124	-0.3374	0.1138
Cheltenham	Wastewater Collection	50,250,000	6%	49,940,486	1.0062	0.1975	0.0725	0.0053
Steelton	Water Distribution and Treatment	21,750,000	3%	23,921,473	0.9092	0.1005	-0.0245	0.0006
Sadsbury	Wastewater Collection	8,600,000	1%	8,517,587	1.0097	0.2010	0.076	0.0058
Exeter	Wastewater Collection and Treatment	93,500,000	11%	99,589,819	0.9389	0.1302	0.0052	0
East Norriton	Wastewater Collection	21,000,000	2%	27,461,356	0.7647	-0.0440	-0.169	0.0286
Kane	Wastewater Collection and Treatment	17,560,000	2%	29,015,055	0.6052	-0.2035	-0.3285	0.1079
Royersford	Wastewater Collection and Treatment	13,000,000	2%	13,376,109	0.9719	0.1632	0.0382	0.0015
Valley	Water Treatment and Distribution System	7,325,000	1%	11,664,026	0.628	-0.1807	-0.3057	0.0935
Valley	Wastewater Collection System	13,950,000	2%	19,252,333	0.7246	-0.0841	-0.2091	0.0437
Delaware County Regional Water Quality Authority	Wastewater Collection and Treatment	276,500,000	32%	399,664,111	0.6918	-0.1169	-0.2419	0.0585
Upper Pottsgrove	Wastewater Collection	13,750,000	2%	18,460,028	0.7449	-0.0638	-0.1888	0.0356
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	53,000,000	6%	51,414,555	1.0308	0.2221	0.0971	0.0094
		857,558,378	100%	1,038,612,785	0.8257			

Simple Mean	0.8087
Standard Deviation	0.1746
SimpleMedian	0.8229
Simple Mode	0.6918
Weighted Mean	0.9337
Standard Deviation	0.1695
Wtd Median	0.7558
Wtd Mode	0.6918

Property Acquired	Type of System and Attributes	Purchase Price (PP)	Proportion of Purchase Price to Total	Replacement Cost New less Depreciation (CORLD)	Purchase Price to CORLD	Accummulated CORLD
Mahoning	Water Distribution System	4734800	1%	8,899,336	0.532	8,899,336
East Bradford Township	Wastewater Collection and paid for treatment Capacity	5000000	1%	9,236,581	0.5413	18,135,917
Mahoning	Wastewater Collection	4765200	1%	7,991,234	0.5963	26,127,151
Kane	Wastewater Collection and Treatment	17560000	2%	29,015,055	0.6052	55,142,206
Valley	Water Treatment and Distribution System	7325000	1%	11,664,026	0.628	66,806,232
Delaware County Regional Water Quality Authority	Wastewater Collection and Treatment	276500000	32%	399,664,111	0.6918	466,470,343
Valley	Wastewater Collection System	13950000	2%	19,252,333	0.7246	485,722,676
Upper Pottsgrove	Wastewater Collection	13750000	2%	18,460,028	0.7449	504,182,704
East Norriton	Wastewater Collection	21000000	2%	27,461,356	0.7647	531,644,060
Limerick Township	Wastewater Collection and Treatment System	64373378	7%	73,068,377	0.881	604,712,437
Steelton	Water Distribution and Treatment	21750000	3%	23,921,473	0.9092	628,633,910
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	29500000	3%	30,615,410	0.9636	659,249,320
Exeter	Wastewater Collection and Treatment	96000000	11%	99,589,819	0.964	758,839,139
Royersford	Wastewater Collection and Treatment	13000000	2%	13,376,109	0.9719	772,215,248
Cheltenham	Wastewater Collection	50250000	6%	49,940,486	1.0062	822,155,734
Sadsbury	Wastewater Collection	8600000	1%	8,517,587	1.0097	830,673,321
City of McKeesport	Wastewater Collection and Treatment	159000000	18%	156,524,909	1.0158	987,198,230
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	53000000	6%	51,414,555	1.0308	1,038,612,785
		860058378	1	1,038,612,785	0.8281	

Middle OCLD		519,306,393
Bottomvalue of the range containng the Middle Value	0.7449	504,182,704
Top value of the range containing the Middle Value	0.7647	531,644,060
Range containng the middle value	0.0198	27,461,356
Range from bottom value to middle value	0.0109	15,123,689
Median Value	0.7558	

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Analysis - PP/Customer

Property Acquired	Type of System and Attributes		Asset Purchase Agreement (APA) Date	Purchase Price (PP)	Proportion of Purchase Price to Total	Customers	Purchase Price to Customers	Variance to Simple Mean	Variance to Wtd Mean	(Variance to Wtd Mean)^2
City of McKeesport	Wastewater Collection and Treatment	2	2016.67	159.000.000	19%	21.953	7.243	(720)	(3.719)	13.830.961
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	2	2016.59	29.500.000	3%	2.106	14.008	6.045	3.046	9.278.116
Limerick Township	Wastewater Collection and Treatment System	2	2016.88	64.373.378	8%	5.434	11.846	3.883	884	781.456
East Bradford Township	Wastewater Collection and paid for treatment Capacity	2	2017.94	5.000.000	1%	1.248	4.006	(3.957)	(6.956)	48.385.936
Mahoning	Water Distribution System	1	2018.30	4.734.800	1%	1.186	3.992	(3.971)	(6.970)	48.580.900
Mahoning	Wastewater Collection	3	2018.30	4.765.200	1%	1.451	3.284	(4.679)	(7.678)	58.951.684
Cheltenham	Wastewater Collection	3	2018.42	50.250.000	6%	10.500	4.786	(3.177)	(6.176)	38.142.976
Steelton	Water Distribution and Treatment	1	2018.87	21.750.000	3%	2.325	9.355	1.392	(1.607)	2.582.449
Sadsbury	Wastewater Collection	3	2017.00	8.600.000	1%	998	8.617	654	(2.345)	5.499.025
Exeter	Wastewater Collection and Treatment	2	2018.41	93.500.000	11%	9.000	10.389	2.426	(573)	328.329
East Norriton	Wastewater Collection	3	2018.83	21.000.000	2%	4.950	4.242	(3.721)	(6.720)	45.158.400
Kane	Wastewater Collection and Treatment	2	2018.75	17.560.000	2%	2.006	8.754	791	(2.208)	4.875.264
Royersford	Wastewater Collection and Treatment	2	2019.94	13.000.000	2%	1.596	8.145	182	(2.817)	7.935.489
Valley	Water Treatment and Distribution System	1	2019.96	7.325.000	1%	1.459	5.021	(2.942)	(5.941)	35.295.481
Valley	Wastewater Collection System	3	2019.96	13.950.000	2%	1.644	8.485	522	(2.477)	6.135.529
Delaware County Regional Water Quality A	Wastewater Collection and Treatment	2	2020.00	276.500.000	32%	16.473	16.785	8.822	5.823	33.907.329
Upper Pottsgrove	Wastewater Collection	3	2020.33	13.750.000	2%	1.428	9.629	1.666	(1.333)	1.776.889
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	2	2020.71	53.000.000	6%	11.151	4.753	(3.210)	(6.209)	38.551.681
				857.558.378	100%	96.908	8.849			
Simple Mean							7963			
Standard Deviation							3637			
SimpleMedian							8.315			
Simple Mode							16.785			
Weighted Mean							10962			
Standard Deviation							4613			
Wtd Median							4.963			
Wtd Mode							16.785			
Forecast			2019 944064				7.600			
			2021				7.301			

Property Acquired	Type of System and Attributes	Asset Purchase Agreement (APA) Date	Purchase Price (PP)	Proportion of Purchase Price to Total	Customers	Purchase Price to Customers	Accummulated Customers
Mahoning	Wastewater Collection	2018.30	4.765.200	1%	1.451	3.284	1.451
Mahoning	Water Distribution System	2018.30	4.734.800	1%	1.186	3.992	2.637
East Bradford Township	Wastewater Collection and paid for treatment Capacity	2017.94	5.000.000	1%	1.248	4.006	3.885
East Norriton	Wastewater Collection	2018.83	21.000.000	2%	4.950	4.242	8.835
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	2020.71	53.000.000	6%	11.151	4.753	19.986
Cheltenham	Wastewater Collection	2018.42	50.250.000	6%	10.500	4.786	30.486
Valley	Water Treatment and Distribution System	2019.96	7.325.000	1%	1.459	5.021	31.945
City of McKeesport	Wastewater Collection and Treatment	2016.67	159.000.000	18%	21.953	7.243	53.898
Royersford	Wastewater Collection and Treatment	2019.94	13.000.000	2%	1.596	8.145	55.494
Valley	Wastewater Collection System	2019.96	13.950.000	2%	1.644	8.485	57.138
Sadsbury	Wastewater Collection	2017.00	8.600.000	1%	998	8.617	58.136
Kane	Wastewater Collection and Treatment	2018.75	17.560.000	2%	2.006	8.754	60.142
Steelton	Water Distribution and Treatment	2018.87	21.750.000	3%	2.325	9.355	62.467
Upper Pottsgrove	Wastewater Collection	2020.33	13.750.000	2%	1.428	9.629	63.895
Exeter	Wastewater Collection and Treatment	2018.41	96.000.000	11%	9.000	10.667	72.895
Limerick Township	Wastewater Collection and Treatment System	2016.88	64.373.378	7%	5.434	11.846	78.329
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	2016.59	29.500.000	3%	2.106	14.008	80.435
Delaware County Regional Water Quality A	Wastewater Collection and Treatment	2020.00	276.500.000	32%	16.473	16.785	96.908
			860.058.378	100%	96.908	8.875	
Middle OCLD							48.454
Bottom value of the range containing the Middle Value						4.786	31.945
Top value of the range containing the Middle Value						5.021	53.898
Range containing the middle value						235	21.953
Range from bottom value to middle value						177	16.509
Median Value						4.963	

Property Acquired	Type of System and Attributes	Asset Purchase Agreement (APA) Date	Purchase Price (PP)	Proportion of Purchase Price to Total	Customers	Purchase Price to Customers	Accummulated Customers
Water Distribution and Treatment							
Mahoning	Water Distribution System	2018.304795	4,734,800	0.005505208	1186	3992	2637
Valley	Water Treatment and Distribution System	2019.963242	7,325,000	0.008516864	1459	5021	31945
Steelton	Water Distribution and Treatment	2018.871689	21,750,000	0.025288981	2325	9355	62467
Mean						6122.66667	
Median						5021	
Wastewater Collection and Treatment							
East Bradford Township	Wastewater Collection and paid for treatment Capacity	2017.944064	5,000,000	0.005813559	1248	4006	3885
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	2020.713242	53,000,000	0.061623724	11151	4753	19986
City of McKeesport	Wastewater Collection and Treatment	2016.669406	159,000,000	0.184871172	21953	7243	53898
Royersford	Wastewater Collection and Treatment	2019.944064	13,000,000	0.015115253	1596	8145	55494
Kane	Wastewater Collection and Treatment	2018.748858	17,560,000	0.020417219	2006	8754	60142
Exeter	Wastewater Collection and Treatment	2018.410046	96,000,000	0.11162033	9000	10667	72895
Limerick Township	Wastewater Collection and Treatment System	2016.877169	64,373,378	0.074847684	5434	11846	78329
New Garden Twp. SA	Wastewater Collection and Paid for and Owned	2016.586073	29,500,000	0.034299997	2106	14008	80435
Delaware County Regional Water Quality A	Wastewater Collection and Treatment	2020.001598	276,500,000	0.321489805	16473	16785	96908
Mean						9578.55556	
Median						8754	
Wastewater Collection Only							
Mahoning	Wastewater Collection	2018.304795	4,765,200	0.005540554	1451	3284	1451
East Norriton	Wastewater Collection	2018.829452	21,000,000	0.024416947	4950	4242	8835
Cheltenham	Wastewater Collection	2018.419406	50,250,000	0.058426267	10500	4786	30486
Valley	Wastewater Collection System	2019.963242	13,950,000	0.016219829	1644	8485	57138
Sadsbury	Wastewater Collection	2017.00274	8,600,000	0.009999321	998	8617	58136
Upper Pottsgrove	Wastewater Collection	2020.326712	13,750,000	0.015987287	1428	9629	63895
Mean						6507.16667	
Median						6635.5	

Description of Service	Purchase Price per Customer Mean	Median
Water Distribution and Treatment	6,123	5,021
Wastewater Collection and Treatment	9,579	8,754
Wastewater Collection	6,507	6,636
Wastewater Treatment Only	3,072	2,118

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Comparable Sales Approach

Market Sales Analysis - PP/Cash Flow (EBITDA Periods 1-5)

Property Acquired	Type of System and Attributes	Asset Purchase Agreement (APA) Date	Purchase Price (PP)	Proportion of Purchase Price to Total	Cash Flows (EBITDA Periods 1-5)	Purchase Price to Cash Flow	Variance to Simple Mean	Variance to Wtd Mean	Variance Squared	Wtd Mean Cash Flow
City of McKeesport	Wastewater Collection and Treatment	2016.67	159,000,000	19%	7,409,096	21.46	3.98	6.14	37.70	3.98
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	2016.59	29,500,000	3%	1,717,347	17.18	(0.30)	1.86	3.46	0.59
Limerick Township	Wastewater Collection and Treatment System	2016.88	64,373,378	8%	3,542,124	18.17	0.69	2.85	8.12	1.36
East Bradford Township	Wastewater Collection and paid for treatment Capacity	2017.94	5,000,000	1%	283,367	17.64	0.16	2.32	5.38	0.10
Mahoning	Water Distribution System	2018.30	4,734,800	1%	233,922	20.24	2.76	4.92	24.21	0.11
Mahoning	Wastewater Collection	2018.30	4,765,200	1%	233,922	20.37	2.89	5.05	25.50	0.11
Cheltenham	Wastewater Collection	2018.42	50,250,000	6%	4,754,020	10.57	(6.91)	(4.75)	22.56	0.62
Steelton	Water Distribution and Treatment	2018.87	21,750,000	3%	2,278,514	9.55	(7.93)	(5.77)	33.29	0.24
Sadsbury	Wastewater Collection	2017.00	8,600,000	1%	714,645	12.03	(5.45)	(3.29)	10.82	0.12
Exeter	Wastewater Collection and Treatment	2018.41	93,500,000	11%	7,279,978	12.84	(4.64)	(2.48)	6.15	1.40
East Norriton	Wastewater Collection	2018.83	21,000,000	2%	1,265,269	16.60	(0.88)	1.28	1.64	0.41
Kane	Wastewater Collection and Treatment	2018.75	17,560,000	2%	1,039,593	16.89	(0.59)	1.57	2.46	0.35
Royersford	Wastewater Collection and Treatment	2019.94	13,000,000	2%	600,765	21.64	4.16	6.32	39.94	0.33
Valley	Water Treatment and Distribution System	2019.96	7,325,000	1%	398,458	18.38	0.90	3.06	9.36	0.16
Valley	Wastewater Collection System	2019.96	13,950,000	2%	392,972	35.50	18.02	20.18	407.23	0.58
Delaware County Regional Wa	Wastewater Collection and Treatment	2020.00	276,500,000	32%	25,883,282	10.68	(6.80)	(4.64)	21.53	3.44
Upper Pottsgrove	Wastewater Collection	2020.33	13,750,000	2%	845,182	16.27	(1.21)	0.95	0.90	0.26
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	2020.71	53,000,000	6%	2,839,988	18.66	1.18	3.34	11.16	1.15
			857,558,378	100%	61,712,444					
Simple Mean						17.48				
Standard Deviation						5.71				
SimpleMedian						17.41				
Simple Mode						Not Applicable				
Weighted Mean						15.32				
Standard Deviation						5.10				
Wtd Median						18.13				
Wtd Mode						Not Applicable				

Property Acquired	Type of System and Attributes	Asset Purchase Agreement (APA) Date	Purchase Price (PP)	Proportion of Purchase Price to Total	Cash Flows (EBITDA Periods 1-5)	Purchase Price to Cash Flow	Accummulated Cashflow (EBITDA Period 1-5)
Steelton	Water Distribution and Treatment	2018.871689	21750000	0.025288981	2278514	9.55	9.55
Cheltenham	Wastewater Collection	2018.419406	50250000	0.058426267	4754020	10.57	20.12
Delaware County Regional Wa	Wastewater Collection and Treatme	2020.001598	276500000	0.321489805	25883282	10.68	30.8
Sadsbury	Wastewater Collection	2017.00274	8600000	0.009999321	714645	12.03	42.83
Exeter	Wastewater Collection and Treatme	2018.410046	96000000	0.11162033	7279978	13.19	56.02
Upper Pottsgrove	Wastewater Collection	2020.326712	13750000	0.015987287	845182	16.27	72.29
East Norriton	Wastewater Collection	2018.829452	21000000	0.024416947	1265269	16.6	88.89
Kane	Wastewater Collection and Treatme	2018.748858	17560000	0.020417219	1039593	16.89	105.78
New Garden Twp. SA	Wastewater Collection and Paid for	2016.586073	29500000	0.034299997	1717347	17.18	122.96
East Bradford Township	Wastewater Collection and paid for	2017.944064	5000000	0.005813559	283367	17.64	140.6
Limerick Township	Wastewater Collection and Treatme	2016.877169	64373378	0.074847684	3542124.2	18.17	158.77
Valley	Water Treatment and Distribution S	2019.963242	7325000	0.008516864	398458	18.38	177.15
Lower Makefield	Wastewater Collection and Purchas	2020.713242	53000000	0.061623724	2839988	18.66	195.81
Mahoning	Water Distribution System	2018.304795	4734800	0.005505208	233922	20.24	216.05
Mahoning	Wastewater Collection	2018.304795	4765200	0.005540554	233922	20.37	236.42
City of McKeesport	Wastewater Collection and Treatme	2016.669406	159000000	0.184871172	7409096	21.46	257.88
Royersford	Wastewater Collection and Treatme	2019.944064	13000000	0.015115253	600765	21.64	279.52
Valley	Wastewater Collection System	2019.963242	13950000	0.016219829	392972	35.5	315.02
			860058378	1	61712444.2		
Middle Cash Flow							157.51
Bottomvalue of the range containg the Middle Value						17.64	140.60
Top value of the range containing the Middle Value						18.17	158.77
Range containg the middle value						0.53	18.17
Range from bottom value to middle value						0.49	16.91
Median Value						18.13	

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Comparable Sales Approach

Market Sales Analysis - PP/Cash Flow (EBITDA Periods 1-13)

Property Acquired	Type of System and Attributes	Asset Purchase Agreement (APA) Date	Purchase Price (PP)	Proportion of Purchase Price to Total	Cash Flows (EBITDA Periods 1-13)	Purchase Price to Cash Flow	Variance to Simple Mean	Variance to Wtd Mean	Variance Squared	Wtd Mean Cash Flow
City of McKeesport	Wastewater Collection and Treatment	2016.67	159,000,000	19%	11,958,224	13.30	1.68	1.85	3.42	2.47
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	2016.59	29,500,000	3%	2,625,115	11.24	(0.38)	(0.21)	0.04	0.39
Limerick Township	Wastewater Collection and Treatment System	2016.88	64,373,378	8%	5,212,045	12.35	0.73	0.90	0.81	0.93
East Bradford Township	Wastewater Collection and paid for treatment Capacity	2017.94	5,000,000	1%	632,892	7.90	(3.72)	(3.55)	12.60	0.05
Mahoning	Water Distribution System	2018.30	4,734,800	1%	348,409	13.59	1.97	2.14	4.58	0.08
Mahoning	Wastewater Collection	2018.30	4,765,200	1%	348,409	13.68	2.06	2.23	4.97	0.08
Cheltenham	Wastewater Collection	2018.42	50,250,000	6%	4,326,210	11.62	-	0.17	0.03	0.68
Steelton	Water Distribution and Treatment	2018.87	21,750,000	3%	3,893,757	5.59	(6.03)	(5.86)	34.34	0.14
Sadsbury	Wastewater Collection	2017.00	8,600,000	1%	895,128	9.61	(2.01)	(1.84)	3.39	0.10
Exeter	Wastewater Collection and Treatment	2018.41	93,500,000	11%	8,011,315	11.67	0.05	0.22	0.05	1.27
East Norriton	Wastewater Collection	2018.83	21,000,000	2%	2,011,465	10.44	(1.18)	(1.01)	1.02	0.26
Kane	Wastewater Collection and Treatment	2018.75	17,560,000	2%	1,446,948	12.14	0.52	0.69	0.48	0.25
Royersford	Wastewater Collection and Treatment	2019.94	13,000,000	2%	1,209,765	10.75	(0.87)	(0.70)	0.49	0.16
Valley	Water Treatment and Distribution System	2019.96	7,325,000	1%	817,993	8.95	(2.67)	(2.50)	6.25	0.08
Valley	Wastewater Collection System	2019.96	13,950,000	2%	844,046	16.53	4.91	5.08	25.81	0.27
Delaware County Regional Water Q	Wastewater Collection and Treatment	2020.00	276,500,000	32%	28,960,162	9.55	(2.07)	(1.90)	3.61	3.08
Upper Pottsgrove	Wastewater Collection	2020.33	13,750,000	2%	932,042	14.75	3.13	3.30	10.89	0.24
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	2020.71	53,000,000	6%	3,432,340	15.44	3.82	3.99	15.92	0.95
			857,558,378	100%	77,906,265					

Simple Mean	11.62
Standard Deviation	2.67
SimpleMedian	11.65
Simple Mode	Not Applicable
Weighted Mean	11.45
Standard Deviation	2.14
Wtd Median	12.07
Wtd Mode	Not Applicable

Property Acquired	Type of System and Attributes	Asset Purchase Agreement (APA) Date	Purchase Price (PP)	Proportion of Purchase Price to Total	Cash Flows (EBITDA Periods 1-13)	Purchase Price to Cash Flow	Accummulated Cashflow (EBITDA Period 1-13)
Steelton	Water Distribution and Treatment	2018.87	21,750,000	3%	3,893,757	5.59	5.59
East Bradford Township	Wastewater Collection and paid for treatment Capacity	2017.94	5,000,000	1%	632,892	7.90	13.49
Valley	Water Treatment and Distribution System	2019.96	7,325,000	1%	817,993	8.95	22.44
Delaware County Regional Water Q	Wastewater Collection and Treatment	2020.00	276,500,000	32%	28,960,162	9.55	31.99
Sadsbury	Wastewater Collection	2017.00	8,600,000	1%	895,128	9.61	41.60
East Norriton	Wastewater Collection	2018.83	21,000,000	2%	2,011,465	10.44	52.04
Royersford	Wastewater Collection and Treatment	2019.94	13,000,000	2%	1,209,765	10.75	62.79
New Garden Twp. SA	Wastewater Collection and Paid for and Owned Treatment	2016.59	29,500,000	3%	2,625,115	11.24	74.03
Cheltenham	Wastewater Collection	2018.42	50,250,000	6%	4,326,210	11.62	85.65
Exeter	Wastewater Collection and Treatment	2018.41	96,000,000	11%	8,011,315	11.98	97.63
Kane	Wastewater Collection and Treatment	2018.75	17,560,000	2%	1,446,948	12.14	109.77
Limerick Township	Wastewater Collection and Treatment System	2016.88	64,373,378	7%	5,212,045	12.35	122.12
City of McKeesport	Wastewater Collection and Treatment	2016.67	159,000,000	18%	11,958,224	13.30	135.42
Mahoning	Water Distribution System	2018.30	4,734,800	1%	348,409	13.59	149.01
Mahoning	Wastewater Collection	2018.30	4,765,200	1%	348,409	13.68	162.69
Upper Pottsgrove	Wastewater Collection	2020.33	13,750,000	2%	932,042	14.75	177.44
Lower Makefield	Wastewater Collection and Purchased Treatment Capacity	2020.71	53,000,000	6%	3,432,340	15.44	192.88
Valley	Wastewater Collection System	2019.96	13,950,000	2%	844,046	16.53	209.41
			860,058,378	100%	77,906,265		

Middle Cash Flow		104.71
Bottomvalue of the range containing the Middle Value	11.98	97.63
Top value of the range containing the Middle Value	12.14	109.77
Range containng the middle value	0.16	12.14
Range from bottom value to middle value	0.09	7.08
Median Value	12.07	

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Wastewater Collection System and Purchased Treatment Capacity
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Comparable Sales Approach

Financial Basis[1]

	Industry Averages	American & Aqua Averages	American States Water	American Water	Aqua America	California Water	Consol. Water Co.	Middlesex Water	SJW Corp	York	Totals
Price per Share			87.33	123.05	47.08	51.52	16.46	63.56	71.79	46.38	
Book value per share			16.1	34.4	18	15.85	10.95	15.7	31.2	10.4	
Market to Book Equity Ratio			5.42	3.58	2.62	3.25	1.5	4.05	2.3	4.46	
Minimum	1.5	2.62									
Mean	3.40	3.1		3.58	2.62						
Standard Deviation	1.18	0.480									
Weighted Market to Debt Ratio	3.41		20,013.22	112,367.28	34,710.24	11,207.07	371.03	5,481.74	5,874.18	3,135.10	193,159.86
Median	3.415	3.1									
Maximum	5.42	3.58									
Debt (Total) $s millions			475.3	9,143.0	3,086.4	967.9	-	294.0	511.1	100.7	
Outstanding Shares (millions)			36.84	180.78	215.84	48.15	15.03	16.67	28.46	12.98	
Debt per share			12.9	50.58	14.3	20.1	0	17.64	17.96	7.76	
Equity (Total) $s millions			3,217.18	22,244.51	10,161.78	2,480.43	247.35	1,059.52	2,042.89	602.24	
Total Capital (Debt + Equity)			3,692.48	31,387.51	13,248.18	3,448.33	247.35	1,353.52	2,553.99	702.94	56,634.30
			0.07	0.55	0.23	0.06	-	0.02	0.05	0.01	0.99
Market Value per Share (Equity+Debt)			100.23	173.63	61.38	71.62	16.46	81.2	89.75	54.14	
Book Value per Share (Equity+Debt)			29	84.98	32.3	35.95	10.95	33.34	49.16	18.16	
Market to Book (Total Capital) Ratio			3.46	2.04	1.9	1.99	1.5	2.44	1.83	2.98	
Minimum	1.5	1.9									
Mean	2.27	1.97		2.04	1.9						
Standard Deviation	0.61	0.070									
Weighted Market to Book (Debt&Equity) Ratio	2.11		12,775.97	64,030.52	25,171.55	6,862.18	371.03	3,302.58	4,673.80	2,094.75	119,282.38
Variance to Wtd Mean	0.1392		1.35	(0.07)	(0.21)	(0.12)	(0.61)	0.33	(0.28)	0.87	
Median	2.015	1.97									
Maximum	3.46	2.04									

1. Value Line Investment Survey January 10, 2020
2. Value Line dropped Connecticut Water in its January 10, 2020 publication

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East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
As of January 8, 2021

Comparable Sales Approach

Market Sales Data

RowID	Approximate Date	Buyer	Seller	County	Type of Facility	Initial Purchase Price	Final Purchase Price[1]	Number of Total Customers	Relationship to the passage of Section 1329
1	9/1/2016	PA American Water	City of McKeesport	Allegheny	Wastewater Collection and Treatment	156,000,000	159,000,000	21,953	Post
2	8/1/2016	Aqua PA	New Garden Twp. SA	Chester	Wastewater Collection and Paid for and Owned Treatment	29,500,000	29,500,000	2,106	Post
3	11/16/2016	Aqua PA	Limerick Township	Montgomery	Wastewater Collection and Treatment System	75,100,000	64,373,378	5,434	Post
4	12/10/2017	Aqua PA	East Bradford Township	Chester	Wastewater Collection and paid for treatment	5,000,000	5,000,000	1,248	Post
5	4/20/2018	SUEZ	Mahoning	Carbon	Water Distribution System	4,734,800	4,734,800	1,186	Post
6	4/20/2018	SUEZ	Mahoning	Carbon	Wastewater Collection	4,765,200	4,765,200	1,451	Post
7	6/1/2018	Aqua PA	Cheltenham	Montgomery	Wastewater Collection	50,250,000	50,250,000	10,500	Post
8	11/14/2018	PA American Water	Steelton	Dauphin	Water Distribution and Treatment	22,500,000	21,750,000	2,325	Post
9	1/1/2017	PA American Water	Sadsbury	Chester	Wastewater Collection	9,250,000	8,600,000	998	Post
10	5/28/2018	PA American Water	Exeter	Berks	Wastewater Collection and Treatment	96,000,000	93,500,000	9,000	Post
11	10/29/2018	Aqua PA	East Norriton	Montgomery	Wastewater Collection	21,000,000	21,000,000	4,950	Post
12	9/30/2018	PA American	Kane	McKean	Wastewater Collection and Treatment	17,560,000	17,560,000	2,006	Post
13	12/10/2019	PA American	Royersford	Montgomery	Wastewater Collection and Treatment	13,000,000	13,000,000	1,596	Post
14	12/17/2019	PA American	Valley	Chester	Water Treatment and Distribution System	7,325,000	7,325,000	1,459	Post
15	12/17/2019	PA American	Valley	Chester	Wastewater Collection System	13,950,000	13,950,000	1,644	Post
16	12/31/2019	Aqua PA	Delaware County Regional Wa	Delaware	Wastewater Collection and Treatment	276,500,000	276,500,000	16,473	Post
17	4/28/2020	PA American Water	Upper Pottsgrove	Montgomery	Wastewater Collection	13,750,000	13,750,000	1,428	Post
18	9/17/2020	Aqua PA	Lower Makefield	Bucks	Wastewater Collection and Purchased Treatment Capacity	53,000,000	53,000,000	11,151	Post

Water and Wastewater General Information

Appraisal Work Papers

Cost Indices

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Water and Wastewater General Information
Appraisal Work Papers

Cost Indices

Handy Whitman Index of Public System Construction Costs
Water Industry – Northeastern United States

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Bulletin No. 193

1912 to January 1, 2021

The Handy-Whitman Index® of Public Utility Construction Costs™

Trends of Construction Costs

COMPILED & PUBLISHED BY

Whitman, Requardt & Associates, LLP

Engineers, Architects and Planners

801 South Caroline Street

Baltimore, Maryland 21231

410-235-3450

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ISSN 1092-955X

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TRENDS OF PUBLIC UTILITY CONSTRUCTION COSTS

GEOGRAPHIC REGIONS

Tradition of Quality

The Handy-Whitman Index of Public Utility Construction Costs has been published continuously since 1924. Formerly the Handy Index, Bulletin Nos. 1 through 15 were developed by William W. Handy of Baltimore who had wide valuation experience in public utilities. *He believed that valuation studies should not be confined to rate cases but should be kept alive to the benefit of the utility industry.* He began publishing index numbers for electric and gas construction cost trends. Carrying on with the *tradition of quality*, after Mr. Handy's death, we continued publication for his estate beginning with Bulletin 16. Then, January 1, 1950, Whitman, Requardt and Associates, LLP purchased rights to the publication and have since been the sole publishers.

The name Handy-Whitman Index was adopted for Bulletin No. 53 and succeeding issues to combine the names of Mr. Handy and Ezra B. Whitman, a well-known valuation engineer. In 1957 an index of water utility construction costs was added. Mr. Whitman was a consultant on the publication of the Index until his death in 1963.

Whitman, Requardt and Associates, LLP

Ezra B. Whitman, a well-known valuation engineer was one of the founders of our firm. Major Whitman, as he was known from his World War I service, had already made a name for himself. Prior to the founding of the firm in 1915, Major Whitman had been President and Chief Engineer of the Water Board of the City of Baltimore. He designed the first rapid sand filtration plant serving a major city while he was the Baltimore Water Engineer. He was also president of the American Society of Civil Engineers and of the American Institute of Consulting Engineers and a chairman of the Public Service Commission of Maryland.

The Handy-Whitman Index is prepared especially for electric, gas and water utilities and is the only known publication of its kind available to the public. The list of subscribers is international and includes operating utilities, regulatory bodies, valuation engineers, equipment industries, insurance companies and reference libraries.

Tradition of Quality Continued

Since 1915, Whitman, Requardt and Associates, LLP, has been an independent consulting engineering firm organized to serve government, industry and private enterprise.

The firm has steadily expanded its engineering capabilities, providing complete services for civil, sanitary, structural, mechanical and electrical engineering and architectural projects from job inception through construction management. Construction cost data from utility projects of all types are available from design and valuation assignments. The staff is composed of specialists in these and related disciplines who bring a diverse professional and academic expertise to each assignment. A full-time staff is maintained specifically for preparing the Handy-Whitman Index.

Methods of Preparation of Indexes

An index number is a percentage ratio between the cost of an item at any stated time and its cost at a base period, or:

$$\text{Index Number} = \frac{\text{cost at stated time}}{\text{cost at base period}} \times 100$$

Index numbers have been prepared for many items, including wage rates, cost-of-living, material and equipment costs, and financial transactions. In the Handy-Whitman Index, index numbers have been developed for Building Construction, Electric Utility Construction, Gas Utility Construction and Water Utility Construction. Prices of basic materials such as cement, sand, gravel, cast iron pipe, wire, etc., are obtained from publications such as Engineering News-Record and checked against prices actually being paid for such materials. Labor cost trends are computed from labor rates obtained from sources such as the Construction Labor Research Council. Prices and cost trends of equipment are obtained from nationally recognized manufacturers, and operating utilities.

Handy-Whitman Index numbers are developed from wage rates and prices prevailing on January 1 and July 1 each year. The index numbers are generally based on 1973 = 100, although those items of recent origin are based on a later year.

The proportions of basic materials, labor, equipment and other cost components used in the Handy-Whitman Index are based on analyses developed during valuation and design assignments and on data furnished by utilities and industrial sources willing to assist with the Index. These data are reviewed continuously, and weightings and components are revised as required. This review assures that the indexes published reflect current construction practice.

Geographic Regions

To reflect differing cost trends throughout the 48 contiguous states, the index has been divided into six geographical regions of similar characteristics. They are shown on the accompanying map.

Use of Index Numbers

Handy-Whitman Index numbers have been widely used to trend earlier valuations and original cost records to estimate reproduction cost at prices prevailing at a certain date. The use of indexes for an appropriate property item or group will provide a reliable guide to changes in cost. Cost trends are given for all the important items of property. The electric and gas groups are arranged by the Federal Energy Regulatory Commission Uniform System of Accounts. The water property accounts are arranged to follow the classification of the National Association of Regulatory Utility Commissioners and the American Water Works Association.

The Handy-Whitman Index will furnish a yardstick for the fluctuations in value of property which will be satisfactory for many purposes. In rate cases, when a more exact determination of value is desired, however, the Index must be used carefully. Average prices and cost trends are used to develop the Index, and any direct application of cost trends without checking with actual local experience may not be accepted without controversy. When local experience is compared with the index and the correlation between the two trends is determined, the result is satisfactory. Costs trended by such a method are used to assist in establishing a rate base.

Indexes in these bulletins are used to trend earlier valuations or original cost records for insurance purposes.

The Handy-Whitman Index has a general application in valuations of all types of property. The building construction cost trends may be used wherever similar items of property are to be compared. Many of the other trends may be used for related items in other industries because of their similarity.

State-of-the-art changes often affect costs independently of inflation. New regulatory and environmental requirements, changes in work rules and improved design standards, for instance, increase construction costs even though the price of wages, materials and equipment may be static. Trended construction costs will not reflect such changes. However, trended costs are a reasonably accurate measure of the cost of reproducing actual plant.

Although every effort is made to maintain accuracy, Whitman, Requardt and Associates, LLP disclaim any responsibility for the use of these indexes, because local conditions may vary.

No guarantee or warranty of any kind is made in the sale of the Handy-Whitman Index. Published numbers are occasionally subject to change based upon receipt of new or different information. These numbers will be bolded.

Further inquiries on electric, gas and water indexes should be addressed to Whitman, Requardt and Associates, LLP.

Total Electric Plant and Function

Three indexes are provided for total plant. The first is for all steam generation and the other two for weighted combinations of steam and nuclear, and steam and hydro generation. Indexes are also provided for each function.

Indexes are not maintained for plant accounts 323,324,325,341,345 and 346. We believe that indexes for comparable accounts in other functions are sufficiently accurate for these accounts.

The indexes for total nuclear production and total other production incorporate comparable indexes from the steam production function for the accounts not listed.

Value of Index Numbers

We believe that present-day reproduction cost of any property can be calculated more accurately using index numbers than by repricing a complete inventory.

Trending the controlling items of property in any utility by the index method saves time and effort in arriving at a valuation. Analyzing and determining cost trends for all of the great numbers of articles of plant that represent only a very small proportion of the value of the utility is not necessary. They may be assumed to follow in general the trend of the controlling items, and the fluctuations in value above or below the trends of the controlling items will tend to offset each other and have a very slight effect on the total value.

Comments on Bulletin No. 193

During the twelve-month period ending January 1, 2021, the average index of all geographical regions for Total Gas Plant increased 0.9%, and the comparable index for Electric Plant-All Steam Generation increased 4.5%.

May 2021
Whitman, Requardt and Associates, LLP

Cost Trends Of

Building Construction

COST TREND TABLES
1912 to January 1, 2021

B-1

COST TRENDS OF BUILDING CONSTRUCTION

NORTH ATLANTIC REGION (1973=100)

Line	CONSTRUCTION, MATERIAL, AND LABOR	COST INDEX NUMBERS															
		1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
1	**Building Construction**																
2	Reinf. Conc. Bldg. Construction	8	8	8	8	12	18	19	19	20	15	14	17	17	17	17	16
3	Brick Building Construction	8	8	8	9	11	15	17	19	21	17	16	18	19	18	18	18
4	Structural Steel Erected	9	9	9	8	16	29	26	22	22	16	15	19	19	17	17	16
5	Reinf. Concrete (Ready-Mix)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7																	
8	**Building Material**																
9	Ready-Mix Concrete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Lumber for Reinf. Concrete	7	7	7	7	9	13	19	19	20	14	13	15	19	19	15	15
11	Steel Bars for Reinf. Concrete	15	15	15	17	34	47	37	35	37	24	22	28	29	27	25	24
12	Common Brick	10	10	10	14	16	19	20	27	34	31	30	33	30	28	28	28
13	Concrete Block	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14																	
15	**Labor**																
16	Building Trades Labor	6	6	6	6	6	7	8	10	11	11	11	12	13	14	15	15
17	Heavy Constr. Trades Labor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Labor for Reinf. Concrete	5	5	5	5	5	6	8	10	11	9	9	10	11	11	11	11
19	Common Labor	4	4	4	4	5	5	8	10	11	9	8	9	9	9	9	9
20	Electricians	5	5	5	6	6	6	8	9	10	11	11	11	12	13	14	14
21	Pipefitters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	Plumbers	6	6	6	6	6	7	8	9	9	11	11	12	12	13	14	14
23																	

Line	CONSTRUCTION, MATERIAL, AND LABOR	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943
1	**Building Construction**																
2	Reinf. Conc. Bldg. Construction	16	16	15	14	12	13	15	15	15	16	16	16	17	18	20	20
3	Brick Building Construction	18	17	17	16	14	14	16	16	16	17	17	17	17	19	20	20
4	Structural Steel Erected	16	16	15	13	11	12	14	15	15	17	15	15	15	19	20	20
5	Reinf. Concrete (Ready-Mix)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Reinf. Concrete (Plant-Mix)	16	16	15	14	12	13	15	15	15	17	17	17	17	18	19	19
7																	
8	**Building Material**																
9	Ready-Mix Concrete	-	-	-	-	-	-	32	32	32	33	33	32	31	31	32	33
10	Lumber for Reinf. Concrete	15	15	14	12	10	12	16	13	13	15	15	15	16	19	21	22
11	Steel Bars for Reinf. Concrete	24	25	22	20	20	21	24	23	25	31	29	28	27	28	28	28
12	Common Brick	25	23	20	20	19	19	22	20	20	20	20	20	20	21	22	22
13	Concrete Block	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14																	
15	**Labor**																
16	Building Trades Labor	15	15	15	15	14	12	13	13	13	15	15	15	16	17	18	18
17	Heavy Constr. Trades Labor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Labor for Reinf. Concrete	11	11	10	10	9	9	11	11	11	12	13	13	14	14	14	15
19	Common Labor	9	9	9	9	8	6	8	9	9	10	10	11	11	12	12	13
20	Electricians	14	15	15	16	16	14	14	14	15	16	16	17	17	18	19	19
21	Pipefitters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	Plumbers	14	15	15	15	13	13	14	14	14	15	16	16	17	17	18	18
23																	

B-1

COST TRENDS OF BUILDING CONSTRUCTION

NORTH ATLANTIC REGION (1973=100)

Line	CONSTRUCTION, MATERIAL, AND LABOR	COST INDEX NUMBERS															
		1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
1	**Building Construction**																
2	Reinf. Conc. Bldg. Construction	20	20	24	28	32	34	35	37	38	40	42	44	48	52	53	55
3	Brick Building Construction	21	21	24	28	32	34	35	37	38	39	41	42	46	49	50	52
4	Structural Steel Erected	20	20	24	30	37	39	41	43	43	47	48	50	59	66	67	67
5	Reinf. Concrete (Ready-Mix)	-	-	-	-	-	-	-	-	35	37	39	41	43	46	48	50
7																	
8	**Building Material**																
9	Ready-Mix Concrete	33	33	35	39	44	45	46	47	49	50	54	57	60	63	66	66
10	Lumber for Reinf. Concrete	23	23	29	33	38	34	37	37	38	36	39	42	44	45	44	47
11	Steel Bars for Reinf. Concrete	28	28	30	34	37	43	45	47	48	51	53	56	61	68	70	72
12	Common Brick	23	27	31	33	38	42	43	47	47	48	50	51	52	53	54	54
13	Concrete Block	-	-	-	-	-	56	58	62	63	63	62	67	69	70	69	73
14																	
15	**Labor**																
16	Building Trades Labor	18	19	21	23	26	27	28	31	31	33	34	36	37	39	41	43
17	Heavy Constr. Trades Labor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Labor for Reinf. Concrete	15	16	18	22	24	25	26	27	29	30	32	33	35	37	39	41
19	Common Labor	13	14	17	19	21	23	24	25	27	28	30	31	33	35	37	40
20	Electricians	19	19	20	23	25	27	28	30	32	33	34	35	37	38	41	42
21	Pipefitters	-	-	-	-	-	26	27	28	29	31	32	33	35	35	39	41
22	Plumbers	18	18	19	22	25	27	28	29	30	32	34	35	37	38	40	41
23																	

Line	CONSTRUCTION, MATERIAL, AND LABOR	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
1	**Building Construction**																
2	Reinf. Conc. Bldg. Construction	55	54	55	55	57	58	59	62	65	70	75	84	91	100	121	134
3	Brick Building Construction	53	52	53	54	56	57	59	61	64	68	74	84	91	100	118	127
4	Structural Steel Erected	66	62	62	62	63	63	65	66	69	74	77	83	89	100	140	161
5	Reinf. Concrete (Ready-Mix)	51	52	53	54	55	57	59	61	64	69	77	88	94	100	111	119
6	Reinf. Concrete (Plant-Mix)	49	48	50	51	52	53	56	58	61	66	73	83	91	100	108	115
7																	
8	**Building Material**																
9	Ready-Mix Concrete	66	66	66	65	64	64	65	65	68	73	82	91	94	100	112	123
10	Lumber for Reinf. Concrete	47	39	41	40	39	38	41	42	46	53	53	63	75	100	93	91
11	Steel Bars for Reinf. Concrete	72	72	72	72	74	81	82	81	81	81	84	91	91	100	157	156
12	Common Brick	56	56	56	57	58	58	60	62	65	65	68	78	84	100	123	126
13	Concrete Block	68	70	70	70	70	67	70	72	75	77	81	90	98	100	109	113
14																	
15	**Labor**																
16	Building Trades Labor	45	46	48	50	52	54	56	59	62	68	76	87	96	100	108	115
17	Heavy Constr. Trades Labor	-	45	47	48	50	53	56	58	61	67	76	86	96	100	107	116
18	Labor for Reinf. Concrete	43	45	47	49	51	53	56	58	62	67	77	88	96	100	108	116
19	Common Labor	42	44	45	47	49	52	55	58	61	66	75	88	97	100	109	117
20	Electricians	43	45	48	49	51	53	55	57	60	64	72	82	91	100	108	117
21	Pipefitters	41	44	45	45	48	50	52	55	57	62	70	85	97	100	107	114
22	Plumbers	43	44	46	48	49	51	53	56	58	64	71	86	96	100	107	114
23																	

B-1

COST TRENDS OF BUILDING CONSTRUCTION

NORTH ATLANTIC REGION (1973=100)

Line	CONSTRUCTION, MATERIAL, AND LABOR	COST INDEX NUMBERS															
		1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1	**Building Construction**																
2	Reinf. Conc. Bldg. Construction	134	139	150	167	184	190	189	196	211	222	229	234	246	258	262	257
3	Brick Building Construction	130	136	148	164	183	192	197	206	217	225	233	239	252	265	271	272
4	Structural Steel Erected	153	154	170	193	225	227	202	202	225	240	249	255	272	286	286	261
5	Reinf. Concrete (Ready-Mix)	124	131	140	154	166	176	191	201	210	220	225	229	238	244	251	260
7																	
8	**Building Material**																
9	Ready-Mix Concrete	126	133	143	163	185	207	226	227	235	248	245	252	254	244	250	255
10	Lumber for Reinf. Concrete	106	118	130	148	139	138	135	143	144	140	140	146	143	148	147	145
11	Steel Bars for Reinf. Concrete	145	147	166	206	215	216	203	190	198	202	205	205	227	232	222	199
12	Common Brick	130	136	159	190	232	247	255	257	256	246	258	270	292	320	320	316
13	Concrete Block	116	120	139	185	210	228	260	260	262	278	285	287	285	301	288	288
14																	
15	**Labor**																
16	Building Trades Labor	122	129	135	143	152	164	184	199	212	221	229	234	245	256	268	285
17	Heavy Constr. Trades Labor	123	131	137	146	155	165	184	199	210	220	229	233	244	255	264	279
18	Labor for Reinf. Concrete	122	130	137	147	157	166	184	198	210	220	227	232	242	253	262	277
19	Common Labor	124	133	141	152	163	172	190	204	214	223	231	234	243	254	265	280
20	Electricians	124	129	135	143	150	164	186	207	224	234	239	244	261	271	280	298
21	Pipefitters	122	131	135	143	154	170	192	207	219	228	236	242	248	263	276	290
22	Plumbers	122	131	136	141	152	168	191	205	217	226	235	241	242	257	279	294
23																	

Line	CONSTRUCTION, MATERIAL, AND LABOR	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005 Jan. 1	2005 Jul. 1
1	**Building Construction**															
2	Reinf. Conc. Bldg. Construction	262	279	298	305	311	322	324	330	342	**354**	363	371	403	415	422
3	Brick Building Construction	278	290	304	310	315	328	337	345	359	**372**	383	391	414	425	431
4	Structural Steel Erected	260	278	305	317	325	334	336	344	360	**372**	375	385	433	443	452
5	Reinf. Concrete (Ready-Mix)	268	279	291	296	304	312	320	327	336	**350**	364	372	389	402	409
6	Reinf. Concrete (Plant-Mix)	247	265	281	279	286	298	296	299	304	**316**	324	328	351	364	373
7																
8	**Building Material**															
9	Ready-Mix Concrete	257	262	270	281	295	286	301	307	315	**332**	350	356	344	351	371
10	Lumber for Reinf. Concrete	150	193	227	196	206	218	186	182	168	**179**	164	153	182	182	215
11	Steel Bars for Reinf. Concrete	194	212	234	236	236	250	246	229	225	**224**	221	243	296	348	360
12	Common Brick	315	310	313	315	311	335	369	384	412	**426**	426	427	429	429	439
13	Concrete Block	288	263	262	258	258	285	306	332	354	**365**	381	384	394	406	406
14																
15	**Labor**															
16	Building Trades Labor	296	307	318	326	331	344	353	362	376	**392**	412	424	442	458	458
17	Heavy Constr. Trades Labor	291	300	311	319	325	337	348	358	372	**386**	402	411	430	446	446
18	Labor for Reinf. Concrete	289	297	308	314	320	333	343	354	366	**382**	400	407	426	439	439
19	Common Labor	293	303	315	315	327	338	349	359	376	**389**	400	407	421	428	428
20	Electricians	309	324	336	343	353	365	377	390	401	**416**	441	454	475	497	497
21	Pipefitters	305	317	323	335	342	352	361	374	388	**409**	423	435	470	488	488
22	Plumbers	305	320	330	339	348	355	363	368	385	**405**	425	438	455	469	469
23																

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COST TRENDS OF BUILDING CONSTRUCTION

NORTH ATLANTIC REGION (1973=100)

Line	CONSTRUCTION, MATERIAL, AND LABOR	COST INDEX NUMBERS															
		2006		2007		2008		2009		2010		2011		2012		2013	
		Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1
1	**Building Construction**																
2	Reinf. Conc. Bldg. Construction	431	436	446	472	493	501	505	486	497	498	515	515	524	527	537	534
3	Brick Building Construction	441	443	457	472	492	497	506	494	506	507	521	518	530	532	542	539
4	Structural Steel Erected	462	471	480	534	550	563	555	509	511	511	531	532	538	542	558	553
5	Reinf. Concrete (Ready-Mix)	414	418	434	446	469	476	484	484	500	506	516	517	525	526	527	527
7																	
8	**Building Material**																
9	Ready-Mix Concrete	371	379	382	425	425	425	429	430	430	437	431	439	441	441	436	436
10	Lumber for Reinf. Concrete	195	195	150	164	157	162	162	159	158	149	147	152	150	165	170	168
11	Steel Bars for Reinf. Concrete	324	361	380	420	398	490	334	326	358	416	417	406	393	391	365	356
12	Common Brick	439	439	457	457	460	460	460	453	453	453	453	434	448	451	458	452
13	Concrete Block	428	450	460	386	390	390	390	390	443	432	430	432	428	428	445	445
14																	
15	**Labor**																
16	Building Trades Labor	478	478	499	499	527	527	550	550	572	572	590	590	607	607	619	619
17	Heavy Constr. Trades Labor	459	459	483	483	517	517	542	542	564	564	584	584	596	596	605	605
18	Labor for Reinf. Concrete	452	452	476	476	512	512	541	541	562	562	579	579	591	591	598	598
19	Common Labor	436	436	475	475	510	510	550	550	572	572	590	590	604	604	604	604
20	Electricians	512	512	543	543	564	564	582	582	615	615	632	632	665	665	674	674
21	Pipefitters	514	514	526	526	566	566	590	590	607	607	642	642	658	658	668	668
22	Plumbers	502	502	520	520	545	545	580	580	597	597	610	610	623	623	634	634
23																	

Line	CONSTRUCTION, MATERIAL, AND LABOR	2014		2015		2016		2017		2018		2019		2020		2021	
		Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1
1	**Building Construction**																
2	Reinf. Conc. Bldg. Construction	546	549	557	549	552	558	569	576	589	611	611	605	617	613	653	
3	Brick Building Construction	550	552	585	580	586	589	604	608	633	647	647	643	664	662	692	
4	Structural Steel Erected	561	567	568	555	549	556	561	569	579	617	618	604	609	594	652	
5	Reinf. Concrete (Ready-Mix)	541	543	556	554	564	567	581	585	602	609	611	608	625	629	650	
6	Reinf. Concrete (Plant-Mix)	482	482	497	490	497	505	519	527	541	561	553	551	565	568	599	
7																	
8	**Building Material**																
9	Ready-Mix Concrete	441	452	455	461	471	471	481	485	488	488	489	488	492	514	521	
10	Lumber for Reinf. Concrete	174	170	188	182	178	204	222	240	244	309	255	249	243	259	330	
11	Steel Bars for Reinf. Concrete	363	373	368	326	288	307	316	349	342	393	413	381	333	325	342	
12	Common Brick	449	449	617	617	618	618	636	637	725	725	709	709	757	757	765	
13	Concrete Block	444	499	505	485	483	429	427	411	411	443	429	461	462	461	463	
14																	
15	**Labor**																
16	Building Trades Labor	636	636	646	646	660	660	678	678	696	696	707	707	732	732	755	
17	Heavy Constr. Trades Labor	620	620	640	640	659	659	673	673	696	696	705	705	732	732	754	
18	Labor for Reinf. Concrete	616	616	633	633	651	651	666	666	690	690	693	693	723	723	745	
19	Common Labor	620	620	644	644	661	661	674	674	705	705	712	712	750	750	777	
20	Electricians	691	691	702	702	724	724	731	731	753	753	775	775	787	787	815	
21	Pipefitters	694	694	704	704	717	717	738	738	755	755	768	768	780	780	796	
22	Plumbers	655	655	668	668	674	674	696	696	716	716	734	734	751	751	776	
23																	

M

UTILITY PLANT MATERIALS

ALL REGIONS (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	COST INDEX NUMBERS													
		1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
1	Boilers	6	6	6	7	8	13	17	15	16	14	12	14	15	15
2	Coal & Ash Handling Equipment	12	12	12	12	19	31	29	20	28	24	21	23	23	21
3	Pumps	9	9	9	12	14	16	18	18	18	17	16	16	16	17
4	Steam Pipe	17	17	17	12	18	39	44	35	37	35	34	36	37	37
5	Cranes	6	6	6	7	7	7	7	8	8	9	9	9	9	10
6	Regulators	32	32	32	32	32	39	47	45	49	50	49	50	53	52
7	Switchboards	20	20	20	20	21	23	26	35	44	49	43	40	43	43
8	Power Transformers	23	23	23	23	23	32	41	41	49	48	42	43	46	46
9	Oil Switches	27	27	27	27	27	30	38	45	49	53	50	50	51	51
10	Motors	21	21	21	21	21	28	31	37	42	43	34	29	29	29
11	Line Transformers	48	48	48	48	48	51	69	72	77	79	69	67	69	68
12	Meters-Electrric	37	37	37	37	37	41	46	51	53	57	53	50	50	48
13	Treated Pine Poles	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Standard Cross Arms	7	7	7	7	7	9	10	12	12	11	12	12	12	13
15	Standard Galv. Steel Guy Wire	12	12	12	14	15	19	22	23	22	22	21	21	20	20
16	Fibre Conduit	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	Plastic Conduit	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Mercury Luminaires w/Standard	-	-	-	-	-	-	-	-	-	-	-	-	27	26
19	Power Wire & Control Cable	23	23	23	30	36	42	48	51	49	37	29	33	31	34
20	Overhead Conductor-Transmission	28	26	23	25	45	49	54	53	51	31	28	32	31	32
21	Underground Conductor-Transmission	15	13	12	12	19	22	25	27	26	21	21	26	23	23
22	Overhead Conductor-Distribution	25	23	20	23	40	43	48	47	45	28	25	28	28	29
23	Underground Conductor-Distribution	16	15	14	14	22	25	28	30	29	22	22	28	25	25
24	Service Cable	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	Condensers & Tubes	7	7	7	7	11	13	20	21	21	20	17	17	18	18
26	Turbo-Generators	9	9	9	9	13	13	17	18	21	23	20	19	19	19
27															
28	Gas Compressors	18	18	18	18	18	19	25	25	27	26	25	25	25	25
29	Gas Transmission Line Pipe	23	24	23	24	34	44	44	45	44	43	40	41	43	43
30	Steel Distribution Pipe	15	16	16	17	24	36	40	36	34	32	28	30	31	31
31	Plastic Pipe	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	Meters-Gas	17	18	18	18	19	23	33	33	32	33	30	30	28	27
33	House Regulators	24	25	25	25	26	31	47	46	45	45	41	41	39	37
34															
35	Cast Iron Pipe	16	17	16	17	23	40	44	48	53	44	39	45	47	40
36	Cast Iron Fittings	10	10	10	13	13	24	27	25	34	29	25	25	25	27
37	Ductile Iron Pipe	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	Chemical Feeders-Small	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Chemical Feeders-Large	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	Gate Valves	15	15	15	17	17	17	24	24	30	28	25	29	29	27
41	Meter Yokes	24	24	24	24	24	24	29	29	31	31	29	29	29	29
42	Corporation Stops	27	27	27	27	27	27	25	25	25	25	25	25	24	24
43	Curb Stops	20	20	20	20	20	20	22	22	22	22	22	22	21	21
44	Hydrants	23	23	23	23	23	23	23	24	27	27	23	26	27	26
45	Meters-Water	23	23	23	23	26	29	35	37	37	37	37	37	37	37
46															
47															
48															
49															
50	Construction Equipment	-	-	-	11	15	19	26	28	30	22	19	23	21	22
51															
52															
53															
54															
55															
56															

M

UTILITY PLANT MATERIALS

ALL REGIONS (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	COST INDEX NUMBERS													
		1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
1	Boilers	15	15	14	14	14	14	12	12	15	15	16	18	19	20
2	Coal & Ash Handling Equipment	21	20	20	20	19	17	16	17	20	20	20	21	20	20
3	Pumps	19	19	19	20	20	19	18	18	19	19	19	21	22	22
4	Steam Pipe	37	37	37	36	36	36	35	32	31	31	32	36	35	35
5	Cranes	10	10	11	11	11	11	10	10	10	10	10	10	10	11
6	Regulators	42	41	40	41	42	43	42	43	48	48	48	52	53	53
7	Switchboards	44	44	45	48	48	47	43	43	48	48	48	52	53	53
8	Power Transformers	46	43	41	42	40	40	39	40	46	47	47	50	52	52
9	Oil Switches	51	49	49	51	53	52	51	55	59	59	59	63	65	65
10	Motors	29	28	28	29	29	29	29	30	33	32	32	32	32	32
11	Line Transformers	63	59	58	62	61	59	57	59	61	62	62	66	67	67
12	Meters-Electrric	48	48	48	48	48	48	48	50	54	55	55	55	55	55
13	Treated Pine Poles	28	27	26	25	24	23	21	22	23	24	23	24	23	23
14	Standard Cross Arms	10	9	9	9	9	8	8	9	10	11	11	12	12	12
15	Standard Galv. Steel Guy Wire	18	17	16	16	15	14	14	15	17	17	17	18	19	18
16	Fibre Conduit	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	Plastic Conduit	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Mercury Luminaires w/Standard	26	23	26	27	28	29	29	29	30	30	30	30	30	30
19	Power Wire & Control Cable	33	30	27	29	26	21	19	23	26	27	29	35	29	26
20	Overhead Conductor-Transmission	29	27	32	38	26	22	19	23	28	27	29	32	27	27
21	Underground Conductor-Transmission	22	21	23	27	20	19	19	21	23	23	25	27	24	24
22	Overhead Conductor-Distribution	26	24	28	34	23	19	17	20	25	24	26	28	24	24
23	Underground Conductor-Distribution	24	22	25	29	22	21	20	22	25	25	27	29	26	26
24	Service Cable	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	Condensers & Tubes	18	16	15	19	20	19	18	19	21	24	24	27	27	27
26	Turbo-Generators	19	19	20	21	22	22	21	22	25	25	26	29	30	30
27															
28	Gas Compressors	24	23	24	24	24	24	24	24	24	24	23	23	23	23
29	Gas Transmission Line Pipe	43	43	43	43	43	43	42	35	35	35	34	35	34	34
30	Steel Distribution Pipe	31	31	31	31	30	29	29	26	29	29	26	28	26	25
31	Plastic Pipe	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	Meters-Gas	27	27	27	27	27	26	25	25	25	25	25	26	26	26
33	House Regulators	37	38	38	38	37	36	34	34	34	34	34	35	37	40
34															
35	Cast Iron Pipe	40	34	29	30	30	28	25	30	34	35	36	39	39	38
36	Cast Iron Fittings	27	25	25	25	24	21	19	20	22	23	23	23	24	24
37	Ductile Iron Pipe	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	Chemical Feeders-Small	18	19	22	22	20	15	17	17	17	17	17	17	17	17
39	Chemical Feeders-Large	-	-	-	-	-	-	-	-	-	12	12	13	13	13
40	Gate Valves	26	26	28	28	28	24	23	23	22	22	23	25	26	26
41	Meter Yokes	29	29	29	29	29	29	28	28	28	28	28	28	29	29
42	Corporation Stops	24	24	24	24	24	24	24	22	21	21	21	21	21	21
43	Curb Stops	21	21	21	21	21	21	21	21	21	21	21	21	21	21
44	Hydrants	24	24	25	25	25	23	23	23	20	22	22	24	25	25
45	Meters-Water	37	37	37	37	37	37	37	35	26	26	26	31	32	32
46															
47															
48															
49															
50	Construction Equipment	21	22	21	22	22	20	19	19	20	21	21	23	23	23
51															
52															
53															
54															
55															
56															

M

UTILITY PLANT MATERIALS

ALL REGIONS (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	COST INDEX NUMBERS													
		1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953
1	Boilers	20	21	21	21	21	21	22	25	31	36	37	41	41	43
2	Coal & Ash Handling Equipment	20	23	25	25	24	24	29	35	42	44	47	50	51	55
3	Pumps	22	23	24	24	24	24	26	32	35	37	40	47	47	48
4	Steam Pipe	35	35	35	35	35	35	37	42	45	50	52	53	53	55
5	Cranes	11	11	11	11	12	17	20	23	26	29	31	33	35	38
6	Regulators	53	53	53	53	52	51	57	63	65	69	70	74	74	81
7	Switchboards	53	53	51	50	45	44	50	58	59	59	62	72	72	77
8	Power Transformers	52	52	51	49	46	45	50	60	62	67	70	78	78	83
9	Oil Switches	65	65	65	65	59	58	67	78	79	79	89	102	102	110
10	Motors	31	32	33	33	31	32	37	45	46	49	53	63	63	66
11	Line Transformers	67	69	68	64	64	64	72	90	93	96	100	113	113	121
12	Meters-Electrric	55	55	55	55	55	55	61	69	74	80	80	80	78	81
13	Treated Pine Poles	23	24	27	28	33	39	37	41	43	43	42	44	46	49
14	Standard Cross Arms	13	16	17	19	22	23	25	35	37	34	36	41	42	42
15	Standard Galv. Steel Guy Wire	17	17	17	18	18	18	19	29	35	38	40	42	43	51
16	Fibre Conduit	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	Plastic Conduit	-	-	-	-	-	-	-	-	-	-	-	-	179	170
18	Mercury Luminaires w/Standard	30	30	31	31	31	31	32	40	44	48	47	53	52	51
19	Power Wire & Control Cable	31	39	40	40	40	40	48	56	65	66	66	75	77	74
20	Overhead Conductor-Transmission	29	28	31	32	32	32	40	48	52	48	52	59	63	69
21	Underground Conductor-Transmission	25	29	30	29	28	28	34	41	50	56	56	59	61	59
22	Overhead Conductor-Distribution	26	25	27	28	28	28	35	43	46	43	46	52	56	61
23	Underground Conductor-Distribution	27	31	32	32	31	31	36	44	54	59	59	63	64	64
24	Service Cable	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	Condensers & Tubes	27	27	27	27	26	27	30	32	33	36	37	40	40	43
26	Turbo-Generators	30	30	30	30	30	31	36	44	47	49	49	54	54	58
27															
28	Gas Compressors	24	25	27	27	26	28	31	31	35	40	40	41	42	43
29	Gas Transmission Line Pipe	34	34	34	34	34	34	36	41	44	48	50	51	52	54
30	Steel Distribution Pipe	25	25	25	25	25	25	28	33	37	41	43	46	47	52
31	Plastic Pipe	-	-	-	-	-	-	-	-	-	-	-	-	175	175
32	Meters-Gas	26	26	26	26	26	26	33	41	42	45	48	55	55	55
33	House Regulators	48	48	48	48	48	48	53	63	64	68	69	74	74	74
34															
35	Cast Iron Pipe	39	39	40	39	39	40	45	58	69	68	67	73	73	73
36	Cast Iron Fittings	24	26	27	27	27	28	33	42	49	48	48	54	56	59
37	Ductile Iron Pipe	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	Chemical Feeders-Small	17	17	17	17	17	18	22	26	31	34	38	40	40	40
39	Chemical Feeders-Large	13	14	15	15	16	19	20	24	29	35	40	42	42	42
40	Gate Valves	26	28	29	29	29	29	34	39	42	45	52	57	57	57
41	Meter Yokes	29	29	30	30	30	31	37	39	40	39	41	48	48	48
42	Corporation Stops	22	22	23	23	23	24	31	36	37	37	37	45	45	45
43	Curb Stops	22	23	23	23	23	25	31	36	38	37	38	45	45	45
44	Hydrants	25	27	27	27	27	27	32	36	39	43	50	55	55	55
45	Meters-Water	33	35	37	37	37	37	40	42	48	52	59	61	61	65
46															
47															
48															
49															
50	Construction Equipment	24	25	28	29	29	29	34	37	39	40	42	45	46	49
51															
52															
53															
54															
55															
56															

M

UTILITY PLANT MATERIALS

ALL REGIONS (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	COST INDEX NUMBERS													
		1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
1	Boilers	45	47	54	61	63	65	65	66	66	66	68	70	71	74
2	Coal & Ash Handling Equipment	56	58	68	76	77	79	77	72	72	72	73	73	74	76
3	Pumps	49	50	55	56	56	62	68	68	69	69	70	70	74	77
4	Steam Pipe	56	57	61	67	69	71	71	71	71	71	73	73	73	74
5	Cranes	40	43	45	47	49	52	54	55	55	55	56	56	58	64
6	Regulators	83	85	98	105	108	108	108	96	96	90	87	84	83	84
7	Switchboards	79	81	96	105	108	106	98	81	78	77	77	78	82	90
8	Power Transformers	85	87	100	103	107	103	95	88	84	76	81	84	87	91
9	Oil Switches	112	110	115	131	136	132	109	75	74	64	70	82	80	88
10	Motors	67	68	79	89	93	96	92	87	86	85	85	87	87	88
11	Line Transformers	123	123	127	135	130	125	122	118	107	100	100	101	101	105
12	Meters-Electrric	83	79	82	87	89	92	92	91	90	89	89	88	88	89
13	Treated Pine Poles	51	51	55	59	60	57	57	56	56	56	56	56	58	61
14	Standard Cross Arms	42	42	49	50	47	46	46	44	44	44	44	45	47	46
15	Standard Galv. Steel Guy Wire	54	55	58	62	63	63	63	63	63	63	63	63	63	63
16	Fibre Conduit	-	-	-	-	-	-	82	86	86	86	86	84	76	71
17	Plastic Conduit	170	157	159	159	154	154	154	150	146	146	143	139	141	136
18	Mercury Luminaires w/Standard	59	59	60	66	68	68	68	67	67	66	67	66	72	82
19	Power Wire & Control Cable	71	68	72	65	50	50	40	38	40	40	44	55	67	72
20	Overhead Conductor-Transmission	67	73	80	81	79	72	73	73	74	63	69	73	76	78
21	Underground Conductor-Transmission	60	65	72	65	63	65	66	64	63	63	69	77	77	79
22	Overhead Conductor-Distribution	59	67	72	63	58	63	64	62	62	62	64	71	75	78
23	Underground Conductor-Distribution	64	71	78	69	67	70	71	69	67	68	74	82	83	85
24	Service Cable	-	-	93	89	74	69	68	69	67	62	66	68	71	74
25	Condensers & Tubes	44	45	48	53	56	56	56	56	56	57	61	65	71	75
26	Turbo-Generators	59	61	72	80	84	84	78	72	70	70	70	71	72	73
27															
28	Gas Compressors	44	46	49	54	58	61	61	61	61	64	68	73	74	78
29	Gas Transmission Line Pipe	55	56	59	65	67	69	69	69	69	69	71	71	71	72
30	Steel Distribution Pipe	54	56	60	68	69	71	71	71	71	71	71	71	71	73
31	Plastic Pipe	154	147	146	142	140	139	137	133	132	132	128	123	126	126
32	Meters-Gas	55	56	63	66	71	71	71	73	79	79	79	79	86	88
33	House Regulators	74	74	74	76	80	80	80	81	82	82	82	80	80	80
34															
35	Cast Iron Pipe	79	80	86	91	95	95	95	95	95	95	95	95	95	95
36	Cast Iron Fittings	62	64	67	69	72	74	74	74	73	72	72	72	72	75
37	Ductile Iron Pipe	-	-	-	-	-	-	-	96	96	96	96	96	96	96
38	Chemical Feeders-Small	40	41	45	48	49	54	60	60	63	63	64	69	73	77
39	Chemical Feeders-Large	42	44	54	61	68	68	68	68	71	72	71	70	72	79
40	Gate Valves	55	51	57	59	58	58	58	59	62	63	62	62	68	72
41	Meter Yokes	51	57	64	61	59	59	62	63	65	65	66	70	75	77
42	Corporation Stops	46	54	59	59	59	60	62	62	65	65	66	71	79	81
43	Curb Stops	46	54	59	59	59	60	62	63	65	65	67	71	79	82
44	Hydrants	55	52	58	59	59	59	59	59	59	59	59	59	61	66
45	Meters-Water	67	70	77	78	78	78	78	78	84	87	87	93	101	101
46															
47															
48															
49															
50	Construction Equipment	49	51	55	59	62	64	65	67	67	68	70	71	73	76
51															
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UTILITY PLANT MATERIALS

ALL REGIONS (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	COST INDEX NUMBERS													
		1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	Boilers	76	78	83	89	94	100	119	143	159	172	186	203	221	245
2	Coal & Ash Handling Equipment	79	84	88	93	95	100	124	150	154	162	175	192	213	225
3	Pumps	78	80	85	89	93	100	127	154	177	183	195	212	235	259
4	Steam Pipe	78	82	86	92	98	100	112	131	143	155	178	206	223	236
5	Cranes	68	72	78	82	88	100	122	139	147	171	186	215	237	267
6	Regulators	84	87	90	92	97	100	128	150	165	170	174	179	189	206
7	Switchboards	92	93	94	96	97	100	131	196	212	222	234	238	261	295
8	Power Transformers	93	95	97	95	93	100	129	157	162	172	182	193	210	223
9	Oil Switches	96	92	93	93	95	100	123	140	143	174	186	195	203	229
10	Motors	89	94	100	104	100	100	110	155	167	186	186	188	195	210
11	Line Transformers	109	106	105	104	100	100	110	133	136	147	158	166	165	194
12	Meters-Electrric	92	95	98	101	101	100	107	126	135	140	144	148	144	160
13	Treated Pine Poles	62	66	69	73	77	100	150	205	192	190	206	234	265	289
14	Standard Cross Arms	44	50	65	60	58	100	162	157	146	155	161	223	244	252
15	Standard Galv. Steel Guy Wire	63	64	72	86	97	100	133	153	151	162	178	205	214	244
16	Fibre Conduit	72	78	83	82	85	100	119	130	133	149	173	203	218	235
17	Plastic Conduit	116	105	100	98	100	100	118	133	129	144	161	187	199	190
18	Mercury Luminaires w/Standard	74	78	94	101	102	100	125	173	194	211	234	263	288	314
19	Power Wire & Control Cable	81	86	84	74	86	100	115	95	97	95	101	109	135	142
20	Overhead Conductor-Transmission	75	84	97	107	103	100	121	167	204	220	189	201	232	250
21	Underground Conductor-Transmission	76	82	86	83	89	100	149	142	142	154	148	188	238	259
22	Overhead Conductor-Distribution	75	84	97	107	102	100	121	166	203	220	192	210	246	257
23	Underground Conductor-Distribution	76	86	94	92	100	100	135	130	132	140	148	196	231	222
24	Service Cable	71	77	92	98	99	100	105	124	126	131	149	183	221	217
25	Condensers & Tubes	80	84	89	94	99	100	109	128	142	157	171	189	209	229
26	Turbo-Generators	72	75	81	89	96	100	111	131	144	158	170	188	206	230
27															
28	Gas Compressors	84	88	91	91	90	100	120	150	161	172	188	213	237	265
29	Gas Transmission Line Pipe	75	80	83	89	98	100	122	145	172	187	212	225	253	290
30	Steel Distribution Pipe	73	76	82	89	97	100	127	142	155	170	194	213	225	254
31	Plastic Pipe	123	111	98	96	100	100	112	116	120	125	129	142	152	142
32	Meters-Gas	88	89	94	100	100	100	111	128	131	136	139	143	149	158
33	House Regulators	81	83	92	98	100	100	106	125	132	136	144	171	201	210
34															
35	Cast Iron Pipe	95	95	96	100	100	100	153	178	180	183	195	201	217	235
36	Cast Iron Fittings	77	80	87	99	99	100	144	142	148	152	163	173	194	209
37	Ductile Iron Pipe	96	96	97	100	100	100	153	182	186	189	201	207	215	228
38	Chemical Feeders-Small	81	81	86	90	92	100	126	180	209	230	249	257	287	316
39	Chemical Feeders-Large	80	81	87	92	94	100	125	177	194	195	201	212	232	249
40	Gate Valves	74	74	79	91	96	100	127	160	191	197	220	252	270	289
41	Meter Yokes	79	87	93	95	95	100	132	139	160	227	246	262	296	320
42	Corporation Stops	85	90	96	99	99	100	126	133	133	136	139	154	168	178
43	Curb Stops	86	90	96	99	99	100	126	133	135	140	146	161	177	187
44	Hydrants	71	76	84	94	95	100	143	185	214	229	261	279	293	315
45	Meters-Water	101	107	108	108	106	100	93	93	98	101	105	108	122	127
46															
47															
48															
49															
50	Construction Equipment	80	84	88	93	95	100	117	141	153	164	178	197	222	246
51															
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53															
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M UTILITY PLANT MATERIALS

ALL REGIONS (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	COST INDEX NUMBERS													
		1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
1	Boilers	264	273	283	292	298	307	330	344	364	380	385	404	413	425
2	Coal & Ash Handling Equipment	224	229	240	246	250	255	270	289	296	300	302	308	318	325
3	Pumps	276	281	284	292	296	300	310	327	342	353	361	391	406	419
4	Steam Pipe	254	226	215	215	215	231	271	264	241	229	222	199	199	216
5	Cranes	302	328	344	384	411	423	442	458	474	482	490	537	598	615
6	Regulators	216	225	227	229	231	236	239	248	253	257	257	256	260	241
7	Switchboards	318	317	319	333	338	343	366	398	429	439	449	499	496	572
8	Power Transformers	231	226	229	237	242	253	264	291	327	337	343	360	371	388
9	Oil Switches	279	280	275	271	268	273	336	380	402	411	399	358	369	395
10	Motors	224	250	260	261	257	266	285	339	365	357	348	376	478	495
11	Line Transformers	208	210	211	212	213	211	212	221	224	222	223	226	230	225
12	Meters-Electrric	188	201	200	202	207	205	187	175	174	186	190	189	174	169
13	Treated Pine Poles	291	280	276	283	289	284	289	300	310	323	332	367	416	445
14	Standard Cross Arms	249	240	243	230	228	226	250	291	333	366	381	419	441	464
15	Standard Galv. Steel Guy Wire	254	236	227	233	233	235	249	253	252	252	251	253	254	255
16	Fibre Conduit	175	210	231	225	221	225	301	470	379	260	230	198	222	228
17	Plastic Conduit	158	183	197	189	188	199	280	409	366	316	289	237	251	260
18	Mercury Luminaires w/Standard	333	326	343	358	352	321	321	334	345	353	361	389	408	430
19	Power Wire & Control Cable	132	131	123	107	110	123	137	139	136	130	126	119	121	127
20	Overhead Conductor-Transmission	247	271	246	242	242	218	359	366	355	372	379	334	352	399
21	Underground Conductor-Transmission	270	268	256	242	277	281	298	328	405	461	469	477	477	485
22	Overhead Conductor-Distribution	252	266	259	249	244	229	349	366	354	363	366	322	341	386
23	Underground Conductor-Distribution	206	201	196	202	216	222	223	243	254	258	259	254	253	263
24	Service Cable	207	198	229	209	194	201	250	285	271	264	258	227	240	271
25	Condensers & Tubes	247	256	257	247	222	239	263	268	268	270	270	275	288	308
26	Turbo-Generators	242	256	266	270	270	274	292	302	306	312	315	325	333	343
27															
28	Gas Compressors	280	284	295	301	303	307	325	354	371	388	405	438	446	455
29	Gas Transmission Line Pipe	315	271	262	254	265	272	301	298	269	257	250	233	235	243
30	Steel Distribution Pipe	268	270	282	272	237	250	291	316	318	323	323	327	370	381
31	Plastic Pipe	132	149	157	146	146	159	218	283	285	290	275	230	235	244
32	Meters-Gas	158	146	147	158	166	165	170	177	185	190	190	191	189	190
33	House Regulators	217	221	230	237	236	243	247	253	269	280	283	297	303	302
34															
35	Cast Iron Pipe	234	254	247	265	244	244	266	282	278	275	275	275	278	266
36	Cast Iron Fittings	216	232	229	240	259	289	296	317	324	324	324	350	377	370
37	Ductile Iron Pipe	228	262	249	281	246	246	275	278	271	271	271	271	273	250
38	Chemical Feeders-Small	341	353	358	366	373	379	398	410	424	430	432	444	453	453
39	Chemical Feeders-Large	273	286	294	306	324	341	353	379	402	418	423	438	437	477
40	Gate Valves	321	358	375	395	417	441	468	517	530	540	548	561	524	540
41	Meter Yokes	336	389	389	383	394	399	445	470	478	507	516	551	566	603
42	Corporation Stops	189	200	207	212	220	220	240	254	257	273	279	303	308	318
43	Curb Stops	198	210	220	225	233	233	254	270	273	289	296	321	330	348
44	Hydrants	352	384	385	414	439	456	480	521	558	560	560	559	561	577
45	Meters-Water	128	141	148	135	135	137	140	143	152	160	173	195	175	200
46															
47															
48															
49															
50	Construction Equipment	263	269	273	276	280	286	295	281	298	320	316	324	331	333
51															
52															
53															
54															
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UTILITY PLANT MATERIALS

ALL REGIONS (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	COST INDEX NUMBERS														
											2005		2006		2007	
		1996	1997	1998	1999	2000	2001	2002	2003	2004	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1
1	Boilers	433	443	452	460	467	474	481	489	517	535	550	565	578	590	604
2	Coal & Ash Handling Equipment	328	333	344	351	353	357	359	362	397	426	426	425.4	431	441	453
3	Pumps	440	476	496	510	528	524	525	544	557	567	575	592.3	602	620	640
4	Steam Pipe	215	204	190	183	178	170	167	160	194	270	286	292	299	307	304
5	Cranes	615	656	689	728	747	749	749	749	800	817	817	816.8	817	817	817
6	Regulators	234	232	234	237	242	240	243	255	261	271	276	290.3	343	360	375
7	Switchboards	620	656	662	689	749	813	892	983	1066	1111	1173	1227	1340	1447	1596
8	Power Transformers	370	371	400	400	400	400	383	375	486	540	545	583.7	591	648	671
9	Oil Switches	399	409	415	415	409	408	399	391	382	379	389	412	420	429	436
10	Motors	475	467	476	497	533	535	541	543	610	691	695	685.7	658	683	601
11	Line Transformers	219	206	210	210	209	217	223	225	237	250	258	298.8	345	397	405
12	Meters-Electrric	172	187	193	181	176	206	241	263	290	276	276	276	283	283	291
13	Treated Pine Poles	463	473	471	473	471	489	505	515	534	541	554	562.3	601	600	604
14	Standard Cross Arms	466	477	443	413	417	437	433	411	394	440	435	451.1	456	487	471
15	Standard Galv. Steel Guy Wire	261	280	314	313	318	249	220	227	271	302	302	300.7	280	323	323
16	Fibre Conduit	204	209	199	225	246	226	275	252	250	284	284	432.2	432	460	390
17	Plastic Conduit	252	256	251	266	281	291	319	311	323	354	354	447.3	447	527	495
18	Mercury Luminaires w/Standard	460	471	469	472	479	492	529	571	583	601	615	637.4	774	808	826
19	Power Wire & Control Cable	121	121	119	112	110	108	103	99.8	112	132	137	159.5	187	263	265
20	Overhead Conductor-Transmission	402	405	420	354	398	426	409	404	457	491	540	633.3	698	742	770
21	Underground Conductor-Transmission	487	487	487	493	485	468	461	462	519	536	559	614.6	615	615	615
22	Overhead Conductor-Distribution	386	387	399	345	381	403	388	387	437	467	515	600.3	648	692	715
23	Underground Conductor-Distribution	266	263	265	268	270	257	245	239	264	295	308	342.2	343	457	459
24	Service Cable	267	264	264	249	260	265	259	266	297	313	347	396	396	432	439
25	Condensers & Tubes	305	306	309	290	284	287	291	304	388	439	433	447.3	465	466	506
26	Turbo-Generators	348	364	369	371	387	372	380	395	397	411	400	401.8	424	440	452
27																
28	Gas Compressors	461	470	478	480	483	487	495	497	503	506	586	535.3	544	557	574
29	Gas Transmission Line Pipe	269	272	273	267	263	258	256	257	377	449	452	440.4	460	525	482
30	Steel Distribution Pipe	376	388	389	399	428	424	421	448	637	875	855	924.4	954	829	839
31	Plastic Pipe	249	251	252	255	265	295	304	308	325	351	351	393	393	509	509
32	Meters-Gas	192	196	196	191	202	209	202	193	183	185	184	187.6	197	205	231
33	House Regulators	303	303	307	306	305	312	319	318	323	336	339	343.8	356	377	377
34																
35	Cast Iron Pipe	268	279	281	285	291	297	299	301	306	341	341	345.9	346	402	402
36	Cast Iron Fittings	368	379	379	378	378	384	476	500	514	520	520	660.6	690	706	720
37	Ductile Iron Pipe	251	268	270	279	290	292	292	292	276	274	274	283.2	283	327	327
38	Chemical Feeders-Small	462	476	514	522	546	561	563	566	606	640	661	669.4	596	640	676
39	Chemical Feeders-Large	493	506	537	569	562	581	612	612	597	576	576	586.2	544	531	570
40	Gate Valves	553	592	611	630	651	685	691	691	704	718	718	718.4	720	720	720
41	Meter Yokes	670	673	677	679	699	708	713	737	762	769	794	793.6	1111	1111	1169
42	Corporation Stops	329	329	329	329	338	341	344	353	364	367	367	367.2	527	527	527
43	Curb Stops	361	361	361	361	371	374	377	387	399	403	403	402.7	577	577	577
44	Hydrants	625	795	840	874	909	961	970	970	980	989	989	989.2	1097	1097	1116
45	Meters-Water	207	197	197	198	205	206	207	207	207	207	207	234.7	248	260	262
46																
47																
48																
49																
50	Construction Equipment	336	351	380	385	389	391	396	402	414	427	443	448.3	461	463	470.6
51																
52																
53																
54																
55																
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UTILITY PLANT MATERIALS

ALL REGIONS (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	COST INDEX NUMBERS													
		2008		2009		2010		2011		2012		2013		2014	
		Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1
1	Boilers	596	616	620	599	608	620	624	634	649	649	669	653	661	665
2	Coal & Ash Handling Equipment	478	537	543	513	499	503	522	536	550	559	562	563	580	581
3	Pumps	643	663	673	675	703	704	706	756	781	787	799	846	859	922
4	Steam Pipe	324	400	454	413	376	417	419	448	438	455	439	425	429	431
5	Cranes	817	899	899	899	899	899	899	899	899	899	899	965	965	1007
6	Regulators	401	427	389	390	402	408	410	418	415	428	422	428	441	425
7	Switchboards	1791	1954	2077	2218	2373	2504	2616	2757	2879	3034	3173	3319	3471	3594
8	Power Transformers	694	725	746	745	780	788	804	814	818	826	815	814	813	816
9	Oil Switches	437	455	460	461	469	475	480	483	483	485	485	488	498	500
10	Motors	635	674	696	719	717	695	713	770	777	782	804	837	849	851
11	Line Transformers	615	505	534	560	588	617	630	650	673	690	737	756	799	819
12	Meters-Electric	292	293	295	295	307	307	295	294	288	291	295	298	303	305
13	Treated Pine Poles	611	643	653	665	672	686	664	678	687	697	700	700	675	675
14	Standard Cross Arms	464	486	518	501	482	465	446	446	452	453	464	466	440	434
15	Standard Galv. Steel Guy Wire	351	381	548	536	550	405	405	405	404	423	423	488	458	486
16	Fibre Conduit	411	420	468	468	380	380	390	390	419	419	417	417	497	497
17	Plastic Conduit	522	526	609	609	463	463	468	468	521	521	477	477	478	478
18	Mercury Luminaires w/Standard	839	899	1024	1053	1087	972	990	1034	1052	1079	1061	1077	990	993
19	Power Wire & Control Cable	242	250	228	234	213	220	245	251	268	270	271	270	267	254
20	Overhead Conductor-Transmission	860	985	985	553	700	714	675	782	650	659	701	729	729	740
21	Underground Conductor-Transmission	877	927	919	929	906	885	973	971	977	1016	1026	1052	1083	1093
22	Overhead Conductor-Distribution	793	898	898	539	661	682	672	772	647	656	686	710	716	735
23	Underground Conductor-Distribution	499	541	631	609	515	518	563	577	621	647	617	654	631	645
24	Service Cable	472	510	511	390	430	460	516	579	497	505	502	512	530	562
25	Condensers & Tubes	496	603	516	462	473	525	527	575	580	566	567	528	536	549
26	Turbo-Generators	457	538	468	417	439	488	474	501	498	487	564	480	478	483
27															
28	Gas Compressors	581	603	621	626	625	631	633	656	662	677	674	692	693	707
29	Gas Transmission Line Pipe	502	604	600	510	444	506	510	525	586	616	542	535	626	627
30	Steel Distribution Pipe	833	1122	1019	929	911	987	1081	1123	1350	1327	1305	1276	1253	1266
31	Plastic Pipe	541	541	644	644	464	464	470	470	535	535	464	464	403	403
32	Meters-Gas	241	250	261	252	257	252	252	256	261	271	271	272	341	342
33	House Regulators	387	392	412	400	406	414	425	430	432	438	443	443	454	454
34															
35	Cast Iron Pipe	421	468	541	541	563	563	550	550	565	676	688	697	770	779
36	Cast Iron Fittings	783	837	897	909	986	987	961	961	1091	1120	1148	1168	1230	1395
37	Ductile Iron Pipe	363	363	485	485	521	521	500	500	524	524	545	545	575	575
38	Chemical Feeders-Small	817	819	831	880	880	880	907	908	1068	1086	1092	1203	1249	1249
39	Chemical Feeders-Large	676	683	654	700	700	700	633	715	753	770	774	803	805	805
40	Gate Valves	736	736	759	759	736	778	762	762	755	755	770	790	803	824
41	Meter Yokes	1169	1169	1202	1202	1202	1241	1241	1241	1323	1594	1594	1594	1594	1594
42	Corporation Stops	527	527	527	527	527	542	542	542	542	723	723	723	723	723
43	Curb Stops	577	577	577	577	577	582	582	582	582	739	739	739	739	739
44	Hydrants	1133	1133	1155	1155	1150	1081	1089	1089	1132	1132	1166	1189	1221	1339
45	Meters-Water	373	373	373	373	374	376	379	379	379	379	380	381	381	381
46															
47															
48															
49															
50	Construction Equipment	474	483	499	502	502	501	505	516	527	539	547	552	554	562
51															
52															
53															
54															
55															
56															

M

UTILITY PLANT MATERIALS

ALL REGIONS (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	COST INDEX NUMBERS													
		2015		2016		2017		2018		2019		2020		2021	
		Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1
1	Boilers	669	691	697	698	700	681	683	707	710	739	738	743	745	
2	Coal & Ash Handling Equipment	584	583	582	584	589	595	596	608	620	630	640	664	638	
3	Pumps	958	963	1043	1076	1120	1244	1248	1345	1401	1492	1526	1639	1640	
4	Steam Pipe	417	416	404	411	421	415	407	462	483	468	481	469	492	
5	Cranes	1007	1007	1007	1007	1007	1007	1041	1083	1108	1108	1141	1175	1222	
6	Regulators	416	406	396	403	412	416	420	430	436	437	442	436	445	
7	Switchboards	3757	3760	3931	3930	4109	4300	4461	4629	4847	4852	5080	5367	5620	
8	Power Transformers	812	801	795	798	822	827	868	879	901	901	902	895	911	
9	Oil Switches	500	502	502	501	501	503	505	507	511	521	530	533	539	
10	Motors	859	857	869	869	893	883	910	917	937	1006	1023	1026	963	
11	Line Transformers	854	856	884	882	918	946	982	1008	1048	1048	1086	1129	1170	
12	Meters-Electrric	307	307	307	298	298	298	304	304	306	306	323	323	332	
13	Treated Pine Poles	670	658	676	678	670	730	665	668	687	693	799	798	706	
14	Standard Cross Arms	458	448	457	458	456	451	450	450	456	456	508	512	535	
15	Standard Galv. Steel Guy Wire	486	486	486	486	515	515	515	515	541	541	623	623	671	
16	Fibre Conduit	475	475	430	430	412	412	511	511	523	523	525	525	407	
17	Plastic Conduit	479	479	468	468	452	452	514	514	521	521	549	549	611	
18	Mercury Luminaires w/Standard	981	1018	986	981	998	942	964	1008	1130	1085	1188	1206	1046	
19	Power Wire & Control Cable	258	253	224	221	225	228	246	253	255	257	261	259	303	
20	Overhead Conductor-Transmission	743	743	777	777	740	740	838	838	885	885	919	919	483	
21	Underground Conductor-Transmission	1095	1103	1108	1108	1113	1180	1252	1271	1329	1329	1339	1385	1435	
22	Overhead Conductor-Distribution	747	750	768	768	741	745	785	801	818	834	868	868	539	
23	Underground Conductor-Distribution	622	637	589	589	539	562	561	572	605	605	622	650	702	
24	Service Cable	592	600	580	578	580	593	496	544	490	540	567	564	541	
25	Condensers & Tubes	547	551	520	535	536	510	516	569	583	574	509	566	604	
26	Turbo-Generators	485	551	538	561	579	506	507	537	560	548	462	562	607	
27															
28	Gas Compressors	713	720	722	727	728	735	747	759	779	783	787	795	793	
29	Gas Transmission Line Pipe	616	589	535	544	570	601	615	693	716	689	680	639	733	
30	Steel Distribution Pipe	1243	1189	1088	1116	1175	1247	1218	1382	1432	1394	1590	1555	1564	
31	Plastic Pipe	403	403	403	403	394	394	410	410	413	413	447	447	559	
32	Meters-Gas	372	372	388	388	442	442	475	477	511	511	489	490	469	
33	House Regulators	469	469	481	481	487	487	533	533	558	565	559	559	549	
34															
35	Cast Iron Pipe	758	748	731	731	809	808	867	868	878	881	912	877	885	
36	Cast Iron Fittings	1278	1322	1380	1418	1478	1478	1481	1565	1627	1736	1883	1955	2130	
37	Ductile Iron Pipe	579	579	600	600	622	622	715	715	721	721	768	768	781	
38	Chemical Feeders-Small	1316	1404	1471	1471	1496	1589	1618	1738	1792	1871	2019	2106	2176	
39	Chemical Feeders-Large	805	805	842	842	863	891	900	939	965	990	1080	1140	1145	
40	Gate Valves	814	814	868	868	825	825	771	789	812	832	863	863	1105	
41	Meter Yokes	1594	1594	1594	1594	1594	1706	1706	1706	1706	1768	1768	1821	1821	
42	Corporation Stops	723	723	723	723	723	723	723	723	773	861	861	887	887	
43	Curb Stops	780	780	780	780	780	780	780	780	835	929	929	957	957	
44	Hydrants	1418	1591	1694	1694	1681	1681	1735	1759	1803	1830	1886	1886	2086	
45	Meters-Water	400	400	403	403	404	418	434	434	443	443	459	459	485	
46															
47															
48															
49															
50	Construction Equipment	564	568	570	574	575	579	580	575	600	609	613	620	621	
51															
52															
53															
54															
55															
56															

Cost Trends Of

Water Utility Construction

COST TREND TABLES
1912 to January 1, 2021

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COST TRENDS OF WATER UTILITY CONSTRUCTION

NORTH ATLANTIC REGION (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	NARUC	COST INDEX NUMBERS													
			1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
1	**Source of Supply Plant**															
2	Collecting & Impounding Res.	305	7	7	7	7	9	13	15	15	17	16	16	16	16	16
3																
4																
5																
6																
7	**Pumping Plant**															
8	Structures & Improvements	304	8	8	8	9	11	16	17	18	20	18	18	18	19	18
9	Electric Pumping Equipment	311	-	-	15	15	17	20	22	24	24	23	21	22	23	23
10																
11																
12																
13																
14	**Water Treatment Plant**															
15	Structures & Improvements	304	8	8	8	9	11	16	17	18	20	18	18	18	19	18
16	Large Treatment Plant Equip.	320	9	9	9	9	11	14	16	17	20	19	18	18	20	20
17	Small Treatment Plant Equip.	320	10	10	10	10	13	17	19	19	22	20	20	20	21	20
18																
19																
20																
21																
22	**Transmission Plant**															
23	Steel Reservoirs	330	4	4	4	12	15	17	19	20	15	13	12	13	13	13
24	Elevated Steel Tanks	330	4	4	4	11	14	16	18	19	16	13	11	12	11	10
25	Concrete Reservoirs	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26																
27	Cast Iron Mains	331	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	Steel Mains	331	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	Concrete Cylinder Mains	331	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30																
31																
32																
33	**Distribution Plant**															
34	Mains-Average All Types	331	9	10	8	9	11	16	19	20	22	22	20	21	22	21
35	Cast Iron Mains	331	9	10	9	9	12	18	20	22	25	24	22	23	24	23
36	Cement-Asbestos Mains	331	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	Steel Mains	331	6	7	6	7	8	11	13	13	14	15	14	14	14	15
38	PVC Mains	331	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Services Installed	333	6	6	5	6	6	9	10	11	12	13	12	12	13	13
40	Meters	334	23	23	23	23	26	29	35	37	37	37	37	37	37	37
41	Meter Installations	334	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Hydrants Installed	335	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43																
44																
45	**Miscellaneous Items**															
46	Flocculating Equipment-Installed		14	16	13	14	26	38	31	29	29	24	25	26	24	23
47	Clarifier Equipment-Installed		-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	Filter Gallery Piping-Installed		8	8	8	8	10	14	16	18	20	18	17	18	19	19
49																
50																
51																
52																
53																
54																
55																
56																

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COST TRENDS OF WATER UTILITY CONSTRUCTION

NORTH ATLANTIC REGION (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	NARUC	COST INDEX NUMBERS													
			1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
1	**Source of Supply Plant**															
2	Collecting & Impounding Res.	305	17	17	17	17	17	16	14	14	15	15	15	17	17	17
3																
4																
5																
6																
7	**Pumping Plant**															
8	Structures & Improvements	304	19	18	18	18	17	16	15	15	16	16	16	18	18	18
9	Electric Pumping Equipment	311	23	23	23	22	22	22	22	23	24	24	25	26	26	26
10																
11																
12																
13																
14	**Water Treatment Plant**															
15	Structures & Improvements	304	19	18	18	18	17	16	15	15	16	16	16	18	18	18
16	Large Treatment Plant Equip.	320	20	20	20	20	20	19	17	17	18	18	18	20	20	20
17	Small Treatment Plant Equip.	320	20	20	20	20	20	19	17	17	19	19	19	21	21	21
18																
19																
20																
21																
22	**Transmission Plant**															
23	Steel Reservoirs	330	12	12	12	12	11	10	9	9	12	11	12	14	14	14
24	Elevated Steel Tanks	330	11	10	10	10	10	9	8	8	10	10	11	12	13	13
25	Concrete Reservoirs	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26																
27	Cast Iron Mains	331	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	Steel Mains	331	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	Concrete Cylinder Mains	331	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30																
31																
32																
33	**Distribution Plant**															
34	Mains-Average All Types	331	21	21	20	20	20	20	18	18	19	19	20	21	22	22
35	Cast Iron Mains	331	23	21	20	21	21	20	18	18	20	20	21	23	24	24
36	Cement-Asbestos Mains	331	-	-	-	-	-	-	-	-	-	-	31	32	32	33
37	Steel Mains	331	15	15	15	16	16	16	14	13	14	14	14	16	16	16
38	PVC Mains	331	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Services Installed	333	13	13	13	14	14	14	13	11	12	13	13	14	14	14
40	Meters	334	37	37	37	37	37	37	37	35	26	26	26	31	32	32
41	Meter Installations	334	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Hydrants Installed	335	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43																
44																
45	**Miscellaneous Items**															
46	Flocculating Equipment-Installed		23	22	22	22	21	20	20	20	21	21	23	26	25	25
47	Clarifier Equipment-Installed		-	-	-	-	-	-	-	-	-	-	-	17	23	24
48	Filter Gallery Piping-Installed		19	18	18	18	18	18	15	16	18	18	18	19	20	20
49																
50																
51																
52																
53																
54																
55																
56																

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COST TRENDS OF WATER UTILITY CONSTRUCTION

NORTH ATLANTIC REGION (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	NARUC	COST INDEX NUMBERS													
			1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953
1	**Source of Supply Plant**															
2	Collecting & Impounding Res.	305	17	18	20	20	20	21	23	27	31	32	33	35	36	38
3																
4																
5																
6																
7	**Pumping Plant**															
8	Structures & Improvements	304	18	19	20	21	21	22	24	28	32	35	36	38	38	39
9	Electric Pumping Equipment	311	26	27	27	27	27	27	31	39	43	45	49	55	55	55
10																
11																
12																
13																
14	**Water Treatment Plant**															
15	Structures & Improvements	304	18	19	20	21	21	22	24	28	32	35	36	38	38	39
16	Large Treatment Plant Equip.	320	21	22	23	24	24	25	28	32	35	36	38	40	41	42
17	Small Treatment Plant Equip.	320	21	22	24	24	24	25	28	33	37	39	41	43	43	44
18																
19																
20																
21																
22	**Transmission Plant**															
23	Steel Reservoirs	330	14	16	16	13	14	16	20	26	29	27	28	30	31	32
24	Elevated Steel Tanks	330	12	15	15	14	15	14	17	23	26	25	26	28	29	31
25	Concrete Reservoirs	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26																
27	Cast Iron Mains	331	-	-	-	-	-	-	-	-	-	-	-	42	43	45
28	Steel Mains	331	-	-	-	-	-	-	-	-	-	-	-	40	40	43
29	Concrete Cylinder Mains	331	-	-	-	-	-	-	-	-	-	-	-	44	45	47
30																
31																
32																
33	**Distribution Plant**															
34	Mains-Average All Types	331	23	23	24	25	25	26	29	35	41	42	43	45	47	48
35	Cast Iron Mains	331	24	25	27	27	28	28	32	39	46	46	48	50	51	53
36	Cement-Asbestos Mains	331	33	34	36	36	37	37	44	49	59	61	62	64	65	67
37	Steel Mains	331	16	17	18	18	18	19	21	24	28	29	31	32	34	36
38	PVC Mains	331	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Services Installed	333	14	15	16	16	17	17	19	22	25	27	28	29	31	33
40	Meters	334	33	35	37	37	37	37	40	42	48	52	59	61	61	65
41	Meter Installations	334	-	-	-	-	-	-	-	-	-	29	31	34	35	36
42	Hydrants Installed	335	-	-	-	-	-	-	-	-	-	35	37	41	41	43
43																
44																
45	**Miscellaneous Items**															
46	Flocculating Equipment-Installed		25	27	28	28	28	30	33	38	44	45	45	49	49	50
47	Clarifier Equipment-Installed		25	26	27	27	27	29	32	37	43	43	44	46	46	49
48	Filter Gallery Piping-Installed		21	21	22	22	22	23	25	30	35	37	37	39	40	41
49																
50																
51																
52																
53																
54																
55																
56																

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COST TRENDS OF WATER UTILITY CONSTRUCTION

NORTH ATLANTIC REGION (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	NARUC	COST INDEX NUMBERS													
			1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
1	**Source of Supply Plant**															
2	Collecting & Impounding Res.	305	39	41	44	47	49	51	52	53	55	56	57	59	61	64
3																
4																
5																
6																
7	**Pumping Plant**															
8	Structures & Improvements	304	41	43	46	49	50	52	53	53	54	55	56	57	59	61
9	Electric Pumping Equipment	311	55	56	63	69	73	74	74	71	71	71	73	74	78	81
10																
11																
12																
13																
14	**Water Treatment Plant**															
15	Structures & Improvements	304	41	43	46	49	50	52	53	53	54	55	56	57	59	61
16	Large Treatment Plant Equip.	320	44	45	48	50	52	54	55	56	58	59	60	62	64	67
17	Small Treatment Plant Equip.	320	46	47	50	53	54	56	58	58	60	60	62	63	66	68
18																
19																
20																
21																
22	**Transmission Plant**															
23	Steel Reservoirs	330	32	33	38	42	37	36	35	35	35	41	44	45	46	47
24	Elevated Steel Tanks	330	31	33	35	38	38	38	38	37	36	37	38	38	41	44
25	Concrete Reservoirs	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26																
27	Cast Iron Mains	331	47	50	52	56	57	61	62	63	64	65	66	67	69	71
28	Steel Mains	331	44	46	49	52	55	57	57	58	59	60	61	63	65	67
29	Concrete Cylinder Mains	331	48	50	52	54	56	59	60	60	61	62	62	64	66	70
30																
31																
32																
33	**Distribution Plant**															
34	Mains-Average All Types	331	51	53	57	60	63	65	68	69	71	72	73	74	75	76
35	Cast Iron Mains	331	56	59	62	66	68	72	73	75	77	79	79	80	80	81
36	Cement-Asbestos Mains	331	68	70	75	78	81	84	86	86	87	89	88	81	82	82
37	Steel Mains	331	38	40	43	46	48	51	53	55	56	58	60	63	65	66
38	PVC Mains	331	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Services Installed	333	35	36	39	41	44	46	48	50	51	53	55	58	60	63
40	Meters	334	67	70	77	78	78	78	78	78	84	87	87	93	101	101
41	Meter Installations	334	38	40	44	45	46	48	51	52	54	55	57	59	62	65
42	Hydrants Installed	335	44	44	48	50	51	53	54	55	56	57	58	58	61	64
43																
44																
45	**Miscellaneous Items**															
46	Flocculating Equipment-Installed		52	53	57	58	58	59	60	61	61	62	65	66	67	68
47	Clarifier Equipment-Installed		50	49	53	55	57	58	58	59	60	60	63	65	66	67
48	Filter Gallery Piping-Installed		44	46	48	50	53	54	56	57	58	59	60	61	63	65
49																
50																
51																
52																
53																
54																
55																
56																

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COST TRENDS OF WATER UTILITY CONSTRUCTION

NORTH ATLANTIC REGION (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	NARUC	COST INDEX NUMBERS													
			1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	**Source of Supply Plant**															
2	Collecting & Impounding Res.	305	67	72	78	86	94	100	115	127	133	139	148	164	179	189
3																
4																
5																
6																
7	**Pumping Plant**															
8	Structures & Improvements	304	64	69	75	84	92	100	117	127	130	137	148	163	181	191
9	Electric Pumping Equipment	311	81	84	89	93	96	100	122	155	174	184	192	205	222	245
10																
11																
12																
13																
14	**Water Treatment Plant**															
15	Structures & Improvements	304	64	69	75	84	92	100	117	127	130	137	148	163	181	191
16	Large Treatment Plant Equip.	320	69	73	79	89	96	100	118	134	144	152	162	175	191	208
17	Small Treatment Plant Equip.	320	70	74	80	90	96	100	120	139	150	160	172	186	204	223
18																
19																
20																
21																
22	**Transmission Plant**															
23	Steel Reservoirs	330	49	53	75	82	85	100	140	159	171	172	173	178	191	208
24	Elevated Steel Tanks	330	48	55	71	80	86	100	152	183	182	183	195	206	228	250
25	Concrete Reservoirs	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26																
27	Cast Iron Mains	331	74	78	84	91	96	100	129	137	142	150	158	166	180	196
28	Steel Mains	331	69	74	80	88	96	100	113	125	133	141	152	166	180	199
29	Concrete Cylinder Mains	331	72	78	80	88	95	100	113	134	138	140	148	162	176	189
30																
31																
32																
33	**Distribution Plant**															
34	Mains-Average All Types	331	77	80	84	94	98	100	110	146	154	162	173	185	202	219
35	Cast Iron Mains	331	82	83	88	97	99	100	143	158	163	167	178	185	202	218
36	Cement-Asbestos Mains	331	82	85	88	97	98	100	127	148	159	167	176	202	212	234
37	Steel Mains	331	68	72	78	88	97	100	115	128	139	151	164	179	197	212
38	PVC Mains	331	-	-	-	-	-	-	25	100	104	108	113	122	132	138
39	Services Installed	333	66	72	79	89	96	100	115	123	130	139	145	160	175	184
40	Meters	334	101	106	108	108	106	100	93	93	98	101	105	108	122	127
41	Meter Installations	334	68	73	79	89	97	100	113	120	131	147	152	162	177	189
42	Hydrants Installed	335	68	72	80	90	96	100	123	143	157	167	182	194	207	222
43																
44																
45	**Miscellaneous Items**															
46	Flocculating Equipment-Installed		69	74	82	93	98	100	139	174	195	218	246	290	350	406
47	Clarifier Equipment-Installed		68	72	82	93	98	100	140	167	181	199	210	232	272	310
48	Filter Gallery Piping-Installed		68	72	78	90	97	100	119	130	136	144	151	158	171	185
49																
50																
51																
52																
53																
54																
55																
56																

W-1

COST TRENDS OF WATER UTILITY CONSTRUCTION

NORTH ATLANTIC REGION (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	NARUC	COST INDEX NUMBERS													
			1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
1	**Source of Supply Plant**															
2	Collecting & Impounding Res.	305	197	206	217	227	234	238	248	255	258	262	270	282	295	302
3																
4																
5																
6																
7	**Pumping Plant**															
8	Structures & Improvements	304	198	206	218	225	233	239	251	265	271	274	281	294	308	316
9	Electric Pumping Equipment	311	260	271	277	282	284	299	311	330	349	355	368	386	428	442
10																
11																
12																
13																
14	**Water Treatment Plant**															
15	Structures & Improvements	304	198	206	218	225	233	239	251	265	271	274	281	294	308	316
16	Large Treatment Plant Equip.	320	227	242	251	262	269	276	286	301	313	322	332	342	348	357
17	Small Treatment Plant Equip.	320	243	259	268	279	286	293	303	317	328	334	343	354	360	366
18																
19																
20																
21																
22	**Transmission Plant**															
23	Steel Reservoirs	330	210	182	184	181	184	196	220	216	229	253	261	248	246	250
24	Elevated Steel Tanks	330	244	197	200	198	207	219	260	268	278	285	277	249	242	252
25	Concrete Reservoirs	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26																
27	Cast Iron Mains	331	208	222	225	236	235	242	253	266	273	279	284	295	305	305
28	Steel Mains	331	215	223	230	234	232	241	255	272	279	287	293	302	316	324
29	Concrete Cylinder Mains	331	203	213	218	232	239	243	258	269	277	288	295	303	311	317
30																
31																
32																
33	**Distribution Plant**															
34	Mains-Average All Types	331	231	239	244	254	255	263	280	295	301	307	311	321	327	332
35	Cast Iron Mains	331	223	245	253	264	263	269	282	296	304	313	320	329	339	341
36	Cement-Asbestos Mains	331	253	244	249	255	259	275	315	340	338	332	319	335	338	354
37	Steel Mains	331	233	228	231	237	242	248	265	277	281	288	295	302	304	311
38	PVC Mains	331	137	151	149	151	150	160	197	217	211	200	183	193	191	204
39	Services Installed	333	198	207	215	221	226	230	245	258	262	272	283	292	300	307
40	Meters	334	128	141	148	135	135	137	140	150	159	162	196	195	175	200
41	Meter Installations	334	207	230	239	247	255	259	269	282	294	310	320	337	347	358
42	Hydrants Installed	335	245	264	270	285	296	307	320	343	363	372	378	385	391	398
43																
44																
45	**Miscellaneous Items**															
46	Flocculating Equipment-Installed		458	496	506	540	560	575	579	580	565	528	539	555	562	566
47	Clarifier Equipment-Installed		356	389	398	431	442	446	451	455	442	416	435	458	492	514
48	Filter Gallery Piping-Installed		201	217	223	234	237	243	251	266	279	289	297	309	319	321
49																
50																
51																
52																
53																
54																
55																
56																

W-1

COST TRENDS OF WATER UTILITY CONSTRUCTION

NORTH ATLANTIC REGION (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	NARUC	COST INDEX NUMBERS									2005		2006		2007	
			1996	1997	1998	1999	2000	2001	2002	2003	2004	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1
1	**Source of Supply Plant**																
2	Collecting & Impounding Res.	305	309	317	318	318	326	336	344	350	373	388	394	400	405	413	439
3																	
4																	
5																	
6																	
7	**Pumping Plant**																
8	Structures & Improvements	304	321	331	337	343	362	378	389	394	421	442	447	456	464	481	494
9	Electric Pumping Equipment	311	450	473	489	505	530	527	529	543	572	604	611	620	619	639	628
10																	
11																	
12																	
13																	
14	**Water Treatment Plant**																
15	Structures & Improvements	304	321	331	337	343	362	378	389	394	421	442	447	456	464	481	494
16	Large Treatment Plant Equip.	320	367	380	391	401	413	428	443	452	466	480	482	499	500	516	533
17	Small Treatment Plant Equip.	320	375	389	401	410	424	439	452	460	480	498	502	520	518	539	559
18																	
19																	
20																	
21																	
22	**Transmission Plant**																
23	Steel Reservoirs	330	251	255	268	268	270	274	275	276	308	329	338	348	375	494	537
24	Elevated Steel Tanks	330	268	273	283	288	299	341	429	431	481	524	524	524	596	657	657
25	Concrete Reservoirs	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26																	
27	Cast Iron Mains	331	311	320	323	328	348	363	383	385	393	411	415	442	451	480	484
28	Steel Mains	331	329	337	342	351	377	391	400	404	451	509	508	530	539	528	527
29	Concrete Cylinder Mains	331	324	331	338	345	372	404	415	415	425	436	440	454	459	460	462
30																	
31																	
32																	
33	**Distribution Plant**																
34	Mains-Average All Types	331	339	347	355	361	377	391	404	407	432	462	464	485	494	524	523
35	Cast Iron Mains	331	348	358	364	370	390	404	421	425	436	457	460	483	492	525	528
36	Cement-Asbestos Mains	331	364	372	375	382	405	423	444	446	460	480	483	538	546	599	597
37	Steel Mains	331	316	322	334	339	346	358	363	367	416	459	460	467	477	494	487
38	PVC Mains	331	211	216	216	219	231	242	253	254	263	277	278	321	321	365	361
39	Services Installed	333	321	323	330	334	348	354	360	368	388	404	407	421	459	478	481
40	Meters	334	207	197	197	198	205	206	207	207	207	207	207	235	248	260	262
41	Meter Installations	334	375	381	387	392	406	417	428	440	456	466	467	482	530	549	552
42	Hydrants Installed	335	418	475	493	508	526	551	565	570	585	597	597	613	647	663	669
43																	
44																	
45	**Miscellaneous Items**																
46	Flocculating Equipment-Installed		579	603	622	642	652	671	683	697	758	801	801	852	852	869	983
47	Clarifier Equipment-Installed		540	562	572	579	593	603	617	630	663	709	709	729	729	760	892
48	Filter Gallery Piping-Installed		328	337	344	349	363	378	398	408	421	438	438	468	470	500	501
49																	
50																	
51																	
52																	
53																	
54																	
55																	
56																	

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COST TRENDS OF WATER UTILITY CONSTRUCTION

NORTH ATLANTIC REGION (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	NARUC	COST INDEX NUMBERS													
			2008		2009		2010		2011		2012		2013		2014	
			Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1
1	**Source of Supply Plant**															
2	Collecting & Impounding Res.	305	457	466	470	465	475	478	492	495	501	502	507	505	515	517
3																
4																
5																
6																
7	**Pumping Plant**															
8	Structures & Improvements	304	516	543	551	536	552	558	571	583	597	600	618	608	621	630
9	Electric Pumping Equipment	311	640	666	679	688	707	701	708	760	780	785	800	844	856	900
10																
11																
12																
13																
14	**Water Treatment Plant**															
15	Structures & Improvements	304	516	543	551	536	552	558	571	583	597	600	618	608	621	630
16	Large Treatment Plant Equip.	320	566	582	614	616	631	638	642	653	669	680	689	697	713	725
17	Small Treatment Plant Equip.	320	602	624	666	669	686	693	706	712	740	754	764	779	800	813
18																
19																
20																
21																
22	**Transmission Plant**															
23	Steel Reservoirs	330	537	722	722	722	722	722	771	771	795	810	778	780	715	742
24	Elevated Steel Tanks	330	680	866	866	866	866	867	1079	1079	1059	1082	1089	1099	1131	1131
25	Concrete Reservoirs	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26																
27	Cast Iron Mains	331	510	534	578	576	601	601	602	610	634	669	691	684	712	743
28	Steel Mains	331	543	606	605	585	593	609	644	658.5	711	708	724	704	694	708
29	Concrete Cylinder Mains	331	468	475	502	502	494	495	510	517	523	526	547	534	535	547
30																
31																
32																
33	**Distribution Plant**															
34	Mains-Average All Types	331	550	588	624	608	617	623	633	644	669	690	698	693	720	733
35	Cast Iron Mains	331	556	579	625	624	647	648	654	660	681	716	733	730	759	781
36	Cement-Asbestos Mains	331	621	632	691	678	638	649	658	683	716	721	712	707	704	721
37	Steel Mains	331	514	582	595	559	565	575	593	606	633	637	638	631	665	665
38	PVC Mains	331	372	374	419	408	353	363	369	389	412	412	391	392	383	383
39	Services Installed	333	501	511	534	534	545	554	568	574	589	600	602	602	603	605
40	Meters	334	373	373	373	373	374	376	379	379	379	379	380	381	381	381
41	Meter Installations	334	572	573	597	598	612	623	635	635	646	673	677	677	688	688
42	Hydrants Installed	335	693	699	732	731	740	721	730	731	757	758	774	784	807	849
43																
44																
45	**Miscellaneous Items**															
46	Flocculating Equipment-Installed		1187	1373	1645	1645	1699	1744	1823	1848	1904	1973	1978	2015	2041	2078
47	Clarifier Equipment-Installed		920	944	997	997	991	1001	1056	1060	1077	1102	1105	1136	1154	1162
48	Filter Gallery Piping-Installed		530	543	589	590	613	614	620	620	641	666	677	680	713	728
49																
50																
51																
52																
53																
54																
55																
56																

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COST TRENDS OF WATER UTILITY CONSTRUCTION

NORTH ATLANTIC REGION (1973=100)

Line	CONSTRUCTION AND EQUIPMENT	NARUC	COST INDEX NUMBERS													
			2015		2016		2017		2018		2019		2020		2021	
			Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul. 1
1	**Source of Supply Plant**															
2	Collecting & Impounding Res.	305	526	521	526	532	543	549	559	570	576	575	584	583	605	
3																
4																
5																
6																
7	**Pumping Plant**															
8	Structures & Improvements	304	642	646	655	659	672	671	687	706	717	713	719	730	762	
9	Electric Pumping Equipment	311	928	931	990	1013	1052	1135	1146	1216	1261	1346	1374	1454	1436	
10																
11																
12																
13																
14	**Water Treatment Plant**															
15	Structures & Improvements	304	642	646	655	659	672	671	687	706	717	713	719	730	762	
16	Large Treatment Plant Equip.	320	736	737	755	758	774	785	797	812	832	842	871	890	922	
17	Small Treatment Plant Equip.	320	832	840	861	864	881	897	911	934	960	975	1012	1035	1075	
18																
19																
20																
21																
22	**Transmission Plant**															
23	Steel Reservoirs	330	742	742	742	774	784	784	801	820	832	832	836	836	836	
24	Elevated Steel Tanks	330	1131	1131	1131	1143	1161	1161	1181	1200	1244	1244	1244	1244	1244	
25	Concrete Reservoirs	330	-	-	-	-	-	-	-	-	-	-	-	-	-	
26																
27	Cast Iron Mains	331	733	744	754	759	793	785	810	825	844	858	884	895	931	
28	Steel Mains	331	712	713	697	705	723	726	733	770	792	785	824	830	845	
29	Concrete Cylinder Mains	331	562	575	591	592	601	592	620	626	639	641	638	653	664	
30																
31																
32																
33	**Distribution Plant**															
34	Mains-Average All Types	331	736	738	747	750	774	772	790	801	819	826	847	850	883	
35	Cast Iron Mains	331	780	785	795	797	832	826	855	864	883	894	920	924	952	
36	Cement-Asbestos Mains	331	724	731	741	743	751	746	763	770	784	793	820	831	900	
37	Steel Mains	331	673	670	678	681	697	701	704	717	734	736	748	748	775	
38	PVC Mains	331	387	387	388	388	387	387	397	397	401	401	417	418	471	
39	Services Installed	333	617	616	622	617	638	651	661	667	677	684	706	701	712	
40	Meters	334	400	400	403	403	404	418	434	434	443	443	459	459	485	
41	Meter Installations	334	702	702	709	708.5	722	733	750	750	765	772	790	797	815	
42	Hydrants Installed	335	877	930	971	972	980	981	1012	1024	1049	1063	1101	1104	1184	
43																
44																
45	**Miscellaneous Items**															
46	Flocculating Equipment-Installed		2167	2177	2192	2192	2198	2213	2223	2264	2360	2360	2470	2481	2567	
47	Clarifier Equipment-Installed		1184	1188	1229	1272	1311	1315	1369	1401	1462	1462	1523	1557	1662	
48	Filter Gallery Piping-Installed		727	728	735	738	772	772	801	808	825	834	868	866	900	
49																
50																
51																
52																
53																
54																
55																
56																

Water and Wastewater General Information
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Cost Indices

AUS Consultants Index of General Support Assets

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AUS Telephone Plant Index

Cost Trend Tables from 1946 to January 1, 2021

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FOREWORD

The AUS Telephone Plant Index, which follows this foreword was first introduced in 1977 by Associated Utility Services, Inc., and published as part of the Handy-Whitman Index of Public Utility Construction Costs through 1989. In 1990 AUS Consultants, the successor company to Associated Utility Services, Inc., decided to publish the Telephone Plant Index under the name C.A. Turner Utility Reports publication division. In 2005 the index changed its name from C.A. Turner Telephone Plant Index to AUS Telephone Plant Index.

The 1990 AUS Telephone Plant Index (TPI) was the first nationally available TPI based on the Federal Communication Commission (FCC) Uniform System of Accounts (USOA) Part 32. The prior published TPI, also prepared by AUS staff, was based on the earlier USOA Part 31 Standards.

Telephone Plant Index Description

The TPI consists of a separate cost index series for each of six geographic regions shown on the map at page iv. These regions are designated: North Atlantic, South Atlantic, North Central, South Central, Plateau, and Pacific Coast. The regional designation are the same as those used in the prior issues of the cost index and are based on similarity of characteristics among the contiguous 48 states.

Each cost index series within a region consists of one index labeled "Total Plant Account" and up to 31 individual cost index series for the individual plant account identified in the left hand columns.

The Base Year for each cost index is 1973=100. Some plant accounts will not show an index number of 100 at year 1973 due to a subsequent adjustment for FCC Part 31 to Part 32, changes explained later in this foreword. In a few accounts the item described in the account was not included in the index series until after 1973 and the base year is considered the first year of entry.

The index for most plant accounts begins with a single entry in year 1946 and continues with a single number for each year through 1973. Beginning in 1974 there are two index numbers for each year; one for January 1 and one for July 1. These numbers represent the prevailing wages and material prices and weightings at that point in time.

Index History

An index is a tool for identifying the relative price change of an item, or group of items over an identified period of time. Price indexes have been in use for many years for a variety of reasons. One example is an index developed in the eighteenth century by an Italian named Carli to determine the effect of the discovery of America upon the level of prices in Italy of three commodities between the years 1500 and 1750. In the current century, numerous organizations, including the United States Bureau of Statistic, have developed a variety of indexes ranging from the cost of basic commodities to manufactured goods and building construction cost.

Interest in telephone utility cost indexes has varied over time depending on the need to develop reproduction cost values for utility properties. Previous uses of cost indexes included such things as the determination trended original cost in fair value rate jurisdictions and current cost pricing for FASB-33 financial accounting disclosures. Due to changes in rate regulation proceedings and financial disclosure requirements, the need in these two specific areas has declined. Other areas in which reproduction cost indexes were utilized included insurance valuations, property tax valuations, retirement accounting and cost forecasting, etc.

Most recently, interest in cost indexes for the telecommunication industry has increased due to the possible implementation of price cap regulation. This form of regulation incorporates the use of changes in price levels by regulators to set rates. Under one proposal, customer tariff prices are adjusted to give consideration to productivity improvements, therefore, the development of the construction cost indexes will have an indirect bearing on the level of the company revenue requirements.

Index Design

The telephone plant index was designed as a product which could be utilized by any of the various telephone operating companies to develop the reproduction cost of the company's property at the selected test year date. Due to the variation of many design construction specifics from one company to another, it is impossible to produce an index which will exactly mirror the construction cost changes for each company. In circumstances where companies desire a more specific reproduction cost of their property, a custom index should be prepared or, alternately, the company's property should be inventoried and unit priced. Such unit cost work efforts, of course, will be significantly more expensive and time consuming to complete.

As indicated, the telephone plant index is a standard index which is published on a semi-annual basis. The yearly average index is calculated via a 1-2-1 weighting process which is the sum of 25% of the January index, 50 of the July index, and 25% of the succeeding year's January index.

In general terms, the telephone plant index was constructed around the FCC Part 32 system of accounts to aid companies in ease of application of the published index. Each embedded property account was reviewed to determine the components which comprise the large segment of the property investment in each account. In this manner, the resulting telephone plant index was a reasonable proxy for determining the reproduction cost of the embedded investment of the independent telephone industry.

With the exception of the General Support Asset Group, the FCC Part 32 based indexes were adjusted for all index years 1987 and prior to compensate for the change in overhead capitalization policies effective with the new regulations. That is, under FCC Part 31 regulation, a greater level of overheads were previously incorporated in the plant in service investments contained on the company's books and records. The adjusted indexes for the years 1946 through 1987, when applied to the company's original costs, will produce the applicable reproduction cost under FCC Part 32 accounting treatment. The index adjustment for Part 31 to Part 32 accounting results in the plant accounts not having an index number of 100 at the 1973 base year.

The AUS Telephone Plant Index was designed around thirty-six component indexes representing the basic components of material and labor which make up the construction of the various telephone plant accounts. The components include such items as Buildings, Switching Equipment, Circuit Equipment, Poles, Cable, Wire Vehicles, Tools, Furniture, Installer Labor and Lineman Labor, etc. The components were composited together into account level indexes based upon material and labor weights derived from a study of independent telephone construction cost experience.

Introduction of new technologies into a reproduction cost index required the review of composite weight included in development of the account level index to reflex the new mix of property.

The goal of the telephone plant index was to produce a product which when utilized together with each companies' books and records would produce a reproduction cost value.

The AUS Telephone Plant Index does not reflect replacement cost inasmuch as it was designed to produce the reproduction cost (the cost in today's dollars to reproduce the company's embedded plant in service).

Index Functions

The AUS Telephone Plant Index series was initially prepared to address a very specific function. That is, it was designed to enable companies to produce trended original cost values to the historical original cost of plant in service on the companies' books and records. This trended original cost is a general representation of the cost to reconstruct the property in question at the price level of the selected period. If a company desires a more specific estimate of reconstruction, the property specific indexes can be developed giving consideration to the actual history of the company's wages and material cost in comparison to the labor and material costs. For an even more specific cost estimated to rebuild the plant in serve, engineering estimated can be completed based upon the property inventory and the current unit costs for constructing the various plant categories.

In summary, the index was designed to be applied on a vintage and account level basis to determine the reproduction cost of local distribution companies' plant in service, as of the selected price level.

A tool can be utilized correctly only within the boundaries for which the product was originally designed. Uses above and beyond the scope of the original design may or may not produce reliable results. That is, the use of a generalized index to prepare a reproduction cost will provide general results within the range of reasonableness. If more specific or exact results are required, alternative methods or procedures (i.e., custom indexes or specific detail pricing) should be employed.

An effort has been made to carefully construct an index which produces a reasonable proxy of reproduction cost for the telephone plant or local distribution companies giving consideration to the fact that there are variances in material and labor costs, as well as, construction methods and practices from one company to another. Nevertheless, we believe that there is sufficient similarity in the cost trends to make the AUS Telephone Plant Index a useful tool when carefully applied to a company's historical cost base.

North Atlantic

SCHEDULE NO. T-1

AUS TELEPHONE PLANT INDEX

NORTH ATLANTIC REGION 1973-100

LINE NO	PLANT IN SERVICE DESCRIPTION	FCC Acct	COST INDEX NUMBER																LINE NO
			1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	
1	Total Plant		85	89	91	91	92	95	96	96	94	94	97	97	96	96	97	96	1
2																			2
3																			3
4	Motor Vehicles	2112	57	57	63	67	67	70	74	74	74	77	81	84	87	89	88	87	4
5	Aircraft	2113	56	56	62	66	66	69	73	73	73	75	80	83	86	88	86	86	5
6	Special Purpose Vehicles	2114	30	34	38	41	42	46	47	48	49	51	56	60	62	65	66	67	6
7	Gargare Work Equipment	2115	36	38	42	44	46	51	51	52	53	56	61	65	67	69	70	70	7
8	Other Work Equipment	2116	50	50	52	54	55	59	59	61	62	64	67	70	71	74	75	77	9
9																			10
10																			11
11	Buildings	2121	24	28	32	34	35	37	38	39	41	42	46	49	50	52	53	52	12
12	Furniture	2122	43	43	46	47	50	56	56	57	57	60	64	68	70	70	71	71	12
13	Office Equipment	2123	67	67	69	69	70	75	74	76	77	79	82	85	87	88	88	89	13
14	General Purpose Computer	2124	67	67	69	69	70	75	74	76	77	79	82	85	87	88	88	89	14
15																			15
16																			16
17	Analog Electronic Switching	2211	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
18	Ditgital Electronic Switching	2212	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
19																			19
20																			20
21	Electro Mechanical Switching	2215	36	48	49	57	62	64	67	66	64	65	68	70	69	72	70	72	21
22																			22
23	Operator Systems	2220	37	50	51	59	64	67	69	68	66	67	70	72	71	73	71	74	23
24																			24
25																			25
26																			26
27	Radio System-Analog	22311	51	57	62	63	63	66	64	60	58	58	49	49	46	47	36	36	27
28	Radio System-Digital	22312	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
29	Circuit Equipment-Analog	22321	347	392	417	411	410	423	410	401	348	311	319	317	303	299	312	297	29
30	Circuit Equipment-Digital	22322	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
31																			31
32	Public Telephone Term Eq	2351	148	151	145	145	148	154	143	144	146	158	159	164	164	164	165	165	32
33																			33
34																			34
35	Poles	2411	33	37	39	41	42	45	47	49	51	50	54	58	59	59	60	61	35
36	Aerial Cable-Metallic	24211	44	47	49	49	51	58	61	64	64	68	74	72	70	71	72	70	36
37	Aerial Cable-Fiber	24212	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
38	Underground Cable-Metallic	24221	48	52	54	53	55	64	67	71	69	75	82	78	75	76	78	75	38
39	Underground Cable-Fiber	24222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
40	Buried Cable-Metallic	24231	50	54	56	55	57	66	70	74	72	78	85	81	77	78	80	76	40
41	Buried Cable-Fiber	24232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
42	Submarine Cable-Metallic	24241	43	45	48	48	50	56	59	62	61	65	71	69	68	69	71	70	42
43	Submarine Cable-Fiber	24241	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
44	Intra Building Cable-Metallic	24261	43	47	49	48	50	58	61	64	63	68	74	71	69	70	72	70	44
45	Intra Building Cable-Fiber	24262	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
46	Aerial Wire	2431	33	36	38	38	40	45	47	50	50	55	58	57	57	59	61	62	46
47	Conduit Systems	2441	54	55	57	59	60	63	64	64	65	65	67	69	71	72	73	74	47
48																			48
49	Aerial Cable-FTTP (Distribution)	24213	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
50	Underground Cable-FTTP (Dist.)	24223	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
51	Buried Cable-FTTP (Distribution)	24233	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
52	Submarine Cable-FTTP (Dist.)	24243	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
53	Intra Building Cable-FTTP (Dist.)	24263	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
54																			54

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LINE NO	COST INDEX NUMBER																							LINE NO
	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974 Jan 1	1974 Jul 1	1975 Jan 1	1975 Jul 1	1976 Jan 1	1976 Jul 1	1977 Jan 1	1977 Jul 1	1978 Jan 1	1978 Jul 1	1979 Jan 1	1979 Jul 1	
1	95	94	94	94	95	96	96	97	101	101	102	105	108	113	116	116	117	120	122	123	125	128	131	135	1
2																									2
3																									3
4	87	86	86	85	85	86	88	89	92	97	99	100	102	105	116	116	123	124	131	132	140	143	149	155	4
5	85	85	84	84	84	84	86	88	91	96	99	100	102	109	119	123	128	131	136	140	146	151	157	163	5
6	67	68	70	72	74	77	81	85	89	93	96	100	103	114	130	141	147	151	158	162	171	177	187	195	6
7	71	71	72	73	76	79	82	85	90	94	96	100	114	118	134	139	143	147	153	159	165	172	180	189	7
8	78	79	79	79	81	85	88	93	98	100	100	100	100	111	118	122	119	122	124	130	131	137	141	147	8
9																									9
10																									10
11	53	54	56	57	59	61	64	68	74	84	91	100	107	119	125	128	126	131	132	136	140	148	154	163	11
12	71	71	72	72	73	77	80	83	89	91	93	100	103	114	130	128	129	135	136	144	149	155	160	171	12
13	89	90	90	90	91	92	93	93	96	97	99	100	101	105	109	111	110	112	111	113	114	118	119	123	13
14	89	90	90	90	91	92	93	93	96	97	99	100	100	100	102	103	100	100	98	90	90	90	90	90	14
15																									15
16																									16
17	0	0	0	0	0	0	0	0	0	0	0	104	103	106	110	111	111	113	113	113	115	119	122	125	17
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	105	105	100	95	95	95	96	96	18
19																									19
20																									20
21	71	76	78	75	72	71	75	81	84	88	98	104	106	110	115	120	124	127	132	136	140	145	151	156	21
22																									22
23	73	77	79	76	72	71	76	81	85	89	98	104	106	108	111	114	117	119	121	122	125	128	132	136	23
24																									24
25																									25
26																									26
27	46	49	52	60	58	63	62	66	78	97	102	104	102	102	102	102	97	98	103	104	106	106	103	103	27
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
29	273	234	228	214	224	210	173	159	163	128	108	104	105	108	111	112	111	111	115	118	118	119	120	122	29
30	0	0	0	0	0	0	0	0	0	0	0	104	104	104	105	105	110	116	121	126	126	127	123	120	30
31																									31
32	165	165	166	130	122	123	120	118	108	107	108	107	106	107	110	109	109	111	112	114	116	119	123	127	32
33																									33
34																									34
35	62	63	65	66	68	71	76	79	83	88	97	107	119	131	144	157	158	160	164	169	176	183	196	208	35
36	70	70	70	73	77	81	84	88	96	97	100	107	114	125	129	126	130	135	140	144	148	152	158	170	36
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
38	74	73	72	75	80	84	87	91	100	99	100	107	114	127	130	125	129	134	138	143	145	149	155	168	38
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
40	76	74	73	77	81	85	88	91	101	99	100	107	114	128	131	124	128	133	138	142	144	147	153	167	40
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
42	70	70	71	73	77	81	84	88	95	96	101	107	113	123	128	126	131	136	141	145	150	154	160	171	42
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
44	70	70	70	73	77	81	84	88	96	96	100	107	114	125	129	126	130	136	140	145	148	152	158	170	44
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
46	63	65	66	70	73	75	78	84	91	93	100	107	114	125	130	131	134	139	142	146	145	150	158	172	46
47	74	77	78	79	82	84	84	87	89	94	102	107	111	117	127	130	135	139	144	150	159	163	169	180	47
48																									48
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
54																									54

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AUS TELEPHONE PLANT INDEX

NORTH ATLANTIC REGION 1973-100

LINE NO	PLANT IN SERVICE DESCRIPTION	FCC Acct	COST INDEX NUMBERS																LINE NO
			1980		1981		1982		1983		1984		1985		1986		1987		
			Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	
1	Total Plant		140	146	146	149	150	152	156	159	156	154	156	158	156	154	154	155	1
2																			2
3																			3
4	Motor Vehicles	2112	162	167	178	186	195	195	201	199	203	204	206	210	215	215	227	220	4
5	Aircraft	2113	170	180	195	205	215	217	224	223	227	228	230	234	238	237	233	231	5
6	Special Purpose Vehicles	2114	206	220	231	245	254	263	266	270	271	274	274	277	278	281	283	287	6
7	Gargare Work Equipment	2115	200	213	223	234	241	248	250	251	253	257	260	263	264	267	268	270	7
8	Other Work Equipment	2116	153	165	170	181	183	189	189	189	189	190	192	197	199	202	204	205	8
9																			9
10																			10
11	Buildings	2121	176	183	188	193	192	198	200	206	210	218	223	224	228	234	234	239	11
12	Furniture	2122	174	182	187	199	210	213	215	222	224	229	232	238	242	245	248	252	12
13	Office Equipment	2123	125	130	132	136	137	140	140	143	142	142	140	142	143	143	143	146	13
14	General Purpose Computer	2124	90	90	90	90	87	83	76	69	59	48	48	48	48	47	47	47	14
15																			15
16																			16
17	Analog Electronic Switching	2211	130	140	149	163	168	175	183	188	193	199	202	204	205	208	210	210	17
18	Ditgital Electronic Switching	2212	96	96	97	97	94	90	84	77	67	57	57	57	57	56	56	56	18
19																			19
20																			20
21	Electro Mechanical Switching	2215	167	188	199	213	219	226	232	248	268	277	282	281	283	286	287	287	21
22																			22
23	Operator Systems	2220	146	157	166	176	180	185	191	197	204	211	213	215	216	218	219	219	23
24																			24
25																			25
26																			26
27	Radio System-Analog	22311	100	100	101	102	90	91	94	94	79	80	80	81	77	78	82	82	27
28	Radio System-Digital	22312	0	0	0	0	0	0	115	115	115	117	119	121	122	124	126	124	28
29	Circuit Equipment-Analog	22321	125	130	129	128	130	132	121	154	153	152	153	152	147	144	145	146	29
30	Circuit Equipment-Digital	22322	114	107	100	93	93	94	95	96	89	82	80	78	68	59	49	39	30
31																			31
32	Public Telephone Term Eq	2351	132	141	145	150	158	167	190	196	201	206	210	212	213	217	219	218	32
33																			33
34																			34
35	Poles	2411	220	232	240	249	254	259	263	268	272	273	280	283	287	292	295	297	35
36	Aerial Cable-Metallic	24211	182	193	191	197	202	204	208	213	211	209	219	231	227	223	225	228	36
37	Aerial Cable-Fiber	24212	0	0	0	0	0	0	136	138	132	127	119	111	108	105	108	110	37
38	Underground Cable-Metallic	24221	181	192	187	191	195	196	199	203	197	193	204	217	212	205	206	209	38
39	Underground Cable-Fiber	24222	0	0	0	0	0	0	130	131	125	119	110	101	98	94	97	100	39
40	Buried Cable-Metallic	24231	180	192	186	189	192	193	195	199	192	187	198	212	205	198	198	201	40
41	Buried Cable-Fiber	24232	0	0	0	0	0	0	129	131	124	118	109	100	97	93	96	98	41
42	Submarine Cable-Metallic	24241	181	192	193	199	205	209	214	219	219	218	227	238	237	235	238	240	42
43	Submarine Cable-Fiber	24241	0	0	0	0	0	0	147	149	145	141	134	128	126	124	127	130	43
44	Intra Building Cable-Metallic	24261	182	193	191	197	202	205	209	214	211	210	220	231	228	224	226	230	44
45	Intra Building Cable-Fiber	24262	0	0	0	0	0	0	136	138	132	127	119	111	108	105	108	111	45
46	Aerial Wire	2431	182	191	198	206	210	214	219	225	232	239	243	248	250	252	253	253	46
47	Conduit Systems	2441	188	196	203	211	219	220	228	240	246	253	257	262	267	271	276	278	47
48																			48
49	Aerial Cable-FTTP (Distribution)	24213	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
50	Underground Cable-FTTP (Dist)	24223	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
51	Buried Cable-FTTP (Distribution)	24233	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
52	Submarine Cable-FTTP (Dist)	24243	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
53	Intra Building Cable-FTTP (Dist)	24263	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
54																			54

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NORTH ATLANTIC REGION 1973-100

LINE NO	COST INDEX NUMBERS																								LINE NO
	1988		1989		1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		
	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul 1	Jan. 1	Jul 1	Jan 1	Jul 1	Jan. 1	Jul 1	Jan. 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan. 1	Jul 1	Jan. 1	Jul 1	Jan 1	Jul 1	
1	150	153	158	165	164	165	167	165	165	165	167	168	169	170	174	178	182	182	184	185	186	184	184	181	1
2																									2
3																									3
4	221	222	231	229	236	232	244	241	254	251	258	261	267	271	275	270	279	276	277	271	270	263	273	266	4
5	234	234	234	240	246	254	261	271	274	284	285	291	297	300	304	312	318	322	326	328	327	328	329	330	5
6	289	293	298	309	312	319	325	328	333	337	343	348	348	351	353	360	362	368	370	374	377	382	383	388	6
7	273	279	286	294	298	305	309	316	318	322	324	328	332	336	338	345	349	354	356	359	361	364	366	368	7
8	206	210	215	218	221	228	230	234	235	240	240	243	244	250	250	254	254	258	258	260	260	262	263	265	8
9																									9
10																									10
11	242	254	257	268	268	272	272	274	270	279	283	290	295	306	310	310	311	312	323	329	331	338	341	343	11
12	255	263	269	274	278	284	287	290	291	294	296	299	302	309	309	315	320	322	326	328	330	330	330	333	12
13	147	149	151	153	154	154	152	153	153	156	154	155	155	155	154	156	155	156	155	157	156	157	156	157	13
14	45	43	37	31	30	29	26	24	23	21	21	21	21	21	21	20	17	15	14	14	14	14	13	13	14
15																									15
16																									16
17	204	207	210	212	214	211	212	214	213	213	213	216	215	216	213	212	211	204	204	200	196	194	193	192	17
18	52	50	45	40	39	38	36	33	32	31	31	31	32	32	32	31	28	27	26	26	26	26	25	25	18
19																									19
20																									20
21	278	284	289	291	291	292	296	302	303	304	309	317	316	324	329	327	334	333	336	339	331	336	338	342	21
22																									22
23	213	216	217	218	218	218	220	223	224	224	227	231	231	236	238	236	239	240	239	239	234	237	237	239	23
24																									24
25																									25
26																									26
27	80	80	81	81	81	82	81	82	84	85	86	87	87	87	89	89	91	91	91	93	94	95	95	96	27
28	117	117	117	118	118	118	116	116	117	118	119	120	119	120	120	121	121	122	123	125	125	123	123	124	28
29	140	141	142	144	145	144	145	146	147	147	147	149	150	150	152	149	149	146	146	145	143	143	142	143	29
30	36	35	35	35	35	34	34	34	37	38	39	39	39	39	37	37	37	38	35	36	36	36	36	35	30
31																									31
32	205	209	212	214	216	213	213	215	214	214	213	216	215	216	213	212	211	204	204	200	196	195	194	192	32
33																									33
34																									34
35	278	285	291	295	300	304	310	315	319	327	331	338	352	365	368	369	379	385	400	402	406	413	418	421	35
36	226	237	257	275	273	277	282	277	279	275	281	282	283	282	294	310	319	323	325	328	333	324	322	314	36
37	94	87	85	89	89	89	90	90	89	90	89	89	88	87	88	89	90	91	91	92	93	94	94	95	37
38	210	221	244	265	261	265	270	261	263	256	262	260	260	257	270	289	299	304	305	308	312	299	297	285	38
39	84	75	73	77	76	76	77	77	76	76	75	74	73	72	72	73	74	75	75	76	76	77	77	77	39
40	204	215	240	262	257	261	265	256	257	249	256	253	252	249	262	283	293	298	298	301	306	291	288	275	40
41	82	73	71	75	74	74	75	75	74	74	73	72	71	69	70	71	72	73	73	73	74	74	75	75	41
42	235	244	260	274	274	277	283	278	282	279	285	286	287	288	298	310	319	324	324	327	332	325	325	319	42
43	114	107	106	111	111	111	113	113	113	114	113	114	113	113	114	115	118	119	119	120	121	122	123	123	43
44	227	238	257	275	273	277	282	277	279	275	281	282	282	282	293	309	318	323	324	328	333	324	322	314	44
45	95	87	85	90	89	89	90	91	90	90	89	89	88	87	88	89	91	92	92	93	94	94	95	95	45
46	249	261	270	278	279	283	290	291	293	298	302	305	307	312	320	324	329	332	334	337	341	344	342	342	46
47	269	277	301	309	311	309	316	308	307	310	314	320	325	331	336	340	345	347	350	353	355	358	362	366	47
48																									48
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
54																									54

SCHEDULE NO. T-1

AUS TELEPHONE PLANT INDEX

NORTH ATLANTIC REGION 1973-100

LINE NO	PLANT IN SERVICE DESCRIPTION	FCC Acct	COST INDEX NUMBERS																LINE NO
			2000		2001		2002		2003		2004		2005		2006		2007		
			Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	
1	Total Plant		182	185	188	190	191	193	194	197	201	206	210	213	227	244	244	249	1
2																			2
3																			3
4	Motor Vehicles	2112	275	269	276	266	270	263	264	257	268	266	272	261	262	258	264	257	4
5	Aircraft	2113	334	343	351	359	362	364	369	377	387	393	408	417	424	438	447	450	5
6	Special Purpose Vehicles	2114	388	392	392	392	392	398	400	404	404	413	428	445	449	462	465	472	6
7	Gargare Work Equipment	2115	369	372	373	377	376	376	377	378	379	387	393	403	408	416	422	430	7
8	Other Work Equipment	2116	266	267	268	273	271	272	271	273	273	275	276	278	278	275	278	279	8
9																			9
10																			10
11	Buildings	2121	353	359	364	374	377	384	385	385	407	412	425	431	441	443	457	472	11
12	Furniture	2122	335	337	338	341	341	341	344	346	346	350	360	368	372	376	380	386	12
13	Office Equipment	2123	156	157	157	158	159	158	158	157	159	160	158	162	161	161	160	161	13
14	General Purpose Computer	2124	12	11	9	9	7	7	6	4.8	3.4	3.4	3.3	3.3	3.0	2.8	2.6	2.7	14
15																			15
16																			16
17	Analog Electronic Switching	2211	193	193	193	190	189	190	189	190	189	190	190	189	187	193	196	186	17
18	Ditgital Electronic Switching	2212	25	24	22	23	23	23	21	22	22	22	22	22	22	22	23	23	18
19																			19
20																			20
21	Electro Mechanical Switching	2215	344	348	350	358	366	376	379	386	391	395	403	405	414	421	430	432	21
22																			22
23	Operator Systems	2220	241	242	243	247	251	257	258	261	264	266	271	272	276	282	287	287	23
24																			24
25																			25
26																			26
27	Radio System-Analog	22311	96	96	96	95	95	95	95	95	95	96	95	95	94	97	98	94	27
28	Radio System-Digital	22312	125	125	126	127	128	127	125	125	125	126	127	127	128	129	130	130	28
29	Circuit Equipment-Analog	22321	143	144	144	142	143	143	143	144	143	145	145	145	144	148	150	144	29
30	Circuit Equipment-Digital	22322	36	36	36	37	37	38	38	39	38	38	39	39	39	40	40	41	30
31																			31
32	Public Telephone Term Eq	2351	193	193	193	191	190	190	190	191	190	191	190	189	187	193	195	186	32
33																			33
34																			34
35	Poles	2411	421	429	434	446	451	459	463	472	477	490	495	503	502	521	526	529	35
36	Aerial Cable-Metallic	24211	313	322	328	333	335	338	340	349	357	371	379	386	430	486	477	492	36
37	Aerial Cable-Fiber	24212	96	98	100	102	104	105	105	108	110	112	114	116	118	119	121	122	37
38	Underground Cable-Metallic	24221	281	289	295	299	298	299	299	307	314	326	334	340	394	461	448	466	38
39	Underground Cable-Fiber	24222	78	80	82	83	84	86	85	87	89	91	92	94	95	96	98	98	39
40	Buried Cable-Metallic	24231	271	278	284	287	285	289	286	293	300	312	320	326	383	456	441	460	40
41	Buried Cable-Fiber	24232	76	77	79	80	81	83	82	84	85	87	89	90	91	92	93	94	41
42	Submarine Cable-Metallic	24241	320	327	334	338	341	343	346	353	362	372	379	384	417	459	454	466	42
43	Submarine Cable-Fiber	24241	125	127	130	132	134	136	136	138	141	144	146	148	149	150	153	154	43
44	Intra Building Cable-Metallic	24261	313	322	328	333	335	338	340	349	357	370	378	385	429	483	474	489	44
45	Intra Building Cable-Fiber	24262	97	99	101	103	104	106	106	108	110	113	115	117	118	120	121	122	45
46	Aerial Wire	2431	348	355	362	368	372	377	381	391	399	412	419	427	446	466	465	472	46
47	Conduit Systems	2441	375	380	391	395	403	412	418	422	432	442	453	458	474	478	495	493	47
48																			48
49	Aerial Cable-FTTP (Distribution)	24213	0	0	0	0	0	0	0	0	0	100	97	95	92	89	88	87	49
50	Underground Cable-FTTP (Dist.)	24223	0	0	0	0	0	0	0	0	0	100	99	98	98	97	96	96	50
51	Buried Cable-FTTP (Distribution)	24233	0	0	0	0	0	0	0	0	0	100	102	105	104	103	103	102	51
52	Submarine Cable-FTTP (Dist.)	24243	0	0	0	0	0	0	0	0	0	100	99	98	98	97	96	96	52
53	Intra Building Cable-FTTP (Dist.)	24263	0	0	0	0	0	0	0	0	0	100	100	100	100	100	101	103	53
54																			54

SCHEDULE NO. T-1

AUS TELEPHONE PLANT INDEX

NORTH ATLANTIC REGION 1973-100

LINE NO	COST INDEX NUMBERS																					LINE NO
	2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		
	Jan. 1	Jul. 1	Jan. 1	Jul. 1	Jan. 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan. 1	Jul. 1	Jan. 1	Jul 1	Jan 1	Jul. 1	Jan. 1	Jul. 1	Jan 1	Jul 1	Jan 1	Jul. 1	
1	251	256	245	248	258	260	279	282	282	282	285	283	284	285	289	287	283	282	288	290	298	304	1
2																							2
3																							3
4	263	257	272	273	274	269	272	273	280	279	286	282	291	287	291	295	299	298	305	301	307	304	4
5	461	471	495	480	485	490	497	502	514	520	523	528	532	537	541	543	543	547	548	553	557	562	5
6	476	485	499	504	503	503	507	518	529	541	548	555	557	564	566	570	572	576	577	581	583	578	6
7	435	445	457	457	456	458	462	474	479	485	489	494	497	503	505	509	510	513	514	519	522	533	7
8	281	286	290	286	286	288	288	290	291	294	295	296	304	307	309	315	318	322	322	324	327	330	8
9																							9
10																							10
11	492	497	506	494	506	507	521	518	530	532	542	539	550	552	585	580	586	589	604	608	633	647	11
12	389	402	417	415	418	420	415	429	433	437	433	437	439	450	449	454	454	455	457	461	464	482	12
13	162	171	184	171	169	169	170	171	173	173	164	165	166	166	171	172	172	172	173	171	171	169	13
14	2.7	2.6	2.6	2.1	2.01	1.98	1.97	1.49	0.82	0.66	0.67	0.50	0.57	0.60	0.55	0.63	0.64	0.65	0.73	0.71	0.67	0.64	14
15																							15
16																							16
17	180	179	178	178	177	177	174	175	174	174	174	175	176	176	176	176	177	177	177	179	177	179	17
18	24	24	25	25	25	25	25	25	26	26	26	27	27	27	27	28	28	28	28	29	29	29	18
19																							19
20																							20
21	439	445	456	458	460	469	474	481	486	478	484	491	497	495	499	499	496	497	502	502	509	506	21
22																							22
23	288	292	297	299	300	305	307	311	313	309	312	317	320	319	322	322	320	321	324	325	328	327	23
24																							24
25																							25
26																							26
27	91	90	90	90	89	89	88	89	88	88	88	88	89	89	89	89	89	89	89	90	90	90	27
28	131	132	134	134	135	137	138	138	137	138	138	138	138	138	139	140	140	140	140	141	141	142	28
29	140	139	139	139	138	138	137	138	137	137	137	138	139	139	140	140	141	141	141	142	142	143	29
30	41	41	41	41	40	40	40	41	41	42	42	42	43	43	44	44	44	45	45	45	46	46	30
31																							31
32	180	179	177	178	177	177	174	175	173	174	173	174	175	175	176	176	177	177	177	179	177	179	32
33																							33
34																							34
35	537	547	554	563	570	578	576	587	594	600	603	607	605	616	620	621	629	633	634	652	643	652	35
36	494	507	461	473	506	509	573	582	577	576	582	572	573	573	578	570	555	551	566	568	590	604	36
37	123	124	126	127	128	130	131	133	135	136	137	138	140	142	143	144	146	148	149	151	153	155	37
38	465	481	421	435	475	476	555	562	554	552	556	544	542	540	544	533	513	506	523	524	548	563	38
39	100	100	102	103	103	105	106	108	109	110	111	112	113	114	116	116	118	119	120	122	123	125	39
40	459	475	410	425	467	467	553	560	550	547	552	538	536	533	537	524	501	493	511	511	537	552	40
41	95	96	97	98	99	100	101	103	104	105	106	107	108	109	111	111	113	114	115	116	118	120	41
42	468	479	447	458	484	486	535	541	539	540	545	539	541	542	547	544	534	532	546	548	566	578	42
43	155	157	159	161	163	164	166	168	170	172	173	174	177	179	181	183	185	187	189	191	194	196	43
44	491	504	459	471	504	507	570	578	573	573	578	569	569	570	575	567	553	549	564	566	588	602	44
45	124	125	127	128	129	131	132	134	135	137	138	139	141	142	144	145	147	148	150	152	154	156	45
46	475	488	469	478	496	501	519	528	525	527	531	530	533	538	543	543	540	541	551	556	569	580	46
47	502	507	525	530	516	521	526	532	545	550	549	552	559	565	571	577	581	586	591	596	611	618	47
48																							48
49	82	77	75	73	65	58	55	53	52	50	50	50	50	50	50	49	50	49	49	50	49	50	49
50	94	92	89	87	83	80	75	70	66	62	58	54	54	54	53	53	54	54	54	55	54.3	55.3	50
51	92	82	78	74	71	68	66	63	61	59	57	54	54	55	54	54	54	53	53	54	52.7	53.7	51
52	94	92	89	87	83	80	75	70	66	62	58	54	54	54	53	53	54	54	54	55	54.3	55.3	52
53	104	105	90	75	68	61	54	47	43	39	39	39	39	39	38	38	39	44	44	44	43.7	44.7	53
54																							54

SCHEDULE NO. T-1

AUS TELEPHONE PLANT INDEX

NORTH ATLANTIC REGION 1973-100

LINE NO	PLANT IN SERVICE DESCRIPTION	FCC Acct	COST INDEX NUMBERS														LINE NO
			2019		2020		2021		2022		2023		2024		2025		
			Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	Jan 1	Jul 1	
1	Total Plant		304	305	308	310	318										1
2																	2
3																	3
4	Motor Vehicles	2112	309	305	308	304	310										4
5	Aircraft	2113	567	574	575	581	583										5
6	Special Purpose Vehicles	2114	602	612	616	622	623										6
7	Gargare Work Equipment	2115	541	550	550	555	556										7
8	Other Work Equipment	2116	333	335	336	340	343										8
9																	9
10																	10
11	Buildings	2121	647	643	664	662	662										11
12	Furniture	2122	491	497	503	512	513										12
13	Office Equipment	2123	170	172	171	170	169										13
14	General Purpose Computer	2124	0 60	0 60	0 51	0 51	0 34										14
15																	15
16																	16
17	Analog Electronic Switching	2211	179	179	181	180	180										17
18	Ditgital Electronic Switching	2212	29	29	30	30	30										18
19																	19
20																	20
21	Electro Mechanical Switching	2215	513	517	518	528	529										21
22																	22
23	Operator Systems	2220	331	334	335	340	341										23
24																	24
25																	25
26																	26
27	Radio System-Analog	22311	90	90	91	91	91										27
28	Radio System-Digital	22312	143	144	146	147	147										28
29	Circuit Equipment-Analog	22321	143	144	145	145	145										29
30	Circuit Equipment-Digital	22322	47	47	48	48	49										30
31																	31
32	Public Telephone Term Eq	2351	179	180	181	181	181										32
33																	33
34																	34
35	Poles	2411	661	671	699	710	715										35
36	Aerial Cable-Metallic	24211	601	603	605	608	634										36
37	Aerial Cable-Fiber	24212	157	158	160	162	164										37
38	Underground Cable-Metallic	24221	558	557	558	559	590										38
39	Underground Cable-Fiber	24222	126	128	129	130	132										39
40	Buried Cable-Metallic	24231	545	544	544	545	577										40
41	Buried Cable-Fiber	24232	121	122	123	125	126										41
42	Submarine Cable-Metallic	24241	578	580	583	587	608										42
43	Submarine Cable-Fiber	24241	199	200	203	205	207										43
44	Intra Building Cable-Metallic	24261	599	601	603	606	632										44
45	Intra Building Cable-Fiber	24262	158	159	161	163	165										45
46	Aerial Wire	2431	583	587	592	597	612										46
47	Conduit Systems	2441	626	631	642	648	655										47
48																	48
49	Aerial Cable-FTTP (Distribution)	24213	50 5	50	50	50	50										49
50	Underground Cable-FTTP (Dist)	24223	55 8	55 1	55 1	55 1	55 1										50
51	Buried Cable-FTTP (Distribution)	24233	54 2	53 7	53 7	53 7	53 7										51
52	Submarine Cable-FTTP (Dist)	24243	55 8	55 1	55 1	55 1	55 1										52
53	Intra Building Cable-FTTP (Dist)	24263	45 2	44 7	44 7	44 7	44 7										53
54																	54

Water and Wastewater General Information
Appraisal Work Papers

Cost Indices

United States Bureau of Labor Statistics – General Inf Cost Indexes

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AUS Consultants
Bureau of Labor Statistics Indexes

Index	Table	Region	Year	Begin Date	End Date	CPI	1	2 Communic Equipment pcu3342	3 Technical Labor ecu11122I linked CIU20154
Earliest Year							1913	1986	1985
Index	Table	Region					1	2	3
BLS	BLS	All	1913	1/1/1913	12/31/1913		10	7	6
BLS	BLS	All	1914	1/1/1914	12/31/1914		10	7	6
BLS	BLS	All	1915	1/1/1915	12/31/1915		10	7	6
BLS	BLS	All	1916	1/1/1916	12/31/1916		11	8	7
BLS	BLS	All	1917	1/1/1917	12/31/1917		13	10	8
BLS	BLS	All	1918	1/1/1918	12/31/1918		15	11	9
BLS	BLS	All	1919	1/1/1919	12/31/1919		17	12	10
BLS	BLS	All	1920	1/1/1920	12/31/1920		20	14	12
BLS	BLS	All	1921	1/1/1921	12/31/1921		18	13	11
BLS	BLS	All	1922	1/1/1922	12/31/1922		17	12	10
BLS	BLS	All	1923	1/1/1923	12/31/1923		17	12	10
BLS	BLS	All	1924	1/1/1924	12/31/1924		17	12	10
BLS	BLS	All	1925	1/1/1925	12/31/1925		18	13	11
BLS	BLS	All	1926	1/1/1926	12/31/1926		18	13	11
BLS	BLS	All	1927	1/1/1927	12/31/1927		17	12	10
BLS	BLS	All	1928	1/1/1928	12/31/1928		17	12	10
BLS	BLS	All	1929	1/1/1929	12/31/1929		17	12	10
BLS	BLS	All	1930	1/1/1930	12/31/1930		17	12	10
BLS	BLS	All	1931	1/1/1931	12/31/1931		15	11	9
BLS	BLS	All	1932	1/1/1932	12/31/1932		14	10	8
BLS	BLS	All	1933	1/1/1933	12/31/1933		13	9	7
BLS	BLS	All	1934	1/1/1934	12/31/1934		13	9	7
BLS	BLS	All	1935	1/1/1935	12/31/1935		14	10	7
BLS	BLS	All	1936	1/1/1936	12/31/1936		14	10	7
BLS	BLS	All	1937	1/1/1937	12/31/1937		14	10	7
BLS	BLS	All	1938	1/1/1938	12/31/1938		14	10	7
BLS	BLS	All	1939	1/1/1939	12/31/1939		14	10	7
BLS	BLS	All	1940	1/1/1940	12/31/1940		14	10	7
BLS	BLS	All	1941	1/1/1941	12/31/1941		15	11	8
BLS	BLS	All	1942	1/1/1942	12/31/1942		16	12	9
BLS	BLS	All	1943	1/1/1943	12/31/1943		17	13	10
BLS	BLS	All	1944	1/1/1944	12/31/1944		18	14	11
BLS	BLS	All	1945	1/1/1945	12/31/1945		18	14	11
BLS	BLS	All	1946	1/1/1946	12/31/1946		20	16	12
BLS	BLS	All	1947	1/1/1947	12/31/1947		22	18	13
BLS	BLS	All	1948	1/1/1948	12/31/1948		24	20	14
BLS	BLS	All	1949	1/1/1949	12/31/1949		24	20	14
BLS	BLS	All	1950	1/1/1950	12/31/1950		24	20	14
BLS	BLS	All	1951	1/1/1951	12/31/1951		26	22	15

AUS Consultants
Bureau of Labor Statistics Indexes

Index	Table	Region	Year	Begin Date	End Date	CPI	1	2 Communic Equipment pcu3342	3 Technical Labor ecu11122I linked CIU20154
Earliest Year							1913	1986	1985
Index	Table	Region					1	2	3
BLS	BLS	All	1952	1/1/1952	12/31/1952		27	23	16
BLS	BLS	All	1953	1/1/1953	12/31/1953		27	23	16
BLS	BLS	All	1954	1/1/1954	12/31/1954		27	23	16
BLS	BLS	All	1955	1/1/1955	12/31/1955		27	23	16
BLS	BLS	All	1956	1/1/1956	12/31/1956		27	23	16
BLS	BLS	All	1957	1/1/1957	12/31/1957		28	24	17
BLS	BLS	All	1958	1/1/1958	12/31/1958		29	25	18
BLS	BLS	All	1959	1/1/1959	12/31/1959		29	25	18
BLS	BLS	All	1960	1/1/1960	12/31/1960		30	26	19
BLS	BLS	All	1961	1/1/1961	12/31/1961		30	26	19
BLS	BLS	All	1962	1/1/1962	12/31/1962		30	26	19
BLS	BLS	All	1963	1/1/1963	12/31/1963		31	27	20
BLS	BLS	All	1964	1/1/1964	12/31/1964		31	27	20
BLS	BLS	All	1965	1/1/1965	12/31/1965		32	28	21
BLS	BLS	All	1966	1/1/1966	12/31/1966		32	28	21
BLS	BLS	All	1967	1/1/1967	12/31/1967		33	29	22
BLS	BLS	All	1968	1/1/1968	12/31/1968		35	31	23
BLS	BLS	All	1969	1/1/1969	12/31/1969		37	33	24
BLS	BLS	All	1970	1/1/1970	12/31/1970		39	35	25
BLS	BLS	All	1971	1/1/1971	12/31/1971		41	37	26
BLS	BLS	All	1972	1/1/1972	12/31/1972		42	38	27
BLS	BLS	All	1973	1/1/1973	12/31/1973		44	40	28
BLS	BLS	All	1974	1/1/1974	12/31/1974		49	44	31
BLS	BLS	All	1975	1/1/1975	12/31/1975		54	49	34
BLS	BLS	All	1976	1/1/1976	12/31/1976		57	52	36
BLS	BLS	All	1977	1/1/1977	12/31/1977		61	56	38
BLS	BLS	All	1978	1/1/1978	12/31/1978		65	60	40
BLS	BLS	All	1979	1/1/1979	12/31/1979		73	67	45
BLS	BLS	All	1980	1/1/1980	12/31/1980		82	75	50
BLS	BLS	All	1981	1/1/1981	12/31/1981		91	83	55
BLS	BLS	All	1982	1/1/1982	12/31/1982		97	89	59
BLS	BLS	All	1983	1/1/1983	12/31/1983		100	92	61
BLS	BLS	All	1984	1/1/1984	12/31/1984		104	96	63
BLS	BLS	All	1985	1/1/1985	12/31/1985		108	100	65
BLS	BLS	All	1986	1/1/1986	12/31/1986		110	102	66
BLS	BLS	All	1987	1/1/1987	12/31/1987		114	104	69
BLS	BLS	All	1988	1/1/1988	12/31/1988		118	104	72
BLS	BLS	All	1989	1/1/1989	12/31/1989		124	106	76
BLS	BLS	All	1990	1/1/1990	12/31/1990		131	108	80

AUS Consultants
Bureau of Labor Statistics Indexes

Index	Table	Region	Year	Begin Date	End Date	CPI	1	2 Communic Equipment pcu3342	3 Technical Labor ecu11122I linked CIU20154
Earliest Year							1913	1986	1985
Index	Table	Region					1	2	3
BLS	BLS	All	1991	1/1/1991	12/31/1991		136	109	84
BLS	BLS	All	1992	1/1/1992	12/31/1992		140	110	88
BLS	BLS	All	1993	1/1/1993	12/31/1993		145	112	92
BLS	BLS	All	1994	1/1/1994	12/31/1994		148	113	95
BLS	BLS	All	1995	1/1/1995	12/31/1995		152	114	97
BLS	BLS	All	1996	1/1/1996	12/31/1996		157	115	100
BLS	BLS	All	1997	1/1/1997	12/31/1997		161	116	102
BLS	BLS	All	1998	1/1/1998	12/31/1998		163	115	106
BLS	BLS	All	1999	1/1/1999	12/31/1999		167	113	109
BLS	BLS	All	2000	1/1/2000	12/31/2000		172	110	114
BLS	BLS	All	2001	1/1/2001	12/31/2001		177	109	119
BLS	BLS	All	2002	1/1/2002	12/31/2002		180	105	123
BLS	BLS	All	2003	1/1/2003	12/31/2003		184	102	127
BLS	BLS	All	2004	1/1/2004	12/31/2004		189	98	132
BLS	BLS	All	2005	1/1/2005	12/31/2005		195	97	135
BLS	BLS	All	2006	1/1/2006	12/31/2006		202	97	139
BLS	BLS	All	2007	1/1/2007	12/31/2007		207	96	146
BLS	BLS	All	2008	1/1/2008	12/31/2008		215	97	152
BLS	BLS	All	2009	1/1/2009	12/31/2009		215	97	155
BLS	BLS	All	2010	1/1/2010	12/31/2010		218	97	157
BLS	BLS	All	2011	1/1/2011	12/31/2011		225	96	161
BLS	BLS	All	2012	1/1/2012	12/31/2012		230	96	164
BLS	BLS	All	2013	1/1/2013	12/31/2013		233	95	167
BLS	BLS	All	2014	1/1/2014	12/31/2014		237	96	170
BLS	BLS	All	2015	1/1/2015	12/31/2015		237	96	173
BLS	BLS	All	2016	1/1/2016	12/31/2016		240	95	176
BLS	BLS	All	2017	1/1/2017	12/31/2017		245.1	94	179
BLS	BLS	All	2018	1/1/2018	12/31/2018		251.1	93	183
BLS	BLS	All	2019	1/1/2019	12/31/2019		255.7	93	187
BLS	BLS	All	2020	1/1/2020	12/31/2020		258.8	94	191
BLS	BLS	All	2021	1/1/2021	12/31/2021		261.6	94	192

Index	Table	Region	Year	Begin Date	End Date	1 Switch Gear PCU3353 13335313 30%	2 Relays PCU3353 14335314 30%	3 Battery Systems PCU3359 12335912 40%	4 Power Systems Calculation Composite	5 Alarm Systems PCU33429 03342901	6 Motors & Generators PCU33531 2335312	7 Emergency Generators Means Ref 26 32 13.13 2600
Earliest Year						1987	1987	1987	1987	1987	1987	1987
Index	Table	Region				1	2	3	4	5	6	7
POW	POW	All	1987	1/1/1987	12/31/1987	103.6	103.9	125.0	112.3	100.1	110.8	83.4
POW	POW	All	1988	1/1/1988	12/31/1988	106.7	106.6	126.7	114.7	101.6	116.4	83.7
POW	POW	All	1989	1/1/1989	12/31/1989	113.5	110.9	133.5	120.7	104.3	123.3	83.9
POW	POW	All	1990	1/1/1990	12/31/1990	118.5	115.4	137.6	125.2	103.4	127.5	84.1
POW	POW	All	1991	1/1/1991	12/31/1991	121.8	120.5	142.7	129.8	101.9	129.7	84.3
POW	POW	All	1992	1/1/1992	12/31/1992	123.6	123.3	146.1	132.5	102.2	131.5	84.8
POW	POW	All	1993	1/1/1993	12/31/1993	125.9	126.9	149.3	135.6	103.2	133.5	85.0
POW	POW	All	1994	1/1/1994	12/31/1994	128.7	128.3	151.2	137.6	104.2	134.2	90.6
POW	POW	All	1995	1/1/1995	12/31/1995	132.4	130.7	154.5	140.7	106.5	137.5	95.1
POW	POW	All	1996	1/1/1996	12/31/1996	133.6	133.6	157.5	143.2	108.3	139.1	95.3
POW	POW	All	1997	1/1/1997	12/31/1997	135.0	137.8	158.3	145.2	109.4	138.6	99.1
POW	POW	All	1998	1/1/1998	12/31/1998	138.2	140.4	164.2	149.3	111.3	139.8	99.6
POW	POW	All	1999	1/1/1999	12/31/1999	141.0	142.8	165.5	151.3	109.4	139.9	99.8
POW	POW	All	2000	1/1/2000	12/31/2000	143.3	144.4	169.9	154.3	108.4	140.4	100.0
POW	POW	All	2001	1/1/2001	12/31/2001	147.6	148.2	178.2	160.0	109.0	141.6	102.9
POW	POW	All	2002	1/1/2002	12/31/2002	149.8	150.0	179.4	161.7	110.4	142.0	103.4
POW	POW	All	2003	1/1/2003	12/31/2003	151.1	152.3	165.1	157.1	110.8	142.4	103.8
POW	POW	All	2004	1/1/2004	12/31/2004	153.7	155.2	165.1	158.7	109.8	145.8	104.3
POW	POW	All	2005	1/1/2005	12/31/2005	160.4	160.0	166.9	162.9	110.6	154.4	104.7
POW	POW	All	2006	1/1/2006	12/31/2006	167.5	167.6	175.6	170.8	113.1	161.8	104.9
POW	POW	All	2007	1/1/2007	12/31/2007	179.4	173.0	182.5	178.7	113.8	169.6	111.0
POW	POW	All	2008	1/1/2008	12/31/2008	187.5	179.3	189.4	185.8	116.0	177.7	123.0
POW	POW	All	2009	1/1/2009	12/31/2009	193.1	184.7	193.4	190.7	116.8	181.8	126.4
POW	POW	All	2010	1/1/2010	12/31/2010	195.1	190.3	191.8	192.3	117.8	185.4	130.9
POW	POW	All	2011	1/1/2011	12/31/2011	198.2	194.5	192.8	194.9	118.4	196.5	130.9
POW	POW	All	2012	1/1/2012	12/31/2012	199.0	196.4	197.1	197.5	119.9	201.1	139.8
POW	POW	All	2013	1/1/2013	12/31/2013	201.5	200.1	198.4	199.8	121.5	203.2	121.9
POW	POW	All	2014	1/1/2014	12/31/2014	200.3	202.7	198.9	200.5	122.2	206.1	106.5
POW	POW	All	2015	1/1/2015	12/31/2015	199.3	205.7	198.4	200.9	123.2	206.4	111.9
POW	POW	All	2016	1/1/2016	12/31/2016	199.6	206.9	196.6	200.6	123.9	204.6	111.9
POW	POW	All	2017	1/1/2017	12/31/2017	200.4	209.8	203.9	204.6	124.6	206.5	111.9
POW	POW	All	2018	1/1/2018	12/31/2018	204.7	211.8	215.5	211.2	123.9	211.9	119.7
POW	POW	All	2019	1/1/2019	12/31/2019	211.6	215.1	218.3	215.3	124.3	215.6	119.7
POW	POW	All	2020	1/1/2020	12/31/2020	219.1	218.5	218.8	218.8	125.5	216.2	119.7

DEPRECIATION AND FUNCTIONAL OBSOLESCENCE

An important step in the appraisal of property using the cost approach is the determination of the depreciation or condition of the property. Depreciation in this appraisal was segregated into normal (mostly physical) depreciation and functional obsolescence. The normal depreciation was determined based on the age of the property and its normal service life; while functional obsolescence was based on the impact on the property's remaining life caused by factors such as changing technology, service requirements, and competition.

Depreciation - The depreciation was determined based on the property's age and it normal service life using the following formula:

$$\text{Condition} = \frac{\text{Remaining Life}}{\text{Age + Remaining Life}}$$

or

$$\text{Depreciation} = \frac{\text{Age}}{\text{Age + Remaining Life}}$$

Where: Remaining Life = f(Age, Survival Characteristic, Normal Service life)

Functional Obsolescence - The obsolescence inherent in the property was determined using the above-described normal service life in comparison to the property's service life is adjusted for functional factors. The obsolescence was quantified base on the difference between the property's normal service life and its functional service life. The following formula was used to calculate the obsolescence:

$$\text{Obsolescence} = \frac{\text{Normal Service Life - Functional Service Life}}{\text{Normal Service Life}}$$

Service Lives - (normal versus functional) - The service life of property is that period of time in which it provides the service to which it was designed and placed into service. In most industrial properties there is a difference between a property's normal or physical life and its functional life. A piece of equipment may physically last for an extended

period; however, as that property ages changing technology, improvements or enhancement in similar equipment, functional and or service requirements change resulting in decreased utility of the existing equipment, and therefore decrease in value to it owner, this additional deterioration over that defined by the equipment's normal life is functional obsolescence.

Wastewater Depreciation Service Life Experience in Pennsylvania

The service lives used in the depreciation and functional obsolescence calculations were developed based on the property and its use, AUS Consultants' experience in developing depreciation studies for the water and wastewater industries and depreciation studies filed with recent PAWC and Aqua America rate cases. With each of their rate case filings PAWC and Aqua America have filed depreciation studies in support of their depreciation service lives and associated depreciation expenses contained within their revenue requirements. The depreciation studies were prepared by Gannett Fleming Rate Consultants a recognized firm in the depreciation consulting area. AUS Consultants has reviewed the studies which are summarized in the following table:

Summary of PAWC & Aqua Depreciation Studies Prepared for Rate Case

Account	Account Description	Iowa Curves			Service Life		
		PAWC 12/31/2016	PAWC 12/31/2019	Aqua 3/31/2018	PAWC 12/31/2016	PAWC 12/31/2019	Aqua 3/31/2018
					years	years	
354.20	STRUCTURES AND IMPROVEMENTS - COLLECTION	R3	R3	S0.5	45	45	55
354.30	STRUCTURES AND IMPROVEMENTS - SPP	R2.5	S0	S1.0	50	55	60
354.40	STRUCTURES AND IMPROVEMENTS - TDP	R2	S0	R2.0	65	55	50
354.70	STRUCTURES AND IMPROVEMENTS - GENERAL	S1	S1	R3.0	35	35	50
355.00	POWER GENERATION EQUIPMENT	R2.5	S0.5		35	35	
360.10	COLLECTION SEWERS - FORCE MAINS	S2	R3	R2.5	70	75	75
361.10	COLLECTION SEWERS - GRAVITY MAINS	R2.5	R2.5	R2.5	70	80	75
361.20	MANHOLES	S1.5	S2.5		50	50	
363.00	SERVICES	R3	R3	R4.0	38	47	70
364.00	FLOW MEASURING DEVICES	L3	L2.5		20	15	
365.00	FLOW MEASURING INSTALLATIONS	S1.5	S2		30	25	
370.00	RECEIVING WELLS	R3	R3		50	50	
371.00	PUMPING EQUIPMENT	SO	S0.5	L0.5	40	30	25
380.00	TREATMENT EQUIPMENT	5-R2	S1.5	S0.0	45	35	40
381.00	PLANT SEWERS	R3	R3	R1.5	50	50	40
382.00	OUTFALL SEWER LINES	R3	R3	R2.5	50	50	40
389.10	OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES	52.5	S2.5		20	20	
389.60	OTHER PLANT AND MISCELLANEOUS EQUIPMENT - CPS	SQ	SQ	L3.0	20	5	20
390.00	OFFICE FURNITURE AND EQUIPMENT	L4	SQ	SQ	15	20	20
391.00	TRANSPORTATION EQUIPMENT	SQ	L4		25	14	
392.00	STORES EQUIPMENT	SQ	SQ		20	25	
393.00	TOOLS, SHOP AND GARAGE EQUIPMENT	SQ	SQ	SQ	15	20	20
394.00	LABORATORY EQUIPMENT	L2.5	SQ	SQ	16	15	25
395.00	POWER OPERATED EQUIPMENT	SQ	R2		15	22	
396.00	COMMUNICATION EQUIPMENT	SQ	SQ		15	15	
397.00	MISCELLANEOUS EQUIPMENT		SQ			15	
398.00	OTHER TANGIBLE PLANT		SQ			25	

AUS Consultants believe this increase in service lives is attributable to the widespread use of relining older mains instead of replacing mains which are in need of repair. The practice of relining mains with a cured in place plastic liner not only repairs specific main but has the affect of extending the life of the original main by the length of time which the relining can be expected to last. Most relining vendors warranty their product and procedure for 50 years. Thus, in essence the original mains' service life will be extended by 50 plus years at the date the relining occurred. For those mains associated with relining their installation date was established at the date of their relining and their depreciation parameters were established the same as the depreciation parameters of the relining, i.e., R2.5 – 60 years.

The following table presents the depreciation parameters (Iowa-type survivor curve and service life) used in the cost approach in calculating the deprecation of the property:

East Whiteland Township, Pennsylvania
East Whiteland Township's Wastewater Collection System and Purchased Treatment Capacity
Wastewater Collection System and Purchased Treatment Capacity
Investor-Owned Utility
January 8, 2021

Summary of Account Costing and Depreciation Parameters Used in the Depreciation Original Cost and the Depreciated Replacement Cost New Studies

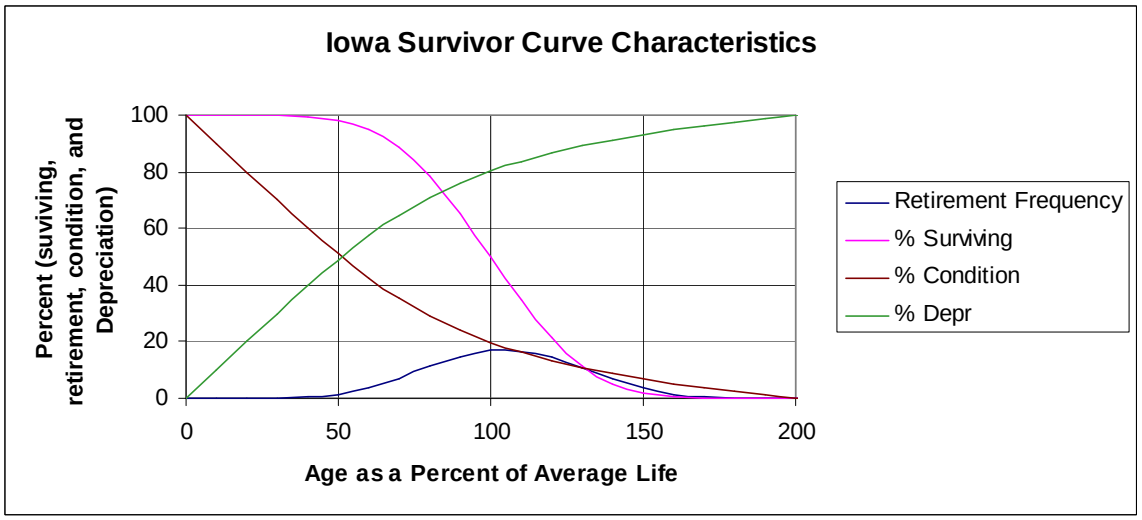
(1)	(2)	(4)		(5)	(6)	
		(4a)	(4b)		(6a)	(6b)
Account Number	Description	Iowa Survivor / Retirement Curve	Normal Service Life	Economic Obsolescence	Tax Depreciation	
			years	% of CORLD	Table	Life
353.20	Land & Land Rights - Original Basin	ZNonDep	0.00	0.00%	Non-Depr	0.00
353.30	Land & Land Rights - Pumping	ZNonDep	0.00	0.00%	Non-Depr	0.00
354.30	Stuctures & Improvements - Pumping	R4.0	45.00	0.00%	MACRS	25.00
360.21	Collection Sewers - Force - Mains	R3.0	75.00	0.00%	MACRS	25.00
361.21	Collection Sewers - Gravity - Mains	R2.5	80.00	0.00%	MACRS	25.00
361.23	Collection Sewers - Gravity - Manholes	R2.5	80.00	0.00%	MACRS	25.00
363.20	Service Laterals	R3.0	70.00	0.00%	MACRS	25.00
365.20	Flow Measuring Installations Meter Pits	S2.0	30.00	0.00%	MACRS	25.00
380.00	Treatment and Disposal Equipment	R2.0	45.00	0.00%	MACRS	25.00
390.70	Office Furniture and Equipment	R3.0	12.00	0.00%	MACRS	12.00
391.70	Transportation Equipment	R3.0	10.00	0.00%	MACRS	10.00

As the above table demonstrates the depreciation lives selected for the AUS Consultants appraisal are consistent with the industry depreciation studies' finding for

wastewater plant. However due to the age of some of the property the extend of the depreciation was limited to 85% of the assets original cost and its replacement cost new.

Iowa Survivor Curves

The Iowa Survivor Curves recommended in the McKeesport appraisal are used to determine the remaining life of the property, and therefore its condition, recognizing the properties' service life and age. The Iowa Survivor Curves allows the appraiser to recognize the property being studied (mains, treatment and pumping plant equipment etc placed in a particular year, say1985) is part of a larger group of property, i.e., all the property i.e., mains, treatment and pumping plant equipment, etc. As such, the service lives which we refer to in our appraisal are an average service lives for the group, i.e., the average life of all mains, treatment and pumping plant equipment, etc. The Iowa Survivor curve allows the appraiser to calculate the remaining life, and therefore condition, of a subset of the group (the mains placed in 1985) based on the groups': (1) Iowa Survivor Curve, (2) Service Life and the (3) age of property at the appraisal date. An Iowa Survivor Curves depicts how property from a group survives and retires about that groups' average life.

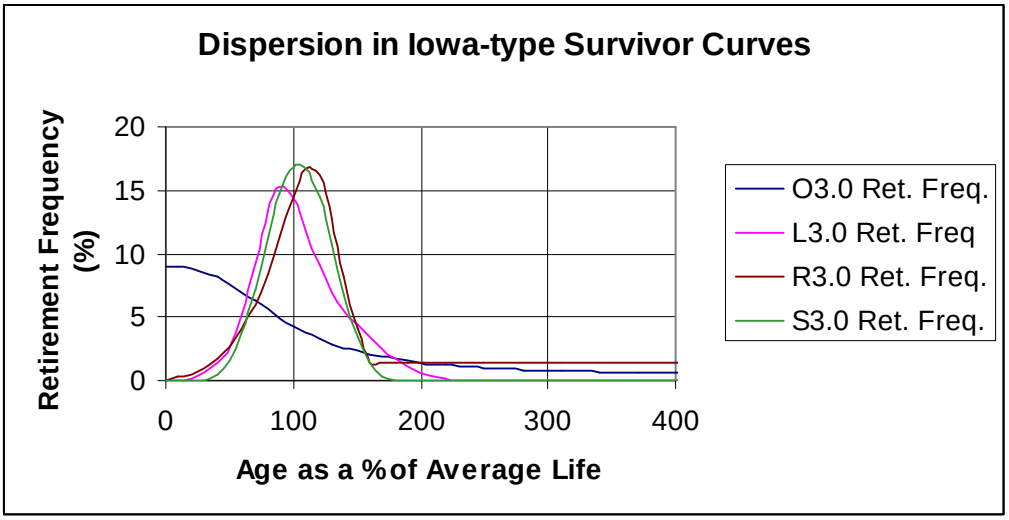


The above figure depicts a typical Iowa-type survivor curve, an S3.0 Iowa-type survivor curve. In this case the survivor curve has been generalized to a service life of 100% of the property's average life, in this generalized form the survivor curve statistics can be utilized with any individual service life in the age-life service life and depreciation calculations. There are four characteristics displayed in the above chart depicting the manner in which property survives and retires about the group's average life, those characteristics are: the retirement frequency (blue), the percent surviving (red), the percent condition (brown) and the percent depreciated (green). The retirement frequency represents the retirement of individual property items about the group's average service life. As can be seen the retirements are distributes about the group's average life with some items retiring before the average life and some items retiring at or after the group's service life. The group's survivor curve is developed from subtracting the retirements as they occur as the property ages. The depreciation curve depicts how much of the property group's life has been consumed; while the condition curve depict

how much of the property group's life remains. The condition and depreciation curves are complementary in that condition equals 100% minus depreciation and vice versa.

The theory of Iowa Survivor Curves was presented in the 1920s and 30s by Robley Winfrey based on research at Iowa State University (then the Iowa Engineering Experiment Station). Winfrey's research was first published in Bulletin 103 - Life Characteristics of Physical Property and Bulletin 125 - Statistical Analysis of Industrial Property Retirements. (Incidentally, both publications are out of print, I have a copy of Bulletin 125 but not Bulletin 103, I'm still trying to get a copy of that piece of depreciation literature.). Bulletin 125 was updated in 1967 by Professor Harold Cowles of Iowa State University's Department of Industrial Engineering. In conducting his research, Winfrey collected data on industrial property survival and retirement from various sources and analyzed that data as a function of property's age at retirement and ultimately the property groups' service life when all the property in the group was fully retired.

Winfrey discovered the industrial property's survival and retirement fits three basic patterns with relationship to the property's average life:



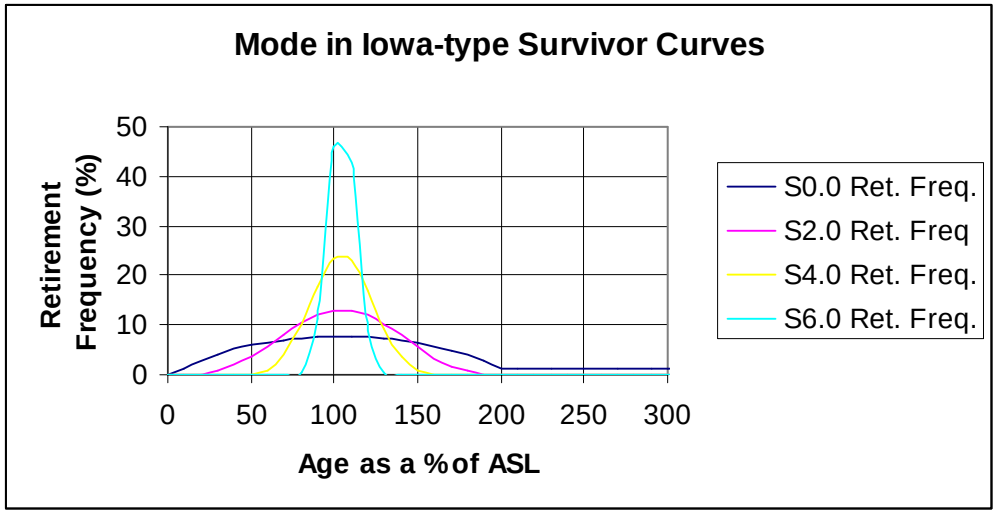
Symmetrically moded (S-type Iowa Survivor Curves) (green) – The S-type Iowa Survivor Curve is one wherein the property's retirements are symmetrically distributed about the mode. Mode in statistics is defined as the highest frequency, in this case retirement frequency. Thus an S-type Iowa curve is like a normal curve; however, its shape is not identical to a normal distribution function.

Right moded (R-type Iowa Curves) (brown) – the R-type Iowa curve has its mode skewed to the right of the property's average life; therefore, the retirements tend to be distributed later in the property's life and there are less retirements earlier in the property's life.

Left moded (L-type Iowa Curve) (red) – The L-type Iowa curve has its mode skewed to the left of the property's average life; therefore, the retirements tend to be distributed earlier in the property's life and there are less retirements later in the property's life.

In the utility industry, the plant, i.e., mains, treatment and pumping plant equipment tends to have a R-type survival/retirement dispersion as it is designed to provide service over extended periods, requiring little maintenance, and it designers have significant experience in designing and placing such property.

In conjunction with the above-described R-, S-, and L-type survival/retirement patterns, Winfrey determine that there were several patterns of the manner in which the retirements' peakedness occur around the average life. In this case, Winfrey described the peakedness of the property retirements with peakedness enumerations of 0, 1, 2, 3, 4, 5, and 6. The low peakedness numbers 0 and 1 represent low levels of retirements being distributed over the property entire life, while high peakedness numbers, 5 and 6 represent retirement patterns where the majority or all the retirement occur tightly grouped around the property's average life. Peakedness numbers 2, 3, and 4 are middle of the road, so to speak, in terms of peakedness.



Origin moded (O-type) survivor curve (blue) – Harold Cowles in his 1967 update of Bulletin 125 introduced the O-type survivor curve with the mode of the curve at the origin or at age equal to zero (0) years. This class of Iowa curves was over looked by Winfrey possibly because it made little intuitive sense that industrial retirement of property would have their maximum retirement frequency at age equal to zero. However, Cowles felt for completeness they should be included. O-type survivor curves do reflect the survival pattern of intangible assets.

Iowa-type survivor curves are parametric, as opposed to formalistic, in that they were derived from empirical survival/retirement data which Winfrey collected. There are Iowa curve equations are presented in Bulletin 125; however, in most cases users reference standardized Iowa Survivor Curve tables. The Iowa-type survivor curves used in this appraisal have been generalized to a service life of 100% of the property's average life. By generalizing the service life to 100% of average life these tables can be used to generate survival and retirement statistics for property of any service life.

It should be apparent that Iowa-types survivor curves are valid for any type property as the curves only depict how that property survives and retires about the average life of a group of similar property.

Generalized Iowa-type Survivor Curves

As was discussed earlier, most users of the Iowa-type survivor curves use standardized tables of Iowa curves. The most usable form of these standardized tables are tables which have been generalized to a standard life of 100% of the property's average life. Based on these generalized tables the user can determine the property's remaining life by knowing the Iowa-type survivor curve (mode and peakedness characteristics), the property's (group's) service life, and the specific property's (for which the remaining life is desired) age. The following table reflects how the remaining life, as well as its condition, is determined:

Year	Study Date	Age	Iowa Curve	Service Life	Age % of ASL	Iowa Lookup	Iowa Condition	Remaining Life	Total Life	Condition
				ASL						
		years		years	%			years	years	%
Input		Calc	Input	Input	Calc	Calc	lookup	Calc	Calc	Calc
1970	2006	35.5	R3.0	25	142	R3.0142	0.066388	1.7	37.2	4.47%
1980	2006	25.5	R3.0	25	102	R3.0102	0.192543	4.8	30.3	15.88%
1990	2006	15.5	R3.0	25	62	R3.0062	0.442050	11.1	26.6	41.62%
2000	2006	5.5	R3.0	25	22	R3.0022	0.787294	19.7	25.2	78.16%
2004	2006	1.5	R3.0	25	6	R3.0006	0.941117	23.5	25.0	94.01%
2005	2006	0.5	R3.0	25	2	R3.0002	0.980320	24.5	25.0	98.00%

The above table was developed with reference to the standardized Iowa Survivor curves contained and represent a R3.0 25 year Iowa curve and life table. The standardized Iowa Curves are located in tab database. In order to reference the proper line of the Iowa Curve data the user looks up that data by reference to the property's age as percent of the service life (age % of ASL column) and the Iowa Survivor curve (Iowa Curve column), combining these two criteria the Iowa Lookup column will get the user to the proper Iowa Curve data.

In the above calculation the Iowa-type survivor curve is R3, the service life of the group is 25 years, and its age is defined by property's accounting records which specifies the investment in property by account (A group in service life terms) and by the year of installation of that property. The age is dependent upon the appraisal year (study date) and the year of placement. It is customary to assume that the property placed in any particular placement year was placed continuously during that year and therefore its age is best represented as if that investment was placed in the middle of the year, i.e., July 1; hence, the adoption of the "mid-year" convention where all property is treated as if placed the mid-year.

Service Life and Survival/retirement pattern

The service life and survival/retirement pattern are determined by an analysis of historical survival and retirement experience of the company's property. This historical experience must be adjusted for factor which are known to be impacting the property's

service life but may not exhibited their effect on the property's retirement. Here it is important that a distinction is made between industrial property's physical service life and its functional service life. While physically a type of property may be deployed and remain in use for many years, over those years factors of changing technology, consumers demand and patterns, and even regulation, lessen the property functional life when compared to its physical life. In an industry such as the communications industry, function obsolescence is the primary driver of depreciation.

The following table details the impact of the above-described lives on the condition calculations:

Year	Study Date	Age	Iowa Curve	Service Life	Age % of ASL	Iowa Lookup	Iowa Condition	Remaining Life	Total Life	Condition
				ASL						
		years		years	%			years	years	%
Input		Calc	Input	Input	Calc	Calc	lookup	Calc	Calc	Calc
1970	2006	35.5	R3.0	30	118	R3.0118	0.131771	4.0	39.5	10.02%
1979	2006	26.5	R3.0	30	88	R3.0088	0.264919	7.9	34.4	23.07%
1981	2006	24.5	R3.0	25	98	R3.0098	0.211333	5.3	29.8	17.74%
1989	2006	16.5	R3.0	25	66	R3.0066	0.411848	10.3	26.8	38.42%
1990	2006	15.5	R3.0	20	78	R3.0078	0.327281	6.5	22.0	29.69%
2000	2006	5.5	R3.0	20	28	R3.0028	0.731331	14.6	20.1	72.67%
2004	2006	1.5	R3.0	20	8	R3.0008	0.921605	18.4	19.9	92.47%
2005	2006	0.5	R3.0	20	3	R3.0003	0.970499	19.4	19.9	97.49%

Statistical Analyses of Industrial Property Retirements

by

Robley Winfrey

BULLETIN 125
REVISED

ENGINEERING RESEARCH INSTITUTE
IOWA STATE UNIVERSITY • AMES, IOWA

IOWA CURVES

Iowa-type survivor curves are based on a set of empirical data collected (mainly in the 1930s) for the purpose of statistically predicting future service expectancy (remaining service) for physical properties.

The techniques used and methods applied are exactly analogous to those used by the insurance industry for the purpose of predicting human mortality (life expectancy) when determining appropriate insurance premium rates. The only distinction to be made is that the life insurance companies are investigating the life or longevity characteristics of human beings and the studies which developed the Iowa-type survivor curves were developed to predict the longevity or service life experience for physical, inanimate objects. The seminal statistical analyses for industrial property were conducted under the auspices of the Iowa Research Station now known as Iowa State University and were published in Statistical Analyses of Industrial Property Retirements, Bulletin 125, Engineering Research Institute, Iowa State University.

From the preface to the revised 1967 edition of Bulletin 125:

> "With the original publication of Bulletin 125 by the Iowa Engineering Experiment Station in 1935 (now known as the Engineering Research Institute), a significant contribution was made to the practice of industrial property life estimation. This was in the form, first, of a single volume, readily available, which presented in considerable detail the procedures for statistically analyzing historical property retirement data. Secondly, but no less significant, was the presentation of a set of 18 generalized density functions descriptive of industrial property retirement dispersion, mathematically described in terms of the Pearson frequency curve family, but with parameters established empirically from the analysis of a wide range of actual retirement experience.
>
> These curves, the cumulative form of which are commonly referred to as the Iowa-type Survivor Curves, have been used extensively since their introduction and, at the present time, the set is accepted as the standard of industrial property retirement dispersion. Because of the very simple mnemonic coding system which suggests the varying statistical characteristics involved, the Iowa Curves have also become widely used and recognized in the identification or classification of retirement dispersions, even for patterns derived in terms of analytical techniques not using the Curves."

The tables which follow this discussion are the ones used to estimate the remaining life of investment at particular age for an account with a particular service life.

Statistical Analyses of Industrial Property Retirements

by Robley Winfrey

(Revised April, 1967 by Harold A. Cowles, Professor, Department of Industrial Engineering)

Originally printed as
BULLETIN 125
of the
IOWA ENGINEERING EXPERIMENT STATION
December, 1935

ENGINEERING RESEARCH INSTITUTE
Iowa State University, Ames, Iowa

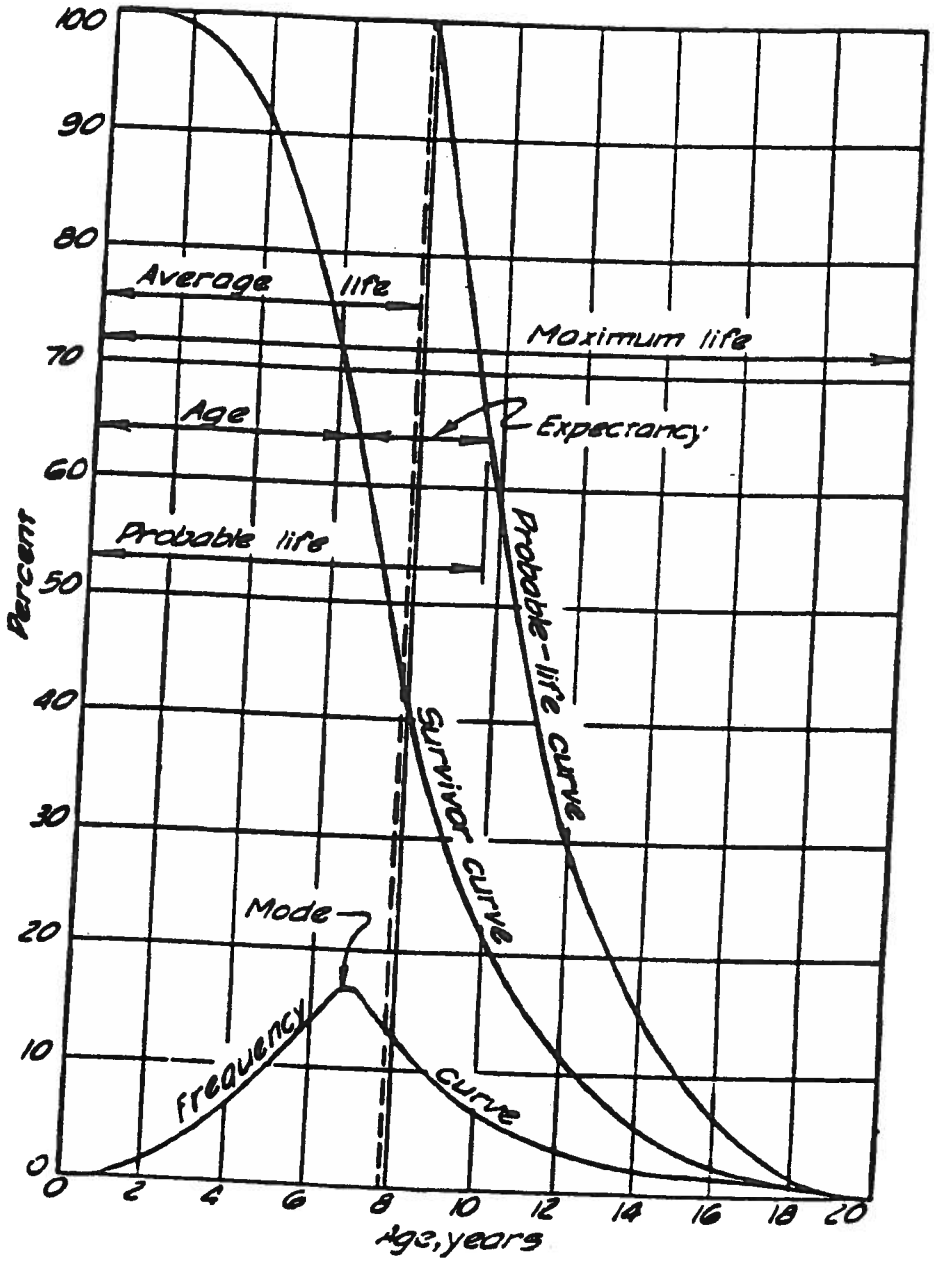


FIG. 1.—A typical survivor curve and its derived curves.

8. The *service life* of a unit is that period of time (or service) extending from the date of its installation to the date of its retirement from service. While the service life of physical property is usually expressed in years it may also be expressed in terms of units of production (screws, wheels, cars, pounds, miles, car-miles), time units of less than a year (months, hours, minutes), or combinations of physical units or services and time (lamp-hours, ton-years).

9. The *probable service life* of an individual unit is that period of time extending from its date of installation to the forecasted date when it probably will be retired from service.

10. The *expectancy* of life of an individual unit is that period of time extending from the observation age (usually the present) to the forecasted date when the unit probably will be retired from service. Age plus expectancy always equals probable life.

11. The *average service life of* a group of individual units is the quotient obtained by dividing the sum of the service lives of all the units by the number of units. The average service life (in years) is equal to the area under the survivor curve in percent-years (or unit-years) divided by 100 percent (or the total number of units).

12. The *probable average service life of* a group of individual units is the average of the probable service lives of the units of the group.

13. The *expectancy* of life of a group of individual units is that period of time extending from the observation age (usually the present) to the average of the forecasted dates when the units probably will be retired. The observation age plus the expectancy always equals the probable average service life.

> Note: Service life and average service life are always known quantities since they represent completed service life; probable service life and probable average service life always must be estimated since they are forecasts of uncompleted service.

14. *Maximum life* or *maximum age* is the age of the last unit of a given group to be retired from service; it is also the age at which the survivor curve has a zero ordinate, or zero percent surviving.

15. Property units which are taken out of service for any reason whatsoever are called *retirements*. Retirements may include original units (units of the initial installation) as well as "second-generation" units, that is, replacements (or renewals) which were installed to take the place of the original units as they were removed.

16. *Replacements* are the units put in service to replace retirements.

17. *Renewals* are replacements "in kind" which have exactly the same life characteristics as the retirements.

18. *Installations* are new units placed in service, not as replacement units, but as additions to the property.

19. All renewals, replacements, and installations are *placements*.

20. *Survivor curves* show the number of units of a given group

which are surviving in service at given ages. The ordinates to the curve give at any particular age the percentage (or the actual number) of the original number which are yet surviving in service. The abscissa is measured in years or other suitable service unit. The *original survivor curve* is the curve drawn through the points calculated from the original data without adjustment. Since this original survivor curve is generally irregular it is smoothed to produce a *smoothed survivor curve*, sometimes referred to as an *adjusted curve*.

Survivor curves have in some publications been referred to as *mortality curves*. However, the term *survivor curve* is used in this report because the curves referred to show the *percent surviving*, not the *percent retired*, and because the term *mortality* suggests human beings and not inanimate objects.

21. A *stub survivor curve* is an incomplete survivor curve; that is, one which does not extend to zero percent surviving because of a lack of retirement data on the longer-lived units.

22. A *probable-life curve* shows the probable average life of the survivors at any age from zero to maximum life.

23. If the percent surviving is read at the beginning of each successive age-interval and the differences in these successive readings plotted at ages corresponding to the midpoints of the intervals, the resulting points form a *frequency curve*, or *distribution curve*. Since the ordinates indicate the percentage of the units retired during each interval, the curve shows in what manner the retirements are distributed over the period from zero age to maximum life.

24. The point on the frequency curve having the highest ordinate is called the *mode*. The year in which the mode occurs is called the *modal year*.

25. A *maximum-life cycle* is a period of time corresponding in length to the maximum life of the units. An industrial property may continue to be operated through several maximum-life cycles of some of the units of which it is composed.

26. An *average-life cycle* is a period of time corresponding in length to the *average* life.

27. If a property is continued in service for a long time and maintained with a constant number of like units of substantially the same potential average life, it will reach a *normal condition* or *stabilized condition*, after which the average age of the units in service and the annual renewals will be constant year after year.

28. *Normal renewals* are the annual renewals after the property group has reached a stabilized condition. Normal renewals, in percent of the original number of units, are equal to 100 percent divided by the average life.

29. *Generalized curves* are those whose ordinates are expressed in percent of the total number of units and whose abscissas (age) are expressed in percent of average life.

30. *Type curves* are those theoretical curves derived by the methods described in this report from a study of actual retirements. They depict typical survivor and frequency curves for industrial property. Actual survivor curves are compared with type survivor curves in the process of determining probable average lives.

MORTALITY TABLES AND CURVES OF HUMAN BEINGS

By a study of population and deaths, life insurance companies have arrived at life tables for human beings of different nationalities. From these life tables the normal death rate and life expectancy for people at different ages can be determined as a basis for life insurance premiums and reserves. Life tables can be prepared from the vital statistics for any desired number of years in combination with census returns. By means of mathematical formulas a life table is adjusted to remove any slight irregularities that may exist in the original data.

Table 1 is the United States life table for white males, based upon deaths for the 10 years from 1901 to 1910. Unlike industrial property units whose average lives are continually being affected by many forces, the human average life and distribution of deaths according to age change very little over several generations. The life curve, however, varies considerably for different races as is illustrated in Fig. 2. The deaths at different ages are shown for the United States by the frequency curves in Fig. 3.

This reference to the United States life tables is made to show the similarity between the life characteristics of human beings and industrial properties. The essential differences are three. First, human beings experience a heavy infant mortality which results in a bi-modal frequency curve, one mode occurring between ages 0 and 1, and the other between ages 75 and 76. Second, the mode at the age-interval 75–76 occurs at a much greater percentage of average life than is usually found with physical property employed in industry. Third, the curves for industrial equipment vary in shape over wide limits while human mortality curves vary relatively little. The Makehamized curve in Fig. 3 is one that has been smoothed. (It does not represent the same group of lives as the lower curves of the figure.)

ANALYZING RETIREMENT DATA

The foregoing section discussed the life tables for humans and the accompanying curves. Similar analyses can be made of the behavior of the physical equipment employed in industry when sufficient information is available. The processes employed for analyzing the retirements of industrial property are not so easily handled as are those employed for mortality data of human beings, nor are the results usually as uniform because of the small number of units observed and the more numerous, less uniform causes of retirement of industrial

CHART NO. 9

SURVIVOR, PROBABLE LIFE AND FREQUENCY CURVES
FOR THE RIGHT-MODAL IOWA TYPE CURVES

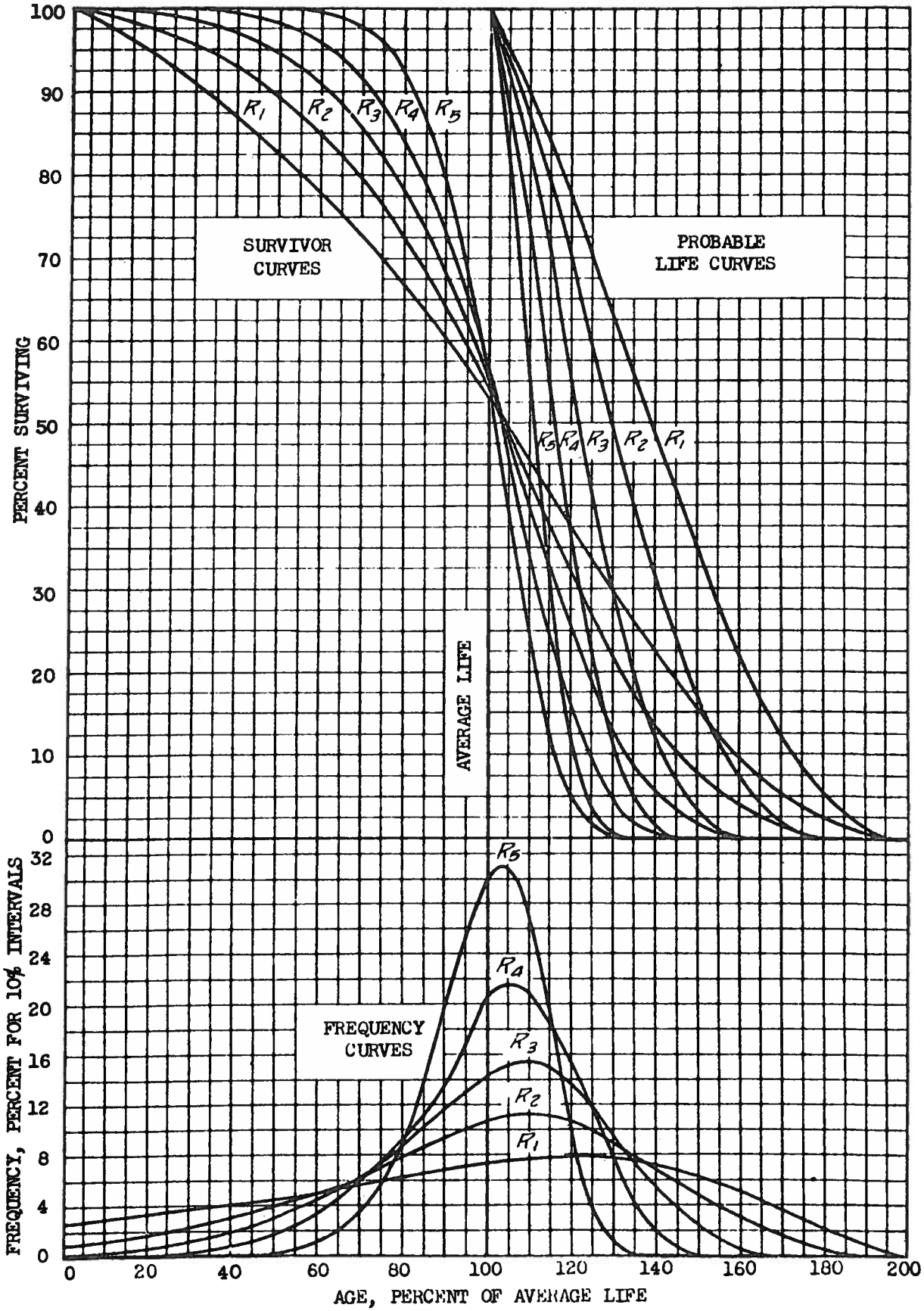


CHART NO. 8

SURVIVOR, PROBABLE LIFE AND FREQUENCY CURVES
FOR THE SYMMETRICAL IOWA TYPE CURVES

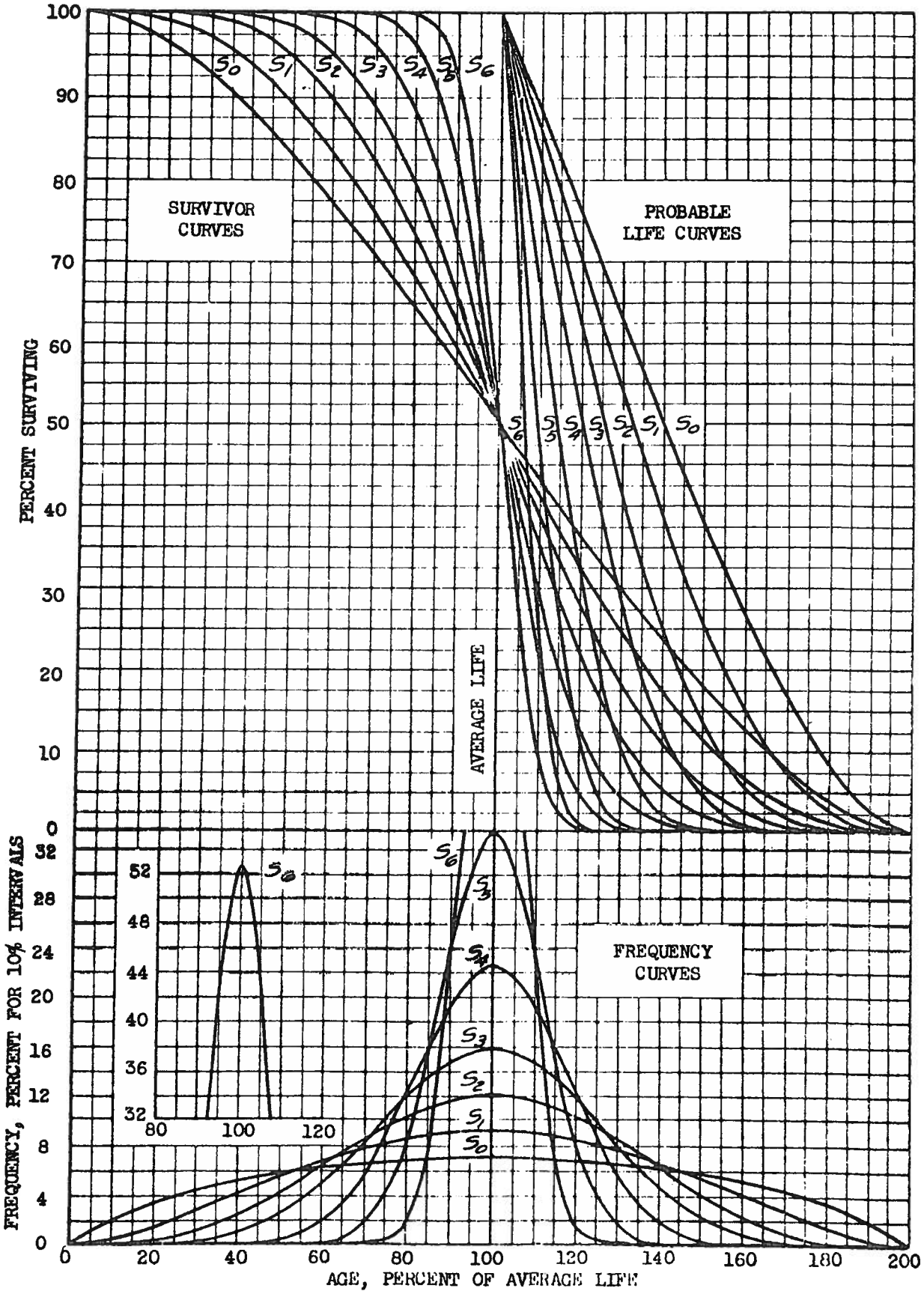


CHART NO. 7

SURVIVOR, PROBABLE LIFE AND FREQUENCY CURVES
FOR THE LEFT-MODAL IOWA TYPE CURVES

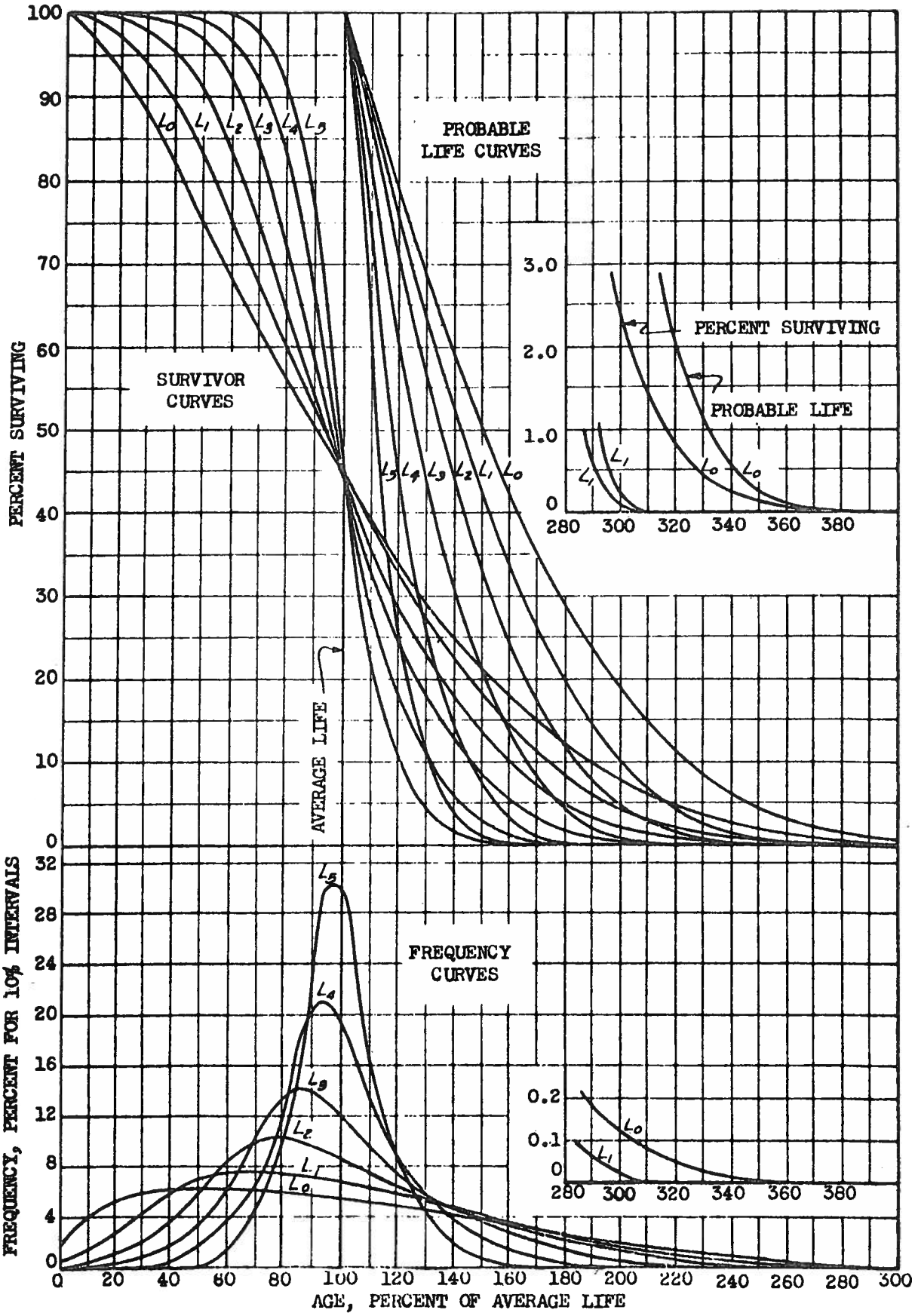
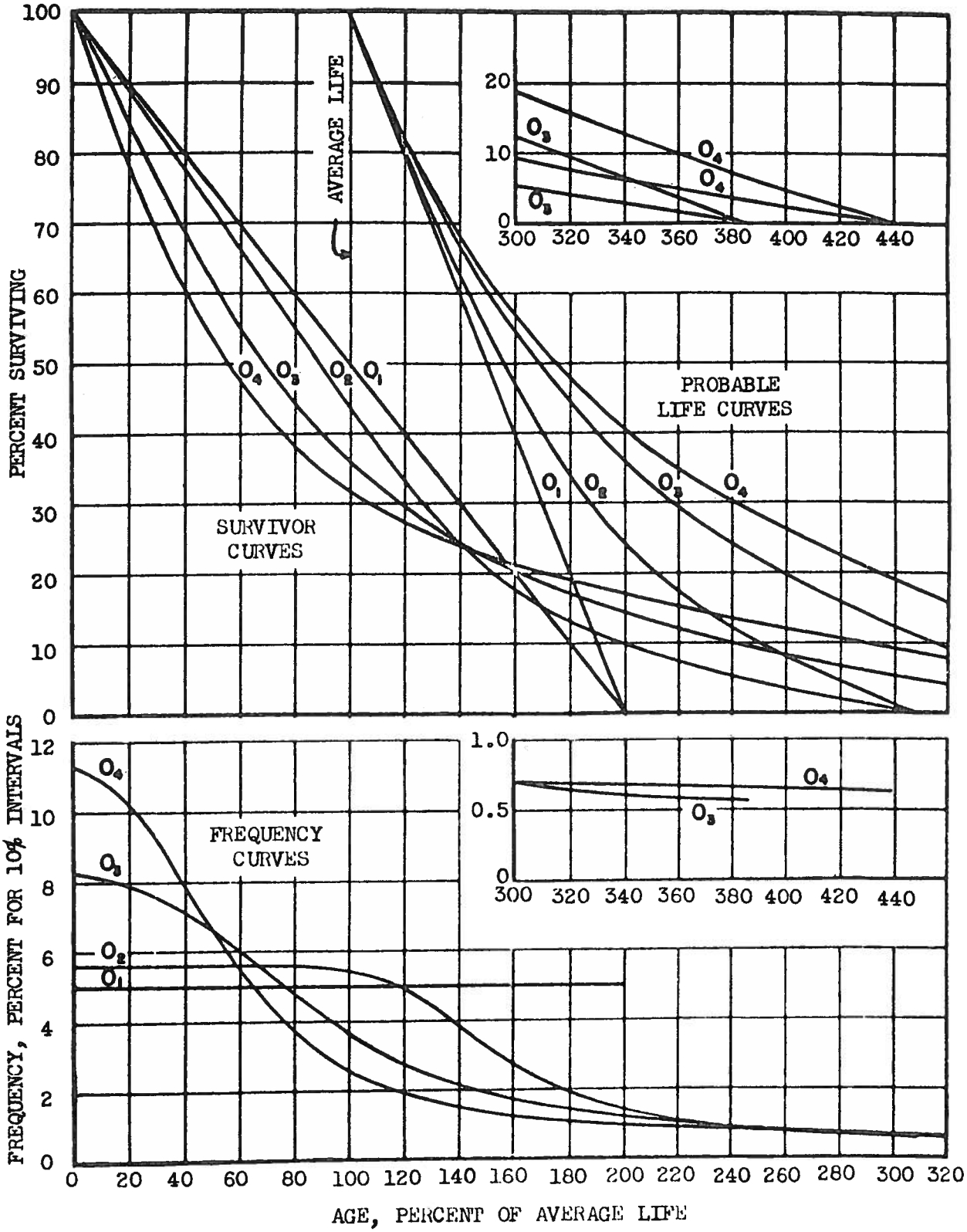


CHART NO. 10

SURVIVOR, PROBABLE LIFE AND FREQUENCY CURVES
FOR THE ORIGIN-MODAL TYPE CURVES



Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
R2.0000	R2.0	0	0.0948315	100.0000000	100.0000000	0.0000000
R2.0001	R2.0	1	0.0981016	99.9051685	99.0944462	0.9055538
R2.0002	R2.0	2	0.1014623	99.8070669	98.1913567	1.8086433
R2.0003	R2.0	3	0.1049099	99.7056046	97.2907686	2.7092314
R2.0004	R2.0	4	0.1084509	99.6006947	96.3927202	3.6072798
R2.0005	R2.0	5	0.1120825	99.4922438	95.4972458	4.5027542
R2.0006	R2.0	6	0.1158104	99.3801613	94.6043863	5.3956137
R2.0007	R2.0	7	0.1196318	99.2643509	93.7141762	6.2858238
R2.0008	R2.0	8	0.1235532	99.1447191	92.8266525	7.1733475
R2.0009	R2.0	9	0.1275731	99.0211659	91.9418526	8.0581474
R2.0010	R2.0	10	0.1316938	98.8935928	91.0598126	8.9401874
R2.0011	R2.0	11	0.1359167	98.7618990	90.1805687	9.8194313
R2.0012	R2.0	12	0.1402454	98.6259823	89.3041592	10.6958408
R2.0013	R2.0	13	0.1446791	98.4857369	88.4306173	11.5693827
R2.0014	R2.0	14	0.1492214	98.3410578	87.5599813	12.4400187
R2.0015	R2.0	15	0.1538735	98.1918364	86.6922846	13.3077154
R2.0016	R2.0	16	0.1586370	98.0379629	85.8275662	14.1724338
R2.0017	R2.0	17	0.1635142	97.8793259	84.9658604	15.0341396
R2.0018	R2.0	18	0.1685056	97.7158117	84.1072016	15.8927984
R2.0019	R2.0	19	0.1736164	97.5473061	83.2516279	16.7483721
R2.0020	R2.0	20	0.1788426	97.3736897	82.3991718	17.6008282
R2.0021	R2.0	21	0.1841926	97.1948471	81.5498714	18.4501286
R2.0022	R2.0	22	0.1896649	97.0106545	80.7037592	19.2962408
R2.0023	R2.0	23	0.1952619	96.8209896	79.8608723	20.1391277
R2.0024	R2.0	24	0.2009860	96.6257277	79.0212450	20.9787550
R2.0025	R2.0	25	0.2068376	96.4247417	78.1849127	21.8150873
R2.0026	R2.0	26	0.2128210	96.2179041	77.3519096	22.6480904
R2.0027	R2.0	27	0.2189369	96.0050831	76.5222740	23.4777260
R2.0028	R2.0	28	0.2251892	95.7861462	75.6960373	24.3039627
R2.0029	R2.0	29	0.2315760	95.5609570	74.8732357	25.1267643
R2.0030	R2.0	30	0.2381039	95.3293810	74.0539045	25.9460955
R2.0031	R2.0	31	0.2447710	95.0912771	73.2380800	26.7619200
R2.0032	R2.0	32	0.2515831	94.8465061	72.4257956	27.5742044
R2.0033	R2.0	33	0.2585392	94.5949230	71.6170883	28.3829117
R2.0034	R2.0	34	0.2656450	94.3363838	70.8119927	29.1880073
R2.0035	R2.0	35	0.2728977	94.0707388	70.0105457	29.9894543
R2.0036	R2.0	36	0.2803049	93.7978411	69.2127819	30.7872181
R2.0037	R2.0	37	0.2878657	93.5175362	68.4187384	31.5812616
R2.0038	R2.0	38	0.2955808	93.2296705	67.6284504	32.3715496
R2.0039	R2.0	39	0.3034544	92.9340897	66.8419552	33.1580448
R2.0040	R2.0	40	0.3114920	92.6306353	66.0592899	33.9407101
R2.0041	R2.0	41	0.3196878	92.3191433	65.2808571	34.7191429
R2.0042	R2.0	42	0.3280507	91.9994555	64.5055971	35.4944029
R2.0043	R2.0	43	0.3365783	91.6714048	63.7346439	36.2653561
R2.0044	R2.0	44	0.3452769	91.3348265	62.9676700	37.0323300

Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
R2.0045	R2.0	45	0.3541450	90.9895496	62.2047148	37.7952852
R2.0046	R2.0	46	0.3631840	90.6354046	61.4458170	38.5541830
R2.0047	R2.0	47	0.3723984	90.2722206	60.6910148	39.3089852
R2.0048	R2.0	48	0.3817892	89.8998222	59.9403491	40.0596509
R2.0049	R2.0	49	0.3913574	89.5180330	59.1938582	40.8061418
R2.0050	R2.0	50	0.4011030	89.1266756	58.4515839	41.5484161
R2.0051	R2.0	51	0.4110289	88.7255726	57.7135668	42.2864332
R2.0052	R2.0	52	0.4211368	88.3145437	56.9798470	43.0201530
R2.0053	R2.0	53	0.4314261	87.8934069	56.2504678	43.7495322
R2.0054	R2.0	54	0.4419002	87.4619808	55.5254688	44.4745312
R2.0055	R2.0	55	0.4525547	87.0200806	54.8048959	45.1951041
R2.0056	R2.0	56	0.4633961	86.5675259	54.0887899	45.9112101
R2.0057	R2.0	57	0.4744196	86.1041298	53.3771148	46.6228852
R2.0058	R2.0	58	0.4856272	85.6297102	52.6701531	47.3298469
R2.0059	R2.0	59	0.4970178	85.1440830	51.9677110	48.0322890
R2.0060	R2.0	60	0.5085907	84.6470652	51.2699108	48.7300892
R2.0061	R2.0	61	0.5203457	84.1384745	50.5767999	49.4232001
R2.0062	R2.0	62	0.5322781	83.6181288	49.8884211	50.1115789
R2.0063	R2.0	63	0.5443878	83.0858507	49.2042208	50.7957792
R2.0064	R2.0	64	0.5566711	82.5414629	48.5260449	51.4739551
R2.0065	R2.0	65	0.5691252	81.9847918	47.8521390	52.1478610
R2.0066	R2.0	66	0.5817490	81.4156666	47.1831479	52.8168521
R2.0067	R2.0	67	0.5945339	80.8339176	46.5191188	53.4808812
R2.0068	R2.0	68	0.6074762	80.2393837	45.8600979	54.1399021
R2.0069	R2.0	69	0.6205731	79.6319075	45.2061300	54.7938700
R2.0070	R2.0	70	0.6338167	79.0113344	44.5572619	55.4427381
R2.0071	R2.0	71	0.6471968	78.3775177	43.9135399	56.0864601
R2.0072	R2.0	72	0.6607103	77.7303209	43.2750101	56.7249899
R2.0073	R2.0	73	0.6743469	77.0696106	42.6417151	57.3582849
R2.0074	R2.0	74	0.6880913	76.3952637	42.0137038	57.9862962
R2.0075	R2.0	75	0.7019453	75.7071724	41.3910160	58.6089840
R2.0076	R2.0	76	0.7158861	75.0052271	40.7736988	59.2263012
R2.0077	R2.0	77	0.7299071	74.2893410	40.1617951	59.8382049
R2.0078	R2.0	78	0.7439918	73.5594339	39.5553460	60.4446540
R2.0079	R2.0	79	0.7581263	72.8154421	38.9543939	61.0456061
R2.0080	R2.0	80	0.7722978	72.0573158	38.3589792	61.6410208
R2.0081	R2.0	81	0.7864914	71.2850180	37.7691412	62.2308588
R2.0082	R2.0	82	0.8006802	70.4985266	37.1849198	62.8150802
R2.0083	R2.0	83	0.8148537	69.6978464	36.6063528	63.3936472
R2.0084	R2.0	84	0.8289880	68.8829927	36.0334740	63.9665260
R2.0085	R2.0	85	0.8430577	68.0540047	35.4663181	64.5336819
R2.0086	R2.0	86	0.8570489	67.2109470	34.9049168	65.0950832
R2.0087	R2.0	87	0.8709355	66.3538981	34.3493028	65.6506972
R2.0088	R2.0	88	0.8846855	65.4829626	33.7995038	66.2004962
R2.0089	R2.0	89	0.8982801	64.5982771	33.2555461	66.7444539

Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
R2.0090	R2.0	90	0.9116889	63.6999970	32.7174568	67.2825432
R2.0091	R2.0	91	0.9248881	62.7883081	32.1852560	67.8147440
R2.0092	R2.0	92	0.9378390	61.8634200	31.6589661	68.3410339
R2.0093	R2.0	93	0.9505158	60.9255810	31.1386020	68.8613980
R2.0094	R2.0	94	0.9628930	59.9750652	30.6241779	69.3758221
R2.0095	R2.0	95	0.9749274	59.0121722	30.1157100	69.8842900
R2.0096	R2.0	96	0.9865956	58.0372448	29.6132040	70.3867960
R2.0097	R2.0	97	0.9978571	57.0506492	29.1166680	70.8833320
R2.0098	R2.0	98	1.0086742	56.0527921	28.6261051	71.3738949
R2.0099	R2.0	99	1.0190200	55.0441179	28.1415110	71.8584890
R2.0100	R2.0	100	1.0288558	54.0250979	27.6628840	72.3371160
R2.0101	R2.0	101	1.0381442	52.9962421	27.1902180	72.8097820
R2.0102	R2.0	102	1.0468449	51.9580979	26.7234991	73.2765009
R2.0103	R2.0	103	1.0549312	50.9112530	26.2627111	73.7372889
R2.0104	R2.0	104	1.0623607	49.8563218	25.8078351	74.1921649
R2.0105	R2.0	105	1.0691033	48.7939611	25.3588469	74.6411531
R2.0106	R2.0	106	1.0751200	47.7248578	24.9157200	75.0842800
R2.0107	R2.0	107	1.0803718	46.6497378	24.4784200	75.5215800
R2.0108	R2.0	108	1.0848422	45.5693660	24.0469079	75.9530921
R2.0109	R2.0	109	1.0884819	44.4845238	23.6211450	76.3788550
R2.0110	R2.0	110	1.0912700	43.3960419	23.2010810	76.7989190
R2.0111	R2.0	111	1.0931697	42.3047719	22.7866659	77.2133341
R2.0112	R2.0	112	1.0941701	41.2116022	22.3778369	77.6221631
R2.0113	R2.0	113	1.0942240	40.1174321	21.9745369	78.0254631
R2.0114	R2.0	114	1.0933342	39.0232081	21.5766909	78.4233091
R2.0115	R2.0	115	1.0914621	37.9298739	21.1842289	78.8157711
R2.0116	R2.0	116	1.0885978	36.8384118	20.7970691	79.2029309
R2.0117	R2.0	117	1.0847301	35.7498140	20.4151239	79.5848761
R2.0118	R2.0	118	1.0798369	34.6650839	20.0383019	79.9616981
R2.0119	R2.0	119	1.0739369	33.5852470	19.6665001	80.3334999
R2.0120	R2.0	120	1.0669980	32.5113101	19.2996221	80.7003779
R2.0121	R2.0	121	1.0590372	31.4443121	18.9375479	81.0624521
R2.0122	R2.0	122	1.0501070	30.3852749	18.5801630	81.4198370
R2.0123	R2.0	123	1.0400660	29.3351679	18.2273769	81.7726231
R2.0124	R2.0	124	1.0290709	28.2951019	17.8789959	82.1210041
R2.0125	R2.0	125	1.0170991	27.2660310	17.5349121	82.4650879
R2.0126	R2.0	126	1.0041568	26.2489319	17.1949849	82.8050151
R2.0127	R2.0	127	0.9902881	25.2447751	16.8590529	83.1409471
R2.0128	R2.0	128	0.9755079	24.2544870	16.5269830	83.4730170
R2.0129	R2.0	129	0.9598532	23.2789791	16.1985951	83.8014049
R2.0130	R2.0	130	0.9433670	22.3191259	15.8737270	84.1262730
R2.0131	R2.0	131	0.9260879	21.3757589	15.5522090	84.4477910
R2.0132	R2.0	132	0.9080550	20.4496710	15.2338660	84.7661340
R2.0133	R2.0	133	0.8893190	19.5416160	14.9185150	85.0814850
R2.0134	R2.0	134	0.8699369	18.6522970	14.6059730	85.3940270

Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
R2.0135	R2.0	135	0.8499541	17.7823601	14.2960570	85.7039430
R2.0136	R2.0	136	0.8294290	16.9324060	13.9885750	86.0114250
R2.0137	R2.0	137	0.8084200	16.1029770	13.6833420	86.3166580
R2.0138	R2.0	138	0.7869870	15.2945570	13.3801709	86.6198291
R2.0139	R2.0	139	0.7651829	14.5075700	13.0788760	86.9211240
R2.0140	R2.0	140	0.7430681	13.7423871	12.7792740	87.2207260
R2.0141	R2.0	141	0.7207081	12.9993190	12.4811831	87.5188169
R2.0142	R2.0	142	0.6981599	12.2786109	12.1844341	87.8155659
R2.0143	R2.0	143	0.6754730	11.5804510	11.8888620	88.1111380
R2.0144	R2.0	144	0.6527110	10.9049780	11.5943070	88.4056930
R2.0145	R2.0	145	0.6299220	10.2522670	11.3006270	88.6993730
R2.0146	R2.0	146	0.6071579	9.6223450	11.0076849	88.9923151
R2.0147	R2.0	147	0.5844650	9.0151870	10.7153600	89.2846400
R2.0148	R2.0	148	0.5618890	8.4307220	10.4235460	89.5764540
R2.0149	R2.0	149	0.5394630	7.8688330	10.1321560	89.8678440
R2.0150	R2.0	150	0.5172310	7.3293700	9.8411110	90.1588891
R2.0151	R2.0	151	0.4952170	6.8121390	9.5503610	90.4496390
R2.0152	R2.0	152	0.4734520	6.3169220	9.2598670	90.7401331
R2.0153	R2.0	153	0.4519570	5.8434700	8.9696111	91.0303890
R2.0154	R2.0	154	0.4307510	5.3915130	8.6795980	91.3204020
R2.0155	R2.0	155	0.4098480	4.9607620	8.3898460	91.6101540
R2.0156	R2.0	156	0.3892590	4.5509140	8.1003940	91.8996060
R2.0157	R2.0	157	0.3689940	4.1616550	7.8112940	92.1887060
R2.0158	R2.0	158	0.3490550	3.7926610	7.5226200	92.4773800
R2.0159	R2.0	159	0.3294490	3.4436060	7.2344580	92.7655420
R2.0160	R2.0	160	0.3101780	3.1141570	6.9468990	93.0531010
R2.0161	R2.0	161	0.2912410	2.8039790	6.6600590	93.3399410
R2.0162	R2.0	162	0.2726440	2.5127380	6.3740460	93.6259540
R2.0163	R2.0	163	0.2543900	2.2400940	6.0889820	93.9110180
R2.0164	R2.0	164	0.2364840	1.9857040	5.8049920	94.1950080
R2.0165	R2.0	165	0.2189350	1.7492200	5.5221940	94.4778060
R2.0166	R2.0	166	0.2017570	1.5302850	5.2407130	94.7592870
R2.0167	R2.0	167	0.1849660	1.3285280	4.9606590	95.0393410
R2.0168	R2.0	168	0.1685830	1.1435620	4.6821490	95.3178510
R2.0169	R2.0	169	0.1526310	0.9749790	4.4052860	95.5947140
R2.0170	R2.0	170	0.1371620	0.8223480	4.1301220	95.8698780
R2.0171	R2.0	171	0.1221950	0.6851860	3.8568020	96.1431980
R2.0172	R2.0	172	0.1077830	0.5629910	3.5853840	96.4146160
R2.0173	R2.0	173	0.0939780	0.4552080	3.3159460	96.6840540
R2.0174	R2.0	174	0.0808330	0.3612300	3.0485230	96.9514770
R2.0175	R2.0	175	0.0684150	0.2803970	2.7832120	97.2167880
R2.0176	R2.0	176	0.0567860	0.2119820	2.5201260	97.4798740
R2.0177	R2.0	177	0.0460210	0.1551960	2.2592980	97.7407020
R2.0178	R2.0	178	0.0361913	0.1091750	2.0008840	97.9991160
R2.0179	R2.0	179	0.0273739	0.0729837	1.7451020	98.2548980

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Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve
as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
R2.5000	R2.5	0	0.0551548	100.0000000	100.0000000	0.0000000
R2.5001	R2.5	1	0.0574713	99.9448452	99.0549097	0.9450903
R2.5002	R2.5	2	0.0598783	99.8873739	98.1116142	1.8883858
R2.5003	R2.5	3	0.0623808	99.8274956	97.1701632	2.8298368
R2.5004	R2.5	4	0.0649805	99.7651148	96.2306089	3.7693911
R2.5005	R2.5	5	0.0676823	99.7001343	95.2930031	4.7069969
R2.5006	R2.5	6	0.0704880	99.6324520	94.3573971	5.6426029
R2.5007	R2.5	7	0.0734014	99.5619640	93.4238472	6.5761528
R2.5008	R2.5	8	0.0764256	99.4885626	92.4924040	7.5075960
R2.5009	R2.5	9	0.0795669	99.4121370	91.5631256	8.4368744
R2.5010	R2.5	10	0.0828257	99.3325701	90.6360693	9.3639307
R2.5011	R2.5	11	0.0862064	99.2497444	89.7112904	10.2887096
R2.5012	R2.5	12	0.0897122	99.1635380	88.7888441	11.2111559
R2.5013	R2.5	13	0.0933485	99.0738258	87.8687897	12.1312103
R2.5014	R2.5	14	0.0971183	98.9804773	86.9511881	13.0488119
R2.5015	R2.5	15	0.1010247	98.8833590	86.0360956	13.9639044
R2.5016	R2.5	16	0.1050710	98.7823343	85.1235743	14.8764257
R2.5017	R2.5	17	0.1092635	98.6772633	84.2136803	15.7863197
R2.5018	R2.5	18	0.1136026	98.5679998	83.3064766	16.6935234
R2.5019	R2.5	19	0.1180954	98.4543972	82.4020252	17.5979748
R2.5020	R2.5	20	0.1227426	98.3363018	81.5003834	18.4996166
R2.5021	R2.5	21	0.1275521	98.2135592	80.6016140	19.3983860
R2.5022	R2.5	22	0.1325226	98.0860071	79.7057791	20.2942209
R2.5023	R2.5	23	0.1376619	97.9534845	78.8129368	21.1870632
R2.5024	R2.5	24	0.1429729	97.8158226	77.9231520	22.0768480
R2.5025	R2.5	25	0.1484576	97.6728497	77.0364828	22.9635172
R2.5026	R2.5	26	0.1541233	97.5243921	76.1529923	23.8470077
R2.5027	R2.5	27	0.1599703	97.3702688	75.2727404	24.7272596
R2.5028	R2.5	28	0.1660032	97.2102985	74.3957863	25.6042137
R2.5029	R2.5	29	0.1722278	97.0442953	73.5221920	26.4778080
R2.5030	R2.5	30	0.1786452	96.8720675	72.6520176	27.3479824
R2.5031	R2.5	31	0.1852608	96.6934223	71.7853222	28.2146778
R2.5032	R2.5	32	0.1920747	96.5081615	70.9221630	29.0778370
R2.5033	R2.5	33	0.1990958	96.3160868	70.0626001	29.9373999
R2.5034	R2.5	34	0.2063245	96.1169910	69.2066917	30.7933083
R2.5035	R2.5	35	0.2137642	95.9106665	68.3544951	31.6455049
R2.5036	R2.5	36	0.2214194	95.6969023	67.5060663	32.4939337
R2.5037	R2.5	37	0.2292928	95.4754829	66.6614609	33.3385391
R2.5038	R2.5	38	0.2373877	95.2461901	65.8207359	34.1792641
R2.5039	R2.5	39	0.2457084	95.0088024	64.9839459	35.0160541
R2.5040	R2.5	40	0.2542592	94.7630940	64.1511440	35.8488560
R2.5041	R2.5	41	0.2630376	94.5088348	63.3223858	36.6776142
R2.5042	R2.5	42	0.2720566	94.2457972	62.4977222	37.5022778
R2.5043	R2.5	43	0.2813111	93.9737406	61.6772060	38.3227940
R2.5044	R2.5	44	0.2908077	93.6924295	60.8608909	39.1391091

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Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve
as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
R2.5045	R2.5	45	0.3005543	93.4016218	60.0488248	39.9511752
R2.5046	R2.5	46	0.3105459	93.1010675	59.2410641	40.7589359
R2.5047	R2.5	47	0.3207922	92.7905216	58.4376559	41.5623441
R2.5048	R2.5	48	0.3312959	92.4697294	57.6386509	42.3613491
R2.5049	R2.5	49	0.3420601	92.1384335	56.8441010	43.1558990
R2.5050	R2.5	50	0.3530903	91.7963734	56.0540552	43.9459448
R2.5051	R2.5	51	0.3643885	91.4432831	55.2685661	44.7314339
R2.5052	R2.5	52	0.3759584	91.0788946	54.4876838	45.5123162
R2.5053	R2.5	53	0.3878079	90.7029362	53.7114601	46.2885399
R2.5054	R2.5	54	0.3999405	90.3151283	52.9399471	47.0600529
R2.5055	R2.5	55	0.4123592	89.9151878	52.1731982	47.8268018
R2.5056	R2.5	56	0.4250708	89.5028286	51.4112682	48.5887318
R2.5057	R2.5	57	0.4380798	89.0777578	50.6542120	49.3457880
R2.5058	R2.5	58	0.4513912	88.6396780	49.9020872	50.0979128
R2.5059	R2.5	59	0.4650126	88.1882868	49.1549511	50.8450489
R2.5060	R2.5	60	0.4789476	87.7232742	48.4128661	51.5871339
R2.5061	R2.5	61	0.4932022	87.2443266	47.6758952	52.3241048
R2.5062	R2.5	62	0.5077830	86.7511244	46.9441018	53.0558982
R2.5063	R2.5	63	0.5226945	86.2433414	46.2175550	53.7824450
R2.5064	R2.5	64	0.5379439	85.7206469	45.4963250	54.5036750
R2.5065	R2.5	65	0.5535354	85.1827030	44.7804852	55.2195148
R2.5066	R2.5	66	0.5694743	84.6291676	44.0701108	55.9298892
R2.5067	R2.5	67	0.5857687	84.0596933	43.3652830	56.6347170
R2.5068	R2.5	68	0.6024160	83.4739246	42.6660848	57.3339152
R2.5069	R2.5	69	0.6194267	82.8715086	41.9726019	58.0273981
R2.5070	R2.5	70	0.6368008	82.2520819	41.2849250	58.7150750
R2.5071	R2.5	71	0.6545391	81.6152811	40.6031480	59.3968520
R2.5072	R2.5	72	0.6726418	80.9607420	39.9273682	60.0726318
R2.5073	R2.5	73	0.6911087	80.2881002	39.2576852	60.7423148
R2.5074	R2.5	74	0.7099390	79.5969915	38.5942020	61.4057980
R2.5075	R2.5	75	0.7291259	78.8870525	37.9370279	62.0629721
R2.5076	R2.5	76	0.7486620	78.1579266	37.2862740	62.7137260
R2.5077	R2.5	77	0.7685376	77.4092646	36.6420512	63.3579488
R2.5078	R2.5	78	0.7887430	76.6407270	36.0044770	63.9955230
R2.5079	R2.5	79	0.8092565	75.8519840	35.3736682	64.6263318
R2.5080	R2.5	80	0.8300667	75.0427275	34.7497439	65.2502561
R2.5081	R2.5	81	0.8511477	74.2126608	34.1328259	65.8671741
R2.5082	R2.5	82	0.8724718	73.3615131	33.5230379	66.4769621
R2.5083	R2.5	83	0.8940096	72.4890413	32.9204998	67.0795002
R2.5084	R2.5	84	0.9157238	71.5950317	32.3253360	67.6746640
R2.5085	R2.5	85	0.9375753	70.6793079	31.7376659	68.2623341
R2.5086	R2.5	86	0.9595194	69.7417326	31.1576109	68.8423891
R2.5087	R2.5	87	0.9815073	68.7822132	30.5852881	69.4147119
R2.5088	R2.5	88	1.0034790	67.8007059	30.0208130	69.9791870
R2.5089	R2.5	89	1.0253773	66.7972269	29.4642980	70.5357020

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Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve
as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
R2.5090	R2.5	90	1.0471344	65.7718496	28.9158480	71.0841520
R2.5091	R2.5	91	1.0686831	64.7247152	28.3755679	71.6244321
R2.5092	R2.5	92	1.0899420	63.6560321	27.8435540	72.1564460
R2.5093	R2.5	93	1.1108289	62.5660901	27.3198969	72.6801031
R2.5094	R2.5	94	1.1312651	61.4552612	26.8046770	73.1953230
R2.5095	R2.5	95	1.1511522	60.3239961	26.2979729	73.7020271
R2.5096	R2.5	96	1.1704039	59.1728439	25.7998481	74.2001519
R2.5097	R2.5	97	1.1889191	58.0024400	25.3103621	74.6896379
R2.5098	R2.5	98	1.2065949	56.8135209	24.8295610	75.1704390
R2.5099	R2.5	99	1.2233358	55.6069260	24.3574791	75.6425209
R2.5100	R2.5	100	1.2390403	54.3835902	23.8941431	76.1058569
R2.5101	R2.5	101	1.2536021	53.1445499	23.4395671	76.5604329
R2.5102	R2.5	102	1.2669158	51.8909478	22.9937501	77.0062499
R2.5103	R2.5	103	1.2788939	50.6240320	22.5566781	77.4433219
R2.5104	R2.5	104	1.2894273	49.3451381	22.1283281	77.8716719
R2.5105	R2.5	105	1.2984328	48.0557108	21.7086580	78.2913420
R2.5106	R2.5	106	1.3058210	46.7572780	21.2976141	78.7023859
R2.5107	R2.5	107	1.3115058	45.4514570	20.8951299	79.1048701
R2.5108	R2.5	108	1.3154220	44.1399512	20.5011189	79.4988811
R2.5109	R2.5	109	1.3175020	42.8245292	20.1154850	79.8845150
R2.5110	R2.5	110	1.3176890	41.5070272	19.7381129	80.2618871
R2.5111	R2.5	111	1.3159404	40.1893382	19.3688741	80.6311259
R2.5112	R2.5	112	1.3122248	38.8733978	19.0076220	80.9923780
R2.5113	R2.5	113	1.3065191	37.5611730	18.6541979	81.3458021
R2.5114	R2.5	114	1.2988228	36.2546539	18.3084259	81.6915741
R2.5115	R2.5	115	1.2891360	34.9558311	17.9701180	82.0298820
R2.5116	R2.5	116	1.2774830	33.6666951	17.6390679	82.3609321
R2.5117	R2.5	117	1.2638931	32.3892121	17.3150611	82.6849389
R2.5118	R2.5	118	1.2484150	31.1253190	16.9978631	83.0021369
R2.5119	R2.5	119	1.2311139	29.8769040	16.6872311	83.3127689
R2.5120	R2.5	120	1.2120590	28.6457901	16.3829119	83.6170881
R2.5121	R2.5	121	1.1913381	27.4337311	16.0846400	83.9153600
R2.5122	R2.5	122	1.1690731	26.2423930	15.7921439	84.2078561
R2.5123	R2.5	123	1.1452968	25.0733199	15.5051580	84.4948420
R2.5124	R2.5	124	1.1201971	23.9280231	15.2233681	84.7766319
R2.5125	R2.5	125	1.0938761	22.8078260	14.9465010	85.0534990
R2.5126	R2.5	126	1.0664589	21.7139499	14.6742671	85.3257329
R2.5127	R2.5	127	1.0380819	20.6474910	14.4063790	85.5936210
R2.5128	R2.5	128	1.0088780	19.6094091	14.1425540	85.8574460
R2.5129	R2.5	129	0.9789822	18.6005311	13.8825150	86.1174850
R2.5130	R2.5	130	0.9485328	17.6215489	13.6259940	86.3740060
R2.5131	R2.5	131	0.9176611	16.6730161	13.3727360	86.6272640
R2.5132	R2.5	132	0.8864870	15.7553550	13.1224999	86.8775001
R2.5133	R2.5	133	0.8551400	14.8688680	12.8750581	87.1249419
R2.5134	R2.5	134	0.8237340	14.0137280	12.6302040	87.3697960

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Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve
as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
R2.5135	R2.5	135	0.7923711	13.1899940	12.3877521	87.6122479
R2.5136	R2.5	136	0.7611500	12.3976229	12.1475360	87.8524640
R2.5137	R2.5	137	0.7301579	11.6364729	11.9094091	88.0905909
R2.5138	R2.5	138	0.6994760	10.9063150	11.6732490	88.3267510
R2.5139	R2.5	139	0.6691670	10.2068390	11.4389530	88.5610470
R2.5140	R2.5	140	0.6392890	9.5376720	11.2064340	88.7935660
R2.5141	R2.5	141	0.6098980	8.8983830	10.9756200	89.0243800
R2.5142	R2.5	142	0.5810320	8.2884851	10.7464550	89.2535450
R2.5143	R2.5	143	0.5527210	7.7074530	10.5188921	89.4811079
R2.5144	R2.5	144	0.5249980	7.1547320	10.2928760	89.7071240
R2.5145	R2.5	145	0.4978830	6.6297340	10.0683579	89.9316421
R2.5146	R2.5	146	0.4713970	6.1318510	9.8452730	90.1547270
R2.5147	R2.5	147	0.4455530	5.6604540	9.6235380	90.3764620
R2.5148	R2.5	148	0.4203759	5.2149010	9.4030380	90.5969620
R2.5149	R2.5	149	0.3958700	4.7945250	9.1836420	90.8163580
R2.5150	R2.5	150	0.3720580	4.3986550	8.9651520	91.0348480
R2.5151	R2.5	151	0.3489550	4.0265970	8.7473331	91.2526670
R2.5152	R2.5	152	0.3265810	3.6776420	8.5298860	91.4701140
R2.5153	R2.5	153	0.3049580	3.3510610	8.3124470	91.6875531
R2.5154	R2.5	154	0.2841100	3.0461030	8.0945830	91.9054170
R2.5155	R2.5	155	0.2640620	2.7619930	7.8757930	92.1242070
R2.5156	R2.5	156	0.2448380	2.4979310	7.6555050	92.3444950
R2.5157	R2.5	157	0.2264680	2.2530930	7.4330760	92.5669240
R2.5158	R2.5	158	0.2089740	2.0266250	7.2078220	92.7921780
R2.5159	R2.5	159	0.1923820	1.8176510	6.9790150	93.0209850
R2.5160	R2.5	160	0.1767130	1.6252690	6.7459320	93.2540680
R2.5161	R2.5	161	0.1619790	1.4485560	6.5078890	93.4921110
R2.5162	R2.5	162	0.1481900	1.2865770	6.2642780	93.7357220
R2.5163	R2.5	163	0.1353470	1.1383870	6.0146450	93.9853550
R2.5164	R2.5	164	0.1234370	1.0030400	5.7587730	94.2412270
R2.5165	R2.5	165	0.1124400	0.8796030	5.4967510	94.5032490
R2.5166	R2.5	166	0.1023100	0.7671630	5.2291050	94.7708950
R2.5167	R2.5	167	0.0929890	0.6648530	4.9568360	95.0431640
R2.5168	R2.5	168	0.0843740	0.5718640	4.6815480	95.3184520
R2.5169	R2.5	169	0.0763160	0.4874900	4.4052840	95.5947160
R2.5170	R2.5	170	0.0685810	0.4111740	4.1301250	95.8698750
R2.5171	R2.5	171	0.0610970	0.3425930	3.8568110	96.1431890
R2.5172	R2.5	172	0.0538920	0.2814960	3.5853870	96.4146130
R2.5173	R2.5	173	0.0469890	0.2276040	3.3159430	96.6840570
R2.5174	R2.5	174	0.0404160	0.1806150	3.0485420	96.9514580
R2.5175	R2.5	175	0.0342080	0.1401990	2.7832260	97.2167740
R2.5176	R2.5	176	0.0283930	0.1059910	2.5201240	97.4798760
R2.5177	R2.5	177	0.0230100	0.0775980	2.2592850	97.7407150
R2.5178	R2.5	178	0.0181160	0.0545880	2.0008610	97.9991390
R2.5179	R2.5	179	0.0136670	0.0364720	1.7451220	98.2548780

database

Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve
as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
R2.5180	R2.5	180	0.0098240	0.0228050	1.4924140	98.5075860
R2.5181	R2.5	181	0.0065460	0.0129810	1.2434710	98.7565290
R2.5182	R2.5	182	0.0038930	0.0064350	0.9997670	99.0002330
R2.5183	R2.5	183	0.0019010	0.0025420	0.7651460	99.2348540
R2.5184	R2.5	184	0.0006080	0.0006410	0.5514820	99.4485180
R2.5185	R2.5	185	0.0000330	0.0000330	0.5000000	99.5000000
R2.5186	R2.5	186	0.0000000	0.0000000	0.0000000	100.0000000

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Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve as a function of Age as a Percent of Average Service Life

1 Lookup	2 Curve	3 Age %	4 % Ret	5 % Surv	6 % Cond	7 % Depr Resv
R3.0000	R3.0	0	0.0154791	100.0000000	100.0000000	0.0000000
R3.0001	R3.0	1	0.0168400	99.9845209	99.0154038	0.9845962
R3.0002	R3.0	2	0.0182953	99.9676809	98.0319996	1.9680004
R3.0003	R3.0	3	0.0198507	99.9493856	97.0498524	2.9501476
R3.0004	R3.0	4	0.0215111	99.9295349	96.0690317	3.9309683
R3.0005	R3.0	5	0.0232811	99.9080238	95.0896082	4.9103918
R3.0006	R3.0	6	0.0251655	99.8847427	94.1116552	5.8883448
R3.0007	R3.0	7	0.0271702	99.8595772	93.1352463	6.8647537
R3.0008	R3.0	8	0.0292997	99.8324070	92.1604576	7.8395424
R3.0009	R3.0	9	0.0315600	99.8031073	91.1873674	8.8126326
R3.0010	R3.0	10	0.0339584	99.7715473	90.2160540	9.7839460
R3.0011	R3.0	11	0.0364952	99.7375889	89.2465992	10.7534008
R3.0012	R3.0	12	0.0391798	99.7010937	88.2790852	11.7209148
R3.0013	R3.0	13	0.0420189	99.6619139	87.3135939	12.6864061
R3.0014	R3.0	14	0.0450144	99.6198950	86.3502102	13.6497898
R3.0015	R3.0	15	0.0481758	99.5748806	85.3890209	14.6109791
R3.0016	R3.0	16	0.0515060	99.5267048	84.4301109	15.5698891
R3.0017	R3.0	17	0.0550118	99.4751988	83.4735680	16.5264320
R3.0018	R3.0	18	0.0586996	99.4201870	82.5194798	17.4805202
R3.0019	R3.0	19	0.0625744	99.3614874	81.5679340	18.4320660
R3.0020	R3.0	20	0.0666428	99.2989130	80.6190205	19.3809795
R3.0021	R3.0	21	0.0709104	99.2322702	79.6728268	20.3271732
R3.0022	R3.0	22	0.0753794	99.1613598	78.7294426	21.2705574
R3.0023	R3.0	23	0.0800638	99.0859804	77.7889566	22.2110434
R3.0024	R3.0	24	0.0849600	99.0059166	76.8514566	23.1485434
R3.0025	R3.0	25	0.0900774	98.9209566	75.9170332	24.0829668
R3.0026	R3.0	26	0.0954256	98.8308792	74.9857712	25.0142288
R3.0027	R3.0	27	0.1010027	98.7354536	74.0577602	25.9422398
R3.0028	R3.0	28	0.1068191	98.6344509	73.1330843	26.8669157
R3.0029	R3.0	29	0.1128788	98.5276318	72.2118292	27.7881708
R3.0030	R3.0	30	0.1191874	98.4147530	71.2940807	28.7059193
R3.0031	R3.0	31	0.1257477	98.2955656	70.3799210	29.6200790
R3.0032	R3.0	32	0.1325683	98.1698179	69.4694319	30.5305681
R3.0033	R3.0	33	0.1396523	98.0372496	68.5626936	31.4373064
R3.0034	R3.0	34	0.1470041	97.8975973	67.6597862	32.3402138
R3.0035	R3.0	35	0.1546307	97.7505932	66.7607861	33.2392139
R3.0036	R3.0	36	0.1625337	97.5959625	65.8657694	34.1342306
R3.0037	R3.0	37	0.1707211	97.4334288	64.9748087	35.0251913
R3.0038	R3.0	38	0.1791944	97.2627077	64.0879793	35.9120207
R3.0039	R3.0	39	0.1879616	97.0835133	63.2053480	36.7946520
R3.0040	R3.0	40	0.1970244	96.8955517	62.3269858	37.6730142
R3.0041	R3.0	41	0.2063894	96.6985273	61.4529600	38.5470400
R3.0042	R3.0	42	0.2160606	96.4921379	60.5833340	39.4166660
R3.0043	R3.0	43	0.2260437	96.2760773	59.7181711	40.2818289
R3.0044	R3.0	44	0.2363405	96.0500336	58.8575339	41.1424661

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Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve as a function of Age as a Percent of Average Service Life

1 Lookup	2 Curve	3 Age %	4 % Ret	5 % Surv	6 % Cond	7 % Depr Resv
R3.0045	R3.0	45	0.2469616	95.8136931	58.0014839	41.9985161
R3.0046	R3.0	46	0.2579089	95.5667315	57.1500778	42.8499222
R3.0047	R3.0	47	0.2691869	95.3088226	56.3033738	43.6966262
R3.0048	R3.0	48	0.2808028	95.0396357	55.4614301	44.5385699
R3.0049	R3.0	49	0.2927637	94.7588329	54.6243000	45.3757000
R3.0050	R3.0	50	0.3050775	94.4660692	53.7920389	46.2079611
R3.0051	R3.0	51	0.3177452	94.1609917	52.9647021	47.0352979
R3.0052	R3.0	52	0.3307829	93.8432465	52.1423440	47.8576560
R3.0053	R3.0	53	0.3441897	93.5124636	51.3250179	48.6749821
R3.0054	R3.0	54	0.3579797	93.1682739	50.5127802	49.4872198
R3.0055	R3.0	55	0.3721629	92.8102942	49.7056861	50.2943139
R3.0056	R3.0	56	0.3867464	92.4381313	48.9037910	51.0962090
R3.0057	R3.0	57	0.4017400	92.0513849	48.1071558	51.8928442
R3.0058	R3.0	58	0.4171553	91.6496449	47.3158379	52.6841621
R3.0059	R3.0	59	0.4330063	91.2324896	46.5299010	53.4700990
R3.0060	R3.0	60	0.4493046	90.7994833	45.7494102	54.2505898
R3.0061	R3.0	61	0.4660597	90.3501787	44.9744310	55.0255690
R3.0062	R3.0	62	0.4832878	89.8841190	44.2050362	55.7949638
R3.0063	R3.0	63	0.5010013	89.4008312	43.4412990	56.5587010
R3.0064	R3.0	64	0.5192156	88.8998299	42.6832981	57.3167019
R3.0065	R3.0	65	0.5379458	88.3806143	41.9311161	58.0688839
R3.0066	R3.0	66	0.5572013	87.8426685	41.1848378	58.8151622
R3.0067	R3.0	67	0.5770016	87.2854672	40.4445572	59.5554428
R3.0068	R3.0	68	0.5973559	86.7084656	39.7103682	60.2896318
R3.0069	R3.0	69	0.6182804	86.1111097	38.9823709	61.0176291
R3.0070	R3.0	70	0.6397857	85.4928293	38.2606740	61.7393260
R3.0071	R3.0	71	0.6618805	84.8530436	37.5453868	62.4546132
R3.0072	R3.0	72	0.6845751	84.1911631	36.8366242	63.1633758
R3.0073	R3.0	73	0.7078676	83.5065880	36.1345072	63.8654928
R3.0074	R3.0	74	0.7317868	82.7987204	35.4391561	64.5608439
R3.0075	R3.0	75	0.7563066	82.0669336	34.7507062	65.2492938
R3.0076	R3.0	76	0.7814388	81.3106270	34.0692878	65.9307122
R3.0077	R3.0	77	0.8071690	80.5291882	33.3950372	66.6049628
R3.0078	R3.0	78	0.8334932	79.7220192	32.7280932	67.2719068
R3.0079	R3.0	79	0.8603878	78.8885260	32.0685968	67.9314032
R3.0080	R3.0	80	0.8878355	78.0281382	31.4166920	68.5833080
R3.0081	R3.0	81	0.9158049	77.1403027	30.7725229	69.2274771
R3.0082	R3.0	82	0.9442616	76.2244978	30.1362350	69.8637650
R3.0083	R3.0	83	0.9731655	75.2802362	29.5079711	70.4920289
R3.0084	R3.0	84	1.0024595	74.3070707	28.8878751	71.1121249
R3.0085	R3.0	85	1.0320921	73.3046112	28.2760870	71.7239130
R3.0086	R3.0	86	1.0619917	72.2725191	27.6727450	72.3272550
R3.0087	R3.0	87	1.0920782	71.2105274	27.0779829	72.9220171
R3.0088	R3.0	88	1.1222725	70.1184492	26.4919291	73.5080709
R3.0089	R3.0	89	1.1524744	68.9961767	25.9147060	74.0852940

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Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve
as a function of Age as a Percent of Average Service Life

1 Lookup	2 Curve	3 Age %	4 % Ret	5 % Surv	6 % Cond	7 % Depr Resv
R3.0090	R3.0	90	1.1825809	67.8437023	25.3464310	74.6535690
R3.0091	R3.0	91	1.2124787	66.6611214	24.7872109	75.2127891
R3.0092	R3.0	92	1.2420444	65.4486427	24.2371471	75.7628529
R3.0093	R3.0	93	1.2711425	64.2065983	23.6963310	76.3036690
R3.0094	R3.0	94	1.2996359	62.9354558	23.1648400	76.8351600
R3.0095	R3.0	95	1.3273778	61.6358199	22.6427441	77.3572559
R3.0096	R3.0	96	1.3542113	60.3084421	22.1301019	77.8698981
R3.0097	R3.0	97	1.3799820	58.9542308	21.6269579	78.3730421
R3.0098	R3.0	98	1.4045148	57.5742488	21.1333439	78.8666561
R3.0099	R3.0	99	1.4276528	56.1697340	20.6492770	79.3507230
R3.0100	R3.0	100	1.4492231	54.7420812	20.1747630	79.8252370
R3.0101	R3.0	101	1.4690599	53.2928581	19.7097900	80.2902100
R3.0102	R3.0	102	1.4869881	51.8237982	19.2543340	80.7456660
R3.0103	R3.0	103	1.5028572	50.3368101	18.8083510	81.1916490
R3.0104	R3.0	104	1.5164928	48.8339529	18.3717880	81.6282120
R3.0105	R3.0	105	1.5277629	47.3174601	17.9445670	82.0554330
R3.0106	R3.0	106	1.5365224	45.7896972	17.5266011	82.4733989
R3.0107	R3.0	107	1.5426388	44.2531748	17.1177840	82.8822160
R3.0108	R3.0	108	1.5460029	42.7105360	16.7179930	83.2820070
R3.0109	R3.0	109	1.5465211	41.1645331	16.3270869	83.6729131
R3.0110	R3.0	110	1.5441080	39.6180120	15.9449101	84.0550899
R3.0111	R3.0	111	1.5387101	38.0739040	15.5712870	84.4287130
R3.0112	R3.0	112	1.5302810	36.5351939	15.2060260	84.7939740
R3.0113	R3.0	113	1.5188141	35.0049129	14.8489180	85.1510820
R3.0114	R3.0	114	1.5043109	33.4860988	14.4997360	85.5002640
R3.0115	R3.0	115	1.4868099	31.9817879	14.1582340	85.8417660
R3.0116	R3.0	116	1.4663680	30.4949780	13.8241530	86.1758470
R3.0117	R3.0	117	1.4430571	29.0286100	13.4972171	86.5027829
R3.0118	R3.0	118	1.4169929	27.5855529	13.1771280	86.8228720
R3.0119	R3.0	119	1.3882911	26.1685600	12.8635780	87.1364220
R3.0120	R3.0	120	1.3571188	24.7802689	12.5562360	87.4437640
R3.0121	R3.0	121	1.3236401	23.4231501	12.2547650	87.7452350
R3.0122	R3.0	122	1.2880390	22.0995100	11.9588110	88.0411890
R3.0123	R3.0	123	1.2505269	20.8114710	11.6680059	88.3319941
R3.0124	R3.0	124	1.2113230	19.5609441	11.3819740	88.6180260
R3.0125	R3.0	125	1.1706541	18.3496211	11.1003320	88.8996680
R3.0126	R3.0	126	1.1287601	17.1789670	10.8226880	89.1773120
R3.0127	R3.0	127	1.0858769	16.0502069	10.5486490	89.4513510
R3.0128	R3.0	128	1.0422470	14.9643300	10.2778220	89.7221780
R3.0129	R3.0	129	0.9981119	13.9220830	10.0098190	89.9901810
R3.0130	R3.0	130	0.9536992	12.9239711	9.7442570	90.2557430
R3.0131	R3.0	131	0.9092329	11.9702719	9.4807680	90.5192320
R3.0132	R3.0	132	0.8649200	11.0610390	9.2190000	90.7810000
R3.0133	R3.0	133	0.8209611	10.1961190	8.9586190	91.0413810
R3.0134	R3.0	134	0.7775309	9.3751580	8.6993200	91.3006800

Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve
as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
R3.0135	R3.0	135	0.7347881	8.5976270	8.4408310	91.5591691
R3.0136	R3.0	136	0.6928700	7.8628390	8.1829081	91.8170919
R3.0137	R3.0	137	0.6518970	7.1699690	7.9253460	92.0746540
R3.0138	R3.0	138	0.6119650	6.5180720	7.6679810	92.3320190
R3.0139	R3.0	139	0.5731500	5.9061070	7.4106960	92.5893040
R3.0140	R3.0	140	0.5355110	5.3329570	7.1534120	92.8465880
R3.0141	R3.0	141	0.4990880	4.7974460	6.8960930	93.1039070
R3.0142	R3.0	142	0.4639030	4.2983580	6.6387510	93.3612490
R3.0143	R3.0	143	0.4299690	3.8344550	6.3814340	93.6185660
R3.0144	R3.0	144	0.3972850	3.4044860	6.1242290	93.8757710
R3.0145	R3.0	145	0.3658450	3.0072010	5.8672540	94.1327460
R3.0146	R3.0	146	0.3356360	2.6413560	5.6106530	94.3893470
R3.0147	R3.0	147	0.3066410	2.3057200	5.3545910	94.6454090
R3.0148	R3.0	148	0.2788620	1.9990790	5.0992460	94.9007540
R3.0149	R3.0	149	0.2522770	1.7202170	4.8448220	95.1551780
R3.0150	R3.0	150	0.2268850	1.4679400	4.5915160	95.4084840
R3.0151	R3.0	151	0.2026930	1.2410550	4.3395140	95.6604860
R3.0152	R3.0	152	0.1797100	1.0383620	4.0890000	95.9110000
R3.0153	R3.0	153	0.1579600	0.8586520	3.8401530	96.1598470
R3.0154	R3.0	154	0.1374690	0.7006920	3.5931400	96.4068600
R3.0155	R3.0	155	0.1182750	0.5632230	3.3480970	96.6519030
R3.0156	R3.0	156	0.1004170	0.4449480	3.1051630	96.8948370
R3.0157	R3.0	157	0.0839420	0.3445310	2.8644800	97.1355200
R3.0158	R3.0	158	0.0688930	0.2605890	2.6261500	97.3738500
R3.0159	R3.0	159	0.0553160	0.1916960	2.3902580	97.6097420
R3.0160	R3.0	160	0.0432485	0.1363800	2.1569580	97.8430420
R3.0161	R3.0	161	0.0327163	0.0931315	1.9263620	98.0736380
R3.0162	R3.0	162	0.0237359	0.0604152	1.6987790	98.3012210
R3.0163	R3.0	163	0.0163033	0.0366793	1.4745100	98.5254900
R3.0164	R3.0	164	0.0103913	0.0203760	1.2542690	98.7457310
R3.0165	R3.0	165	0.0059434	0.0099847	1.0392430	98.9607570
R3.0166	R3.0	166	0.0028646	0.0040413	0.8322900	99.1677100
R3.0167	R3.0	167	0.0010104	0.0011767	0.6413070	99.3586930
R3.0168	R3.0	168	0.0001662	0.0001662	0.4999820	99.5000180
R3.0169	R3.0	169	0.0000000	0.0000000	0.0000000	100.0000000

Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
R4.0000	R4.0	0	0.0008278	100.0000000	100.0000000	0.0000000
R4.0001	R4.0	1	0.0009632	99.9991722	99.0013161	0.9986839
R4.0002	R4.0	2	0.0011139	99.9982090	98.0022631	1.9977369
R4.0003	R4.0	3	0.0012894	99.9970951	97.0033197	2.9966803
R4.0004	R4.0	4	0.0014858	99.9958057	96.0045939	3.9954061
R4.0005	R4.0	5	0.0017109	99.9943199	95.0060129	4.9939871
R4.0006	R4.0	6	0.0019645	99.9926090	94.0076304	5.9923696
R4.0007	R4.0	7	0.0022536	99.9906445	93.0094681	6.9905319
R4.0008	R4.0	8	0.0025768	99.9883909	92.0115519	7.9884481
R4.0009	R4.0	9	0.0029430	99.9858141	91.0139113	8.9860887
R4.0010	R4.0	10	0.0033541	99.9828711	90.0165749	9.9834251
R4.0011	R4.0	11	0.0038157	99.9795170	89.0195789	10.9804211
R4.0012	R4.0	12	0.0043325	99.9757013	88.0229569	11.9770431
R4.0013	R4.0	13	0.0049095	99.9713688	87.0267496	12.9732504
R4.0014	R4.0	14	0.0055561	99.9664593	86.0310001	13.9689999
R4.0015	R4.0	15	0.0062743	99.9609032	85.0357533	14.9642467
R4.0016	R4.0	16	0.0070753	99.9546289	84.0410605	15.9589395
R4.0017	R4.0	17	0.0079612	99.9475536	83.0469732	16.9530268
R4.0018	R4.0	18	0.0089484	99.9395924	82.0535498	17.9464502
R4.0019	R4.0	19	0.0100383	99.9306440	81.0608521	18.9391479
R4.0020	R4.0	20	0.0112429	99.9206057	80.0689449	19.9310551
R4.0021	R4.0	21	0.0125732	99.9093628	79.0778990	20.9221010
R4.0022	R4.0	22	0.0140372	99.8967896	78.0877886	21.9122114
R4.0023	R4.0	23	0.0156517	99.8827524	77.0986939	22.9013061
R4.0024	R4.0	24	0.0174217	99.8671007	76.1106977	23.8893023
R4.0025	R4.0	25	0.0193634	99.8496790	75.1238899	24.8761101
R4.0026	R4.0	26	0.0214911	99.8303156	74.1383648	25.8616352
R4.0027	R4.0	27	0.0238161	99.8088245	73.1542206	26.8457794
R4.0028	R4.0	28	0.0263576	99.7850084	72.1715622	27.8284378
R4.0029	R4.0	29	0.0291262	99.7586508	71.1904984	28.8095016
R4.0030	R4.0	30	0.0321426	99.7295246	70.2111445	29.7888555
R4.0031	R4.0	31	0.0354223	99.6973820	69.2336187	30.7663813
R4.0032	R4.0	32	0.0389815	99.6619597	68.2580481	31.7419519
R4.0033	R4.0	33	0.0428438	99.6229782	67.2845621	32.7154379
R4.0034	R4.0	34	0.0470247	99.5801344	66.3132954	33.6867046
R4.0035	R4.0	35	0.0515423	99.5331097	65.3443880	34.6556120
R4.0036	R4.0	36	0.0564251	99.4815674	64.3779860	35.6220140
R4.0037	R4.0	37	0.0616894	99.4251423	63.4142370	36.5857630
R4.0038	R4.0	38	0.0673580	99.3634529	62.4532971	37.5467029
R4.0039	R4.0	39	0.0734539	99.2960949	61.4953232	38.5046768
R4.0040	R4.0	40	0.0800018	99.2226410	60.5404782	39.4595218
R4.0041	R4.0	41	0.0870266	99.1426392	59.5889268	40.4110732
R4.0042	R4.0	42	0.0945492	99.0556126	58.6408401	41.3591599
R4.0043	R4.0	43	0.1025982	98.9610634	57.6963892	42.3036108
R4.0044	R4.0	44	0.1111975	98.8584652	56.7557492	43.2442508

Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
R4.0045	R4.0	45	0.1203727	98.7472677	55.8190970	44.1809030
R4.0046	R4.0	46	0.1301480	98.6268950	54.8866129	45.1133871
R4.0047	R4.0	47	0.1405506	98.4967470	53.9584770	46.0415230
R4.0048	R4.0	48	0.1516085	98.3561964	53.0348692	46.9651308
R4.0049	R4.0	49	0.1633424	98.2045879	52.1159720	47.8840280
R4.0050	R4.0	50	0.1757803	98.0412455	51.2019682	48.7980318
R4.0051	R4.0	51	0.1889468	97.8654652	50.2930360	49.7069640
R4.0052	R4.0	52	0.2028656	97.6765184	49.3893561	50.6106439
R4.0053	R4.0	53	0.2175588	97.4736528	48.4911060	51.5088940
R4.0054	R4.0	54	0.2326536	97.2560940	47.5984602	52.4015398
R4.0055	R4.0	55	0.2497578	97.0234404	46.7115922	53.2884078
R4.0056	R4.0	56	0.2665119	96.7736826	45.8306670	54.1693330
R4.0057	R4.0	57	0.2845173	96.5071707	44.9558511	55.0441489
R4.0058	R4.0	58	0.3034000	96.2226534	44.0873008	55.9126992
R4.0059	R4.0	59	0.3231707	95.9192534	43.2251711	56.7748289
R4.0060	R4.0	60	0.3438416	95.5960827	42.3696070	57.6303930
R4.0061	R4.0	61	0.3654260	95.2522411	41.5207481	58.4792519
R4.0062	R4.0	62	0.3879290	94.8868151	40.6787262	59.3212738
R4.0063	R4.0	63	0.4113550	94.4988861	39.8436651	60.1563349
R4.0064	R4.0	64	0.4357090	94.0875311	39.0156770	60.9843230
R4.0065	R4.0	65	0.4609852	93.6518221	38.1948690	61.8051310
R4.0066	R4.0	66	0.4871807	93.1908369	37.3813329	62.6186671
R4.0067	R4.0	67	0.5142860	92.7036562	36.5751538	63.4248462
R4.0068	R4.0	68	0.5422850	92.1893702	35.7764020	64.2235980
R4.0069	R4.0	69	0.5711651	91.6470852	34.9851360	65.0148640
R4.0070	R4.0	70	0.6009006	91.0759201	34.2014031	65.7985969
R4.0071	R4.0	71	0.6314631	90.4750195	33.4252348	66.5747652
R4.0072	R4.0	72	0.6628237	89.8435564	32.6566491	67.3433509
R4.0073	R4.0	73	0.6949434	89.1807327	31.8956490	68.1043510
R4.0074	R4.0	74	0.7277765	88.4857893	31.1422219	68.8577781
R4.0075	R4.0	75	0.7612782	87.7580128	30.3963370	69.6036630
R4.0076	R4.0	76	0.7953930	86.9967346	29.6579499	70.3420501
R4.0077	R4.0	77	0.8300562	86.2013416	28.9269941	71.0730059
R4.0078	R4.0	78	0.8652038	85.3712854	28.2033880	71.7966120
R4.0079	R4.0	79	0.9007626	84.5060816	27.4870250	72.5129750
R4.0080	R4.0	80	0.9366550	83.6053190	26.7777820	73.2222180
R4.0081	R4.0	81	0.9727898	82.6686640	26.0755160	73.9244840
R4.0082	R4.0	82	1.0092020	81.6958742	25.3800550	74.6199450
R4.0083	R4.0	83	1.0464849	80.6866722	24.6912470	75.3087530
R4.0084	R4.0	84	1.0855894	79.6401873	24.0091240	75.9908760
R4.0085	R4.0	85	1.1274805	78.5545979	23.3340089	76.6659911
R4.0086	R4.0	86	1.1729546	77.4271174	22.6665139	77.3334861
R4.0087	R4.0	87	1.2225552	76.2541628	22.0074830	77.9925170
R4.0088	R4.0	88	1.2765531	75.0316076	21.3579230	78.6420770
R4.0089	R4.0	89	1.3349047	73.7550545	20.7189319	79.2810681

Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
R4.0090	R4.0	90	1.3973417	72.4201498	20.0916240	79.9083760
R4.0091	R4.0	91	1.4632540	71.0228081	19.4770801	80.5229199
R4.0092	R4.0	92	1.5318708	69.5595541	18.8762820	81.1237180
R4.0093	R4.0	93	1.6022349	68.0276833	18.2900851	81.7099149
R4.0094	R4.0	94	1.6732702	66.4254484	17.7191961	82.2808039
R4.0095	R4.0	95	1.7437983	64.7521782	17.1641600	82.8358400
R4.0096	R4.0	96	1.8126111	63.0083799	16.6253510	83.3746490
R4.0097	R4.0	97	1.8785019	61.1957688	16.1029799	83.8970201
R4.0098	R4.0	98	1.9403057	59.3172669	15.5971090	84.4028910
R4.0099	R4.0	99	1.9969244	57.3769612	15.1076440	84.8923560
R4.0100	R4.0	100	2.0473556	55.3800368	14.6343750	85.3656250
R4.0101	R4.0	101	2.0907240	53.3326812	14.1769710	85.8230290
R4.0102	R4.0	102	2.1262794	51.2419572	13.7350060	86.2649940
R4.0103	R4.0	103	2.1534547	49.1156778	13.3079650	86.6920350
R4.0104	R4.0	104	2.1718040	46.9622231	12.8952750	87.1047250
R4.0105	R4.0	105	2.1810722	44.7904191	12.4962990	87.5037010
R4.0106	R4.0	106	2.1811419	42.6093469	12.1103610	87.8896390
R4.0107	R4.0	107	2.1720638	40.4282050	11.7367520	88.2632480
R4.0108	R4.0	108	2.1540241	38.2561412	11.3747400	88.6252600
R4.0109	R4.0	109	2.1273389	36.1021171	11.0235781	88.9764219
R4.0110	R4.0	110	2.0924511	33.9747782	10.6825140	89.3174860
R4.0111	R4.0	111	2.0498882	31.8823271	10.3507971	89.6492029
R4.0112	R4.0	112	2.0002858	29.8324389	10.0276790	89.9723210
R4.0113	R4.0	113	1.9443300	27.8321531	9.7124300	90.2875700
R4.0114	R4.0	114	1.8827472	25.8878231	9.4043380	90.5956620
R4.0115	R4.0	115	1.8162958	24.0050759	9.1027160	90.8972840
R4.0116	R4.0	116	1.7457612	22.1887801	8.8069040	91.1930960
R4.0117	R4.0	117	1.6718969	20.4430189	8.5162840	91.4837160
R4.0118	R4.0	118	1.5954540	18.7711220	8.2302750	91.7697250
R4.0119	R4.0	119	1.5171400	17.1756680	7.9483430	92.0516570
R4.0120	R4.0	120	1.4376240	15.6585280	7.6700060	92.3299940
R4.0121	R4.0	121	1.3575180	14.2209040	7.3948390	92.6051610
R4.0122	R4.0	122	1.2773730	12.8633860	7.1224760	92.8775240
R4.0123	R4.0	123	1.1976880	11.5860130	6.8526120	93.1473880
R4.0124	R4.0	124	1.1188790	10.3883250	6.5850130	93.4149870
R4.0125	R4.0	125	1.0413181	9.2694460	6.3195140	93.6804860
R4.0126	R4.0	126	0.9653040	8.2281280	6.0560060	93.9439940
R4.0127	R4.0	127	0.8910890	7.2628240	5.7944580	94.2055420
R4.0128	R4.0	128	0.8188760	6.3717350	5.5348880	94.4651120
R4.0129	R4.0	129	0.7488360	5.5528590	5.2773810	94.7226190
R4.0130	R4.0	130	0.6811100	4.8040230	5.0220640	94.9779360
R4.0131	R4.0	131	0.6158200	4.1229130	4.7691140	95.2308860
R4.0132	R4.0	132	0.5530780	3.5070930	4.5187400	95.4812600
R4.0133	R4.0	133	0.4930080	2.9540150	4.2715210	95.7284790
R4.0134	R4.0	134	0.4357350	2.4610070	4.0273490	95.9726510

Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
R4.0135	R4.0	135	0.3814000	2.0252720	3.7864600	96.2135400
R4.0136	R4.0	136	0.3301680	1.6438720	3.5490210	96.4509790
R4.0137	R4.0	137	0.2822160	1.3137040	3.3315155	66.6848450
R4.0138	R4.0	138	0.2377380	1.0314880	3.0849780	96.9150220
R4.0139	R4.0	139	0.1969280	0.7937500	2.8585810	97.1414190
R4.0140	R4.0	140	0.1599700	0.5968220	2.6360510	97.3639490
R4.0141	R4.0	141	0.1270220	0.4368520	2.4174760	97.5825240
R4.0142	R4.0	142	0.0981870	0.3098300	2.2029340	97.7970660
R4.0143	R4.0	143	0.0734960	0.2116430	1.9925030	98.0074970
R4.0144	R4.0	144	0.0529003	0.1381470	1.7862840	98.2137160
R4.0145	R4.0	145	0.0362607	0.0852467	1.5844010	98.4155990
R4.0146	R4.0	146	0.0233463	0.0489860	1.3870900	98.6129100
R4.0147	R4.0	147	0.0138307	0.0256397	1.1948260	98.8051740
R4.0148	R4.0	148	0.0072948	0.0118090	1.0086400	98.9913600
R4.0149	R4.0	149	0.0032339	0.0045142	0.8306070	99.1693930
R4.0150	R4.0	150	0.0010741	0.0012803	0.6657290	99.3342710
R4.0151	R4.0	151	0.0002001	0.0002061	0.5292780	99.4707220
R4.0152	R4.0	152	0.0000060	0.0000060	0.5000830	99.4999170
R4.0153	R4.0	153	0.0000000	0.0000000	0.0000000	100.0000000

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Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve
as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
S3.0000	S3.0	0	0.0000000	100.0000000	100.0000000	0.0000000
S3.0001	S3.0	1	0.0000000	100.0000000	99.0000000	1.0000000
S3.0002	S3.0	2	0.0000000	100.0000000	98.0000000	2.0000000
S3.0003	S3.0	3	0.0000000	100.0000000	97.0000000	3.0000000
S3.0004	S3.0	4	0.0000000	100.0000000	96.0000000	4.0000000
S3.0005	S3.0	5	0.0000000	100.0000000	95.0000000	5.0000000
S3.0006	S3.0	6	0.0000009	100.0000000	94.0000000	6.0000000
S3.0007	S3.0	7	0.0000029	99.9999991	93.0000010	6.9999990
S3.0008	S3.0	8	0.0000057	99.9999962	92.0000038	7.9999962
S3.0009	S3.0	9	0.0000124	99.9999905	91.0000086	8.9999914
S3.0010	S3.0	10	0.0000229	99.9999781	90.0000200	9.9999800
S3.0011	S3.0	11	0.0000410	99.9999552	89.0000401	10.9999599
S3.0012	S3.0	12	0.0000706	99.9999142	88.0000773	11.9999227
S3.0013	S3.0	13	0.0001154	99.9998436	87.0001392	12.9998608
S3.0014	S3.0	14	0.0001821	99.9997282	86.0002394	13.9997606
S3.0015	S3.0	15	0.0002785	99.9995461	85.0003939	14.9996061
S3.0016	S3.0	16	0.0004120	99.9992676	84.0006294	15.9993706
S3.0017	S3.0	17	0.0005932	99.9988556	83.0009728	16.9990272
S3.0018	S3.0	18	0.0008402	99.9982624	82.0014629	17.9985371
S3.0019	S3.0	19	0.0011616	99.9974222	81.0021467	18.9978533
S3.0020	S3.0	20	0.0015783	99.9962606	80.0030832	19.9969168
S3.0021	S3.0	21	0.0021086	99.9946823	79.0043373	20.9956627
S3.0022	S3.0	22	0.0027761	99.9925737	78.0059929	21.9940071
S3.0023	S3.0	23	0.0036030	99.9897976	77.0081453	22.9918547
S3.0024	S3.0	24	0.0046177	99.9861946	76.0109024	23.9890976
S3.0025	S3.0	25	0.0058498	99.9815769	75.0143890	24.9856110
S3.0026	S3.0	26	0.0073300	99.9757271	74.0187492	25.9812508
S3.0027	S3.0	27	0.0090951	99.9683971	73.0241404	26.9758596
S3.0028	S3.0	28	0.0111771	99.9593020	72.0307388	27.9692612
S3.0029	S3.0	29	0.0136185	99.9481249	71.0387383	28.9612617
S3.0030	S3.0	30	0.0164585	99.9345064	70.0483513	29.9516487
S3.0031	S3.0	31	0.0197382	99.9180479	69.0598068	30.9401932
S3.0032	S3.0	32	0.0235014	99.8983097	68.0733528	31.9266472
S3.0033	S3.0	33	0.0277939	99.8748083	67.0892544	32.9107456
S3.0034	S3.0	34	0.0326624	99.8470144	66.1077900	33.8922100
S3.0035	S3.0	35	0.0381479	99.8143520	65.1292582	34.8707418
S3.0036	S3.0	36	0.0443048	99.7762041	64.1539688	35.8460312
S3.0037	S3.0	37	0.0511732	99.7318993	63.1822462	36.8177538
S3.0038	S3.0	38	0.0588046	99.6807261	62.2144260	37.7855740
S3.0039	S3.0	39	0.0672397	99.6219215	61.2508540	38.7491460
S3.0040	S3.0	40	0.0765267	99.5546818	60.2918859	39.7081141
S3.0041	S3.0	41	0.0867071	99.4781551	59.3378830	40.6621170
S3.0042	S3.0	42	0.0978231	99.3914480	58.3892121	41.6107879
S3.0043	S3.0	43	0.1099110	99.2936249	57.4462428	42.5537572
S3.0044	S3.0	44	0.1230097	99.1837139	56.5093489	43.4906511

Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve
as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
S3.0045	S3.0	45	0.1371507	99.0607042	55.5788989	44.4211011
S3.0046	S3.0	46	0.1523667	98.9235535	54.6552620	45.3447380
S3.0047	S3.0	47	0.1686792	98.7711868	53.7388029	46.2611971
S3.0048	S3.0	48	0.1861134	98.6025076	52.8298788	47.1701212
S3.0049	S3.0	49	0.2046880	98.4163942	51.9288392	48.0711608
S3.0050	S3.0	50	0.2244149	98.2117062	51.0360251	48.9639749
S3.0051	S3.0	51	0.2453012	97.9872913	50.1517639	49.8482361
S3.0052	S3.0	52	0.2673512	97.7419901	49.2763739	50.7236261
S3.0053	S3.0	53	0.2905626	97.4746389	48.4101572	51.5898428
S3.0054	S3.0	54	0.3149290	97.1840763	47.5534000	52.4466000
S3.0055	S3.0	55	0.3404341	96.8691473	46.7063732	53.2936268
S3.0056	S3.0	56	0.3670616	96.5287132	45.8693328	54.1306672
S3.0057	S3.0	57	0.3947830	96.1616516	45.0425129	54.9574871
S3.0058	S3.0	58	0.4235687	95.7668686	44.2261319	55.7738681
S3.0059	S3.0	59	0.4533825	95.3432999	43.4203882	56.5796118
S3.0060	S3.0	60	0.4841824	94.8899174	42.6254621	57.3745379
S3.0061	S3.0	61	0.5159149	94.4057350	41.8415122	58.1584878
S3.0062	S3.0	62	0.5485287	93.8898201	41.0686789	58.9313211
S3.0063	S3.0	63	0.5819635	93.3412914	40.3070850	59.6929150
S3.0064	S3.0	64	0.6161499	92.7593279	39.5568309	60.4431691
S3.0065	S3.0	65	0.6510201	92.1431780	38.8179989	61.1820011
S3.0066	S3.0	66	0.6864967	91.4921579	38.0906539	61.9093461
S3.0067	S3.0	67	0.7224970	90.8056612	37.3748412	62.6251588
S3.0068	S3.0	68	0.7589350	90.0831642	36.6705899	63.3294101
S3.0069	S3.0	69	0.7957239	89.3242292	35.9779110	64.0220890
S3.0070	S3.0	70	0.8327675	88.5285053	35.2967982	64.7032018
S3.0071	S3.0	71	0.8699665	87.6957378	34.6272311	65.3727689
S3.0072	S3.0	72	0.9072227	86.8257713	33.9691749	66.0308251
S3.0073	S3.0	73	0.9444323	85.9185486	33.3225799	66.6774201
S3.0074	S3.0	74	0.9814892	84.9741163	32.6873822	67.3126178
S3.0075	S3.0	75	1.0182848	83.9926271	32.0635042	67.9364958
S3.0076	S3.0	76	1.0547151	82.9743423	31.4508619	68.5491381
S3.0077	S3.0	77	1.0906649	81.9196272	30.8493540	69.1506460
S3.0078	S3.0	78	1.1260299	80.8289623	30.2588730	69.7411270
S3.0079	S3.0	79	1.1606951	79.7029324	29.6793010	70.3206990
S3.0080	S3.0	80	1.1945553	78.5422373	29.1105120	70.8894880
S3.0081	S3.0	81	1.2275000	77.3476820	28.5523710	71.4476290
S3.0082	S3.0	82	1.2594261	76.1201820	28.0047390	71.9952610
S3.0083	S3.0	83	1.2902269	74.8607559	27.4674680	72.5325320
S3.0084	S3.0	84	1.3198013	73.5705290	26.9404030	73.0595970
S3.0085	S3.0	85	1.3480530	72.2507277	26.4233890	73.5766110
S3.0086	S3.0	86	1.3748846	70.9026747	25.9162619	74.0837381
S3.0087	S3.0	87	1.4002104	69.5277901	25.4188600	74.5811400
S3.0088	S3.0	88	1.4239378	68.1275797	24.9310110	75.0689890
S3.0089	S3.0	89	1.4459896	66.7036419	24.4525449	75.5474551

S:\Depreciation\Iowacurves.xls

Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve
as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
S3.0090	S3.0	90	1.4662924	65.2576523	23.9832900	76.0167100
S3.0091	S3.0	91	1.4847698	63.7913599	23.5230711	76.4769289
S3.0092	S3.0	92	1.5013619	62.3065901	23.0717111	76.9282889
S3.0093	S3.0	93	1.5160102	60.8052282	22.6290381	77.3709619
S3.0094	S3.0	94	1.5286632	59.2892180	22.1948710	77.8051290
S3.0095	S3.0	95	1.5392757	57.7605548	21.7690370	78.2309630
S3.0096	S3.0	96	1.5478119	56.2212791	21.3513601	78.6486399
S3.0097	S3.0	97	1.5542393	54.6734672	20.9416640	79.0583360
S3.0098	S3.0	98	1.5585370	53.1192279	20.5397761	79.4602239
S3.0099	S3.0	99	1.5606909	51.5606909	20.1455231	79.8544769
S3.0100	S3.0	100	1.5606909	50.0000000	19.7587349	80.2412651
S3.0101	S3.0	101	1.5585370	48.4393091	19.3792419	80.6207581
S3.0102	S3.0	102	1.5542393	46.8807721	19.0068769	80.9931231
S3.0103	S3.0	103	1.5478119	45.3265328	18.6414750	81.3585250
S3.0104	S3.0	104	1.5392757	43.7787209	18.2828729	81.7171271
S3.0105	S3.0	105	1.5286631	42.2394452	17.9309101	82.0690899
S3.0106	S3.0	106	1.5160103	40.7107821	17.5854299	82.4145701
S3.0107	S3.0	107	1.5013619	39.1947718	17.2462750	82.7537250
S3.0108	S3.0	108	1.4847698	37.6934099	16.9132950	83.0867050
S3.0109	S3.0	109	1.4662919	36.2086401	16.5863359	83.4136641
S3.0110	S3.0	110	1.4459901	34.7423482	16.2652550	83.7347450
S3.0111	S3.0	111	1.4239380	33.2963581	15.9499090	84.0500910
S3.0112	S3.0	112	1.4002102	31.8724201	15.6401500	84.3598500
S3.0113	S3.0	113	1.3748848	30.4722099	15.3358450	84.6641550
S3.0114	S3.0	114	1.3480530	29.0973251	15.0368600	84.9631400
S3.0115	S3.0	115	1.3198011	27.7492721	14.7430561	85.2569439
S3.0116	S3.0	116	1.2902269	26.4294710	14.4543080	85.5456920
S3.0117	S3.0	117	1.2594261	25.1392441	14.1704850	85.8295150
S3.0118	S3.0	118	1.2275000	23.8798180	13.8914710	86.1085290
S3.0119	S3.0	119	1.1945550	22.6523180	13.6171401	86.3828599
S3.0120	S3.0	120	1.1606951	21.4577630	13.3473700	86.6526300
S3.0121	S3.0	121	1.1260300	20.2970679	13.0820510	86.9179490
S3.0122	S3.0	122	1.0906648	19.1710379	12.8210681	87.1789319
S3.0123	S3.0	123	1.0547152	18.0803731	12.5643160	87.4356840
S3.0124	S3.0	124	1.0182848	17.0256579	12.3116800	87.6883200
S3.0125	S3.0	125	0.9814891	16.0073731	12.0630680	87.9369320
S3.0126	S3.0	126	0.9444329	15.0258840	11.8183630	88.1816370
S3.0127	S3.0	127	0.9072221	14.0814511	11.5774790	88.4225210
S3.0128	S3.0	128	0.8699670	13.1742290	11.3403140	88.6596860
S3.0129	S3.0	129	0.8327670	12.3042620	11.1067700	88.8932300
S3.0130	S3.0	130	0.7957240	11.4714950	10.8767610	89.1232390
S3.0131	S3.0	131	0.7589350	10.6757710	10.6501980	89.3498020
S3.0132	S3.0	132	0.7224970	9.9168360	10.4270001	89.5729999
S3.0133	S3.0	133	0.6864971	9.1943390	10.2070690	89.7929310
S3.0134	S3.0	134	0.6510199	8.5078420	9.9903250	90.0096750

database

Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve
as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
S3.0135	S3.0	135	0.6161500	7.8568220	9.7766990	90.2233011
S3.0136	S3.0	136	0.5819630	7.2406720	9.5661089	90.4338911
S3.0137	S3.0	137	0.5485290	6.6587090	9.3584729	90.6415271
S3.0138	S3.0	138	0.5159150	6.1101800	9.1537210	90.8462790
S3.0139	S3.0	139	0.4841820	5.5942650	8.9517880	91.0482121
S3.0140	S3.0	140	0.4533830	5.1100830	8.7525981	91.2474020
S3.0141	S3.0	141	0.4235690	4.6567000	8.5560840	91.4439160
S3.0142	S3.0	142	0.3947830	4.2331310	8.3621800	91.6378200
S3.0143	S3.0	143	0.3670610	3.8383480	8.1708230	91.8291770
S3.0144	S3.0	144	0.3404340	3.4712870	7.9819520	92.0180480
S3.0145	S3.0	145	0.3149290	3.1308530	7.7955040	92.2044960
S3.0146	S3.0	146	0.2905630	2.8159240	7.6114220	92.3885780
S3.0147	S3.0	147	0.2673510	2.5253610	7.4296480	92.5703520
S3.0148	S3.0	148	0.2453010	2.2580100	7.2501270	92.7498730
S3.0149	S3.0	149	0.2244150	2.0127090	7.0728060	92.9271940
S3.0150	S3.0	150	0.2046880	1.7882940	6.8976320	93.1023680
S3.0151	S3.0	151	0.1861140	1.5836060	6.7245530	93.2754470
S3.0152	S3.0	152	0.1686790	1.3974920	6.5535220	93.4464780
S3.0153	S3.0	153	0.1523660	1.2288130	6.3844900	93.6155100
S3.0154	S3.0	154	0.1371510	1.0764470	6.2174110	93.7825890
S3.0155	S3.0	155	0.1230100	0.9392960	6.0522380	93.9477620
S3.0156	S3.0	156	0.1099110	0.8162860	5.8889290	94.1110710
S3.0157	S3.0	157	0.0978230	0.7063750	5.7274410	94.2725590
S3.0158	S3.0	158	0.0867070	0.6085520	5.5677320	94.4322680
S3.0159	S3.0	159	0.0765270	0.5218450	5.4097620	94.5902380
S3.0160	S3.0	160	0.0672400	0.4453180	5.2534920	94.7465080
S3.0161	S3.0	161	0.0588040	0.3780780	5.0988860	94.9011140
S3.0162	S3.0	162	0.0511730	0.3192740	4.9459060	95.0540940
S3.0163	S3.0	163	0.0443050	0.2681010	4.7945200	95.2054800
S3.0164	S3.0	164	0.0381480	0.2237960	4.6446910	95.3553090
S3.0165	S3.0	165	0.0326620	0.1856480	4.4963870	95.5036130
S3.0166	S3.0	166	0.0277940	0.1529860	4.3495800	95.6504200
S3.0167	S3.0	167	0.0235020	0.1251920	4.2042330	95.7957670
S3.0168	S3.0	168	0.0197375	0.1016900	4.0603190	95.9396810
S3.0169	S3.0	169	0.0164582	0.0819525	3.9178100	96.0821900
S3.0170	S3.0	170	0.0136189	0.0654943	3.7766790	96.2233210
S3.0171	S3.0	171	0.0111777	0.0518754	3.6369070	96.3630930
S3.0172	S3.0	172	0.0090944	0.0406977	3.4984640	96.5015360
S3.0173	S3.0	173	0.0073307	0.0316033	3.3613300	96.6386700
S3.0174	S3.0	174	0.0058498	0.0242726	3.2254840	96.7745160
S3.0175	S3.0	175	0.0046178	0.0184228	3.0909090	96.9090910
S3.0176	S3.0	176	0.0036030	0.0138050	2.9575850	97.0424150
S3.0177	S3.0	177	0.0027755	0.0102020	2.8255000	97.1745000
S3.0178	S3.0	178	0.0021089	0.0074265	2.6946400	97.3053600
S3.0179	S3.0	179	0.0015783	0.0053176	2.5649990	97.4350010

Iowa-type Retirement - Survival Tables

Percent Retired, Surviving, Condition, and Depreciation Reserve
as a function of Age as a Percent of Average Service Life

1	2	3	4	5	6	7
Lookup	Curve	Age %	% Ret	% Surv	% Cond	% Depr Resv
S3.0180	S3.0	180	0.0011617	0.0037393	2.4365660	97.5634340
S3.0181	S3.0	181	0.0008396	0.0025776	2.3093440	97.6906560
S3.0182	S3.0	182	0.0005946	0.0017381	2.1833410	97.8166590
S3.0183	S3.0	183	0.0004116	0.0011435	2.0585660	97.9414340
S3.0184	S3.0	184	0.0002778	0.0007319	1.9350420	98.0649580
S3.0185	S3.0	185	0.0001821	0.0004541	1.8128020	98.1871980
S3.0186	S3.0	186	0.0001156	0.0002720	1.6918880	98.3081120
S3.0187	S3.0	187	0.0000706	0.0001564	1.5723710	98.4276290
S3.0188	S3.0	188	0.0000413	0.0000858	1.4543500	98.5456500
S3.0189	S3.0	189	0.0000229	0.0000446	1.3379620	98.6620380
S3.0190	S3.0	190	0.0000119	0.0000217	1.2234140	98.7765860
S3.0191	S3.0	191	0.0000058	0.0000097	1.1110030	98.8889970
S3.0192	S3.0	192	0.0000025	0.0000040	1.0011880	98.9988120
S3.0193	S3.0	193	0.0000010	0.0000014	0.8946340	99.1053660
S3.0194	S3.0	194	0.0000003	0.0000004	0.7925260	99.2074740
S3.0195	S3.0	195	0.0000001	0.0000001	0.6968450	99.3031550
S3.0196	S3.0	196	0.0000000	0.0000000	0.6112800	99.3887200
S3.0197	S3.0	197	0.0000000	0.0000000	0.5431250	99.4568750
S3.0198	S3.0	198	0.0000000	0.0000000	0.5056800	99.4943200
S3.0199	S3.0	199	0.0000000	0.0000000	0.5000000	99.5000000
S3.0200	S3.0	200	0.0000000	0.0000000	0.0000000	100.0000000

VOLUME 11

PENNSYLVANIA-AMERICAN WATER COMPANY

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

EXHIBIT NO. 11-C, 11-D
DEPRECIATION STUDY

WATER OPERATIONS EXCLUDING STEELTON
AS OF DECEMBER 31, 2021, 2022

EXHIBIT NO. 11-C - DEPRECIATION STUDY

WATER OPERATIONS EXCLUDING STEELTON

AS OF DECEMBER 31, 2021

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

PENNSYLVANIA-AMERICAN WATER COMPANY

MECHANICSBURG, PENNSYLVANIA

WATER OPERATIONS EXCLUDING STEELTON

2021 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS

RELATED TO WATER PLANT

AS OF DECEMBER 31, 2021

Prepared by:

Gannett Fleming

Excellence Delivered ***As Promised***

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

PENNSYLVANIA-AMERICAN WATER COMPANY

Mechanicsburg, Pennsylvania

WATER OPERATIONS EXCLUDING STEELTON

2021 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS
RELATED TO WATER 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 and Regulatory

Ladies and Gentlemen:

Pursuant to your request, we have determined the annual depreciation accruals applicable to water 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 Water 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

PENNSYLVANIA-AMERICAN WATER COMPANY

WATER OPERATIONS EXCLUDING STEELTON

DEPRECIATION STUDY

RESULTS OF STUDY

DESCRIPTION OF SUMMARY TABULATIONS

Tables 1 through 5 presented on pages 3 through 13 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-8. 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 through III-6.

PENNSYLVANIA-AMERICAN WATER COMPANY
WATER OPERATIONS EXCLUDING STEELTON

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

	DEPRCIABLE GROUP	ORIGINAL COST AS OF DECEMBER 31, 2021		CUSTOMER ADVANCES		CONTRIBUTIONS IN AID OF CONSTRUCTION		EXCLUDED PROPERTY		NET ORIGINAL COST AS OF DECMEBER 31, 2021
	(1)	(2)	-	(3)	-	(4)	-	(5)	=	(6)
INTANGIBLE PLANT										
301.00	ORGANIZATION	766,405.12								766,405.12
302.00	FRANCHISES AND CONSENTS	2,404,599.20								2,404,599.20
303.00	MISCELLANEOUS INTANGIBLE PLANT	1,453,020.77								1,453,020.77
	TOTAL INTANGIBLE PLANT	**4,624,025.09**		**0.00**		**0.00**		**0.00**		**4,624,025.09**
NONDEPRECIABLE PLANT										
303.20	POWER AND PUMPING LAND	4,315,318.23								4,315,318.23
303.30	PURIFICATION LAND	15,412.25								15,412.25
303.40	TRANSMISSION AND DISTRIBUTION LAND AND RIGHTS OF WAY	3,724,070.21				215,927.20				3,508,143.01
303.50	DISTRIBUTION RESERVOIRS AND STANDPIPE LAND	2,001,789.51								2,001,789.51
303.51	TRANSMISSION AND DISTRIBUTION - LAND	1,762,423.06								1,762,423.06
303.52	TRANSMISSION AND DISTRIBUTION - RIGHTS OF WAY	5,288,947.81								5,288,947.81
303.61	OFFICE LAND	5,260,832.58								5,260,832.58
	TOTAL NONDEPRECIABLE PLANT	**22,368,793.65**		**0.00**		**215,927.20**		**0.00**		**22,152,866.45**
DEPRECIABLE PLANT										
303.14	WATER RIGHTS - HIBERNIA	1,942,822.51								1,942,822.51
303.35	WASTE HANDLING AND TREATMENT LAND	155,025.17								155,025.17
303.99	COMPREHENSIVE PLANNING STUDIES	9,710,061.35								9,710,061.35
304.15	OTHER WATER SOURCE STRUCTURES	44,248,707.65								44,248,707.65
304.20	POWER AND PUMPING STRUCTURES	121,818,280.30				1,289,607.60		41,310.00		120,487,362.70
304.30	PURIFICATION BUILDINGS	289,983,841.49				169,605.01		230,375.00		289,583,861.48
304.36	WASTE HANDLING AND TREATMENT STRUCTURES	11,668,886.83								11,668,886.83
304.38	WASTE HANDLING AND TREATMENT STRUCTURES PAINTING	65,958.42								65,958.42
304.39	PURIFICATION BUILDINGS - TANK PAINTING	119,362.95								119,362.95
304.61	OFFICE BUILDINGS	44,005,306.44				60,000.00		12,834.00		43,932,472.44
304.62	STORES, SHOP AND GARAGE BUILDINGS	55,111,889.86				576.00				55,111,313.86
304.63	MISCELLANEOUS STRUCTURES AND IMPROVEMENTS	4,132,815.74								4,132,815.74
305.00	COLLECTING AND IMPOUNDING RESERVOIRS	135,672,663.72				3,575.00				135,669,088.72
306.00	LAKE, RIVER AND OTHER INTAKES	18,257,338.08				41,551.00				18,215,787.08
307.00	WELLS AND SPRINGS	10,694,793.00				71,610.27				10,623,182.73
310.00	POWER GENERATION EQUIPMENT	19,954,396.50				118,273.00		26,561.00		19,809,562.50
311.20	PUMPING EQUIPMENT - ELECTRIC PUMPING EQUIPMENT	25,829,705.97				1,954,569.05		116,716.00		23,758,420.92
311.50	PUMPING EQUIPMENT - OTHER	2,389,457.83								2,389,457.83
311.52	PUMPING EQUIPMENT - SOURCE OF SUPPLY	14,212,241.21								14,212,241.21
311.53	PUMPING EQUIPMENT - WATER TREATMENT	46,865,937.19								46,865,937.19
311.54	PUMPING EQUIPMENT - TRANSMISSION AND DISTRIBUTION	6,787,710.63								6,787,710.63
320.10	PURIFICATION SYSTEM - LARGE STRUCTURES	278,019,906.37				27,162.27		627,852.00		277,364,892.10
320.18	PURIFICATION SYSTEM - LARGE STRUCTURES PAINT	103,245.73								103,245.73
320.19	PURIFICATION SYSTEM - LARGE STRUCTURES PAINT	3,522,542.77								3,522,542.77
320.20	PURIFICATION SYSTEM - CHEMICAL TREATMENT	84,745,690.42				42,367.00				84,703,323.42
320.29	PURIFICATION SYSTEM - CHEM. TREATMENT PAINT	8,167.87								8,167.87
320.30	GRANULAR ACTIVATED CARBON	8,601,165.21								8,601,165.21
320.37	WASTE HANDLING AND TREATMENT - EQUIPMENT	14,969,798.93								14,969,798.93
330.00	DISTRIBUTION RESERVOIRS AND STANDPIPES	117,655,216.74				2,905,114.51				114,750,102.23

PENNSYLVANIA-AMERICAN WATER COMPANY
WATER OPERATIONS EXCLUDING STEELTON

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

	DEPRCIABLE GROUP	ORIGINAL COST AS OF DECEMBER 31, 2021	- CUSTOMER ADVANCES	- CONTRIBUTIONS IN AID OF CONSTRUCTION	- EXCLUDED PROPERTY	= NET ORIGINAL COST AS OF DECMEBER 31, 2021
	(1)	(2)	(3)	(4)	(5)	(6)
330.10	ELEVATED TANKS AND STANDPIPES	14,100,477.17				14,100,477.17
330.20	GROUND LEVEL FACILITIES	18,929,725.89				18,929,725.89
330.30	BELOW GRADE FACILITIES	818,672.56				818,672.56
330.40	CLEARWELL	12,806,094.73				12,806,094.73
330.58	DISTRIBUTION RESERVOIRS AND STANDPIPES - PAINTING	2,211,111.35				2,211,111.35
330.59	DISTRIBUTION RESERVOIRS AND STANDPIPES - PAINTING	34,570,376.62				34,570,376.62
331.00	MAINS AND ACCESSORIES	3,064,685,925.46	63,514,361.86	200,747,868.78	502,366.00	2,799,921,328.82
333.00	SERVICES	649,550,756.85	5,782,801.70	11,851,183.63		631,916,771.52
334.00	METERS AND METER INSTALLATIONS	207,962,808.09		1,707,754.19		206,255,053.90
335.00	FIRE HYDRANTS	127,625,861.91	71,848.81	4,768,402.44		122,785,610.66
340.10	OFFICE FURNITURE AND EQUIPMENT - FURNITURE	7,475,864.68				7,475,864.68
340.20	OFFICE FURNITURE AND EQUIPMENT - COMPUTERS AND PERIPHERAL EQUIPMENT	24,511,435.46				24,511,435.46
340.30	OFFICE FURNITURE AND EQUIPMENT - COMPUTER SOFTWARE	45,994,769.94				45,994,769.94
340.31	OFFICE FURNITURE AND EQUIPMENT - COMPUTER SOFTWARE - BUSINESS TRANSFORMATION	62,990,459.09				62,990,459.09
340.50	OFFICE FURNITURE AND EQUIPMENT - OTHER OFFICE EQUIPMENT	7,644.67		354.00		7,290.67
341.00	TRANSPORTATION EQUIPMENT - NOT CLASSIFIED	349.00				349.00
341.10	TRANSPORTATION EQUIPMENT - LIGHT DUTY TRUCKS	28,802,310.96				28,802,310.96
341.20	TRANSPORTATION EQUIPMENT - EQUIPMENT	23,205,811.64				23,205,811.64
341.30	TRANSPORTATION EQUIPMENT - AUTOS	3,874,730.49				3,874,730.49
341.40	TRANSPORTATION EQUIPMENT - OTHER	10,439,225.68				10,439,225.68
342.00	STORES EQUIPMENT	448,033.65				448,033.65
343.00	TOOLS AND WORK EQUIPMENT	32,097,198.82		61.00		32,097,137.82
344.00	LABORATORY EQUIPMENT	2,606,821.35				2,606,821.35
345.00	POWER OPERATED EQUIPMENT	2,405,805.64				2,405,805.64
346.00	COMMUNICATOIN EQUIPMENT - EQUIPMENT	3,459,420.00				3,459,420.00
346.10	COMMUNICATOIN EQUIPMENT - NON-TELEPHONE	6,770,729.39				6,770,729.39
346.19	COMMUNICATOIN EQUIPMENT - REMOTE CONTROL AND INSTRUMENTATION	2,790,901.75				2,790,901.75
346.20	COMMUNICATOIN EQUIPMENT - TELEPHONE	188,390.60				188,390.60
347.00	MISCELLANEOUS EQUIPMENT	11,608,430.21		4,085.00		11,604,345.21
348.00	OTHER TANGIBLE EQUIPMENT	793,796.73				793,796.73
	TOTAL DEPRECIABLE PLANT	**5,774,986,877.26**	**69,369,012.37**	**225,763,719.75**	**1,558,014.00**	**5,478,296,131.14**
	TOTAL UTILITY PLANT IN SERVICE	**5,801,979,696.00**	**69,369,012.37**	**225,979,646.95**	**1,558,014.00**	**5,505,073,022.68**

PENNSYLVANIA-AMERICAN WATER COMPANY
WATER OPERATIONS EXCLUDING STEELTON

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

	DEPRECIABLE GROUP	SURVIVOR CURVE		NET ORIGINAL COST AS OF DECEMBER 31, 2021	BOOK RESERVE	FUTURE ACCRUALS	ANNUAL ACCRUAL AMOUNT	ANNUAL ACCRUAL RATE, PERCENT	COMPOSITE REMAINING LIFE
	(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)
INTANGIBLE PLANT									
301.00	ORGANIZATION	NONDEPR.		766,405.12					
302.00	FRANCHISES AND CONSENTS	NONDEPR.		2,404,599.20					
303.00	MISCELLANEOUS INTANGIBLE PLANT	NONDEPR.		1,453,020.77					
	TOTAL INTANGIBLE PLANT			**4,624,025.09**					
NONDEPRECIABLE PLANT									
303.20	POWER AND PUMPING LAND	NONDEPR.		4,315,318.23					
303.30	PURIFICATION LAND	NONDEPR.		15,412.25					
303.40	TRANSMISSION AND DISTRIBUTION LAND AND RIGHTS OF WAY	NONDEPR.		3,508,143.01					
303.50	DISTRIBUTION RESERVOIRS AND STANDPIPES LAND	NONDEPR.		2,001,789.51					
303.51	TRANSMISSION AND DISTRIBUTION - LAND	NONDEPR.		1,762,423.06					
303.52	TRANSMISSION AND DISTRIBUTION - RIGHTS OF WAY	NONDEPR.		5,288,947.81					
303.61	OFFICE LAND	NONDEPR.		5,260,832.58					
	TOTAL NONDEPRECIABLE PLANT			**22,152,866.45**					
DEPRECIABLE PLANT									
303.14	WATER RIGHTS - HIBERNIA	25-SQ		1,942,822.51	1,942,823	0	0	-	-
303.35	WASTE HANDLING AND TREATMENT LAND	100-R2	*	155,025.17	150,407	4,618	4,618	2.98	1.0
303.99	COMPREHENSIVE PLANNING STUDIES	5-SQ		9,710,061.35	7,494,569	2,215,492	751,049	7.73	2.9
304.15	OTHER WATER SOURCE STRUCTURES	60-R1.5		44,248,707.65	8,283,077	35,965,631	970,351	2.19	37.1
304.20	POWER AND PUMING STRUCTURES								
	LARGE STRUCTURES	70-R2.5	*	69,567,251.92	9,280,689	60,286,563	1,787,063	2.57	33.7
	OTHER STRUCTURES	55-R3		50,920,110.78	9,270,044	41,650,067	1,298,796	2.55	32.1
	TOTAL ACCOUNT 304.2			120,487,362.70	18,550,733	101,936,630	3,085,859	2.56	33.0
304.30	PURIFICATION BUILDINGS								
	LARGE STRUCTURES	60-R2.5	*	248,267,049.87	78,898,085	169,368,965	5,619,625	2.26	30.1
	OTHER STRUCTURES	60-R3		41,316,811.61	12,978,751	28,338,061	730,378	1.77	38.8
	TOTAL ACCOUNT 304.3			289,583,861.48	91,876,836	197,707,026	6,350,003	2.19	31.1
304.36	WASTE HANDLING AND TREATMENT STRUCTURES	60-S2.5	*	11,668,886.83	6,315,009	5,353,878	309,282	2.65	17.3
304.38	WASTE HANDLING AND TREATMENT STRUCTURES PAINTING	10-SQ		65,958.42	57,775	8,183	2,338	3.54	3.5
304.39	PURIFICATION BUILDINGS - TANK PAINTING	10-SQ		119,362.95	107,705	11,658	3,331	2.79	3.5
304.61	OFFICE BUILDINGS								
	LARGE STRUCTURES	50-R1.5	*	31,024,747.89	5,523,525	25,501,224	970,539	3.13	26.3
	OTHER STRUCTURES	50-R3		12,907,724.55	3,482,369	9,425,356	295,081	2.29	31.9
	TOTAL ACCOUNT 304.61			43,932,472.44	9,005,894	34,926,580	1,265,620	2.88	27.6

PENNSYLVANIA-AMERICAN WATER COMPANY
WATER OPERATIONS EXCLUDING STEELTON

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

	DEPRECIABLE GROUP	SURVIVOR CURVE		NET ORIGINAL COST AS OF DECEMBER 31, 2021	BOOK RESERVE	FUTURE ACCRUALS	ANNUAL ACCRUAL AMOUNT	ANNUAL ACCRUAL RATE, PERCENT	COMPOSITE REMAINING LIFE
	(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)
304.62	STORES, SHOP AND GARAGE BUILDINGS								
	LARGE STRUCTURES	55-S0.5	*	48,973,108.70	11,428,586	37,544,523	1,323,667	2.70	28.4
	OTHER STRUCTURES	45-R3		6,138,205.16	3,952,462	2,185,743	82,351	1.34	26.5
	TOTAL ACCOUNT 304.62			55,111,313.86	15,381,048	39,730,266	1,406,018	2.55	28.3
304.63	MISCELLANEOUS STRUCTURES AND IMPROVEMENTS	35-S0.5		4,132,815.74	2,198,599	1,934,217	86,804	2.10	22.3
	TOTAL ACCOUNT 304			569,350,742.07	151,776,676	417,574,069	13,479,606	2.37	31.0
305.00	COLLECTING AND IMPOUNDING RESERVOIRS								
	LARGE RESERVOIRS	125-R2	*	128,044,777.60	18,481,585	109,563,192	1,809,335	1.41	60.6
	OTHER RESERVOIRS	75-R3		7,624,311.12	2,729,327	4,894,984	215,147	2.82	22.8
	TOTAL ACCOUNT 305			135,669,088.72	21,210,912	114,458,176	2,024,482	1.49	56.5
306.00	LAKE, RIVER AND OTHER INTAKES								
	LARGE INTAKES	55-S1	*	14,029,064.70	4,448,923	9,580,142	336,818	2.40	28.4
	OTHER INTAKES	50-S0.5		4,186,722.38	1,524,770	2,661,952	110,315	2.63	24.1
	TOTAL ACCOUNT 306			18,215,787.08	5,973,693	12,242,094	447,133	2.45	27.4
307.00	WELLS AND SPRINGS	55-S0		10,623,182.73	3,343,133	7,280,050	246,499	2.32	29.5
310.00	POWER GENERATION EQUIPMENT	43-S1		19,809,562.50	5,157,558	14,652,004	541,291	2.73	27.1
	PUMPING EQUIPMENT								
311.20	ELECTRIC	42-S0		23,758,420.92	4,483,984	19,274,437	769,961	3.24	25.0
311.50	OTHER	42-S0		2,389,457.83	559,308	1,830,150	74,670	3.12	24.5
311.52	SOURCE OF SUPPLY	42-S0		14,212,241.21	2,191,102	12,021,139	477,564	3.36	25.2
311.53	WATER TREATMENT	42-S0		46,865,937.19	18,885,547	27,980,390	1,331,345	2.84	21.0
311.54	TRANSMISSION AND DISTRIBUTION	42-S0		6,787,710.63	2,125,816	4,661,895	197,458	2.91	23.6
	TOTAL ACCOUNT 311			94,013,767.78	28,245,757	65,768,011	2,850,998	3.03	23.1
	PURIFICATION SYSTEM								
320.10	LARGE STRUCTURES								
	LARGE STRUCTURES	60-S0.5	*	255,675,564.06	73,452,571	182,222,993	7,332,914	2.87	24.9
	OTHER STRUCTURES	55-R3		21,689,328.04	3,259,936	18,429,392	451,433	2.08	40.8
	TOTAL ACCOUNT 320.1			277,364,892.10	76,712,507	200,652,385	7,784,347	2.81	25.8
320.18	LARGE STRUCTURES PAINT	10-SQ		103,245.73	103,246	0	0	-	-
320.19	LARGE STRUCTURES PAINT	10-SQ		3,522,542.77	3,513,661	8,882	2,537	0.07	3.5
320.20	CHEMICAL TREATMENT	36-R0.5		84,703,323.42	32,767,124	51,936,199	2,724,881	3.22	19.1
320.29	CHEMICAL TREATMENT PAINT	FULLY ACCRUED		8,167.87	8,168	0	0	-	-
320.30	GRANULAR ACTIVATED CARBON	7-L2		8,601,165.21	6,864,049	1,737,116	577,102	6.71	3.0
320.37	WASTE HANDLING AND TREATMENT - EQUIPMENT	30-R3		14,969,798.93	10,336,097	4,633,702	255,895	1.71	18.1
	TOTAL ACCOUNT 320			389,273,136.03	130,304,852	258,968,284	11,344,762	2.91	22.8

PENNSYLVANIA-AMERICAN WATER COMPANY
WATER OPERATIONS EXCLUDING STEELTON

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

	DEPRECIABLE GROUP	SURVIVOR CURVE	NET ORIGINAL COST AS OF DECEMBER 31, 2021	BOOK RESERVE	FUTURE ACCRUALS	ANNUAL ACCRUAL AMOUNT	ANNUAL ACCRUAL RATE, PERCENT	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
330.00	DISTRIBUTION RESERVOIRS AND STANDPIPES	65-S0.5	114,750,102.23	37,604,850	77,145,252	2,040,752	1.78	37.8
330.10	ELEVATED TANKS AND STANDPIPES	65-S0.5	14,100,477.17	1,396,944	12,703,533	302,304	2.14	42.0
330.20	GROUND LEVEL FACILITIES	65-S0.5	18,929,725.89	1,478,786	17,450,940	411,613	2.17	42.4
330.30	BELOW GRADE FACILITIES	65-S0.5	818,672.56	134,722	683,951	16,514	2.02	41.4
330.40	CLEARWELL	65-S0.5	12,806,094.73	2,241,101	10,564,994	256,016	2.00	41.3
330.58	DISTRIBUTION RESERVOIRS AND STANDPIPES - PAINTING	10-SQ	2,211,111.35	2,124,822	86,289	24,654	1.12	3.5
330.59	DISTRIBUTION RESERVOIRS AND STANDPIPES - PAINTING	10-SQ	34,570,376.62	22,983,972	11,586,405	2,403,686	6.95	4.8
	TOTAL ACCOUNT 330		198,186,560.55	67,965,197	130,221,364	5,455,539	2.75	23.9
331.00	MAINS AND ACCESSORIES	110-R2	2,799,921,328.82	327,632,397	2,472,288,932	33,559,667	1.20	73.7
333.00	SERVICES	70-R2.5	631,916,771.52	153,302,150	478,614,622	10,466,170	1.66	45.7
334.00	METERS AND METER INSTALLATIONS	21-L1	206,255,053.90	85,792,067	120,462,987	10,770,670	5.22	11.2
335.00	FIRE HYDRANTS	75-R2.5	122,785,610.66	21,454,868	101,330,743	1,959,904	1.60	51.7
340.00	OFFICE FURNITURE AND EQUIPMENT							
	FURNITURE	20-SQ	7,475,864.68	1,347,541	6,128,324	386,093	5.16	15.9
	COMPUTERS AND PERIPHERAL EQUIPMENT	5-SQ	24,511,435.46	5,940,437	18,570,998	5,214,238	21.27	3.6
	COMPUTER SOFTWARE	5-SQ	45,994,769.94	21,924,860	24,069,910	8,444,686	18.36	2.9
	COMPUTER SOFTWARE - BUSINESS TRANSFORMATION	10-SQ	62,990,459.09	52,072,253	10,918,206	8,099,503	12.86	1.3
	OTHER OFFICE EQUIPMENT	10-SQ	7,290.67	1,744	5,547	740	10.15	7.5
	TOTAL ACCOUNT 340		140,979,819.84	81,286,835	59,692,985	22,145,260	15.71	2.7
341.00	TRANSPORATION EQUIPMENT							
	NOT CLASSIFIED	7-L3	349.00	349	0	0	-	-
	LIGHT DUTY TRUCKS	7-L3	28,802,310.96	17,540,380	11,261,931	2,978,791	10.34	3.8
	EQUIPMENT	7-L3	23,205,811.64	13,407,514	9,798,298	2,686,946	11.58	3.6
	AUTOS	7-L3	3,874,730.49	2,379,267	1,495,463	347,892	8.98	4.3
	OTHER	7-L3	10,439,225.68	5,565,457	4,873,769	1,261,319	12.08	3.9
	TOTAL ACCOUNT 341		66,322,427.77	38,892,967	27,429,461	7,274,948	10.97	3.8
342.00	STORES EQUIPMENT	20-SQ	448,033.65	97,064	350,970	26,762	5.97	13.1
343.00	TOOLS AND WORK EQUIPMENT	20-SQ	32,097,137.82	7,101,221	24,995,917	1,893,452	5.90	13.2
344.00	LABORATORY EQUIPMENT	20-L0.5	2,606,821.35	1,152,886	1,453,935	152,376	5.85	9.5
345.00	POWER OPERATED EQUIPMENT	19-S0.5	2,405,805.64	1,655,168	750,638	98,401	4.09	7.6
346.00	COMUNICATION EQUIPMENT							
	EQUIPMENT	15-SQ	3,459,420.00	476,123	2,983,297	226,521	6.55	13.2
	NON-TELEPHONE	15-SQ	6,770,729.39	1,148,483	5,622,246	452,423	6.68	12.4
	REMOTE CONTROL AND INSTRUMENTATION	10-SQ	2,790,901.75	1,618,957	1,171,945	256,489	9.19	4.6
	TELEPHONE	10-SQ	188,390.60	121,502	66,889	17,853	9.48	3.7
	TOTAL ACCOUNT 346		13,209,441.74	3,365,065	9,844,377	953,286	7.22	10.3

PENNSYLVANIA-AMERICAN WATER COMPANY
WATER OPERATIONS EXCLUDING STEELTON

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

	DEPRECIABLE GROUP	SURVIVOR CURVE	NET ORIGINAL COST AS OF DECEMBER 31, 2021	BOOK RESERVE	FUTURE ACCRUALS	ANNUAL ACCRUAL AMOUNT	ANNUAL ACCRUAL RATE, PERCENT	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
347.00	MISCELLANEOUS EQUIPMENT	25-SQ	11,604,345.21	2,121,851	9,482,494	803,731	6.93	11.8
348.00	OTHER TANGIBLE EQUIPMENT	25-SQ	793,796.73	433,683	360,114	31,961	4.03	11.3
	TOTAL DEPRECIABLE PLANT		**5,478,296,131.14**	**1,147,853,799**	**4,330,442,337**	**127,282,565**	**2.32**	
	AMORTIZATION OF NET SALVAGE					**18,150,547**		
	TOTAL UTILITY PLANT IN SERVICE		**5,505,073,022.68**	**1,147,853,799**	**4,330,442,337**	**145,433,112**		

* Life Span Procedure was used. Curve shown is Interim Survivor Curve.

PENNSYLVANIA-AMERICAN WATER COMPANY
WATER OPERATIONS EXCLUDING STEELTON

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

Account	BOOK RESERVE BALANCE AS OF 12/31/2020	+	PROJECTED DEPRECIATION ACCRUALS	-	PROJECTED RETIREMENTS	-	PROJECTED COST OF REMOVAL	+	PROJECTED SALVAGE	+	ACQUISITIONS	=	PROJECTED BOOK RESERVE BALANCE AS OF 12/31/2021
(1)	(2)		(3)		(4)		(5)		(6)		(7)		(8)
303.14	1,942,823		0										1,942,823
303.35	141,137		9,270										150,407
303.99	6,351,030		1,204,524		60,985								7,494,569
304.15	7,899,182		1,048,120		390,721		285,226		11,722				8,283,077
304.20	16,349,816		2,976,022		674,004		121,321		20,220				18,550,733
304.30	88,458,520		6,134,387		2,425,064		315,258		24,251				91,876,836
304.36	5,992,818		322,191										6,315,009
304.38	55,437		2,338										57,775
304.39	104,374		3,331										107,705
304.61	7,849,697		1,216,908		55,698		5,013						9,005,894
304.62	13,999,901		1,402,722		23,709		3,319		5,453				15,381,048
304.63	2,130,689		84,121		14,220		2,844		853				2,198,599
305.00	18,943,519		2,267,393										21,210,912
306.00	5,508,799		464,894										5,973,693
307.00	3,088,287		259,686		4,840								3,343,133
310.00	4,866,142		517,290		179,265		46,609						5,157,558
311.20	3,771,805		1,021,432		264,319		44,934						4,483,984
311.50	481,982		77,326										559,308
311.52	1,945,471		445,658		170,963		29,064						2,191,102
311.53	18,177,110		1,212,264		430,621		73,206						18,885,547
311.54	1,921,773		204,043										2,125,816
320.10	76,059,881		6,303,140		5,000,455		650,059						76,712,507
320.18	103,246		0										103,246
320.19	3,511,123		2,538										3,513,661
320.20	30,554,763		2,678,001		412,071		53,569						32,767,124
320.29	8,168		0										8,168
320.30	5,943,551		920,498										6,864,049
320.37	10,000,742		335,355										10,336,097
330.00	35,124,500		3,507,933		642,239		385,344						37,604,850
330.10	1,540,919		243,438		242,133		145,280						1,396,944
330.20	1,787,324		345,686		408,890		245,334						1,478,786
330.30	117,944		16,778										134,722

PENNSYLVANIA-AMERICAN WATER COMPANY
WATER OPERATIONS EXCLUDING STEELTON

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

Account	BOOK RESERVE BALANCE AS OF 12/31/2020	+	PROJECTED DEPRECIATION ACCRUALS	-	PROJECTED RETIREMENTS	-	PROJECTED COST OF REMOVAL	+	PROJECTED SALVAGE	+	ACQUISITIONS	=	PROJECTED BOOK RESERVE BALANCE AS OF 12/31/2021
(1)	(2)		(3)		(4)		(5)		(6)		(7)		(8)
330.40	1,980,284		260,817										2,241,101
330.58	2,100,168		24,654										2,124,822
330.59	20,863,908		2,449,147		329,083								22,983,972
331.00	302,790,062		45,553,978		10,787,314		9,924,329						327,632,397
333.00	144,244,631		11,456,303		1,654,334		744,450						153,302,150
334.00	74,409,987		12,124,741		663,090		86,202		6,631				85,792,067
335.00	20,020,642		2,278,774		620,991		223,557						21,454,868
340.10	971,125		376,416										1,347,541
340.20	7,343,075		4,532,973		5,935,611								5,940,437
340.30	17,701,446		10,353,824		6,130,410								21,924,860
340.31	41,731,922		10,340,331										52,072,253
340.40	1,004		740										1,744
341.00	349		0										349
341.10	14,623,372		3,145,900		238,429		4,769		14,306				17,540,380
341.20	11,191,984		2,532,823		330,514		6,610		19,831				13,407,514
341.30	2,126,610		307,184		56,799		1,136		3,408				2,379,267
341.40	4,729,807		1,013,708		185,477		3,710		11,129				5,565,457
342.00	68,032		29,032										97,064
343.00	5,263,107		1,838,114										7,101,221
344.00	978,341		174,545										1,152,886
345.00	1,541,860		113,308										1,655,168
346.00	407,979		212,013		143,869								476,123
346.10	797,215		351,268										1,148,483
346.19	1,556,269		283,385		220,697								1,618,957
346.20	608,614		39,337		526,449								121,502
347.00	1,328,449		848,537		55,135								2,121,851
348.00	401,551		32,132										433,683
TOTAL	**1,054,514,266**		**145,901,271**		**39,278,399**		**13,401,143**		**117,804**		**0**		**1,147,853,799**

PENNSYLVANIA-AMERICAN WATER COMPANY
WATER OPERATIONS EXCLUDING STEELTON

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

ACCOUNT (1)	NET ORIGINALCOST AS OF 12/31/2020 (2)	NET ORIGINALCOST AS OF 12/31/2021 (3)	ACCRUAL RATE (4)	AVERAGE ACCRUALS (5)*	AMORTIZATION OF NET SALVAGE (6)	PROJECTED DEPRECIATION ACCRUALS (7)=(5)+(6)
303.14	1,942,822.51	1,942,822.51	0.00	(487)	487	0
303.35	155,025.17	155,025.17	5.98	9,270		9,270
303.99	8,413,546.31	9,710,061.35	13.83	1,203,911	613	1,204,524
304.15	40,603,116.18	44,248,707.65	2.14	906,382	141,738	1,048,120
304.20	110,059,548.11	120,487,362.70	2.56	2,930,331	45,691	2,976,022
304.30	266,957,000.42	289,583,861.48	2.15	5,850,996	283,391	6,134,387
304.36	11,668,886.83	11,668,886.83	2.69	313,454	8,737	322,191
304.38	65,958.42	65,958.42	3.54	2,338		2,338
304.39	119,362.95	119,362.95	2.79	3,331		3,331
304.61	43,412,787.39	43,932,472.44	2.97	1,298,373	(81,465)	1,216,908
304.62	54,890,101.85	55,111,313.86	2.58	1,418,230	(15,508)	1,402,722
304.63	4,000,139.23	4,132,815.74	2.06	83,448	673	84,121
305.00	135,669,088.72	135,669,088.72	1.47	1,996,136	271,257	2,267,393
306.00	18,215,787.08	18,215,787.08	2.51	456,818	8,076	464,894
307.00	9,898,022.81	10,623,182.73	2.34	235,405	24,281	259,686
310.00	18,136,948.65	19,809,562.50	2.71	495,783	21,507	517,290
311.20	21,292,217.56	23,758,420.92	3.28	725,917	295,515	1,021,432
311.50	2,389,457.83	2,389,457.83	3.24	77,326		77,326
311.52	12,617,080.84	14,212,241.21	3.35	445,658		445,658
311.53	42,848,060.38	46,865,937.19	2.80	1,212,264		1,212,264
311.54	6,787,710.63	6,787,710.63	3.01	204,043		204,043
320.10	225,716,944.63	277,364,892.10	2.44	5,905,753	397,387	6,303,140
320.18	103,245.73	103,245.73	0.00	0		0
320.19	3,522,542.77	3,522,542.77	0.07	2,538		2,538
320.20	80,858,527.99	84,703,323.42	3.26	2,678,001		2,678,001
320.29	8,167.87	8,167.87	0.00	0		0
320.30	8,601,165.21	8,601,165.21	9.68	832,282	88,216	920,498
320.37	14,969,798.93	14,969,798.93	1.81	271,256	64,099	335,355
330.00	106,929,232.38	114,750,102.23	1.80	1,970,376	1,537,557	3,507,933
330.10	10,930,110.10	14,100,477.17	2.06	243,438		243,438
330.20	15,192,040.47	18,929,725.89	2.09	345,686		345,686
330.30	818,672.56	818,672.56	2.05	16,778		16,778

PENNSYLVANIA-AMERICAN WATER COMPANY
WATER OPERATIONS EXCLUDING STEELTON

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

ACCOUNT	NET ORIGINALCOST AS OF 12/31/2020	NET ORIGINALCOST AS OF 12/31/2021	ACCRUAL RATE	AVERAGE ACCRUALS	AMORTIZATION OF NET SALVAGE	PROJECTED DEPRECIATION ACCRUALS
(1)	(2)	(3)	(4)	(5)*	(6)	(7)=(5)+(6)
330.40	12,806,094.73	12,806,094.73	2.04	260,817		260,817
330.58	2,211,111.35	2,211,111.35	1.12	24,654		24,654
330.59	29,919,635.20	34,570,376.62	7.86	2,449,147		2,449,147
331.00	2,675,857,649.51	2,799,921,328.82	1.21	32,758,152	12,795,826	45,553,978
333.00	604,695,086.73	631,916,771.52	1.66	10,245,705	1,210,598	11,456,303
334.00	196,137,446.01	206,255,053.90	5.51	11,091,554	1,033,187	12,124,741
335.00	115,429,813.60	122,785,610.66	1.60	1,894,800	383,974	2,278,774
340.10	5,339,828.99	7,475,864.68	5.31	340,079	36,337	376,416
340.20	19,364,761.45	24,511,435.46	21.66	4,532,973		4,532,973
340.30	42,907,597.73	45,994,769.94	21.25	10,353,824		10,353,824
340.31	62,990,459.09	62,990,459.09	16.42	10,340,331		10,340,331
340.50	7,290.67	7,290.67	10.15	740		740
341.00	349.00	349.00	0.00	0		0
341.10	26,577,670.21	28,802,310.96	11.00	3,063,529	82,371	3,145,900
341.20	20,121,976.99	23,205,811.64	11.93	2,532,823		2,532,823
341.30	3,344,774.93	3,874,730.49	8.40	307,184		307,184
341.40	8,708,645.51	10,439,225.68	11.54	1,013,708		1,013,708
342.00	448,033.65	448,033.65	6.04	27,046	1,986	29,032
343.00	29,078,050.31	32,097,137.82	5.99	1,829,220	8,894	1,838,114
344.00	2,606,821.35	2,606,821.35	6.50	169,353	5,192	174,545
345.00	2,405,805.64	2,405,805.64	4.67	112,304	1,004	113,308
346.00	2,539,854.88	3,459,420.00	6.19	188,316	23,697	212,013
346.10	4,581,387.28	6,770,729.39	6.62	351,268		351,268
346.19	3,011,599.18	2,790,901.75	9.44	283,385		283,385
346.20	714,839.66	188,390.60	5.68	39,337		39,337
347.00	11,260,526.60	11,604,345.21	7.24	827,967	20,570	848,537
348.00	793,796.73	793,796.73	4.03	31,976	156	32,132
TOTAL	**5,161,654,025.49**	**5,478,296,131.14**		**127,205,227**	**18,696,044**	**145,901,271**

* Annual Accrual developed based on monthly averages.

PENNSYLVANIA-AMERICAN WATER COMPANY
WATER OPERATIONS EXCLUDING STEELTON

TABLE 5. AMORTIZATION OF EXPERIENCED AND ESTIMATED NET SALVAGE

	2017		2018		2019		PROJECTED 2020		PROJECTED 2021			
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
303.14				2,459.00							(2,459.00)	(492)
303.20		2,459.00		(2,459.00)							0.00	0
303.99						3,062.78					(3,062.78)	(613)
304.15		68,090.61	1,582.30	180,812.86	27,560.73	387,837.75	1,329.00	32,333.00	11,722.00	285,226.00	(912,106.19)	(182,421)
304.20		38,831.70	13,853.00	39,684.28	31,830.10	147,277.43	4,421.00	26,528.00	20,220.00	121,321.00	(303,318.31)	(60,664)
304.30		36,848.82	14,493.83	1,091,908.37	66,260.61	148,391.82	2,461.00	31,989.00	24,251.00	315,258.00	(1,516,929.57)	(303,386)
304.36				43,138.55		546.00					(43,684.55)	(8,737)
304.61		71,906.49			1,864,549.94	1,304,656.48		9,724.00		5,013.00	473,249.97	94,650
304.62		10,015.90	729.22	6,567.28	192,159.79	54,481.40	9,550.00	5,813.00	5,453.00	3,319.00	127,695.43	25,539
304.63		2,051.43		3,068.49	25,209.50	8,030.27	1,607.00	5,357.00	853.00	2,844.00	6,318.31	1,264
305.00		5,620.91				1,266,548.34					(1,272,169.25)	(254,434)
306.00		16,836.83				17,003.99					(33,840.82)	(6,768)
307.00		618.42		1,391.04		118,341.25					(120,350.71)	(24,070)
310.00		2,903.30		11,634.03		42,462.99		4,760.00		46,609.00	(108,369.32)	(21,674)
311.00	880.05	72,179.55		191,399.40	13,739.63	1,092,490.18		33,004.00		147,204.00	(1,521,657.45)	(304,331)
320.00	3.44	115,579.33	512.50	619,426.48	229.83	924,729.91		225,992.00		703,628.00	(2,588,609.95)	(517,722)
320.30		1,622.00				423,003.27					(424,625.27)	(84,925)
320.37		7,150.00		29,963.00	23.00	90,807.00					(127,897.00)	(25,579)
330.00		645,827.57	162.78	2,820,506.21		2,686,207.69		165,227.00		775,958.00	(7,093,563.69)	(1,418,713)
331.00	107,310.05	7,290,999.85	25,598.82	11,746,655.36	13,124.96	21,381,790.52		12,141,393.00		9,924,329.00	(62,339,133.90)	(12,467,827)
333.00	2,339.38	1,164,164.90	(214.01)	1,300,493.65	9,792.38	1,897,743.49		714,893.00		744,450.00	(5,809,827.29)	(1,161,965)
334.00	98,185.09	960,401.22	115,629.32	913,142.15	93,029.52	2,727,391.38	8,480.00	110,240.00	6,631.00	86,202.00	(4,475,421.82)	(895,084)
335.00	248.83	227,143.79	2,311.49	309,652.61	4,063.03	908,970.88		204,109.00		223,557.00	(1,866,809.93)	(373,362)
340.00		6,364.74	8,779.58	30,861.14	10,745.87	122,477.36					(140,177.79)	(28,036)
341.00		1,430.78	205,163.90	148,702.02	261,902.01	761,298.60	50,503.00	16,835.00	48,674.00	16,225.00	(378,248.49)	(75,650)
342.00				245.80		9,682.12					(9,927.92)	(1,986)
343.00		8,345.37		7,924.48	48,579.17	57,836.24					(25,526.92)	(5,105)
344.00		1,202.11		4,823.99		14,919.23					(20,945.33)	(4,189)
345.00		98.42		860.13	12,288.18	15,876.66					(4,547.03)	(909)
346.00		646.24	132.58	30,002.27		87,193.50					(117,709.43)	(23,542)
347.00		12,915.37		20,027.66	8,306.50	73,665.55					(98,302.08)	(19,660)
348.00				(29.21)		808.08					(778.87)	(156)
TOTAL	208,966.84	10,772,254.65	388,735.31	19,552,862.04	2,683,394.75	36,775,532.16	78,351.00	13,728,197.00	117,804.00	13,401,143.00	(90,752,736.95)	(18,150,547)

ımmation of Columns (2) through (11).

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

PENNSYLVANIA-AMERICAN WATER COMPANY

MECHANICSBURG, PENNSYLVANIA

WASTEWATER SSS OPERATIONS EXCLUDING SADSBURY AND EXETER

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-L
Witness: J. J. Spanos

PENNSYLVANIA-AMERICAN WATER COMPANY

Mechanicsburg, Pennsylvania

WASTEWATER SSS OPERATIONS EXCLUDING SADSBURY AND EXETER

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

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, 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

Gannett Fleming Valuation and Rate Consultants, LLC
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PART I. RESULTS OF STUDY

PENNSYLVANIA-AMERICAN WATER COMPANY

WASTEWATER SSS OPERATIONS EXCLUDING SADSBURY AND EXETER

DEPRECIATION STUDY

PART I. RESULTS OF STUDY

SUMMARY OF RESULTS

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-7. 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 through III-4.

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER SSS OPERATIONS EXCLUDING SADSBURY AND EXETER

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

DEPRCIABLE GROUP	ORIGINAL COST AS OF DECEMBER 31, 2022	- CUSTOMER ADVANCES	- CONTRIBUTIONS IN AID OF CONSTRUCTION	- EXCLUDED PROPERTY	= NET ORIGINAL COST AS OF DECMEBER 31, 2022
(1)	(2)	(3)	(4)	(5)	(6)
DEPRECIABLE PLANT					
354.20 STRUCTURES AND IMPROVEMENTS - COLLECTION	1,372,711.27				1,372,711.27
354.30 STRUCTURES AND IMPROVEMENTS - SPP	17,988,212.97		2,734,528.70		15,253,684.27
354.40 STRUCTURES AND IMPROVEMENTS - TDP	55,042,602.26		1,853,012.73		53,189,589.53
354.70 STRUCTURES AND IMPROVEMENTS - GENERAL	3,153,826.87				3,153,826.87
355.00 POWER GENERATION EQUIPMENT	4,180,589.06		144,517.16		4,036,071.90
360.10 COLLECTION SEWERS - FORCE MAINS	50,575,251.29	157,753.14	11,251,126.61		39,166,371.54
361.10 COLLECTION SEWERS - GRAVITY MAINS	120,095,333.20	133,423.53	13,295,536.11		106,666,373.56
361.20 MANHOLES	17,657,269.96		4,387,312.76		13,269,957.20
363.00 SERVICES	24,656,795.81	70,197.45	3,753,803.46		20,832,794.90
364.00 FLOW MEASURING DEVICES	371,151.65		14,726.81		356,424.84
365.00 FLOW MEASURING INSTALLATIONS	14,938.00				14,938.00
370.00 RECEIVING WELLS	143,419.77				143,419.77
371.00 PUMPING EQUIPMENT	13,374,027.20		66,626.22		13,307,400.98
380.00 TREATMENT EQUIPMENT	67,907,787.21		2,200,080.47		65,707,706.74
381.00 PLANT SEWERS	6,212,540.44		30,192.33		6,182,348.11
382.00 OUTFALL SEWER LINES	604,388.91				604,388.91
389.10 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES	582,205.16				582,205.16
389.60 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - CPS	1,707,500.00				1,707,500.00
390.00 OFFICE FURNITURE AND EQUIPMENT	168,706.08				168,706.08
391.00 TRANSPORTATION EQUIPMENT	3,034,840.81				3,034,840.81
392.00 STORES EQUIPMENT	107,351.44				107,351.44
393.00 TOOLS, SHOP AND GARAGE EQUIPMENT	1,505,097.79				1,505,097.79
394.00 LABORATORY EQUIPMENT	729,305.71				729,305.71
395.00 POWER OPERATED EQUIPMENT	917,645.43		10,000.00		907,645.43
396.00 COMMUNICATION EQUIPMENT	1,744,213.66				1,744,213.66
397.00 MISCELLANEOUS EQUIPMENT	661,593.59		29,000.00		632,593.59
398.00 OTHER TANGIBLE PLANT	14,231.50				14,231.50
TOTAL DEPRECIABLE PLANT	**394,523,537.04**	**361,374.12**	**39,770,463.36**	**0.00**	**354,391,699.56**
NONDEPRECIABLE PLANT					
352.10 FRANCHISES	221,139.78				221,139.78
353.20 LAND AND LAND RIGHTS - COLLECTION	1,093,483.20				1,093,483.20
353.30 LAND AND LAND RIGHTS - SPP	85,560.07				85,560.07
353.40 LAND AND LAND RIGHTS - TDP	1,717,020.09		125,000.00		1,592,020.09
TOTAL NONDEPRECIABLE PLANT	**3,117,203.14**	**0.00**	**125,000.00**	**0.00**	**2,992,203.14**
TOTAL UTILITY PLANT	**397,640,740.18**	**361,374.12**	**39,895,463.36**	**0.00**	**357,383,902.70**

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER SSS OPERATIONS EXCLUDING SADSBURY AND EXETER

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	1,372,711.27	97,323	1,275,388	38,320	2.79	33.3
354.30	STRUCTURES AND IMPROVEMENTS - SPP	55-S0	15,253,684.27	5,449,788	9,803,896	300,957	1.97	32.6
354.40	STRUCTURES AND IMPROVEMENTS - TDP	55-S0	53,189,589.53	13,447,768	39,741,821	1,254,377	2.36	31.7
354.70	STRUCTURES AND IMPROVEMENTS - GENERAL	35-S1	3,153,826.87	1,687,584	1,466,242	63,310	2.01	23.2
355.00	POWER GENERATION EQUIPMENT	35-S0.5	4,036,071.90	2,807,978	1,228,094	63,471	1.57	19.3
360.10	COLLECTION SEWERS - FORCE MAINS	75-R3	39,166,371.54	3,526,886	35,639,485	678,631	1.73	52.5
361.10	COLLECTION SEWERS - GRAVITY MAINS	80-R2.5	106,666,373.56	13,972,547	92,693,827	1,691,826	1.59	54.8
361.20	MANHOLES	50-S2.5	13,269,957.20	2,036,681	11,233,276	348,535	2.63	32.2
363.00	SERVICES	47-R3	20,832,794.90	4,780,861	16,051,934	531,451	2.55	30.2
364.00	FLOW MEASURING DEVICES	15-L2.5	356,424.84	170,648	185,777	36,426	10.22	5.1
365.00	FLOW MEASURING INSTALLATIONS	25-S2	14,938.00	2,513	12,425	1,154	7.73	10.8
370.00	RECEIVING WELLS	50-R3	143,419.77	34,923	108,497	3,219	2.24	33.7
371.00	PUMPING EQUIPMENT	30-S0.5	13,307,400.98	2,331,656	10,975,745	602,548	4.53	18.2
380.00	TREATMENT EQUIPMENT	35-S1.5	65,707,706.74	18,480,154	47,227,552	2,355,132	3.58	20.1
381.00	PLANT SEWERS	50-R3	6,182,348.11	1,591,522	4,590,827	140,418	2.27	32.7
382.00	OUTFALL SEWER LINES	50-R3	604,388.91	244,690	359,698	12,727	2.11	28.3
389.10	OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES	20-S2.5	582,205.16	231,563	350,642	31,102	5.34	11.3
389.60	OTHER PLANT AND MISCELLANEOUS EQUIPMENT - CPS	5-SQ	1,707,500.00	457,989	1,249,511	357,607	20.94	3.5
390.00	OFFICE FURNITURE AND EQUIPMENT	20-SQ	168,706.08	37,591	131,115	13,043	7.73	10.1
391.00	TRANSPORTATION EQUIPMENT	14-L4	3,034,840.81	718,213	2,316,627	235,403	7.76	9.8
392.00	STORES EQUIPMENT	25-SQ	107,351.44	33,748	73,604	4,273	3.98	17.2
393.00	TOOLS, SHOP AND GARAGE EQUIPMENT	20-SQ	1,505,097.79	299,112	1,205,986	78,428	5.21	15.4
394.00	LABORATORY EQUIPMENT	15-SQ	729,305.71	275,058	454,248	43,556	5.97	10.4
395.00	POWER OPERATED EQUIPMENT	22-R2	907,645.43	389,500	518,146	39,364	4.34	13.2
396.00	COMMUNICATION EQUIPMENT	15-SQ	1,744,213.66	998,400	745,814	107,830	6.18	6.9
397.00	MISCELLANEOUS EQUIPMENT	15-SQ	632,593.59	205,091	427,503	33,372	5.28	12.8
398.00	OTHER TANGIBLE PLANT	25-SQ	14,231.50	2,461	11,771	547	3.84	21.5
	TOTAL DEPRECIABLE PLANT		**354,391,699.56**	**74,312,248**	**280,079,451**	**9,067,027**	**2.56**	**30.9**
	NONDEPRECIABLE PLANT							
352.10	FRANCHISES		221,139.78					
353.20	LAND AND LAND RIGHTS - COLLECTION		1,093,483.20					
353.30	LAND AND LAND RIGHTS - SPP		85,560.07					
353.40	LAND AND LAND RIGHTS - TDP		1,592,020.09					
	TOTAL NONDEPRECIABLE PLANT		**2,992,203.14**					
	AMORTIZATION OF NET SALVAGE					**897,190**		
	TOTAL UTILITY PLANT		**357,383,902.70**	**74,312,248**	**280,079,451**	**9,964,217**		

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER SSS OPERATIONS EXCLUDING SADSBURY AND EXETER

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

ACCOUNT	PROJECTED BOOK RESERVE BALANCE AS OF 12/31/2021		PROJECTED DEPRECIATION ACCRUALS		PROJECTED RETIREMENTS		PROJECTED COST OF REMOVAL		PROJECTED SALVAGE		ACQUISITIONS		PROJECTED BOOK RESERVE BALANCE AS OF 12/31/2022
(1)	(2)	+	(3)	-	(4)	-	(5)	+	(6)	+	(7)	=	(8)
354.20	49,219		63,092		1,401		13,587						97,323
354.30	5,144,884		325,647		18,356		2,386						5,449,788
354.40	12,232,042		1,272,456		56,167		562						13,447,768
354.70	1,613,097		88,037		3,218		10,331						1,687,584
355.00	2,739,150		68,828										2,807,978
360.10	2,894,314		759,287		62,421		64,294						3,526,886
361.10	12,678,919		1,999,555		480,223		225,705						13,972,547
361.20	1,778,786		417,490		22,832		137,220		457				2,036,681
363.00	4,422,337		604,967		122,608		123,835						4,780,861
364.00	127,900		42,748										170,648
365.00	1,315		1,198										2,513
370.00	31,682		3,241										34,923
371.00	1,690,669		652,922		9,472		2,463						2,331,656
380.00	16,084,154		2,433,983		33,913		4,070						18,480,154
381.00	1,449,946		141,576										1,591,522
382.00	231,500		13,190										244,690
389.10	199,257		32,306										231,563
389.60	106,944		351,045										457,989
390.00	24,328		13,263										37,591
391.00	533,900		218,897		29,813		4,770						718,213
392.00	29,475		4,273										33,748
393.00	227,278		71,834										299,112
394.00	233,029		42,973		859		86						275,058
395.00	361,954		35,148		7,453		149						389,500
396.00	887,391		113,680		2,450		221						998,400
397.00	176,585		28,506										205,090
398.00	1,652		809										2,461
TOTAL	**65,951,706**		**9,800,949**		**851,187**		**589,676**		**457**		**0**		**74,312,248**

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER SSS OPERATIONS EXCLUDING SADSBURY AND EXETER

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

ACCOUNT	NET ORIGINAL COST AS OF 12/31/2021	NET ORIGINAL COST AS OF 12/31/2022	ACCRUAL RATE	DEPRECIATION ACCRUALS	AMORTIZATION OF NET SALVAGE	PROJECTED DEPRECIATION ACCRUALS
(1)	(2)	(3)	(4)	(5)*	(6)	(7)=(5)+(6)
354.20	1,350,155.77	1,372,711.27	2.84	38,574	24,518	63,092
354.30	14,958,113.65	15,253,684.27	2.01	302,788	22,859	325,647
354.40	52,285,165.25	53,189,589.53	2.41	1,267,886	4,570	1,272,456
354.70	3,102,005.24	3,153,826.87	2.01	62,724	25,313	88,037
355.00	4,036,071.90	4,036,071.90	1.63	65,788	3,040	68,828
360.10	38,161,242.14	39,166,371.54	1.75	673,706	85,581	759,287
361.10	99,296,640.99	106,666,373.56	1.60	1,633,382	366,173	1,999,555
361.20	12,812,001.40	13,269,957.20	2.63	342,146	75,344	417,490
363.00	18,663,546.11	20,832,794.90	2.55	500,757	104,210	604,967
364.00	356,424.84	356,424.84	11.98	42,700	48	42,748
365.00	14,938.00	14,938.00	8.02	1,198		1,198
370.00	143,419.77	143,419.77	2.26	3,241		3,241
371.00	13,154,873.34	13,307,400.98	4.71	619,894	33,028	652,922
380.00	64,581,620.12	65,707,706.74	3.67	2,371,867	62,116	2,433,983
381.00	6,182,348.11	6,182,348.11	2.29	141,576		141,576
382.00	604,388.91	604,388.91	2.13	12,873	317	13,190
389.10	582,205.16	582,205.16	5.48	31,905	401	32,306
389.60	1,655,000.00	1,707,500.00	20.97	351,045		351,045
390.00	168,706.08	168,706.08	7.76	13,092	171	13,263
391.00	2,554,774.18	3,034,840.81	7.83	213,813	5,084	218,897
392.00	107,351.44	107,351.44	3.98	4,273		4,273
393.00	1,199,614.28	1,505,097.79	5.29	71,382	452	71,834
394.00	628,336.51	729,305.71	6.14	41,616	1,357	42,973
395.00	787,628.77	907,645.43	4.17	34,678	470	35,148
396.00	1,669,700.06	1,744,213.66	6.33	107,931	5,749	113,680
397.00	496,492.71	632,593.59	4.84	26,200	2,306	28,506
398.00	14,231.50	14,231.50	3.93	559	250	809
TOTAL	**339,566,996.23**	**354,391,699.56**		**8,977,592**	**823,357**	**9,800,949**

* Total accruals shown are based on average monthly balances.

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER SSS OPERATIONS EXCLUDING SADSBURY AND EXETER

TABLE 5. AMORTIZATION OF EXPERIENCED AND ESTIMATED NET SALVAGE

	2018		2019		PROJECTED 2020		PROJECTED 2021		PROJECTED 2022			
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		2,367		27,531		29,175		63,211		13,587	(135,871)	(27,174)
354.30		87		61,135		5,124		11,101		2,386	(79,833)	(15,967)
354.40		(18,539)		1,986		1,206		2,613		562	12,172	2,434
354.70		36,100		18,075		22,182		48,060		10,331	(134,747)	(26,949)
355.00		4,539		9,730							(14,269)	(2,854)
360.10		85,350		245,202		41,420		54,123		64,294	(490,390)	(98,078)
361.10		345,943		1,038,559		170,104		222,272		225,705	(2,002,583)	(400,517)
361.20				109,567	440	132,346	452	135,702	457	137,220	(513,485)	(102,697)
363.00		48,455		150,830		130,023		122,465		123,835	(575,608)	(115,122)
364.00				240							(240)	(48)
371.00		(18,885)		141,438		37,534				2,463	(162,550)	(32,510)
380.00		12,304		214,843		11,073		65,469		4,070	(307,759)	(61,552)
382.00		981									(981)	(196)
389.10		(3,678)		5,682							(2,003)	(401)
390.00		94									(94)	(19)
391.00		9,708		6,029		5,013		4,669		4,770	(30,189)	(6,038)
393.00				1,931							(1,931)	(386)
394.00		118		5,593		1,012				86	(6,809)	(1,362)
395.00				2,048		157		146		149	(2,500)	(500)
396.00				1,898		21,079		293		221	(23,491)	(4,698)
397.00		6,019		5,513							(11,532)	(2,306)
398.00				1,251							(1,251)	(250)
TOTAL	**0**	**510,964**	**0**	**2,049,082**	**440**	**607,449**	**452**	**730,122**	**457**	**589,676**	**(4,485,944)**	**(897,190)**

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

Pennsylvania American Water Company

Valley Township, Chester County, Pennsylvania

Water System
Appraisal Work Papers
As of December 17, 2019

PAWC General Rate Cases Depreciation Studies
Water and Wastewater 2017

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

VOLUME 11

PENNSYLVANIA-AMERICAN WATER COMPANY

2017 GENERAL BASE RATE CASE

R-2017-2595853

EXHIBIT NO. 11-C - DEPRECIATION STUDY

WATER OPERATIONS AS OF

DECEMBER 31, 2018

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

PENNSYLVANIA-AMERICAN WATER COMPANY

HERSHEY, PENNSYLVANIA

2018 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS
RELATED TO WATER PLANT
AS OF DECEMBER 31, 2018

Prepared by:

Gannett Fleming

Excellence Delivered As Promised

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

PENNSYLVANIA-AMERICAN WATER COMPANY

Hershey, Pennsylvania

2018 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS
RELATED TO WATER PLANT
AS OF DECEMBER 31, 2018

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC

Camp Hill, Pennsylvania

Gannett Fleming

*Excellence Delivered **As Promised***

April 21, 2017

Pennsylvania-American Water Company
800 West Hersheypark Drive
Hershey, PA 17033

Attention: Mr. John R. Cox
Manager of Rates and Regulations

Gentlemen:

Pursuant to your request, we have determined the annual depreciation accruals applicable to water plant as of December 31, 2018. The results of our study at December 31, 2013 are presented in our report titled "2017 Depreciation Study - Calculated Annual Depreciation Accruals Related to Water Plant as of December 31, 2017". 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
Sr. Vice President

JJS:mlw

062027.100

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PART I. RESULTS OF STUDY

PENNSYLVANIA-AMERICAN WATER COMPANY

DEPRECIATION STUDY

RESULTS OF STUDY

DESCRIPTION OF SUMMARY TABULATIONS

Tables 1 through 5 presented on pages 3 through 10 summarize the results of the depreciation study as of December 31, 2018. Table 1 sets forth the development of the net original cost by account as of December 31, 2018. Table 2 sets forth, by depreciable group, the estimated survivor curve, original cost, book depreciation reserve as of December 31, 2018, 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, 2018. Table 4 sets forth the calculation of the depreciation accruals for the twelve months ended December 31, 2018. Table 5 presents the annual amortization of experienced and estimated net salvage based on the period 2014 through 2018.

DESCRIPTION OF DETAILED TABULATIONS

The supporting data for the depreciation calculations are presented in account sequence in the section beginning on page II-2. 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 2014 through 2018, beginning on pages III-2 through III-5.

PENNSYLVANIA-AMERICAN WATER COMPANY

TABLE 1. DEVELOPMENT OF NET ORIGINAL COST AS OF DECEMBER 31, 2018

	DEPRCIABLE GROUP (1)	ORIGINAL COST AS OF DECEMBER 31, 2018 (2)	- CUSTOMER ADVANCES (3)	- CONTRIBUTIONS IN AID OF CONSTRUCTION (4)	- EXCLUDED PROPERTY (5)	= NET ORIGINAL COST AS OF DECMEBER 31, 2018 (6)
INTANGIBLE PLANT						
301.00	ORGANIZATION	774,398.06				774,398.06
302.00	FRANCHISES AND CONSENTS	2,404,599.20				2,404,599.20
303.00	MISCELLANEOUS INTANGIBLE PLANT	15,569.16				15,569.16
	TOTAL INTANGIBLE PLANT	**3,194,566.42**	**0.00**	**0.00**	**0.00**	**3,194,566.42**
NONDEPRECIABLE PLANT						
303.20	POWER AND PUMPING LAND	3,576,428.03				3,576,428.03
303.30	PURIFICATION LAND	15,412.25				15,412.25
303.40	TRANS. AND DISTR. LAND AND RIGHTS OF WAY	4,578,480.03		215,927.20		4,362,552.83
303.50	DISTRIBUTION RESERVOIRS AND STANDPIPE LAND	2,389,882.77				2,389,882.77
303.51	TRANSMISSION AND DISTRIBUTION - LAND	1,762,423.06				1,762,423.06
303.52	TRANSMISSION AND DISTRIBUTION - RIGHTS OF WAY	5,288,947.81				5,288,947.81
303.61	OFFICE LAND	3,918,022.99				3,918,022.99
	TOTAL NONDEPRECIABLE PLANT	**21,529,596.94**	**0.00**	**215,927.20**	**0.00**	**21,313,669.74**
DEPRECIABLE PLANT						
303.14	WATER RIGHTS - HIBERNIA	1,942,822.51				1,942,822.51
303.35	WASTE HANDLING AND TREATMENT LAND	155,025.17				155,025.17
303.99	COMPREHENSIVE PLANNING STUDIES	9,920,726.11				9,920,726.11
304.15	OTHER WATER SOURCE STRUCTURES	34,442,969.90				34,442,969.90
304.20	POWER AND PUMPING STRUCTURES	107,320,207.30		1,289,607.60	41,310.00	105,989,289.70
304.30	PURIFICATION BUILDINGS	274,724,337.33		169,605.01	230,375.00	274,324,357.32
304.36	WASTE HANDLING AND TREATMENT STRUCTURE	11,733,221.74				11,733,221.74
304.38	WASTE HANDLING & TREATMENT STRUCTURE PAINTING	65,958.42				65,958.42
304.39	PURIFICATION BUILDINGS - TANK PAINTING	134,806.79				134,806.79
304.61	OFFICE BUILDINGS	40,019,986.62		60,000.00	12,834.00	39,947,152.62
304.62	STORES, SHOP AND GARAGE BUILDINGS	55,222,287.14		576.00		55,221,711.14
304.63	MISCELLANEOUS STRUCTURES AND IMPROVEMENTS	4,933,374.39				4,933,374.39
305.00	COLLECTING AND IMPOUNDING RESERVOIRS	134,357,766.90		3,575.00		134,354,191.90
306.00	LAKE, RIVER AND OTHER INTAKES	20,005,870.35		41,551.00		19,964,319.35
307.00	WELLS AND SPRINGS	11,241,893.43		71,610.27		11,170,283.16
310.00	OTHER POWER PRODUCTION EQUIPMENT	18,152,052.81		118,273.00	26,561.00	18,007,218.81
311.20	ELECTRIC PUMPING EQUIPMENT	21,282,287.19		1,954,569.05	116,716.00	19,211,002.14
311.50	OTHER	1,634,152.00				1,634,152.00
311.52	SOURCE OF SUPPLY	8,509,617.14				8,509,617.14
311.53	WATER TREATMENT	47,732,222.90				47,732,222.90
311.54	TRANSMISSION AND DISTRIBUTION	8,693,988.14				8,693,988.14

PENNSYLVANIA-AMERICAN WATER COMPANY

TABLE 1. DEVELOPMENT OF NET ORIGINAL COST AS OF DECEMBER 31, 2018

	DEPRCIABLE GROUP	ORIGINAL COST AS OF DECEMBER 31, 2018	- CUSTOMER ADVANCES	- CONTRIBUTIONS IN AID OF CONSTRUCTION	- EXCLUDED PROPERTY	= NET ORIGINAL COST AS OF DECMEBER 31, 2018
	(1)	(2)	(3)	(4)	(5)	(6)
320.10	PURIFICATION SYSTEM - LARGE STRUCTURES	203,017,958.78		27,162.27	627,852.00	202,362,944.51
320.18	PURIFICATION SYSTEM - LARGE STRUCTURES PAINT	103,245.73				103,245.73
320.19	PURIFICATION SYSTEM - LARGE STRUCTURES PAINT	3,770,702.48				3,770,702.48
320.20	PURIFICATION SYSTEM - CHEMICAL TREATMENT	83,453,443.30		42,367.00		83,411,076.30
320.29	PURIFICATION SYSTEM - CHEM. TREATMENT PAINT	8,167.87				8,167.87
320.30	GRANULAR ACTIVATED CARBON	8,693,834.87				8,693,834.87
320.37	WASTE HANDLING & TREATMENT - EQUIPMENT	16,075,077.23				16,075,077.23
330.00	DISTRIBUTION RESERVOIRS AND STANDPIPES	101,037,841.09		2,905,114.51		98,132,726.58
330.10	ELEVATED TANKS AND STANDPIPES	17,636,401.77				17,636,401.77
330.20	GROUND LEVEL FACILITIES	22,144,158.48				22,144,158.48
330.30	BELOW GRADE FACILITIES	818,744.06				818,744.06
330.40	CLEARWELL	14,179,641.14				14,179,641.14
330.58	DISTR. RESERVOIRS AND STANDPIPES - PAINTING	2,375,281.44				2,375,281.44
330.59	DISTR. RESERVOIRS AND STANDPIPES - PAINTING	36,418,707.41				36,418,707.41
331.00	MAINS AND ACCESSORIES	2,676,234,771.44	81,810,993.14	178,351,203.78	502,366.00	2,415,570,208.52
333.00	SERVICES	578,601,077.41	1,753,981.88	9,002,408.46		567,844,687.07
334.00	METERS	203,441,435.13	305,369.35	1,653,080.42		201,482,985.36
335.00	FIRE HYDRANTS	107,503,420.52		4,275,268.25		103,228,152.27
340.10	OFFICE FURNITURE	19,179,166.67				19,179,166.67
340.20	COMPUTERS AND PERIPHERAL EQUIPMENT	18,458,835.00		354.00		18,458,481.00
340.30	COMPUTER SOFTWARE - 5 YEAR	36,694,738.71				36,694,738.71
340.31	COMPUTER SOFTWARE - 10 YEAR	62,548,894.51				62,548,894.51
341.00	NOT CLASSIFIED	16,002.14				16,002.14
341.10	LIGHT DUTY TRUCKS	18,911,227.50				18,911,227.50
341.20	EQUIPMENT	14,430,392.96				14,430,392.96
341.30	AUTOS	4,883,332.68				4,883,332.68
341.40	OTHER	5,895,986.16				5,895,986.16
342.00	STORES EQUIPMENT	400,072.70				400,072.70
343.00	TOOLS AND WORK EQUIPMENT	26,095,362.58		61.00		26,095,301.58
344.00	LABORATORY EQUIPMENT	3,323,028.15				3,323,028.15
345.00	POWER OPERATED EQUIPMENT	2,571,357.61				2,571,357.61
346.00	EQUIPMENT	2,585,584.40				2,585,584.40
346.10	NON-TELEPHONE	918,926.11				918,926.11
346.19	REMOTE CONTROL AND INSTRUMENTATION	6,460,864.86				6,460,864.86
346.20	TELEPHONE	831,870.50				831,870.50
347.00	MISCELLANEOUS EQUIPMENT	17,035,118.69		4,085.00		17,031,033.69
348.00	OTHER TANGIBLE EQUIPMENT	735,410.29				735,410.29
	TOTAL DEPRECIABLE PLANT	**5,129,715,656.65**	**83,870,344.37**	**199,970,471.62**	**1,558,014.00**	**4,844,316,826.66**
	TOTAL WATER PLANT IN SERVICE	**5,154,439,820.01**	**83,870,344.37**	**200,186,398.82**	**1,558,014.00**	**4,868,825,062.82**

PENNSYLVANIA-AMERICAN WATER COMPANY

TABLE 2. SUMMARY OF ESTIMATED SURVIVOR CURVES, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WATER PLANT AS OF DECEMBER 31, 2018

	DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)		NET ORIGINAL COST AS OF DECEMBER 31, 2018 (3)	BOOK RESERVE (4)	FUTURE ACCRUALS (5)	ANNUAL ACCRUAL AMOUNT (6)	ANNUAL ACCRUAL RATE, PERCENT (7)	COMPOSITE REMAINING LIFE (8)
INTANGIBLE PLANT									
301.00	ORGANIZATION	NONDEPR.		774,398.06					
302.00	FRANCHISES AND CONSENTS	NONDEPR.		2,404,599.20					
303.00	MISCELLANEOUS INTANGIBLE PLANT	NONDEPR.		15,569.16					
	TOTAL INTANGIBLE PLANT			**3,194,566.42**					
NONDEPRECIABLE PLANT									
303.20	POWER AND PUMPING LAND	NONDEPR.		3,576,428.03					
303.30	PURIFICATION LAND	NONDEPR.		15,412.25					
303.40	TRANSMISSION AND DISTRIBUTION LAND AND RIGHTS OF WAY	NONDEPR.		4,362,552.83					
303.50	DISTRIBUTION RESERVOIRS AND STANDPIPES LAND	NONDEPR.		2,389,882.77					
303.51	TRANSMISSION AND DISTRIBUTION - LAND	NONDEPR.		1,762,423.06					
303.52	TRANSMISSION AND DISTRIBUTION - RIGHTS OF WAY	NONDEPR.		5,288,947.81					
303.61	OFFICE LAND	NONDEPR		3,918,022.99					
	TOTAL NONDEPRECIABLE PLANT			**21,313,669.74**					
DEPRECIABLE PLANT									
303.14	WATER RIGHTS - HIBERNIA	25-SQ		1,942,822.51	1,763,172	179,651	119,767	6.16	1.5
303.35	WASTE HANDLING AND TREATMENT LAND	100-R2	*	155,025.17	155,025	0	0	-	-
303.99	COMPREHENSIVE PLANNING STUDIES	5-SQ		9,920,726.11	6,716,899	3,203,827	1,251,002	12.61	2.6
304.15	OTHER WATER SOURCE STRUCTURES	60-R3		34,442,969.90	7,573,274	26,869,696	624,862	1.81	43.0
304.20	POWER AND PUMING STRUCTURES								
	LARGE STRUCTURES	70-R2.5	*	64,671,856.38	7,894,471	56,777,385	1,515,893	2.34	37.5
	OTHER STRUCTURES	55-R3		41,317,433.32	9,408,085	31,909,348	1,013,195	2.45	31.5
	TOTAL ACCOUNT 304.2			105,989,289.70	17,302,556	88,686,733	2,529,088	2.39	35.1
304.30	PURIFICATION BUILDINGS								
	LARGE STRUCTURES	60-R2.5	*	221,661,139.93	71,976,298	149,684,840	4,739,588	2.14	31.6
	OTHER STRUCTURES	55-R3		52,663,217.39	17,798,107	34,865,110	965,350	1.83	36.1
	TOTAL ACCOUNT 304.3			274,324,357.32	89,774,405	184,549,950	5,704,938	2.08	32.3
304.36	WASTE HANDLING AND TREATMENT STRUCTURES	60-R2.5	*	11,733,221.74	5,437,209	6,296,013	317,692	2.71	19.8
304.38	WASTE HANDLING AND TREATMENT STRUCTURES PAINTING	10-SQ		65,958.42	53,322	12,636	1,944	2.95	6.5
304.39	PURIFICATION BUILDINGS - TANK PAINTING	10-SQ		134,806.79	118,388	16,419	2,526	1.87	6.5
304.61	OFFICE BUILDINGS								
	LARGE STRUCTURES	50-R1.5	*	33,043,308.29	2,227,308	30,816,000	1,588,814	4.81	19.4
	OTHER OTHER STRUCTURES	45-R3		6,903,844.33	1,760,585	5,143,259	252,918	3.66	20.3
	TOTAL ACCOUNT 304.61			39,947,152.62	3,987,893	35,959,259	1,841,732	4.61	19.5
304.62	STORES, SHOP AND GARAGE BUILDINGS								
	LARGE STRUCTURES	75-R2	*	46,534,320.53	5,760,761	40,773,559	1,216,856	2.61	33.5
	OTHER OTHER STRUCTURES	45-R3		8,687,390.61	2,972,865	5,714,526	197,657	2.28	28.9
	TOTAL ACCOUNT 304.62			55,221,711.14	8,733,626	46,488,085	1,414,513	2.56	32.9

PENNSYLVANIA-AMERICAN WATER COMPANY

TABLE 2. SUMMARY OF ESTIMATED SURVIVOR CURVES, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WATER PLANT AS OF DECEMBER 31, 2018

	DEPRECIABLE GROUP	SURVIVOR CURVE	NET ORIGINAL COST AS OF DECEMBER 31, 2018	BOOK RESERVE	FUTURE ACCRUALS	ANNUAL ACCRUAL AMOUNT	ANNUAL ACCRUAL RATE, PERCENT	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
304.63	MISCELLANEOUS STRUCTURES AND IMPROVEMENTS	50-R2.5	4,933,374.39	688,106	4,245,268	118,887	2.41	35.7
	TOTAL ACCOUNT 304		526,792,842.02	133,668,779	393,124,059	12,556,182	2.38	31.3
305.00	COLLECTING AND IMPOUNDING RESERVOIRS							
	LARGE RESERVOIRS	125-R2.5 *	127,795,628.42	12,895,938	114,899,691	1,855,378	1.45	61.9
	OTHER RESERVOIRS	75-R3	6,558,563.48	1,994,257	4,564,306	211,899	3.23	21.5
	TOTAL ACCOUNT 305		134,354,191.90	14,890,195	119,463,997	2,067,277	1.54	57.8
306.00	LAKE, RIVER AND OTHER INTAKES							
	LARGE RESERVOIRS	65-S1.5 *	14,550,654.76	4,232,561	10,318,093	281,627	1.94	36.6
	OTHER RESERVOIRS	60-S1	5,413,664.59	1,518,542	3,895,123	114,947	2.12	33.9
	TOTAL ACCOUNT 306		19,964,319.35	5,751,103	14,213,216	396,574	1.99	35.8
307.00	WELLS AND SPRINGS	55-R2	11,170,283.16	4,335,267	6,835,016	214,258	1.92	31.9
310.00	POWER GENERATION EQUIPMENT	40-R2.5	18,007,218.81	4,138,472	13,868,747	507,133	2.82	27.3
	PUMPING EQUIPMENT							
311.20	ELECTRIC PUMPING EQUIPMENT	50-R1	19,211,002.14	2,866,110	16,344,892	607,142	3.16	26.9
311.50	OTHER	50-R1	1,634,152.00	442,578	1,191,574	38,877	2.38	30.6
311.52	SOURCE OF SUPPLY	50-R1	8,509,617.14	1,490,308	7,019,309	230,180	2.70	30.5
311.53	WATER TREATMENT	50-R1	47,732,222.90	24,443,262	23,288,961	844,364	1.77	27.6
311.54	TRANSMISSION AND DISTRIBUTION	50-R1	8,693,988.14	2,116,640	6,577,348	228,997	2.63	28.7
	TOTAL ACCOUNT 311		85,780,982.32	31,358,898	54,422,084	1,949,560	2.27	27.9
	PURIFICATION SYSTEM							
320.10	PURIFICATION STRUCTURES							
	LARGE STRUCTURES	70-R2 *	184,705,299.72	68,522,614	116,182,684	3,855,315	2.09	30.1
	OTHER OTHER STRUCTURES	55-R3	17,657,644.79	6,494,933	11,162,712	326,633	1.85	34.2
	TOTAL ACCOUNT 320.1		202,362,944.51	75,017,547	127,345,396	4,181,948	2.07	30.5
320.18	LARGE STRUCTURES PAINT	10-SQ	103,245.73	103,246	0	0	-	-
320.19	LARGE STRUCTURES PAINT	10-SQ	3,770,702.48	3,730,550	40,152	6,177	0.16	6.5
320.20	CHEMICAL TREATMENT	32-R1	83,411,076.30	32,322,374	51,088,702	3,007,085	3.61	17.0
320.29	CHEMICAL TREATMENT PAINT	FULLY ACCRUED	8,167.87	8,168	0	0	-	-
	TOTAL PURIFICATION SYSTEM		289,656,136.89	111,181,885	178,474,250	7,195,210	2.48	24.8
320.30	GRANULAR ACTIVATED CARBON	6-L2.5	8,693,834.87	7,889,111	804,724	352,710	4.06	2.3
320.37	WASTE HANDLING AND TREATMENT - EQUIPMENT	25-R3	16,075,077.23	10,177,065	5,898,012	454,920	2.83	13.0
	TOTAL ACCOUNT 320		314,425,048.99	129,248,061	185,176,986	8,002,840	2.55	23.1
330.00	DISTRIBUTION RESERVOIRS AND STANDPIPES	65-R2	98,132,726.58	33,734,636	64,398,091	1,654,187	1.69	38.9
330.10	ELEVATED TANKS AND STANDPIPES	65-R2	17,636,401.77	1,995,151	15,641,251	351,909	2.00	44.4
330.20	GROUND LEVEL FACILITIES	65-R2	22,144,158.48	1,625,703	20,518,455	461,150	2.08	44.5
330.30	BELOW GRADE FACILITIES	65-R2	818,744.06	94,397	724,347	15,980	1.95	45.3
330.40	CLEARWELL	65-R2	14,179,641.14	1,641,824	12,537,817	277,639	1.96	45.2
330.58	DISTRIBUTION RESERVOIRS AND STANDPIPES - PAINTING	10-SQ	2,375,281.44	2,271,962	103,319	15,895	0.67	6.5
330.59	DISTRIBUTION RESERVOIRS AND STANDPIPES - PAINTING	10-SQ	36,418,707.41	23,152,151	13,266,556	1,947,156	5.35	6.8
	TOTAL ACCOUNT 330		191,705,660.88	64,515,824	127,189,836	4,723,916	2.46	26.9

PENNSYLVANIA-AMERICAN WATER COMPANY

TABLE 2. SUMMARY OF ESTIMATED SURVIVOR CURVES, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WATER PLANT AS OF DECEMBER 31, 2018

	DEPRECIABLE GROUP	SURVIVOR CURVE	NET ORIGINAL COST AS OF DECEMBER 31, 2018	BOOK RESERVE	FUTURE ACCRUALS	ANNUAL ACCRUAL AMOUNT	ANNUAL ACCRUAL RATE, PERCENT	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
331.00	MAINS AND ACCESSORIES	110-R2	2,415,570,208.52	334,433,465	2,081,136,744	28,333,986	1.17	73.5
333.00	SERVICES	70-R2	567,844,687.07	138,762,554	429,082,133	9,665,934	1.70	44.4
334.00	METERS AND METER INSTALLATIONS	19-L1.5	201,482,985.36	86,722,828	114,760,157	11,361,534	5.64	10.1
335.00	FIRE HYDRANTS	72-R2	103,228,152.27	21,864,870	81,363,282	1,738,263	1.68	46.8
340.00	OFFICE FURNITURE AND EQUIPMENT							
	FURNITURE	20-SQ	19,179,166.67	10,246,557	8,932,610	1,167,381	6.09	7.7
	COMPUTERS AND PERIPHERAL EQUIPMENT	5-SQ	18,458,481.00	10,236,065	8,222,416	4,056,320	21.98	2.0
	COMPUTER SOFTWARE - 5 YEAR	5-SQ	36,694,738.71	11,923,801	24,770,938	7,550,771	20.58	3.3
	COMPUTER SOFTWARE - 10 YEAR	10-SQ	62,548,894.51	33,663,138	28,885,757	7,051,454	11.27	4.1
	TOTAL ACCOUNT 340		136,881,280.89	66,069,561	70,811,721	19,825,926	14.48	3.6
341.00	TRANSPORATION EQUIPMENT							
	NOT CLASSIFIED	6-L3	16,002.14	16,002	0	0	-	-
	LIGHT DUTY TRUCKS	6-L3	18,911,227.50	11,779,314	7,131,914	2,386,794	12.62	3.0
	EQUIPMENT	6-L3	14,430,392.96	8,523,832	5,906,561	1,912,723	13.25	3.1
	AUTOS	6-L3	4,883,332.68	3,523,998	1,359,335	437,513	8.96	3.1
	OTHER	6-L3	5,895,986.16	3,635,257	2,260,729	740,427	12.56	3.1
	TOTAL ACCOUNT 341		44,136,941.44	27,478,403	16,658,539	5,477,457	12.41	3.0
342.00	STORES EQUIPMENT	20-SQ	400,072.70	175,368	224,705	25,808	6.45	8.7
343.00	TOOLS AND WORK EQUIPMENT	20-SQ	26,095,301.58	6,924,992	19,170,310	1,386,538	5.31	13.8
344.00	LABORATORY EQUIPMENT	20-R0.5	3,323,028.15	1,953,912	1,369,116	149,806	4.51	9.1
345.00	POWER OPERATED EQUIPMENT	10-S2	2,571,357.61	2,356,661	214,697	54,619	2.12	3.9
346.00	COMUNICATION EQUIPMENT							
	EQUIPMENT	15-SQ	2,585,584.40	1,596,948	988,636	191,330	7.40	5.2
	NON-TELEPHONE	15-SQ	918,926.11	337,227	581,699	62,431	6.79	9.3
	REMOTE CONTROL AND INSTRUMENTATION	10-SQ	6,460,864.86	2,304,114	4,156,751	639,314	9.90	6.5
	TELEPHONE	10-SQ	831,870.50	576,271	255,600	90,692	10.90	2.8
	TOTAL ACCOUNT 346		10,797,245.87	4,814,560	5,982,686	983,767	9.11	6.1
347.00	MISCELLANEOUS EQUIPMENT	25-SQ	17,031,033.69	7,190,728	9,840,306	740,716	4.35	13.3
348.00	OTHER TANGIBLE EQUIPMENT	25-SQ	735,410.29	336,044	399,366	29,846	4.06	13.4
	TOTAL DEPRECIABLE PLANT		**4,844,316,826.66**	**1,095,625,641**	**3,748,691,181**	**111,562,709**	**2.30**	
	AMORTIZATION OF NET SALVAGE					**10,118,367**		
	TOTAL WATER PLANT IN SERVICE		**4,868,825,062.82**	**1,095,625,641**	**3,748,691,181**	**121,681,076**		

* Life Span Procedure was used. Curve shown is Interim Survivor Curve.

PENNSYLVANIA-AMERICAN WATER COMPANY

TABLE 3. BRINGFORWARD TO DECEMBER 31, 2018, OF BOOK RESERVE AS OF DECEMBER 31, 2017

Account	BOOK RESERVE BALANCE AS OF 12/31/2017	+	PROJECTED DEPRECIATION ACCRUALS	-	PROJECTED RETIREMENTS	-	PROJECTED COST OF REMOVAL	+	PROJECTED SALVAGE	+	ACQUISITIONS AND ADJUSTMENTS	=	PROJECTED BOOK RESERVE BALANCE AS OF 12/31/2018
(1)	(2)		(3)		(4)		(5)		(6)		(7)		(8)
303.14	1,643,499		119,673										1,763,172
303.35	155,025		1								(1)		155,025
303.99	5,352,539		1,364,360										6,716,899
304.15	6,909,235		664,039										7,573,274
304.20	15,033,851		2,322,205		50,000		3,500						17,302,556
304.30	85,330,298		5,335,142		625,500		125,100		31,275				89,946,115
304.36	5,115,719		321,490										5,437,209
304.61	8,272,646		492,346		4,118,189		658,910						3,987,893
304.62	8,353,831		863,511		420,623		63,093						8,733,626
304.63	587,392		100,714										688,106
305.00	13,760,888		1,974,307		676,000		169,000						14,890,195
306.00	5,387,209		363,894										5,751,103
307.00	4,108,224		227,043										4,335,267
310.00	3,660,377		478,095										4,138,472
311.00	29,682,739		1,686,559		10,000		400						31,358,898
320.00	105,563,784		6,709,898		983,601		108,196						111,181,885
320.30	7,281,524		618,087		10,000		500						7,889,111
320.37	9,643,694		533,371										10,177,065
330.00	59,927,838		5,281,086		415,030		278,070						64,515,824
331.00	307,251,055		33,308,236		2,001,904		4,143,941		20,019				334,433,465
333.00	130,484,389		10,279,715		758,163		1,288,877		45,490				138,762,554
334.00	82,002,013		12,137,416		5,794,220		1,796,208		173,827				86,722,828
335.00	20,413,015		1,835,503		132,750		253,553		2,655				21,864,870
340.00	54,302,838		19,960,056		8,193,333								66,069,561
341.00	23,491,852		5,385,886		1,385,480		13,855						27,478,403
342.00	148,957		26,411										175,368
343.00	5,794,792		1,403,657		273,457								6,924,992
344.00	1,785,651		168,261										1,953,912
345.00	2,212,806		143,855										2,356,661
346.00	4,832,669		939,756		957,865								4,814,560
347.00	7,210,908		780,531		800,711								7,190,728
348.00	306,186		29,858										336,044
TOTAL	**1,016,007,443**		**115,854,962**		**27,606,826**		**8,903,203**		**273,266**		**(1)**		**1,095,625,641**

PENNSYLVANIA-AMERICAN WATER COMPANY

TABLE 4. CALCULATION OF DEPRECIATION ACCRUALS FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2018

ACCOUNT (1)	NET ORIGINAL COST AS OF 12/31/2017 (2)	NET ORIGINAL COST AS OF 12/31/2018 (3)	ACCRUAL RATE (4)	AVERAGE ACCRUALS (5) **	AMORTIZATION OF NET SALVAGE (6) **	PROJECTED DEPRECIATION ACCRUALS (7)=(5)+(6)
303.14	1,942,822.51	1,942,822.51	6.16	119,678	(5)	119,673
303.35	155,025.17	155,025.17	0.00	0	1	1
303.99	9,576,726.11	9,920,726.11	13.49	1,364,360	0	1,364,360
304.15	34,442,969.90	34,442,969.90	1.83	630,306	33,733	664,039
304.20	93,905,163.70	105,989,289.70	2.43	2,294,131	28,074	2,322,205
304.30	243,136,140.53	274,525,122.53	2.04	5,060,596	274,546	5,335,142
304.36	11,733,221.74	11,733,221.74	2.74	321,490	0	321,490
304.61	17,094,819.62	39,947,152.62	2.57	463,808	28,538	492,346
304.62	32,773,506.14	55,221,711.14	2.43	827,212	36,299	863,511
304.63	3,533,821.39	4,933,374.39	2.36	84,774	15,940	100,714
305.00	104,994,473.90	134,354,191.90	1.59	1,841,311	132,996	1,974,307
306.00	17,500,498.35	19,964,319.35	2.01	362,121	1,773	363,894
307.00	11,170,283.16	11,170,283.16	1.96	218,938	8,105	227,043
310.00	16,166,661.81	18,007,218.81	2.80	459,831	18,264	478,095
311.00	75,163,955.32	85,780,982.32	2.09	1,580,172	106,387	1,686,559
320.00	249,747,732.89	289,656,136.89	2.42	6,175,354	534,544	6,709,898
320.30	8,392,061.87	8,693,834.87	6.87	577,398	40,689	618,087
320.37	16,075,077.23	16,075,077.23	3.07	493,505	39,866	533,371
330.00	175,036,176.88	191,705,660.88	2.38	4,247,686	1,033,400	5,281,086
331.00	2,266,777,896.52	2,415,570,208.52	1.18	27,309,171	5,999,065	33,308,236
333.00	544,561,188.07	567,844,687.07	1.71	9,499,159	780,556	10,279,715
334.00	190,951,156.36	201,482,985.36	5.65	11,052,527	1,084,889	12,137,416
335.00	97,220,732.27	103,228,152.27	1.69	1,691,756	143,747	1,835,503
340.00	128,187,365.27	136,881,280.89	14.81	19,947,271	12,785	19,960,056
341.00	38,595,020.44	44,136,941.44	13.47	5,380,407	5,479	5,385,886
342.00	400,072.70	400,072.70	6.57	26,285	126	26,411
343.00	24,418,459.37	26,095,301.58	5.47	1,390,131	13,526	1,403,657
344.00	3,323,028.15	3,323,028.15	4.99	165,819	2,442	168,261
345.00	2,571,357.61	2,571,357.61	5.56	142,967	888	143,855
346.00	9,582,111.31	10,797,245.87	9.36	935,813	3,943	939,756
347.00	16,642,716.36	17,031,033.69	4.55	773,172	7,359	780,531
348.00	735,410.29	735,410.29	4.06	29,858	0	29,858
TOTAL	**4,446,507,652.94**	**4,844,316,826.66**		**105,467,007**	**10,387,955**	**115,854,962**

** developed in monthly bringforward schedule

PENNSYLVANIA-AMERICAN WATER COMPANY

TABLE 5. AMORTIZATION OF EXPERIENCED AND ESTIMATED NET SALVAGE

Account	EXPERIENCED AND ESTIMATED NET SALVAGE					5 - YEAR
	2014	2015	2016	2017	2018	AMORT.
(1)	(2)	(3)	(4)	(5)	(5)	(7)
	0	0	26	0	0	(5)
303.35	(4)	0	0	0	0	1
304.15	(46,636)	(46,243)	(70,089)	0	0	32,594
304.20	(53,488)	(56,757)	(26,237)	0	(3,500)	27,996
304.30	319,920	(476,945)	(191,035)	(19,080)	(93,825)	92,193
304.61	(65,824)	0	(70,936)	0	(658,910)	159,134
304.62	(80,107)	(3,615)	(48,019)	(14,400)	(63,093)	41,847
304.63	0	(59,776)	(11,676)	(8,250)	0	15,940
305.00	(317,805)	(46,348)	(84,116)	(59,314)	(169,000)	135,316
306.00	(2,002)	(324)	(6,542)	0	0	1,773
307.00	(13,938)	(16,118)	(1,054)	0	0	6,222
310.00	0	(8,915)	(45,776)	0	0	10,938
311.00	(162,341)	(159,509)	(103,119)	0	(400)	85,074
320.00	(93,583)	(182,337)	(101,953)	(91,944)	(108,196)	115,603
320.30	(27,730)	(78,144)	(16,457)	0	(500)	24,566
320.37	(6,734)	0	(192,597)	0	0	39,866
330.00	(631,746)	(1,024,942)	(1,370,181)	(475,306)	(278,070)	756,049
331.00	(3,496,437)	(7,578,550)	(11,564,326)	(4,703,868)	(4,123,922)	6,293,421
333.00	(446,624)	(606,667)	(987,614)	(1,239,963)	(1,243,387)	904,851
334.00	(764,036)	(1,258,131)	(770,084)	(1,414,519)	(1,622,381)	1,165,830
335.00	(146,091)	81,394	(276,615)	(244,260)	(250,898)	167,294
340.00	1,941	(20,871)	(41,508)	0	0	12,088
341.00	(1,555)	(13,623)	(1,158)	(11,060)	(13,855)	8,250
342.00	0	(630)	0	0	0	126
343.00	(9,640)	(19,321)	(18,941)	0	0	9,580
344.00	(983)	(3,939)	(5,015)	0	0	1,987
345.00	(201)	(3,680)	(472)	0	0	871
346.00	(1,029)	(7,472)	(777)	0	0	1,856
347.00	(9,534)	(21,448)	(4,547)	0	0	7,106
TOTAL	(6,056,209)	(11,612,910)	(16,010,818)	(8,281,964)	(8,629,937)	10,118,367

PART II. DETAILED DEPRECIATION CALCULATIONS

VOLUME 12

PENNSYLVANIA-AMERICAN WATER COMPANY

2017 GENERAL BASE RATE CASE

R-2017-2595853

EXHIBITS NO. 11-D, 11-E, 11-F

DEPRECIATION STUDY

WASTEWATER OPERATIONS

(EXCLUDING SCRANTON WASTEWATER)

AS OF DECEMBER 31, 2016, 2017, 2018

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

PENNSYLVANIA-AMERICAN WATER COMPANY

HERSHEY, PENNSYLVANIA

WASTEWATER OPERATIONS

(Excluding Scranton Wastewater)

2016 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS
RELATED TO WASTEWATER PLANT
AS OF DECEMBER 31, 2016

Prepared by:

Excellence Delivered As Promised

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

PENNSYLVANIA-AMERICAN WATER COMPANY

Hershey, Pennsylvania

WASTEWATER OPERATIONS

(Excluding Scranton Wastewater)

2016 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS
RELATED TO WASTEWATER PLANT
AS OF DECEMBER 31, 2016

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC

Camp Hill, Pennsylvania

Gannett Fleming

Excellence Delivered ***As Promised***

April 21, 2017

Pennsylvania-American Water Company
800 West Hersheypark Drive
Hershey, PA 17033

Attention Mr. John R. Cox
Manager of Rates and Regulations

Gentlemen:

Pursuant to your request, we have determined the annual depreciation accruals applicable to wastewater plant as of December 31, 2016. 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 "2017 Depreciation Study - Calculated Annual Depreciation Accruals Related to Wastewater Plant as of December 31, 2017".

Respectfully submitted,

GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC

John J. Spanos

JOHN J. SPANOS
Sr. Vice President

JJS:mlw

062027.100

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PART I. RESULTS OF STUDY

PENNSYLVANIA-AMERICAN WATER COMPANY

WASTEWATER OPERATIONS
(Excluding Scranton Wastewater)

DEPRECIATION STUDY

PART I. RESULTS OF STUDY

SUMMARY OF RESULTS

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, 2016, 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, 2012-2016.

DETAILED TABULATIONS OF DEPRECIATION CALCULATIONS

The supporting data for the depreciation calculations are presented in account sequence in the section beginning on page II-2. 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 2012 through 2016, on pages III-2 through III-6.

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER OPERATIONS (EXCLUDING SCRANTON WASTEWATER)

TABLE 1. DEVELOPMENT OF NET ORIGINAL COST AS OF DECEMBER 31, 2016

DEPRCIABLE GROUP (1)	ORIGINAL COST AS OF DECEMBER 31, 2016 (2)	- CUSTOMER ADVANCES (3)	- CONTRIBUTIONS IN AID OF CONSTRUCTION (4)	- EXCLUDED PROPERTY (5)	= NET ORIGINAL COST AS OF DECMEBER 31, 2016 (6)
DEPRECIABLE PLANT					
354.20 STRUCTURES AND IMPROVEMENTS - COLLECTION	479,296.86				479,296.86
354.30 STRUCTURES AND IMPROVEMENTS - SPP	18,169,291.90		2,734,528.70		15,434,763.20
354.40 STRUCTURES AND IMPROVEMENTS - TDP	50,958,423.67		1,853,012.73		49,105,410.94
354.70 STRUCTURES AND IMPROVEMENTS - GENERAL	2,130,769.53				2,130,769.53
355.00 POWER GENERATING EQUIPMENT	4,881,040.73		144,517.16		4,736,523.57
360.10 COLLECTION SEWERS - FORCE MAINS	30,666,434.21	157,753.14	11,251,126.61		19,257,554.46
361.10 COLLECTION SEWERS - GRAVITY MAINS	73,305,655.63	143,423.53	9,166,636.12		63,995,595.98
361.20 MANHOLES	13,045,669.35		4,387,312.76		8,658,356.59
363.00 SERVICES	15,575,965.95	70,197.45	3,737,893.58		11,767,874.92
364.00 FLOW MEASURING DEVICES	533,521.59		14,726.81		518,794.78
365.00 FLOW MEASURING INSTALLATIONS	20,918.30				20,918.30
370.00 RECEIVING WELLS	103,531.95				103,531.95
371.00 PUMPING EQUIPMENT	7,114,659.39		66,626.22		7,048,033.17
380.00 TREATMENT EQUIPMENT	52,675,840.17		2,200,080.47		50,475,759.70
381.00 PLANT SEWERS	6,450,916.81		30,192.33		6,420,724.48
382.00 OUTFALL SEWER LINES	674,274.67				674,274.67
389.10 OTHER PLANT AND MISCELLANEOUS EQUIPMENT	273,149.74				273,149.74
390.00 OFFICE FURNITURE AND EQUIPMENT	199,675.37				199,675.37
391.00 TRANSPORTATION EQUIPMENT	440,469.70				440,469.70
392.00 STORES EQUIPMENT	64,249.97				64,249.97
393.00 TOOLS, SHOP AND GARAGE EQUIPMENT	536,841.71				536,841.71
394.00 LABORATORY EQUIPMENT	342,757.97				342,757.97
395.00 POWER OPERATED EQUIPMENT	532,736.59		10,000.00		522,736.59
396.00 COMMUNICATION EQUIPMENT	1,522,349.38				1,522,349.38
397.00 MISCELLANEOUS EQUIPMENT	3,256,051.56		29,000.00		3,227,051.56
TOTAL DEPRECIABLE PLANT	**283,954,492.70**	**371,374.12**	**35,625,653.49**	**0.00**	**247,957,465.09**
NONDEPRECIABLE PLANT					
352.10 FRANCHISES	221,139.78				221,139.78
353.20 LAND AND LAND RIGHTS - COLLECTION	1,093,483.20				1,093,483.20
353.30 LAND AND LAND RIGHTS - SPP	85,560.07				85,560.07
353.40 LAND AND LAND RIGHTS - TDP	1,677,525.60		125,000.00		1,552,525.60
TOTAL NONDEPRECIABLE PLANT	**3,077,708.65**	**0.00**	**125,000.00**	**0.00**	**2,952,708.65**
TOTAL WASTEWATER PLANT IN SERVICE	**287,032,201.35**	**371,374.12**	**35,750,653.49**	**0.00**	**250,910,173.74**

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER OPERATIONS (EXCLUDING SCRANTON WASTEWATER)

TABLE 2. SUMMARY OF ESTIMATED SURVIVOR CURVE, ORIGINAL COST, BOOK RESERVE, AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WASTEWATER PLANT AS OF DECEMBER 31, 2016

	DEPRECIABLE GROUP	SURVIVOR CURVE	ORIGINAL COST AS OF DECEMBER 31, 2016	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	479,296.86	49,350	429,947	11,001	2.30	39.1
354.30	STRUCTURES AND IMPROVEMENTS - SPP	50-R2.5	15,434,763.20	4,146,488	11,288,276	249,925	1.62	45.2
354.40	STRUCTURES AND IMPROVEMENTS - TDP	65-R2	49,105,410.94	9,948,199	39,157,212	691,430	1.41	56.6
354.70	STRUCTURES AND IMPROVEMENTS - GENERAL	35-S1	2,130,769.53	1,306,466	824,304	24,748	1.16	33.3
355.00	POWER GENERATING EQUIPMENT	35-R2.5	4,736,523.57	2,652,039	2,084,484	70,197	1.48	29.7
360.10	COLLECTION SEWERS - FORCE MAINS	70-S2	19,257,554.46	175,918	19,081,636	359,040	1.86	53.1
361.10	COLLECTION SEWERS - GRAVITY MAINS	70-R2.5	63,995,595.98	11,371,594	52,624,002	925,253	1.45	56.9
361.20	MANHOLES	50-S1.5	8,658,356.59	1,103,203	7,555,154	183,051	2.11	41.3
363.00	SERVICES	38-R3	11,767,874.92	3,048,755	8,719,120	380,797	3.24	22.9
364.00	FLOW MEASURING DEVICES	20-L3	518,794.78	(3,852)	522,647	39,167	7.55	13.3
365.00	FLOW MEASURING INSTALLATIONS	30-S1.5	20,918.30	4,022	16,896	733	3.50	23.1
370.00	RECEIVING WELLS	50-R3	103,531.95	16,346	87,186	2,042	1.97	42.7
371.00	PUMPING EQUIPMENT	40-S0	7,048,033.17	1,267,841	5,780,192	162,743	2.31	35.5
380.00	TREATMENT EQUIPMENT	45-R2	50,475,759.70	10,681,481	39,794,279	1,072,308	2.12	37.1
381.00	PLANT SEWERS	50-R3	6,420,724.48	831,789	5,588,936	129,614	2.02	43.1
382.00	OUTFALL SEWER LINES	50-R3	674,274.67	157,760	516,515	13,676	2.03	37.8
389.10	OTHER PLANT AND MISCELLANEOUS EQUIPMENT	20-S2.5	273,149.74	72,881	200,268	14,747	5.40	13.6
390.00	OFFICE FURNITURE AND EQUIPMENT	20-SQ	199,675.37	53,384	146,291	11,861	5.94	12.3
391.00	TRANSPORTATION EQUIPMENT	15-L4	440,469.70	245,469	195,000	20,435	4.64	9.5
392.00	STORES EQUIPMENT	25-SQ	64,249.97	18,187	46,063	2,310	3.60	19.9
393.00	TOOLS, SHOP AND GARAGE EQUIPMENT	20-SQ	536,841.71	241,652	295,190	18,017	3.36	16.4
394.00	LABORATORY EQUIPMENT	15-SQ	342,757.97	193,677	149,081	13,157	3.84	11.3
395.00	POWER OPERATED EQUIPMENT	16-L2.5	522,736.59	242,424	280,312	32,263	6.17	8.7
396.00	COMMUNICATION EQUIPMENT	15-SQ	1,522,349.38	854,060	668,289	65,055	4.27	10.3
397.00	MISCELLANEOUS EQUIPMENT	15-SQ	3,227,051.56	467,686	2,759,366	288,902	8.95	9.6
	TOTAL DEPRECIABLE PLANT		**247,957,465.09**	**49,146,818**	**198,810,646**	**4,782,472**	**1.93**	
	AMORTIZATION OF NET SALVAGE					**65,222**		
	NONDEPRECIABLE PLANT							
352.10	FRANCHISES		221,139.78					
353.20	LAND AND LAND RIGHTS - COLLECTION		1,093,483.20					
353.30	LAND AND LAND RIGHTS - SPP		85,560.07					
353.40	LAND AND LAND RIGHTS - TDP		1,552,525.60					
	TOTAL NONDEPRECIABLE PLANT		**2,952,708.65**					
	TOTAL WASTEWATER PLANT IN SERVICE		**250,910,173.74**	**49,146,818**	**198,810,646**	**4,847,694**		

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER OPERATIONS (EXCLUDING SCRANTON WASTEWATER)

TABLE 3. AMORTIZATION OF EXPERIENCED NET SALVAGE

Account (1)	EXPERIENCED NET SALVAGE 2012 (2)	2013 (3)	2014 (4)	2015 (5)	2016 (5)	5 - YEAR AMORT. (7)
354.20	0	0	(17,282)	(1,398)	(42)	3,744
354.30	(3,707)	(1,424)	(0)	(4,141)	0	1,854
354.40	(159,227)	(27,581)	(10,305)	(1,027)	(4,581)	40,544
354.70	0	0	0	(480)	0	96
355.00	(3,170)	(963)	(510)	(1,666)	(4,934)	2,248
360.10	(461)	(8,182)	(1,577)	(3,256)	(12,703)	5,236
361.10	(14,158)	(34,624)	(16,027)	(65,334)	(6,970)	27,423
361.20	0	0	0	(7,497)	(53,000)	12,099
363.00	(2,580)	(15,735)	(26,515)	(27,377)	(11,694)	16,780
364.00	0	0	(816)	0	0	163
371.00	(2,645)	(2,291)	(4,325)	(4,902)	(11,515)	5,136
380.00	(120,523)	(6,028)	(21,655)	(1,623)	(23,917)	34,749
381.00	0	0	0	0	(2,110)	422
382.00	(1)	0	0	0	0	0
390.00	0	0	0	0	(276)	55
393.00	0	(240)	(240)	0	171,552	(34,214)
394.00	0	(6)	0	0	(566)	115
395.00	0	0	0	0	44,960	(8,992)
396.00	(1,192)	(2,027)	0	(4,190)	131,476	(24,813)
397.00	0	0	0	0	87,116	(17,423)
TOTAL	(307,663)	(99,101)	(99,252)	(122,889)	302,795	65,222

PART II. DETAILED DEPRECIATION CALCULATIONS

AQUA PENNSYLVANIA, INC.

WASTEWATER ASSETS

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, ORIGINAL COST, BOOK RESERVE AND CALCULATED

ANNUAL DEPRECIATION ACCRUALS RELATED TO WASTEWATER PLANT AS OF MARCH 31, 2018

DEPRECIABLE GROUP	SURVIVOR CURVE	ORIGINAL COST AS OF MARCH 31, 2018	BOOK RESERVE	FUTURE ACCRUALS	ANNUAL ACCRUAL AMOUNT	COMPOSITE REMAINING LIFE	ANNUAL ACCRUAL RATE, PERCENT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
COLLECTION	55-S0.5	1,277,000.00	409,543	867,457	24,595	35.3	1.93
PUMPING	60-S1	1,084,876.22	122,337	962,539	21,574	44.6	1.99
TREATMENT AND DISPOSAL	50-R2	6,537,155.71	1,836,991	4,700,165	162,774	28.9	2.49
GENERAL	50-R3	14,636.81	8,523	6,114	354	17.3	2.42
TOTAL ACCOUNT 354		8,913,668.74	2,377,394	6,536,275	209,297		
360.00 COLLECTION MAINS - FORCE	75-R2.5	9,872,459.72	1,286,248	8,586,212	165,153	52.0	1.67
361.00 COLLECTION MAINS - GRAVITY	75-R2.5	4,083,815.05	769,857	3,313,958	65,836	50.3	1.61
363.00 SERVICES	70-R4	1,488,413.86	517,616	970,798	17,881	54.3	1.20
371.30 PUMPING EQUIPMENT-PUMPING	25-L0.5	464,547.60	35,266	429,282	32,552	13.2	7.01
380.00 TREATMENT AND DISPOSAL EQUIPMENT	40-SO	1,553,793.25	762,551	791,242	36,744	21.5	2.36
381.40 PLANT SEWERS - TREATMENT AND DISPOSAL	40-R1.5	1,536.55	1,220	317	32	9.9	2.08
382.00 OUTFALL LINES	40-R2.5	1,536.55	1,220	317	45	7.0	2.93
389.20 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - COLLECTION	20-L3	13,030.75	4,882	8,149	721	11.3	5.53
390.10 OFFICE FURNITURE AND EQUIPMENT - FURNITURE	20-SQ	274.98	260	15	0	-	-
393.00 TOOLS, SHOP AND GARAGE EQUIPMENT	20-SQ	4,449.14	4,504	(55)	0		
394.00 LABORATORY EQUIPMENT	25-SQ	1,362.82	1,383	(20)	0		
TOTAL DEPRECIABLE PLANT		26,398,889.01	5,762,401	20,636,490	528,261		
TOTAL CONTRIBUTIONS IN AID OF CONSTRUCTION		26,398,889.01	5,762,401	20,636,490	528,261		
AMORTIZATION OF NET SALVAGE					5,718		
TOTAL WASTEWATER PLANT		118,682,738.17	32,776,275	83,039,273	3,017,474		

Water and Wastewater Industry

Cost of Capital / Required Return
Water and Wastewater Industry
As of 1-1-2021

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

Cost of Capital / Required Return

The net cashflows described in the income approach section of this report were discounted to present value using a cost of capital reflective of the investor-owned water industry with particular emphasis on investor-owned water and wastewater in the Commonwealth of Pennsylvania capital costs for both debt and equity summarized as follows:

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Discount Rate)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	After-tax Market Capital Cost (2)*(3)*(4a)
Debt	29%	Market	2.79%	Market	28.89%	71.11%	0.58%
Equity	71%	Market	9.85%	Market	0.0%	100.0%	6.99%
Total Capital r	100.0%						7.57%
Growth (g)							1.82%
Rate without Growth: [(1+r)/(1+g)]-1							5.65%

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Capitlization Rate)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	Market Capital Cost (2)*(3)
Debt	29%	Market	2.79%	Market	Not Applicable	Not Applicable	0.81%
Equity	71%	Market	9.85%	Market	Not Applicable	Not Applicable	6.99%
Total Capital r	100.0%						7.80%
Growth (g)							1.82%
Rate without Growth: [(1+r)/(1+g)]-1							5.87%

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Rate of Return on Rate Base)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	Required Return on Rate Base (2)*(3)
Debt	44%	Embedded	3.84%	Embedded	Not Applicable	Not Applicable	1.69%
Equity	56%	Embedded	9.85%	Market	Not Applicable	Not Applicable	5.52%
Total Capital r	100.0%						7.21%
Growth (g)						Not Applicable	0.00%
Rate without Growth: [(1+r)/(1+g)]-1							7.21%

The cost of capital and required return was based on the weighted cost of capital (WACC) method; wherein the market capital cost of debt and equity at the second quarter (January 1, 2021) closest to the appraisal date are weighted based on the market capital structure typical of the industry. The inputs to the WACC required return determination are described summarized below.

Debt Cost – The market cost of debt at the study data was determined based on review of financial information published by Value Line Investment Surveys in their Selected Yield weekly publication. These sources were helpful in determining the typical debt rating for investments in water industry to be A Standard and Poor's corporate debt rating. The above sources were also useful in determining that the market cost of debt at A rating to be 2.76% on January 1, 2021. Issuance cost of 0.90% was determined based on analysis annual Public Utility Financing Tracker reports over the period 2008 through 2019 published by PUFT, Inc. The final market cost of debt of 2.79% was determined for the water industry using the following formula which incorporates the above-described issuance costs:

1	2	3	4	5
Value Line Investment Surveys **Water Industry** **As of First Quarter 2021 (1-1-2021)**	S&P Debt Rating	Long Term Debt	Long Term Interest	Long Term Interest Rate (embedded)
		Input Value Line	Input Value Line	(4) / (3)
American States Water		440.3	25.0	5.68%
American Water	Baa1	9,580.0	354.0	3.70%
California Water		785.1	40.0	5.09%
Consolidated Water Company		0.1	-	
Essential Utilities, Inc.	Baa2	5,191.0	196.0	3.78%
Middlesex Water		234.5	7.2	3.07%
SJW Corporation		1,307.6	50.0	3.82%
York Water		116.8	5.5	4.71%
		17,655.4	677.7	3.84%
Minimum				3.07%
wtd Mean				3.84%
Mean				4.26%
Median				3.82%
Maximum				5.68%

Debt Rating and Cost of Debt

Embedded	3.84%	wtd mean col 5
Rating (S&P)	A	Input
Market Cost of Debt @Bond Rating Value Line Selected Yields	2.76%	Input
Use	2.76%	AUS Input
Issuance Cost PUFT Data 2018-2019	0.90%	Input
Final Cost of Debt	2.79%	

$K_d = K_u / (100\% - f)$

where:

K_d =Cost of Debt recognizing issuance costs

K_u is the market cost of debt without consideration of issuance costs

f is the cost of issuance as a percentage of the debt's par value

$K_d = 2.76\% / (100\% - 0.90\%)$

$K_d = 2.79\%$

Equity Cost – The cost of equity was evaluated using the Capital Asset Pricing Model (CAPM) and the dividend growth model (DGM) which looks to market returns to quantify the cost equity capital.

1	2	3	4	5	6	7		8	9		10	11		12	13		14	15		16	17
Value Line Investment Surveys **Water Industry** **As of First Quarter 2021 (1-1-2021)**								Revenues			Cash Flows			Earnings			Dividends			Book Value	
Company	Exchange	Ticker	Valueline No.	Valueline Issue	Beta	Divided			Past 3 Years to Future 3 Years			Past 3 Years to Future 3 Years			Past 3 Years to Future 3 Years			Past 3 Years to Future 3 Years			Past 3 Years to Future 3 Years
Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	Past 10 yrs Input Value Line	Past 5 yrs Input Value Line	Input Value Line	Past 10 yrs Input Value Line	Past 5 yrs Input Value Line	Input Value Line	Past 10 yrs Input Value Line	Past 5 yrs Input Value Line	Input Value Line	Past 10 yrs Input Value Line	Past 5 yrs Input Value Line	Input Value Line	Past 10 yrs Input Value Line	Past 5 yrs Input Value Line	Input Value Line
American States Water	NYSE	AWR	1789	1/08/2021	0.65	1.8%	3.0%	0.0%	5.0%	6.0%	3.0%	7.0%	9.5%	5.0%	6.5%	8.0%	7.5%	9.5%	5.5%	4.0%	5.5%
American Water	NYSE	AWK	1790	1/08/2021	0.85	1.6%	3.0%	3.0%	4.5%	13.0%	6.0%	6.5%	45.5%	6.5%	8.5%	16.0%	10.5%	8.5%	2.5%	4.0%	5.0%
California Water	NYSE	CWT	1791	1/08/2021	0.65	1.6%	4.0%	2.5%	2.0%	5.5%	5.5%	3.0%	4.5%	4.5%	8.0%	2.5%	3.5%	5.5%	4.5%	4.5%	4.0%
Consolidated Water Company	NDQ	CWCO	1792	1/08/2021	0.85	2.8%	5.0%	0.5%	13.5%	2.0%	0.5%	10.0%	-3.0%	-4.5%	17.0%	5.0%	0.0%	14.5%	5.0%	2.0%	2.5%
Essential Utilities, Inc.	NYSE	WTRG	1793	1/08/2021	0.95	2.3%	1.5%	0.5%	11.5%	5.0%	2.0%	5.5%	7.0%	1.5%	7.0%	7.5%	8.0%	7.5%	8.0%	9.0%	7.0%
Middlesex Water	NDQ	MSEX	1794	1/08/2021	0.75	1.5%	2.0%	2.5%	2.0%	6.0%	9.5%	5.5%	8.0%	12.0%	7.0%	2.5%	4.0%	5.5%	4.5%	6.0%	1.5%
SJW Corporation	NYSE	SJW	1795	1/08/2021	0.85	1.9%	3.0%	2.0%	5.5%	6.0%	3.5%	4.5%	7.5%	4.5%	10.5%	6.0%	9.0%	7.0%	7.5%	12.0%	5.5%
York Water	NDQ	YORW	1796	1/08/2021	0.8	1.6%	3.0%	2.5%	5.0%	6.0%	5.5%	7.0%	6.0%	6.0%	7.0%	3.0%	4.0%	6.0%	4.5%	4.0%	4.0%
Minimum					0.65	1.50%	1.50%	0.00%	2.00%	2.00%	0.50%	3.00%	-3.00%	-4.50%	6.50%	2.50%	0.00%	5.50%	2.50%	2.00%	1.50%
wtd Mean					0.79	1.89%	3.06%	1.69%	6.13%	6.19%	4.44%	6.13%	10.63%	4.44%	8.94%	6.31%	5.81%	8.00%	5.25%	5.69%	4.38%
Mean					0.83	1.70%	3.00%	2.25%	5.00%	6.00%	4.50%	6.00%	7.25%	4.75%	7.50%	5.50%	5.75%	7.25%	4.75%	4.25%	4.50%
Median					0.95	2.80%	5.00%	3.00%	13.50%	13.00%	9.50%	10.00%	45.50%	12.00%	17.00%	16.00%	10.50%	14.50%	8.00%	12.00%	7.00%
Maximum																					

Capital Assets Pricing Model (CAPM) - The CAPM method estimates the cost of equity capital by quantifying the premium, or additional return required to entice investors to purchase equities, over an investment in which the investors would receive riskless return like that from a long-term U.S. government security.

The mathematical form of this model is:

Capital Asset Pricing Model:

$$r_e = r_f + B_c(r_p) + r_s + r_i$$

where:

B_c is an estimation of the subject Company's risk premium relative to the risk premium of the entire market. In these equity cost estimating methods the risk premium of the entire market is defined as unity or $B_m = 1.0$.

The inputs to this model are developed from an analysis of the financial markets. The risk-free government securities rate (rf) is readily available from financial sources; we have used the risk-free rate at the study date of 5.21% as determined from the average long-term income returns of government bonds over the period 1926 through 2020 as detailed on table A-7 in Ibbotson Associates' 2020 Yearbooks of Stocks, Bonds, Bills, and Inflation (SBBI).

The risk premiums (r_p) and size premiums (r_s) were established based on analysis of the data presented by Ibbotson Associates and published in Ibbotson Associates' 2010 through 2020 Yearbooks of Stocks, Bonds, Bills, and Inflation (SBBI), detailing the financial market returns of stocks, bonds, U.S. Treasury Bills, and Inflation for the period 1926 through 2020.

The total market risk premium (r_p) required to entice an investor to invest in equity securities over risk-free government securities was established at 6.60% based on the Ibbotson Associates research, while the size premiums (r_s) were established at:

1.99% for mid-capitalization companies with market equity capitalization between $2,444.7 and $13,177.8 million.

3.46% for low-capitalization companies with market equity capitalization between $451.8 and $2,444.7 million.

5.72% for micro-capitalization companies with market equity capitalization under $451.8 million.

There is no size premium (0.0%) for companies with market equity capitalization above $13,177.8 million.

Dividend Yield and Growth Model (DGM)

The dividend yield and growth model was also review in estimating the cost of equity. Two models were considered, those of:

re = Dividend Yield + Dividend Growth

re = Dividend Yield + Earnings Growth

Cost of Equity Conclusion - Based on these procedures the cost of equity using previous described cost of equity estimating techniques the cost of equity was determined as follows:

Value Line Investment Surveys
Water Industry
As of First Quarter 2021 (1-1-2021)

Cost of Equity Dividend Growth Model

Dividend 1.89% mean Col 7

Growth	Past 10 yrs	Past 5 yrs	Est'd 16-18 to 22-24	Beta
Revenues	3.06%	1.69%	6.13%	
Cash Flow	6.00%	4.44%	6.13%	
Earnings	10.63%	4.44%	8.94%	
Dividends	5.50%	5.81%	8.00%	
Book Value	4.75%	5.69%	4.38%	Input 0.79
Mean	5.99%	4.41%	6.71%	Min-Max 0.65-0.95

Growth 6.71% AUS Input

Cost of Equity Dividend Growth Model

Dividend	1.89%
Growth	6.71%
Cost of Equity	8.60%

Cost of Equity Capital Asset Pricing Model (CAPM)

Risk Free Rate			5.21% Input	Long term Government Bonds Income Return SBBI (Mean)
Risk Premium				
Beta			0.79	
Risk Premia	6.60%	Input SBBI	6.60% Input	$r_p=r_m-r_f$ per PA PUC
Size Premia			$ Millions	$ Millions
Micro	5.72%	Input SBBI	-	451.8
Small	3.46%	Input SBBI	451.8	2,444.7
Mid	1.99%	Input SBBI	2,444.7	13,177.8
Large	0.00%	Input SBBI	13,177.8	
Size Premia			0.00% Input	
Cost of Equity			10.45%	

Cost of Equity		
Dividend Growth Model	8.60%	
Capital Asset Pricing Model (CAPM)	10.45%	
Mean	9.53%	
Issuance Cost PUFT 2008-2019	3.60%	
Final Cost of Equity	9.88%	

Pennsylvania PUC
Bureau of Technical Utility Services
Report on the Quarterly Earnings
of Jurisdictional Utilities
31-Dec-20

9.85%

Cost of Equity	9.85% AUS Input Jurisdictional Exception
Growth	6.71% Input from Growth Above
Inflation	1.82% SBBI Last 5-years

Equity issuance cost (f) of 3.60% was determined based on analysis annual Public Utility Financing Tracker reports over the period 2008 through 2019 published by PUFT, Inc. The final market cost of equity of 9.88% was determined for the water industry using the following formula which incorporates the above-described issuance costs:

$K_e = K_{e'} / (100\% - f)$

where:

K_e =Cost of equity recognizing issuance costs

$K_{e'}$ is the market cost of equity without consideration of issuance costs (9.85%)

f is the cost of issuance as a percentage of the equity par value (3.60%)

$K_e = 9.53\% / (100\% - 3.60\%)$

$K_e = 9.88\%$

An equity cost of 9.85% was used in the determination of the cost of capital based on the determination of Pennsylvania PUC's Bureau of Technical Utility Services (TUS) Report on Quarterly Earnings of Jurisdictional Utilities for year-ending December 31, 2020.

Tax Rate

The tax rate was determined at 28.89% (State and Federal) based on the Value Line Investment Survey as follows:

1	2	3	4	5				

Value Line Investment Surveys
Water Industry
As of First Quarter 2021 (1-1-2021)

Company	Exchange	Ticker	Valueline No.	Valueline Issue	Tax Rate			
Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	2019 Input Value Line	2020 Input Value Line	2021 Input Value Line	Future 3 Years Input Value Line
American States Water	NYSE	AWR	1789	1/08/2021	22.6%	25.0%	23.0%	23.0%
American Water	NYSE	AWK	1790	1/08/2021	25.5%	21.5%	21.5%	21.0%
California Water	NYSE	CWT	1791	1/08/2021	19.1%	21.0%	21.0%	21.0%
Consolidated Water Company	NDQ	CWCO	1792	1/08/2021				
Essential Utilities, Inc.	NYSE	WTRG	1793	1/08/2021	6.6%	1.5%	3.5%	8.0%
Middlesex Water	NDQ	MSEX	1794	1/08/2021	2.8%	21.0%	21.0%	21.0%
SJW Corporation	NYSE	SJW	1795	1/08/2021	25.3%	21.0%	21.0%	21.0%
York Water	NDQ	YORW	1796	1/08/2021	13.5%	18.5%	21.0%	21.0%
Minimum					2.80%	1.50%	3.50%	8.00%
wtd Mean								
Mean					16.49%	18.50%	18.86%	19.43%
Median					19.10%	21.00%	21.00%	21.00%
Maximum					25.50%	25.00%	23.00%	23.00%

	Historical		Current	
Embedded Tax Rate	16.49%	Mean 2019	18.50%	Mean 2020
Federal Tax Rate (Marginal)	35.00%	AUS Input	21.00%	AUS Input
US 50-state average	4.91%	AUS Input	4.91%	AUS Input
Pennsylvania	9.99%	AUS Input	9.99%	AUS Input
Composite Federal and State Tax Rate	41.49%	Calculated =Federal Tax * (1-State Tax)+State Tax	28.89%	Calculated =Federal Tax * (1-State Tax)+State Tax

Capital Structure

The capital structure was determined based on the water industry market indictors published by Value Line Investment Survey published April 1, 2021, as detailed as follows:

2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Value Line Investment Surveys **Water Industry** **As of First Quarter 2021 (1-1-2021)**																				
Company	Exchange	Ticker	Valueline No.	Valueline Issue	Total Debt	Market Debt	Long Term Debt	Long Term Interest	Long Term Interest Rate (embedded)	Proportion of Debt	Book Debt	Book Equity	Preferred Stock	% Preferred	Shares Outstanding	Price per Share	Market Equity	Portion Market Equity	Capitalization	Total Market Capital
Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	(6) / (21)	Input Value Line	Input Value Line	(9) / (8)	Input Value Line	Input Value Line	Input Value Line	Input Value Line	(14) / (21)	Input Value Line	Input Value Line	Input Value Line	(18) / (21)	Input Value Line	(6)+(14)+(18)
					$s Million	%	$s Million	$s Million	%	%	%	%	$s Million	%	Shares Million	$s per Share	$s Million	%		$s Million
American States Water	NYSE	AWR	1789	1/08/2021	440.7	13.11%	440.3	25.0	5.68%	41.0%	41.0%	59.0%	0	0.00%	36.8890610	79.2	2,919.8	86.89%	Mid Cap	3,360.5
American Water	NYSE	AWK	1790	1/08/2021	10,691.0	28.27%	9,580.0	354.0	3.70%	60.0%	59.5%	40.5%	4	0.01%	181.2719950	149.7	27,127.4	71.72%	Large Cap	37,822.4
California Water	NYSE	CWT	1791	1/08/2021	1,182.1	30.44%	785.1	40.0	5.09%	50.0%	45.5%	54.5%	0	0.00%	49.8400000	54.2	2,701.8	69.56%	Mid Cap	3,883.9
Consolidated Water Company	NDQ	CWCO	1792	1/08/2021	0.1	0.07%	0.1	-		0.0%	0.0%	100.0%	0	0.00%	11.1129750	12.3	137.0	99.93%	Small Cap	137.1
Essential Utilities, Inc.	NYSE	WTRG	1793	1/08/2021	5,444.0	32.51%	5,191.0	196.0	3.78%	53.0%	53.0%	47.0%	0	0.00%	245.2717270	46.1	11,302.1	67.49%	Large Cap	16,746.1
Middlesex Water	NDQ	MSEX	1794	1/08/2021	278.2	18.01%	234.5	7.2	3.07%	42.0%	44.5%	55.5%	2.4	0.16%	17.4694100	72.4	1,264.4	81.84%	Mid Cap	1,545.0
SJW Corporation	NYSE	SJW	1795	1/08/2021	1,379.5	41.17%	1,307.6	50.0	3.82%	60.0%	58.0%	42.0%	0	0.00%	28.5521770	69.0	1,971.2	58.83%	Mid Cap	1,545.0
York Water	NDQ	YORW	1796	1/08/2021	116.8	15.95%	116.8	5.5	4.71%	45.0%	44.0%	56.0%	0	0.00%	13.0492370	47.2	615.4	84.05%	Small Cap	732.2
Total					19,532.4	28.90%	17,655.4	677.7	3.84%				6.4	0.01%			48,039.2	71.09%		67,578.0
Minimum						0.07%			3.07%	0.00%	0.00%	40.50%		0.00%				58.83%		
wtd Mean						28.90%			3.84%					0.01%				71.09%		
Mean						22.44%			4.26%	43.88%	43.19%	56.81%		0.02%				77.54%		
Median						23.14%			3.82%	47.50%	45.00%	55.00%		0.00%				76.78%		
Maximum						41.17%			5.68%	60.00%	59.50%	100.00%		0.16%				99.93%		

In arriving at the capital structure, the market capital structure was used in developing the market cost of capital while an embedded capital structure was used in developing the required return on rate base as follows:

Water Industry Capital Structure

Capital Structure	Market Proportion	Market Reference	Embedded Proportion	Embedded Reference
Debt	28.90%	wtd mean col 7	43.88%	mean col 11
Preferred	0.01%	wtd mean col 15	0.02%	mean col 15
Equity	71.09%	wtd mean col 19	56.81%	mean col 13
Total	100.00%		100.71%	
Use				
Debt	29%	AUS Input	44%	AUS Input Jurisdictional Execption
Equity	71%	AUS Input	56%	AUS Input Jurisdictional Execption
Total	100%		100%	

Market Cost of Capital and Required Return on Rate Base

Using the above-described cost of debt and equity, the rate of returned required for an investment in property similar to the Company's was determined to be 7.57% as follows:

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Discount Rate)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	After-tax Market Capital Cost (2)*(3)*(4a)
Debt	29%	Market	2.79%	Market	28.89%	71.11%	0.58%
Equity	71%	Market	9.85%	Market	0.0%	100.0%	6.99%
Total Capital r	100.0%						7.57%
Growth (g)							1.82%
Rate without Growth: [(1+r)/(1+g)]-1							5.65%

While the require return on rate base was determined to be 7.16 follows:

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Rate of Return on Rate Base)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	Required Return on Rate Base (2)*(3)
Debt	44%	Embedded	3.84%	Embedded	Not Applicable	Not Applicable	1.69%
Equity	56%	Embedded	9.85%	Market	Not Applicable	Not Applicable	5.52%
Total Capital r	**100.0%**						**7.21%**
Growth (g)						Not Applicable	**0.00%**
Rate without Growth: [(1+r)/(1+g)]-1							**7.21%**

The statistics supporting these findings can be found in the Cost of Capital section of this report.

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Discount Rate)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	After-tax Market Capital Cost (2)*(3)*(4a)
Debt	29%	Market	2.79%	Market	28.89%	71.11%	0.58%
Equity	71%	Market	9.85%	Market	0.0%	100.0%	6.99%
Total Capital r	**100.0%**						**7.57%**
Growth (g)							**1.82%**
Rate without Growth: [(1+r)/(1+g)]-1							**5.65%**

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Capitlization Rate)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	Market Capital Cost (2)*(3)
Debt	29%	Market	2.79%	Market	Not Applicable	Not Applicable	0.81%
Equity	71%	Market	9.85%	Market	Not Applicable	Not Applicable	6.99%
Total Capital r	**100.0%**						**7.80%**
Growth (g)							**1.82%**
Rate without Growth: [(1+r)/(1+g)]-1							**5.87%**

Water and Wastewater Cost of Capital
First Quarter 2021 (0-01-2021)

As an Investor-Owned Utility

Weighted Cost of Capital (Rate of Return on Rate Base)

(1)	(2)	(2a)	(3)	(3a)	(4)	(4a)	(5)
	Portion of Capital AUS Input	Type of Data	Capital Cost AUS Input	Type of Data	Tax Rate	Tax affect on cost of capital	Required Return on Rate Base (2)*(3)
Debt	44%	Embedded	3.84%	Embedded	Not Applicable	Not Applicable	1.69%
Equity	56%	Embedded	9.85%	Market	Not Applicable	Not Applicable	5.52%
Total Capital r	**100.0%**						**7.21%**
Growth (g)						Not Applicable	**0.00%**
Rate without Growth: [(1+r)/(1+g)]-1							**7.21%**

S:\water industry\East Whiteland Township\East Whiteland Wastewater System Valuation as of 1-8-2021

1	2	3	4	5
Value Line Investment Surveys **Water Industry** **As of First Quarter 2021 (1-1-2021)**	S&P Debt Rating	Long Term Debt	Long Term Interest	Long Term Interest Rate (embedded)
		Input Value Line	Input Value Line	(4) / (3)
American States Water		440.3	25.0	5.68%
American Water	Baa1	9,580.0	354.0	3.70%
California Water		785.1	40.0	5.09%
Consolidated Water Company		0.1	-	
Essential Utilities, Inc.	Baa2	5,191.0	196.0	3.78%
Middlesex Water		234.5	7.2	3.07%
SJW Corporation		1,307.6	50.0	3.82%
York Water		116.8	5.5	4.71%
		17,655.4	677.7	3.84%
Minimum				3.07%
wtd Mean				3.84%
Mean				4.26%
Median				3.82%
Maximum				5.68%

Debt Rating and Cost of Debt

Embedded	3.84%	wtd mean col 5
Rating (S&P)	A	Input
Market Cost of Debt @Bond Rating		
Value Line Selected Yields	2.76%	Input
Use	2.76%	AUS Input
Issuance Cost PUFT Data 2018-2019	0.90%	Input
Final Cost of Debt	2.79%	

Value Line Analysis

S:\water industry\East Whiteland Township\East Whiteland Wastewater System Valuation as of 1-8-2021

1	2	3	4	5	6	7	8		9		10		11	12		13		14		15		16	17
Value Line Investment Surveys **Water Industry** **As of First Quarter 2021 (1-1-2021)**								Revenues			Cash Flows				Earnings			Dividends			Book Value		
Company Input Value Line	Exchange Input Value Line	Ticker Input Value Line	Valueline No. Input Value Line	Valueline Issue Input Value Line	Beta Input Value Line	Divided Input Value Line	Past 10 yrs Input Value Line	Past 5 yrs Input Value Line	Past 3 Years to Future 3 Years Input Value Line	Past 10 yrs Input Value Line	Past 5 yrs Input Value Line	Past 3 Years to Future 3 Years Input Value Line	Past 10 yrs Input Value Line	Past 5 yrs Input Value Line	Past 3 Years to Future 3 Years Input Value Line	Past 10 yrs Input Value Line	Past 5 yrs Input Value Line	Past 3 Years to Future 3 Years Input Value Line	Past 10 yrs Input Value Line	Past 5 yrs Input Value Line	Past 3 Years to Future 3 Years Input Value Line
American States Water	NYSE	AWR	1789	1/08/2021	0.65	1.8%	3.0%	0.0%	5.0%	6.0%	3.0%	7.0%	9.5%	5.0%	6.5%	8.0%	7.5%	9.5%	5.5%	4.0%	5.5%
American Water	NYSE	AWK	1790	1/08/2021	0.85	1.6%	3.0%	3.0%	4.5%	13.0%	6.0%	6.5%	45.5%	6.5%	8.5%	16.0%	10.5%	8.5%	2.5%	4.0%	5.0%
California Water	NYSE	CWT	1791	1/08/2021	0.65	1.6%	4.0%	2.5%	2.0%	5.5%	5.5%	3.0%	4.5%	4.5%	8.0%	2.5%	3.5%	5.5%	4.5%	4.5%	4.0%
Consolidated Water Company	NDQ	CWCO	1792	1/08/2021	0.85	2.8%	5.0%	0.5%	13.5%	2.0%	0.5%	10.0%	-3.0%	-4.5%	17.0%	5.0%	0.0%	14.5%	5.0%	2.0%	2.5%
Essential Utilities, Inc.	NYSE	WTRG	1793	1/08/2021	0.95	2.3%	1.5%	0.5%	11.5%	5.0%	2.0%	5.5%	7.0%	1.5%	7.0%	7.5%	8.0%	7.5%	8.0%	9.0%	7.0%
Middlesex Water	NDQ	MSEX	1794	1/08/2021	0.75	1.5%	2.0%	2.5%	2.0%	6.0%	9.5%	5.5%	8.0%	12.0%	7.0%	2.5%	4.0%	5.5%	4.5%	6.0%	1.5%
SJW Corporation	NYSE	SJW	1795	1/08/2021	0.85	1.9%	3.0%	2.0%	5.5%	6.0%	3.5%	4.5%	7.5%	4.5%	10.5%	6.0%	9.0%	7.0%	7.5%	12.0%	5.5%
York Water	NDQ	YORW	1796	1/08/2021	0.8	1.6%	3.0%	2.5%	5.0%	6.0%	5.5%	7.0%	6.0%	6.0%	7.0%	3.0%	4.0%	6.0%	4.5%	4.0%	4.0%
Minimum					0.65	1.50%	1.50%	0.00%	2.00%	2.00%	0.50%	3.00%	-3.00%	-4.50%	6.50%	2.50%	0.00%	5.50%	2.50%	2.00%	1.50%
wtd Mean					0.79	1.89%	3.06%	1.69%	6.13%	6.19%	4.44%	6.13%	10.63%	4.44%	8.94%	6.31%	5.81%	8.00%	5.25%	5.69%	4.38%
Mean					0.83	1.70%	3.00%	2.25%	5.00%	6.00%	4.50%	6.00%	7.25%	4.75%	7.50%	5.50%	5.75%	7.25%	4.75%	4.25%	4.50%
Median					0.95	2.80%	5.00%	3.00%	13.50%	13.00%	9.50%	10.00%	45.50%	12.00%	17.00%	16.00%	10.50%	14.50%	8.00%	12.00%	7.00%
Maximum																					

Value Line Investment Surveys
Water Industry
As of First Quarter 2021 (1-1-2021)

Cost of Equity Dividend Growth Model

Dividend **1.89%** mean Col 7

Cost of Equity Capital Asset Pricing Model (CAPM)

Growth	Past 10 yrs	Past 5 yrs	Est'd 16-18 to 22-24	Beta	
Revenues	3.06%	1.69%	6.13%		
Cash Flow	6.00%	4.44%	6.13%		
Earnings	10.63%	4.44%	8.94%		
Dividends	5.50%	5.81%	8.00%		
Book Value	4.75%	5.69%	4.38%	Input	Min-Max
Mean	5.99%	4.41%	6.71%	0.79	0.65-0.95

Growth **6.71%** AUS Input

Cost of Equity Dividend Growth Model

Cost of Equity Capital Asset Pricing Model (CAPM)

Dividend	1.89%				
Growth	6.71%				
Cost of Equity	8.60%				
		Risk Free Rate		5.21% Input	Long term Government Bonds Income Return SBBI (Mean)
		Risk Premium			
		Beta		0.79	
		Risk Premia	6.60% Input SBBI	6.60% Input	$r_o=r_m-r_f$ per PA PUC
		Size Premia		$ Millions	$ Millions
		Micro	5.72% Input SBBI	-	451.8
		Small	3.46% Input SBBI	451.8	2,444.7
		Mid	1.99% Input SBBI	2,444.7	13,177.8
		Large	0.00% Input SBBI	13,177.8	
		Size Premia		0.00% Input	
		Cost of Equity		10.45%	

Cost of Equity		
Dividend Growth Model	8.60%	
Capital Asset Pricing Model (CAPM)	10.45%	
Mean	9.53%	
Issuance Cost PUFT 2008-2019	3.60%	
Final Cost of Equity	9.88%	
		9.85%

Pennsylvania PUC
Bureau of Technical Utility Services
Report on the Quarterly Earnings
of Jurisdictional Utilities
31-Dec-20

Cost of Equity	9.85%	AUS Input Jurisdictional Exception
Growth	6.71%	Input from Growth Above
Inflation	1.82%	SBBI Last 5-years

Value Line Analysis

S:\water industry\East Whiteland Township\East Whiteland Wastewater System Valuation as of 1-8-2021

1	2	3	4	5	6	7	8	9	10
Value Line Investment Surveys **Water Industry** **As of First Quarter 2021 (1-1-2021)**									
Company	Exchange	Ticker	Valueline No.	Valueline Issue	Total Return				
					1 year	3 Years	3 years annualized	5 Years	5 years annualized
Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	Calculation	Input Value Line	Calculation
							=((1+3 year Total Return)^(1/3))-1		=((1+5 year Total Return)^(1/5))-1
American States Water	NYSE	AWR	1789	1/08/2021	-12.4%	34.0%	10.2%	92.8%	14.0%
American Water	NYSE	AWK	1790	1/08/2021	28.2%	76.2%	20.8%	190.9%	23.8%
California Water	NYSE	CWT	1791	1/08/2021	-2.4%	13.8%	4.4%	140.5%	19.2%
Consolidated Water Company	NDQ	CWCO	1792	1/08/2021	-32.7%	-10.2%	-3.5%	2.0%	0.4%
Essential Utilities, Inc.	NYSE	WTRG	1793	1/08/2021	4.0%	27.1%	8.3%	72.5%	11.5%
Middlesex Water	NDQ	MSEX	1794	1/08/2021	10.3%	56.1%	16.0%	194.1%	24.1%
SJW Corporation	NYSE	SJW	1795	1/08/2021	-6.0%	1.5%	0.5%	136.5%	18.8%
York Water	NDQ	YORW	1796	1/08/2021	3.2%	28.3%	8.7%	107.7%	15.7%
Total					-1.0%		8.2%		15.9%
Minimum					-32.70%		-3.52%		0.40%
wtd Mean									
Mean					-0.98%		8.17%		15.94%
Median					0.40%		8.49%		17.26%
Maximum					28.20%		20.78%		24.08%

Value Line Analysis

S:\water industry\East Whiteland Township\East Whiteland Wastewater System Valuation as of 1-8-2021

1	2	3	4	5				
Value Line Investment Surveys								
Water Industry								
As of First Quarter 2021 (1-1-2021)								
					Tax Rate			
Company	Exchange	Ticker	Valueline No.	Valueline Issue	2019	2020	2021	Future 3 Years
Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line
American States Water	NYSE	AWR	1789	1/08/2021	22.6%	25.0%	23.0%	23.0%
American Water	NYSE	AWK	1790	1/08/2021	25.5%	21.5%	21.5%	21.0%
California Water	NYSE	CWT	1791	1/08/2021	19.1%	21.0%	21.0%	21.0%
Consolidated Water Company	NDQ	CWCO	1792	1/08/2021				
Essential Utilities, Inc.	NYSE	WTRG	1793	1/08/2021	6.6%	1.5%	3.5%	8.0%
Middlesex Water	NDQ	MSEX	1794	1/08/2021	2.8%	21.0%	21.0%	21.0%
SJW Corporation	NYSE	SJW	1795	1/08/2021	25.3%	21.0%	21.0%	21.0%
York Water	NDQ	YORW	1796	1/08/2021	13.5%	18.5%	21.0%	21.0%
Minimum					2.80%	1.50%	3.50%	8.00%
wtd Mean								
Mean					16.49%	18.50%	18.86%	19.43%
Median					19.10%	21.00%	21.00%	21.00%
Maximum					25.50%	25.00%	23.00%	23.00%
	Historical		Current					
Embedded Tax Rate	16.49%	Mean 2019	18.50%	Mean 2020				
Federal Tax Rate (Marginal)	35.00%	AUS Input	21.00%	AUS Input				
US 50-state average	4.91%	AUS Input	4.91%	AUS Input				
Pennsylvania	9.99%	AUS Input	9.99%	AUS Input				
Composite Federal and State Tax Rate	41.49%	Calculated =Federal Tax * (1-State Tax)+State Tax	28.89%	Calculated =Federal Tax * (1-State Tax)+State Tax				

Value Line Analysis

S:\water industry\East Whiteland Township\East Whiteland Wastewater System Valuation as of 1-8-2021

Value Line Investment Surveys
Water Industry
As of First Quarter 2021 (1-1-2021)

	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Company		Exchange	Ticker	Valueline No.	Valueline Issue	Total Debt	Market Debt	Long Term Debt	Long Term Interest	Long Term Interest Rate (embedded)	Proportion of Debt	Book Debt	Book Equity	Preferred Stock	% Preferred	Shares Outstanding	Price per Share	Market Equity	Portion Market Equity	Capitalization	Total Market Capital
	Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	Input Value Line	(6) / (21)	Input Value Line	Input Value Line	(9) / (8)	Input Value Line	Input Value Line	Input Value Line	Input Value Line	(14) / (21)	Input Value Line	Input Value Line	Input Value Line	(18) / (21)	Input Value Line	(6)+(14)+(18)
						$s Million	%	$s Million	$s Million	%	%	%	%	$s Million	%	Shares Million	$s per Share	$s Million	%		$s Million
American States Water		NYSE	AWR	1789	1/08/2021	440.7	13.11%	440.3	25.0	5.68%	41.0%	41.0%	59.0%	0	0.00%	36.8890610	79.2	2,919.8	86.89%	Mid Cap	3,360.5
American Water		NYSE	AWK	1790	1/08/2021	10,691.0	28.27%	9,580.0	354.0	3.70%	60.0%	59.5%	40.5%	4	0.01%	181.2719950	149.7	27,127.4	71.72%	Large Cap	37,822.4
California Water		NYSE	CWT	1791	1/08/2021	1,182.1	30.44%	785.1	40.0	5.09%	50.0%	45.5%	54.5%	0	0.00%	49.8400000	54.2	2,701.8	69.56%	Mid Cap	3,883.9
Consolidated Water Company		NDQ	CWCO	1792	1/08/2021	0.1	0.07%	0.1	-		0.0%	0.0%	100.0%	0	0.00%	11.1129750	12.3	137.0	99.93%	Small Cap	137.1
Essential Utilities, Inc.		NYSE	WTRG	1793	1/08/2021	5,444.0	32.51%	5,191.0	196.0	3.78%	53.0%	53.0%	47.0%	0	0.00%	245.2717270	46.1	11,302.1	67.49%	Large Cap	16,746.1
Middlesex Water		NDQ	MSEX	1794	1/08/2021	278.2	18.01%	234.5	7.2	3.07%	42.0%	44.5%	55.5%	2.4	0.16%	17.4694100	72.4	1,264.4	81.84%	Mid Cap	1,545.0
SJW Corporation		NYSE	SJW	1795	1/08/2021	1,379.5	41.17%	1,307.6	50.0	3.82%	60.0%	58.0%	42.0%	0	0.00%	28.5521770	69.0	1,971.2	58.83%	Mid Cap	3,350.7
York Water		NDQ	YORW	1796	1/08/2021	116.8	15.95%	116.8	5.5	4.71%	45.0%	44.0%	56.0%	0	0.00%	13.0492370	47.2	615.4	84.05%	Small Cap	732.2
Total						19,532.4	28.90%	17,655.4	677.7	3.84%				6.4	0.01%			48,039.2	71.09%		67,578.0
Minimum							0.07%			3.07%	0.00%	0.00%	40.50%		0.00%				58.83%		
wtd Mean							28.90%			3.84%					0.01%				71.09%		
Mean							22.44%			4.26%	43.88%	43.19%	56.81%		0.02%				77.54%		
Median							23.14%			3.82%	47.50%	45.00%	55.00%		0.00%				76.78%		
Maximum							41.17%			5.68%	60.00%	59.50%	100.00%		0.16%				99.93%		

Water Industry Capital Structure

Capital Structure	Market Proportion	Market Reference	Embedded Proportion	Embedded Reference
Debt	28.90%	wtd mean col 7	43.88%	mean col 11
Preferred	0.01%	wtd mean col 15	0.02%	mean col 15
Equity	71.09%	wtd mean col 19	56.81%	mean col 13
Total	100.00%		100.71%	

Use		
Debt	29%	AUS Input
Equity	71%	AUS Input
Total	100%	

44%	AUS Input Jurisdictional Execption	
56%	AUS Input Jurisdictional Execption	
100%		

Decile	Recent Number of Companies	Min Size $1,000s	Max Size $1,000s	Arithmetic Mean (%)	Beta	Size Premium S&P 500	Risk Premium Beta Adjusted	Size Premium
1	191	29,025,803,000	1,966,078,882,000	11.06%	0.92	-0.75%	6.60%	-0.75%
2	186	13,178,743,000	28,808,073,000	12.82%	1.04	1.01%	6.60%	1.01%
3	210	6,743,361,000	13,177,828,000	13.66%	1.11	1.85%	6.60%	1.85%
4	218	3,861,858,000	6,710,676,000	13.67%	1.13	1.86%	6.60%	1.86%
5	255	2,445,693,000	3,836,536,000	14.19%	1.17	2.68%	6.60%	2.68%
6	246	1,591,865,000	2,444,745,000	14.82%	1.18	3.01%	6.60%	3.01%
7	306	911,586,000	1,591,765,000	15.63%	1.26	3.82%	6.60%	3.82%
8	365	451,955,000	911,103,000	15.91%	1.31	4.10%	6.60%	4.10%
9	412	190,019,000	451,800,000	16.69%	1.34	4.88%	6.60%	4.88%
10 - Smallest	569	2,194,000	189,831,000	19.64%	1.40	7.86%	6.60%	7.86%
Total	2,958							
Large-Cap 1-2	385	13,178,743,000	1,966,078,882,000	11.32%	0.94	-0.48%	6.60%	-0.74%
Mid-Cap 3-5	683	2,445,693,000	13,177,828,000	13.80%	1.13	1.99%	6.60%	1.99%
Low Cap 6-8	917	451,955,000	2,444,745,000	15.27%	1.23	3.46%	6.60%	3.46%
Micro-Cap 9-10	981	2,194,000	451,800,000	17.53%	1.35	5.72%	6.60%	5.72%
	2,966		1,982,153,255,000					
1-5	1,068	2,445,693,000	1,966,078,882,000	11.64%	0.96	-0.17%	6.60%	-0.17%
6-10	1,898	2,194,000	2,444,745,000	15.49%	1.24	3.68%	6.60%	3.68%

2021 Business Valuation Resources, LLC

Historiacl Return 1928-2020	11.81%
10-Year T Bond Average Annual Return	5.21%
Risk Premium	6.60%

BVR
What It's Worth

Cost of Capital Professional

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User Input Download User References

Specify search criteria

Company Name
AUS Consultants

Valuation Date
12/31/2020

Returns Reference – Start Year
EARLIEST YEAR YYYY

Returns Reference – End Year
2020

Returns Calculation - Mean
(•) Arithmetic
( ) Geometric

RFR ERP Size Premium IRP CoE WACC Summary

Decile	Firms			Portfolio		Size Premium	
	Count	Min size ('000)	Max Size ('000)	Annual Return	Beta	S&P 500	Beta Adjusted
1 - Largest	199	$29,025,803	$1,966,078,882	11.06%	0.92	(0.75%)	

2	186	$13,178,743	$28,808,073	12.82%	1.04	1.01%
3	210	$6,743,361	$13,177,828	13.66%	1.11	1.85%
4	218	$3,861,858	$6,710,676	13.67%	1.13	1.86%
5	255	$2,445,693	$3,836,536	14.49%	1.17	2.68%
6	246	$1,591,865	$2,444,745	14.82%	1.18	3.01%
7	306	$911,586	$1,591,765	15.63%	1.26	3.82%
8	365	$451,955	$911,103	15.91%	1.31	4.10%
9	412	$190,019	$451,800	16.69%	1.34	4.88%
10 - Smallest	569	$2,194	$189,831	19.64%	1.40	7.83%
1 through 2	385	$13,178,743	$1,966,078,882	11.32%	0.94	(0.48%)
3 through 5	683	$2,445,693	$13,177,828	13.80%	1.13	1.99%
6 through 8	917	$451,955	$2,444,745	15.27%	1.23	3.46%
9 through 10	981	$2,194	$451,800	17.53%	1.35	5.72%
1 through 5	1,068	$2,445,693	$1,966,078,882	11.64%	0.96	(0.17%)
6 through 10	1,898	$2,194	$2,444,745	15.49%	1.24	3.68%

S&P 500 Annual Return for Period 1928 - 2020 : 11.81%

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Company Name

AUS Consultants

Valuation Date

12/31/2020

Returns Reference – Start Year

EARLIEST YEAR YYYY

Returns Reference – End Year

2020

Returns Calculation - Mean

- (•) Arithmetic
- ( ) Geometric

RFR ERP Size Premium IRP CoE WACC Summary

CRSP Equity Risk Premium

6.60%	Historical ERP (10Y T-Bond) – For Period:	1928-2020
	S&P 500 Average Annual Return:	11.81%
	10-Year T-Bond Average Annual Return:	5.21%
	(Damodaran)	

5.90%	Historical ERP (20Y T-Bond) – For Period:	1928-2020
	S&P 500 Average Annual Return:	11.81%
	20-Year T-Bond Average Annual Return (Reconstructed):	5.91%

Dr. Damodaran Equity Risk Premium

6.50%	Implied ERP - As of:	2020
6.72%	Implied ERP With Sustainable Payout - As of:	2020
6.43%	Historical ERP -- For Period:	1928-2020
	S&P 500 Average Annual Return:	11.64%
	10-Year T-Bond Average Annual Return:	5.21%

Custom Equity Risk Premium

0.00%	Add Notes Here

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Company Name

AUS Consultants

Valuation Date

12/31/2020

Returns Reference – Start Year

EARLIEST YEAR YYYY

Returns Reference – End Year

2020

Returns Calculation - Mean

- (•) Arithmetic
- ( ) Geometric

RFR ERP Size Premium IRP CoE WACC Summary

Treasury Constant Maturity Rate

0.93%	10-Year Maturity - As of:	12/31/2020
1.45%	20-Year Maturity - As of:	12/31/2020

Custom Risk Free Rate

0.00% Add Notes Here

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PENNSYLVANIA PUBLIC UTILITY COMMISSION

Public Meeting held May 6, 2021

Docket Number: M-2021-3025288

BUREAU OF TECHNICAL UTILITY SERVICES

REPORT ON THE QUARTERLY EARNINGS

OF JURISDICTIONAL UTILITIES

FOR THE YEAR ENDED

December 31, 2020

Gladys Brown Dutrieuille, Chairman
David W. Sweet, Vice Chairman
John F. Coleman, Jr., Commissioner
Ralph V. Yanora, Commissioner

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* UGI Utilities, Inc. – Electric Division, PECO Energy Company – Gas Operations, Columbia Gas of Pennsylvania, Inc., and UGI Utilities, Inc. – Gas Division have rate filings at Docket Nos. R-2021-3023618, R-2020-3018929, R-2020-3018835, and R-2019-3015162 respectively, and filed a letter with the Secretary in place of a report in accordance with 52 Pa. Code § 71.4.

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Introduction:

On September 20, 1991, the Commission initiated a rulemaking at L-00910061 pertaining to earnings disclosures by the public utilities subject to its jurisdiction. At that docket, the Commission stated that the submission of accurate, reliable and complete earnings disclosure reports, at regular intervals, is essential to the fulfillment of the broad regulatory oversight responsibilities entrusted to the Commission by the Legislature in the Public Utility Code. The earnings disclosure regulations promulgated by the Commission were adopted October 1, 1992, and published January 23, 1993, at 23 Pa.B. 463. Based upon those regulations, codified at 52 Pa. Code, Chapter 71, a reporting format was developed and distributed to the jurisdictional fixed utilities of Pennsylvania.

All fixed utilities having jurisdictional revenues of $1,000,000 or more, for a calendar year, are required to file the report by March 31 of each year. Such reports are to be based upon the results of operations for the 12-month period ending December 31 of the prior year. Utilities having more than $10,000,000 in jurisdictional revenues are also required to file reports for the 12 months ending on March 31, June 30, and September 30 of each year. On November 30, 2004, however, the Pennsylvania General Assembly signed into law Act 183 concerning alternative telecommunications regulation and broadband deployment. As a result of Act 183, the reporting requirements for the PUC jurisdictional telecommunications companies of Pennsylvania have been streamlined at section 3015(e) of the Public Utility Code. A quarterly earnings report is not listed among those reports now required of PUC jurisdictional telecommunications utilities in Pennsylvania and, therefore, this report does not address telephone company earnings.

The reports have been filed for the period ended December 31, 2020.[1] The Finance Staff of the Bureau of Technical Utility Services has reviewed the reports and has prepared this summary report for public release. This report sets forth the achieved return on equity for each company, the last allowed return for that utility, a market return as determined through the analysis of the barometer group data and the most recent returns allowed, per industry, by the Pennsylvania Public Utility Commission and by other regulatory bodies. Where a utility has not filed a report, the reasons for not filing are indicated.

Questions pertaining to the preparation and contents of this Report should be directed to Ms. Erin Laudenslager, Manager - Finance, Bureau of Technical Utility Services, at (717) 705-4364.

[1] UGI Utilities, Inc. – Electric Division, PECO Energy Company – Gas Operations, Columbia Gas of Pennsylvania, Inc., and UGI Utilities, Inc. – Gas Division have rate filings at Docket Nos. R-2021-3023618, R-2020-3018929, R-2020-3018835, and R-2019-3015162 respectively, and filed a letter with the Secretary in place of a report in accordance with 52 Pa. Code § 71.4.

The equity return summaries that follow in Attachment A are, for each quarter;

ACTUAL

1. Based on actual results of operations

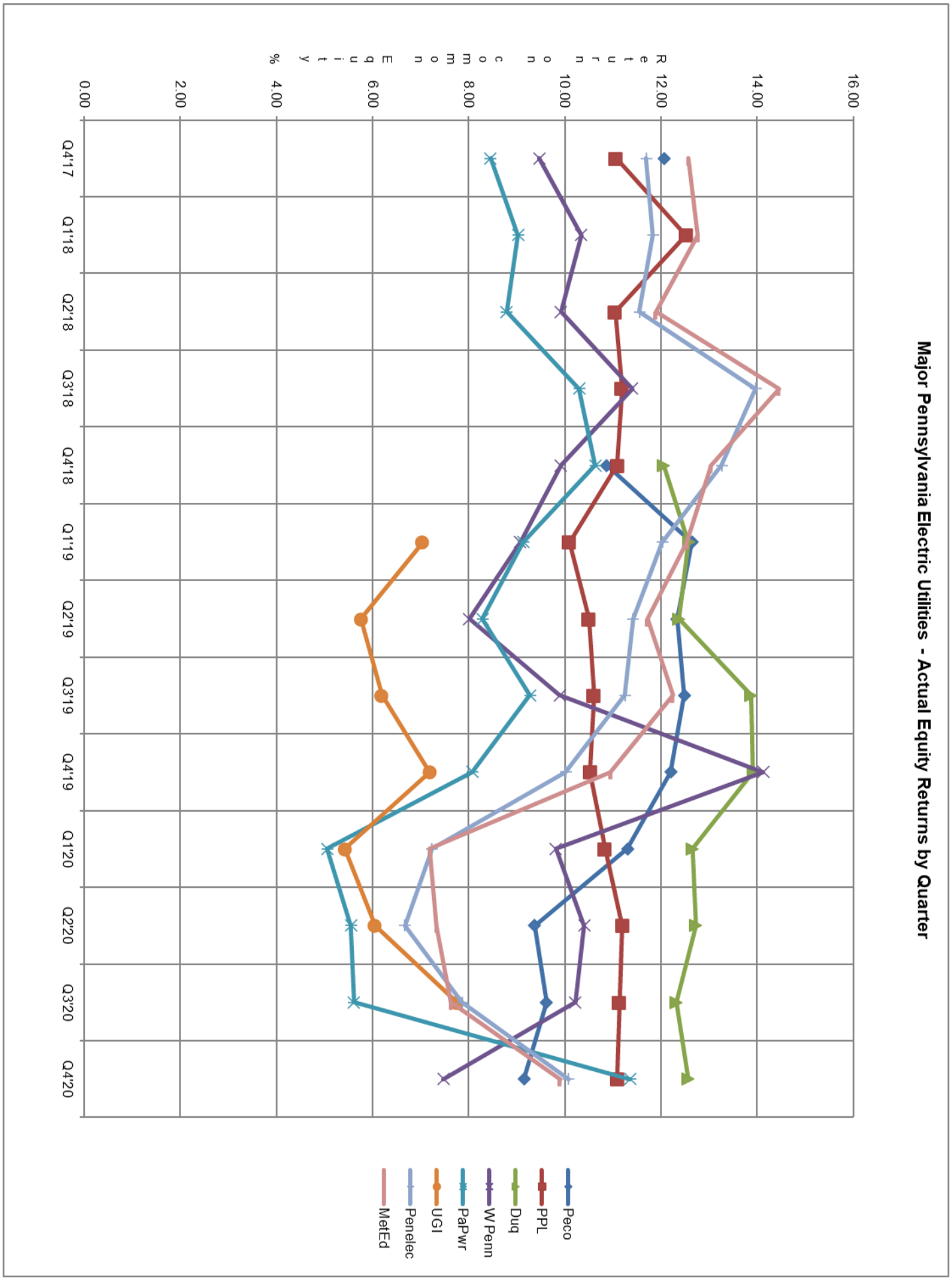
and

ADJUSTED

2. Based on company proposed pro forma and ratemaking adjustments

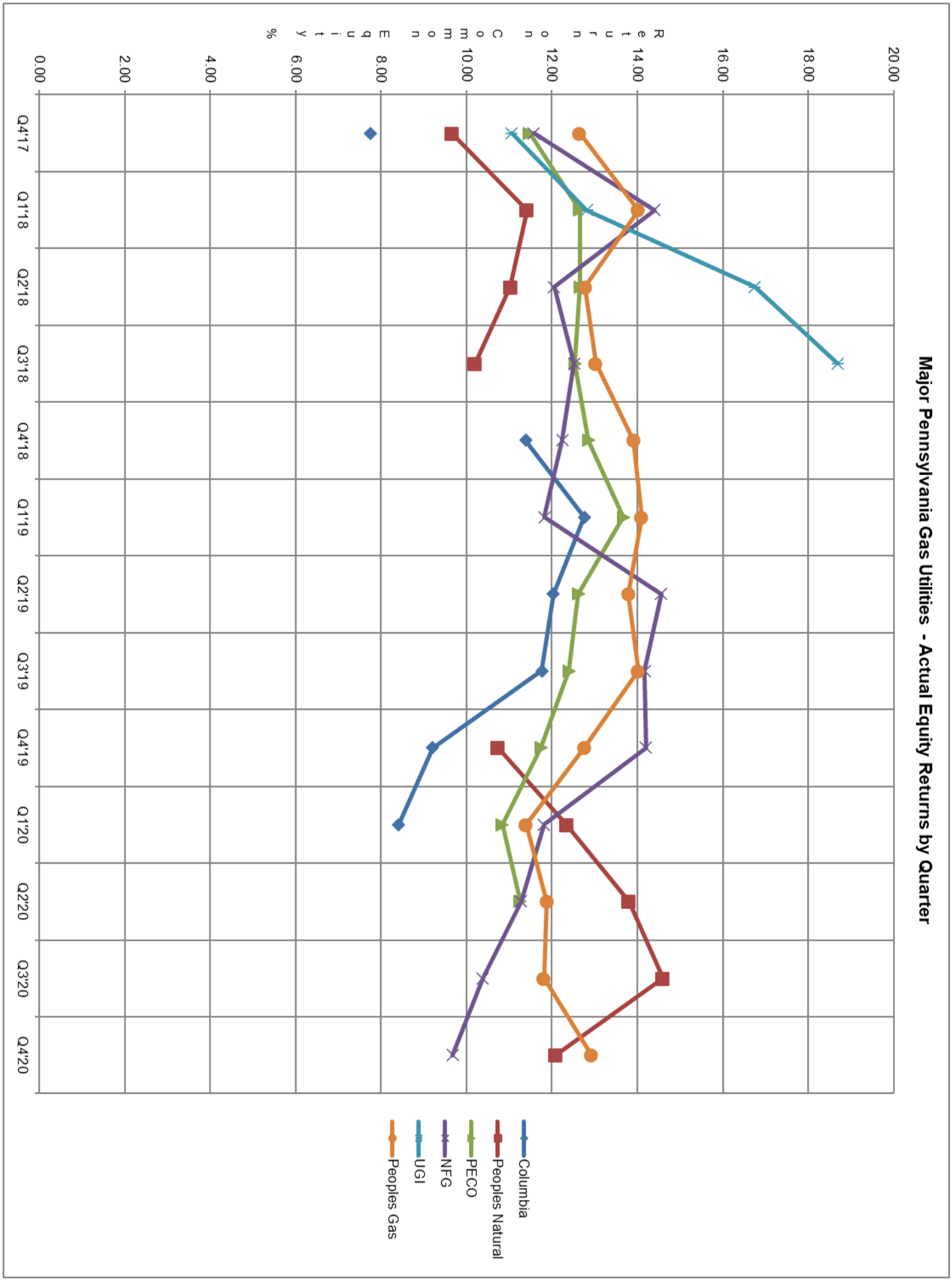
ELECTRIC UTILITIES
EQUITY RETURNS BY QUARTER

QTR END		PECO		PPL		Duq		W Penn		PaPwr		UGI		Penelec		MetEd	
		ACT	ADJ	ACT	ADJ	ACT	ADJ	ACT	ADJ	ACT	ADJ	ACT	ADJ	ACT	ADJ	ACT	ADJ
2015	1					10.08	9.65					10.88	10.39				
	2					9.80	9.42					13.57	9.49				
	3					10.11	9.73	6.45	6.45	5.77	5.77	15.93	7.57	2.94	2.94	3.69	3.69
	4	10.74	8.84	8.89	8.48	9.73	9.36	8.09	8.09	5.13	5.13	9.74	9.21	5.45	5.45	7.04	7.04
2016	1	10.86	9.74	7.75	6.94	9.87	9.89					10.41	8.69				
	2	11.46	10.15	9.15	8.51	9.57	9.47					8.29	8.10				
	3	13.42	11.44	10.15	9.59	10.12	9.46					19.18	6.99				
	4	12.52	10.65	10.45	10.29	9.71	9.01					26.07	7.30				
2017	1	13.01	11.40	9.76	8.49	9.53	8.99					22.86	6.81				
	2	12.98	11.40	10.71	9.70	9.86	9.24	8.23	7.38	7.32	7.97	21.96	6.74	9.23	9.20	9.74	9.35
	3	12.84	10.52	10.15	9.30	9.53	9.23	7.63	7.24	8.32	9.08	16.13	5.22	9.61	9.50	11.37	10.97
	4	12.07	9.11	11.07	10.63			9.47	9.12	8.46	8.19			11.70	10.93	12.58	11.67
2018	1			12.53	11.36			10.35	9.08	9.03	8.08			11.84	9.93	12.77	11.38
	2			11.05	9.49			9.92	8.52	8.79	7.57			11.56	9.39	11.90	10.26
	3			11.19	9.83			11.41	6.74	10.30	5.80			13.97	8.44	14.46	9.62
	4	10.88	7.61	11.10	10.15	12.06	9.39	9.92	6.78	10.64	7.43			13.27	9.31	13.05	7.40
2019	1	12.65	7.93	10.10	8.96	12.58	9.73	9.08	6.62	9.14	7.61	7.05	5.22	12.03	8.07	12.54	7.66
	2	12.34	7.94	10.51	8.95	12.38	9.34	8.02	5.99	8.29	7.10	5.77	3.22	11.42	8.16	11.72	7.21
	3	12.49	7.96	10.61	8.99	13.88	9.33	9.90	7.87	9.28	7.76	6.20	2.04	11.26	8.78	12.25	7.77
	4	12.21	8.50	10.53	10.40	13.92	9.08	14.13	7.07	8.08	6.90	7.20	2.38	10.02	8.54	10.96	9.27
2020	1	11.31	8.35	10.84	11.20	12.66	8.31	9.82	5.54	5.06	6.71	5.43	2.26	7.24	8.74	7.20	8.31
	2	9.38	8.17	11.20	10.81	12.73	8.56	10.41	5.53	5.56	6.55	6.06	2.01	6.68	7.94	7.34	8.04
	3	9.62	8.56	11.14	11.20	12.32	8.08	10.22	5.42	5.62	6.74	7.76	0.41	7.87	8.75	7.64	8.37
	4	9.16	7.64	11.10	11.48	12.57	8.15	7.48	5.65	11.36	7.34			10.08	8.62	9.91	8.64


Major Pennsylvania Electric Utilities - Actual Equity Returns by Quarter
Return on common equity %
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
Q4'17
Q1'18
Q2'18
Q3'18
Q4'18
Q1'19
Q2'19
Q3'19
Q4'19
Q1'20
Q2'20
Q3'20
Q4'20
Peco
PPL
Duq
W Penn
PaPwr
UGI
Penelec
MetEd

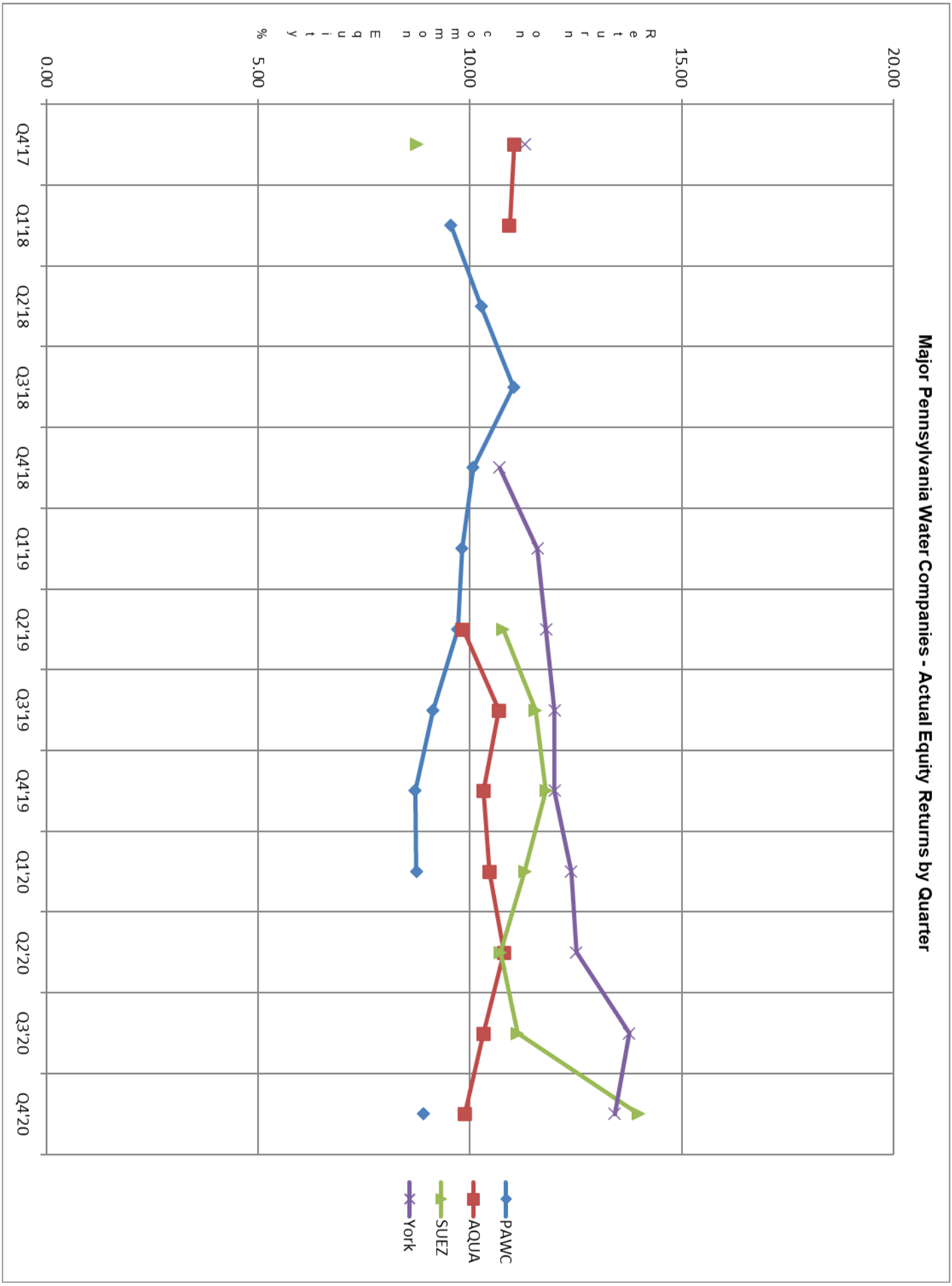
GAS UTILITIES
EQUITY RETURNS BY QUARTER

QTR		Columbia		Peoples Natural		PECO		NFG		UGI		Peoples Gas	
END		ACT	ADJ	ACT	ADJ	ACT	ADJ	ACT	ADJ	ACT	ADJ	ACT	ADJ
2015	1			14.22	7.90	14.60	13.01	20.17	10.31	15.76	7.87	16.36	11.23
	2			14.37	8.88	13.89	12.32	18.82	10.39	14.07	7.62	16.15	12.90
	3			13.55	8.14	13.29	11.77	16.41	10.27	15.67	6.51	15.69	12.58
	4	9.75	9.73	8.80	9.83	12.50	12.70	15.01	10.59			12.71	12.14
2016	1			7.01	10.02	10.73	13.58	12.60	10.97			8.54	10.48
	2			6.24	9.99	11.55	13.85	12.31	11.08			9.20	10.43
	3			6.93	9.34	12.09	14.40	13.00	10.34			9.07	12.02
	4	8.90	9.26	10.11	11.03	11.39	12.37	14.18	9.58			12.47	11.87
2017	1	10.52	10.17	9.96	9.27	11.45	12.55	12.84	9.26	21.08	10.09	11.82	12.34
	2	9.15	9.81	9.41	9.71	10.87	12.17	13.33	10.53	19.16	9.44	11.89	13.47
	3	8.15	8.77	6.69	6.40	11.26	10.92	10.92	10.00	13.34	9.03	12.04	13.36
	4	7.76	8.48	9.66	7.27	11.48	9.83	11.58	10.56	11.06	8.62	12.65	11.79
2018	1			11.42	7.00	12.65	9.77	14.40	10.20	12.82	7.90	14.02	10.17
	2			11.03	6.80	12.66	9.05	12.06	9.89	16.75	6.80	12.78	10.15
	3			10.21	7.43	12.54	8.36	12.52	10.12	18.69	8.04	13.03	10.20
	4	11.39	9.81			12.86	8.68	12.24	10.21			13.92	11.13
2019	1	12.76	10.22			13.68	9.06	11.83	10.93			14.10	10.71
	2	12.04	9.92			12.62	8.41	14.56	9.99			13.80	11.66
	3	11.77	9.85			12.40	8.31	14.17	9.75			14.02	11.63
	4	9.21	9.09	10.74	12.26	11.75	6.99	14.20	9.77			12.76	11.20
2020	1	8.42	9.11	12.34	12.34	10.84	7.68	11.82	9.92			11.40	11.07
	2			13.81	12.38	11.26	7.25	11.28	9.05			11.89	11.10
	3			14.60	12.77			10.39	8.25			11.82	11.50
	4			12.09	10.37			9.68	8.12			12.93	12.11


Major Pennsylvania Gas Utilities - Actual Equity Returns by Quarter
Return on Common Equity %
20.00
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
Q4'17
Q1'18
Q2'18
Q3'18
Q4'18
Q1'19
Q2'19
Q3'19
Q4'19
Q1'20
Q2'20
Q3'20
Q4'20
Columbia
Peoples Natural
PECO
NFG
UGI
Peoples Gas

WATER UTILITIES
EQUITY RETURNS BY QUARTER

QTR		PAWC		AQUA		SUEZ		York	
END		ACT	ADJ	ACT	ADJ	ACT	ADJ	ACT	ADJ
2015	1	10.33	9.14	12.46	11.11	9.11	9.83	12.7	12.7
	2	10.51	9.31	12.66	11.62	8.36	9.25	12.7	12.7
	3	10.06	8.81	12.41	11.95	8.39	9.37	13.6	13.6
	4	9.80	8.48	12.61	12.16	8.54	8.77	12.50	11.10
2016	1	10.12	8.68	12.31	11.71	9.27	10.19	12.40	10.90
	2	9.99	8.47	11.71	11.21	11.00	12.37	12.20	10.80
	3	9.82	8.47	11.55	10.32	8.23	9.99	12.20	11.00
	4	9.37	8.51	11.70	10.57	9.13	9.90	11.50	10.40
2017	1			11.34	10.04	9.22	9.60	11.61	9.50
	2			10.99	9.22	9.03	9.07	11.60	9.10
	3			10.99	9.23	8.57	8.57	11.60	8.70
	4			11.05	8.63	8.75	8.73	11.30	8.40
2018	1	9.55	8.97	10.94	8.41				
	2	10.27	9.65						
	3	11.03	9.48						
	4	10.08	9.03					10.70	10.30
2019	1	9.82	8.87					11.60	11.60
	2	9.72	8.90	9.84	9.04	10.78	10.36	11.80	11.80
	3	9.13	8.41	10.69	8.84	11.55	11.75	12.00	12.00
	4	8.71	8.09	10.33	8.24	11.80	12.15	12.00	9.80
2020	1	8.74	7.56	10.47	8.31	11.30	11.30	12.39	12.39
	2			10.81	8.57	10.72	10.69	12.51	12.51
	3			10.33	8.55	11.13	10.69	13.76	13.76
	4	8.90	8.15	9.89	8.30	13.98	10.17	13.42	9.94


Major Pennsylvania Water Companies - Actual Equity Returns by Quarter
Return on common Equity %
0.00
5.00
10.00
15.00
20.00
Q4'17
Q1'18
Q2'18
Q3'18
Q4'18
Q1'19
Q2'19
Q3'19
Q4'19
Q1'20
Q2'20
Q3'20
Q4'20
PAWC
AQUA
SUEZ
York

Attachment B includes:

A. Overall Returns on rate base
1. Actual
2. Company proposed pro forma and ratemaking adjustments

and

B. Equity Returns
1. Actual
2. Company proposed pro forma and ratemaking adjustments

Summary of Returns
For the Year Ended December 31, 2020

COMPANY NAME	OVERALL RETURN ACTUAL	OVERALL RETURN ADJ	EQUITY RETURN ACTUAL	EQUITY RETURN ADJ	ROE AUTH	YEAR AUTH
ELECTRIC						
$10,000,000 Revenues						
PECO Energy - Electric Operations	6.74	5.84	9.16	7.64	Settled	2018
PPL Electric Utilities Corp.	7.89	8.10	11.10	11.48	Settled	2015
Duquesne Light Company	8.74	6.37	12.57	8.15	Settled	2018
West Penn Power Company	5.83	4.87	7.48	5.65	Settled	2017
Pennsylvania Power Company	8.40	6.32	11.36	7.34	Settled	2017
UGI Utilities, Inc. - Electric Division*					9.85	2018
Pennsylvania Electric Company	7.27	6.46	10.08	8.62	Settled	2017
Metropolitan Edison Company	7.05	6.35	9.91	8.64	Settled	2017
Over $1,000,000 Revenues						
Citizens Electric Company	4.80	6.40	4.94	6.74	9.54	2020
Pike County Light & Power Co.	3.66	2.84	3.26	1.81	Settled	2014
Wellsboro Electric Company	8.45	8.45	22.88	22.88	9.31	2020
GAS						
$10,000,000 Revenues						
Columbia Gas of PA, Inc.*					9.86	2021
Peoples Natural Gas Company LLC	8.24	7.34	12.09	10.37	Settled	2019
PECO Energy - Gas Operations*					Settled	2010
National Fuel Gas Distribution Co.	7.11	6.45	9.68	8.12	Settled	2006
UGI Utilities, Inc. – Gas Division*					Settled	2020
Peoples Gas Company, LLC	7.95	7.47	12.93	12.11	Settled	2013
$1,000,000 to $10,000,000 Revenues						
North East Heat & Light Co.	10.31	10.31	10.47	10.47	11.00	2008
Valley Energy	2.46	2.57	1.51	1.67	9.73	2020
Pike County Light & Power Co.	4.62	3.85	5.74	4.25	Settled	2014
WATER						
$10,000,000 Revenues						
PA American Water Company	6.90	6.49	8.90	8.15	Settled	2021
Aqua Pennsylvania	7.05	6.18	9.89	8.30	Settled	2018
York Water Company	9.24	7.25	13.42	9.94	Settled	2019
SUEZ Water Pennsylvania, Inc.	9.56	7.48	13.98	10.17	Settled	2018
$1,000,000 to $10,000,000 Revenues						
Newtown Artesian Water Co.	12.03	10.13	16.04	12.92	Settled	2019
Columbia Water Company	4.13	4.13	3.79	3.70	Settled	2015

UGI Utilities, Inc. – Electric Division, PECO Energy Company – Gas Operations, Columbia Gas of Pennsylvania, Inc., and UGI Utilities, Inc. – Gas Division have rate filings at Docket Nos. R-2021-3023618, R-2020-3018929, R-2020-3018835, and R-2019-3015162 respectively, and filed a letter with the Secretary in place of a report in accordance with 52 Pa. Code § 71.4.

ALLOWED RATES OF RETURN ON COMMON EQUITY

This is a historical chart that shows the most recent rate cases for select companies in electric, gas, and water. A docket number followed by their final return on equity and year is also given.

ELECTRIC	**Docket Number**	**ROE (%)**	**Year**
Recent PA PUC Allowed			
Duquesne Light Company	R-2018-3000124	Settled	2018
PECO Energy Company	R-2018-3000164	Settled	2018
UGI - Electric	R-2017-2640058	9.85	2018
Pennsylvania Electric Company	R-2016-2537352	Settled	2017
Metropolitan Edison Company	R-2016-2537349	Settled	2017
Pennsylvania Power Company	R-2016-2537355	Settled	2017
West Penn Power Company	R-2016-2537359	Settled	2017
Current Market Indicated ROE as calculated by the Bureau of Technical Utility Services.			**7.10-10.08**

GAS			
Recent PA PUC Allowed			
Columbia Gas of Pa.	R-2020-3018835	9.86	2021
UGI Utilities, Inc. – Gas Division	R-2019-3015162	Settled	2020
Peoples Natural Gas Company	R-2018-3006818	Settled	2019
PECO Energy	R-2010-2161592	Settled	2010
Peoples Gas Company	R-2013-2355886	Settled	2013
Current Market Indicated ROE as calculated by the Bureau of Technical Utility Services.			**8.24-9.84**

WATER			
Recent PA PUC Allowed			
Aqua Pennsylvania	R-2018-3003558	Settled	2018
PA American Water	R-2020-3019369	Settled	2021
Columbia Water	R-2017-2598203	Settled	2017
York Water	R-2018-3000019	Settled	2019
SUEZ Water	R-2018-3000834	Settled	2018
Current Market Indicated ROE as calculated by the Bureau of Technical Utility Services.			**6.55-11.16**

Distribution System Improvement Charge (DSIC) Eligible Utilities
Return on Equity (ROE) Summary

	Utility Adjusted ROE[2] (%)	Commission Approved ROE[3] (%)
ELECTRIC		
PECO Energy – Electric Operations	7.64	9.45
PPL Electric Utilities Corp.	11.48	9.45
Duquesne Light Company	8.15	9.45
West Penn Power Company	5.65	9.45
Pennsylvania Power Company	7.34	9.45
Pennsylvania Electric Company	8.62	9.45
Metropolitan Edison Company	8.64	9.45
UGI Utilities, Inc.- Electric Division*		9.45
GAS		
Columbia Gas of PA, Inc.*		9.86
Peoples Natural Gas Company LLC	10.37	10.20
PECO Energy – Gas Operations*		10.20
Peoples Gas Company, LLC	12.11	10.20
UGI Utilities, Inc. – Gas Division*		10.20
WATER		
PA American Water Company	8.15	9.85
PA American – Wastewater	8.15	9.85
AQUA Pennsylvania	8.30	9.85
AQUA Pennsylvania – Wastewater	8.30	9.85
York Water Company	9.94	9.85
SUEZ Water Pennsylvania Inc.	10.17	9.85
Columbia Water Company	3.70	9.85
Newtown Artesian Water	12.92	9.85

* UGI Utilities, Inc. – Electric Division, PECO Energy Company – Gas Operations, Columbia Gas of Pennsylvania, Inc., and UGI Utilities, Inc. – Gas Division have rate filings at Docket Nos. R-2021-3023618, R-2020-3018929, R-2020-3018835, and R-2019-3015162 respectively, and filed a letter with the Secretary in place of a report in accordance with 52 Pa. Code § 71.4.

2 Each utility lists adjustments on Schedule B of their quarterly financial report.

3 The ROE is approved in a utility's most recent fully litigated base rate proceeding for which a final order was entered not more than two years prior to the effective date of the DSIC. If more than two years have elapsed between the entry of a final order and the DSIC effective date, the ROE is from this report. If the base rate proceeding is settled, without a stipulated ROE, the ROE is from this report.

Explanation of Discounted Cash Flow (DCF) and Capital Asset Pricing Model (CAPM)

Barometer Group Criteria

The criteria used for determining the industry barometer groups used to calculate ROEs in this report are as follows:

- 50% or more of the company's assets must be related to the jurisdictional utility industry;
- The company's stock must be publicly traded;
- Companies involved in merger & acquisition activity will be excluded;
- Investment information for the company must be available to the Commission from more than one source; and
- Geographic Regions:
  EDCs: *Value Line* East, Central, and West Group Electric Utility companies;
  NGDCs: *Value Line* Investment Survey's Natural Gas Utility industry group companies;
  Water/Wastewater: *Value Line* Investment Survey's Water Utility industry group companies.

The barometer group companies are reviewed by staff on a quarterly basis and make any changes to these companies based upon the criteria above.

ROE Calculations

The Commission consistently uses the DCF model to determine the appropriate cost of equity for utilities. In this report, the DSIC ROE is calculated using two DCF models.

TUS uses the following formula to calculate the current dividend DCF: $K = D_1/P_0 + G$

TUS uses the following formula to calculate the 52-week average dividend DCF: $K = D_0/P_a + G$

Definitions:

K	=	Cost of equity
D_1	=	Dividend expected during the year
	=	$D_0 + ½g$
D_0	=	Latest indicated dividend, obtained from Yahoo! Finance
g	=	Expected 5-year dividend growth rate of barometer group obtained from Value Line Investment Survey.
P_0	=	Current price of the stock, obtained from Yahoo! Finance
P_a	=	Average of high and low stock price over the latest 52-week period, obtained from Yahoo! Finance
G	=	Average of 5-year expected earnings growth rate forecasts obtained from Value Line, Zacks Investment Survey, Yahoo! Finance, and Morningstar.

The CAPM uses the yield of a risk-free interest-bearing obligation plus a rate of return premium that is proportional to the systematic risk of an investment.

TUS uses the following formula to calculate CAPM: $K = \beta(R_m - R_f)$

Three components are necessary to calculate the CAPM cost of equity:

β	=	Beta, a measure of systematic risk for each stock
R_f	=	The risk-free rate of return, 10-year U.S. Treasury yields are used for R_f. Yields are taken from the previous two quarters and forecasted next four quarters.
R_m	=	Total return of the equity market as determined by the SBBI Yearbook

The Commission determines the ROE used for DSIC purposes based on the range of reasonableness from the DCF barometer group data, CAPM data, recent ROEs adjudicated by the Commission, and informed judgment.

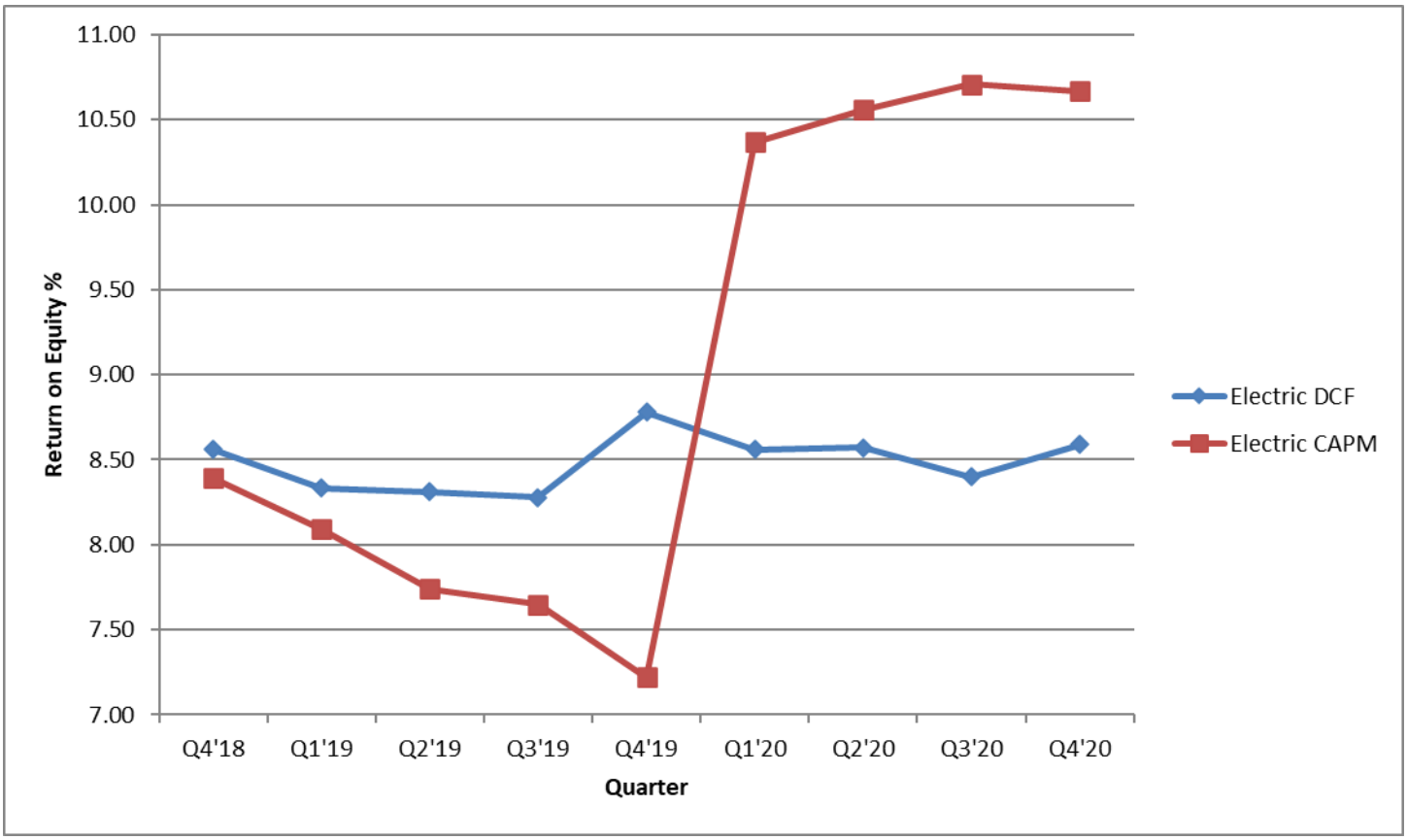
The market indicated common equity cost rate range consists of data used from the barometer groups and is based on a series of calculations to average the DCF methods.

Market Based Returns on Common Equity[1]	
April 15, 2021	
Electric Company Barometer Group	
	Cost Rates
	%
(1) Current DCF:	8.47
(2) 52-Week Average DCF:	8.72
(3) Overall DCF ((1) + (2)) / 2 :	8.59
(4) Market Indicated Common Equity Cost Rate Range:	7.10-10.08
@ 1 standard deviation around the mean.[2]	
(5) CAPM Check of DCF Reasonableness:	10.67
(6) Recent Commission Approved ROEs[3]:	*
*None within last two years	
(7) Distribution System Improvement Charge (DSIC) Return[4]:	**9.45%**
[1] As calculated by the Bureau of Technical Utility Services	
[2] Standard Deviation of 56 DCF observations	
[3] Base rate case ROEs within last two years, fully litigated or stipulated for DSIC purposes	
[4] Commission authorized Return on Equity (ROE) for DSIC purposes	
Any questions concerning DSIC should be directed to Marc Hoffer	
of the Bureau of Technical Utility Services at (717) 787-1869.	

Historic Electric Industry Barometer Group DCF and CAPM Average ROEs

Electric		
	DCF	CAPM
Q4'18	8.56	8.39
Q1'19	8.33	8.09
Q2'19	8.31	7.74
Q3'19	8.28	7.65
Q4'19	8.78	7.22
Q1'20	8.56	10.37
Q2'20	8.57	10.56
Q3'20	8.40	10.71
Q4'20	8.59	10.67

Chart of Historic Electric Industry DCF and CAPM Average ROEs



Barometer electric companies are used to calculate a current DCF in the first chart. The second chart demonstrates the companies 52-week average DCF. A final average of the two calculations is also shown at the bottom.

Electric Company Barometer Group

Calculation of a Current Dividend Yield

	Closing Market Price (Po) 4/15/2021 ($)	Latest Indicated Dividend (Do) ($)	Ind. Div. Plus 1/2 Div. Growth Rate (D1) ($)	Current Dividend Yield(D1/Po) (%)	DCF (%)
Allete, Inc.	70.01	2.52	2.56	3.66	10.16
Alliant Energy Corp	55.68	1.61	1.67	2.99	8.87
Ameren Corp	85.38	2.20	2.28	2.67	9.72
American Electric Power	87.81	2.96	3.04	3.46	9.50
AVANGRID, Inc.	52.58	1.76	1.77	3.37	9.77
Avista Corp	47.70	1.69	1.72	3.61	8.55
CMS Energy Corp	63.40	1.74	1.80	2.84	10.02
Consolidated Edison	77.19	3.10	3.15	4.08	6.66
DTE Energy Company	139.48	4.34	4.48	3.21	7.08
Duke Energy Company	99.75	3.86	3.91	3.92	8.69
Edison International	61.44	2.65	2.70	4.40	6.43
Entergy Corp.	105.59	3.80	3.89	3.68	8.10
Eversource Energy	88.79	2.41	2.48	2.80	9.78
Exelon Corp	45.77	1.53	1.57	3.43	5.05
Fortis Inc.	43.66	1.59	1.64	3.75	8.85
IDACORP, Inc..	100.49	2.84	2.93	2.92	6.42
MGE Energy, Inc.	73.83	1.48	1.52	2.06	6.69
NextEra Energy, Inc.	80.18	1.54	1.62	2.02	10.99
NorthWestern Corp	68.18	2.48	2.53	3.71	7.54
OGE Energy Corp	33.40	1.61	1.65	4.93	8.83
Otter Tail Corp	47.22	1.56	1.60	3.39	11.39
Pinnacle West Capital Corp	84.47	3.32	3.42	4.05	7.80
Portland General Electric Co.	50.14	1.63	1.68	3.35	7.30
PPL Corporation	28.99	1.66	1.67	5.77	8.32
Public Service Enterprise Group	62.40	2.04	2.08	3.33	7.05
Southern Company	64.49	2.56	2.60	4.03	9.23
WEC Energy Group, Inc.	95.94	2.71	2.80	2.92	9.24
Xcel Energy Inc.	69.96	1.83	1.88	2.69	8.87
Group Average	70.85	2.32	2.38	3.47	8.46
Group Average G				5.00	
DCF				**8.47**	

Electric Company Barometer Group 52-week Average Dividend Yield Calculation						
	High	Low	Average (Pa)	Latest Indicated Dividend (Do)	Average Dividend Yield (Do/Pa)	DCF
	($)	($)	($)	($)	(%)	(%)
Allete, Inc.	72.60	48.22	60.41	2.52	4.17	10.67
Alliant Energy Corp	58.10	44.36	51.23	1.61	3.14	9.02
Ameren Corp	86.90	66.33	76.62	2.20	2.87	9.92
American Electric Power	94.21	74.80	84.51	2.96	3.50	9.54
AVANGRID, Inc.	56.20	38.78	47.49	1.76	3.71	10.11
Avista Corp	49.14	32.26	40.70	1.69	4.15	9.09
CMS Energy Corp	67.98	52.35	60.17	1.74	2.89	10.07
Consolidated Edison	90.00	65.56	77.78	3.10	3.99	6.57
DTE Energy Company	140.79	92.39	116.59	4.34	3.72	7.58
Duke Energy Company	100.90	77.58	89.24	3.86	4.33	9.10
Edison International	66.68	48.47	57.58	2.65	4.60	6.64
Entergy Corp.	113.36	85.78	99.57	3.80	3.82	8.24
Eversource Energy	96.66	73.61	85.14	2.41	2.83	9.82
Exelon Corp	46.15	33.97	40.06	1.53	3.82	5.43
Fortis Inc.	44.25	35.53	39.89	1.59	3.99	9.09
IDACORP, Inc..	102.96	78.91	90.94	2.84	3.12	6.62
MGE Energy, Inc.	74.53	56.25	65.39	1.48	2.26	6.90
NextEra Energy, Inc.	87.69	55.65	71.67	1.54	2.15	11.12
NorthWestern Corp	69.81	47.43	58.62	2.48	4.23	8.06
OGE Energy Corp	35.24	27.96	31.60	1.61	5.09	8.99
Otter Tail Corp	47.80	35.36	41.58	1.56	3.75	11.75
Pinnacle West Capital Corp	91.88	69.29	80.59	3.32	4.12	7.87
Portland General Electric Co.	51.14	31.96	41.55	1.63	3.92	7.87
PPL Corporation	30.94	23.71	27.33	1.66	6.08	8.63
Public Service Enterprise Group	63.38	43.87	53.63	2.04	3.80	7.52
Southern Company	65.05	50.40	57.73	2.56	4.43	9.63
WEC Energy Group, Inc.	106.85	80.55	93.70	2.71	2.89	9.22
Xcel Energy Inc.	76.44	56.07	66.26	1.83	2.76	8.94
Group Average	74.56	54.55	64.55	2.32	3.72	8.71
Group Average G					5.00	
DCF					**8.72**	
		Average of Current and 52-Week			**8.59**	

Multiple sources of the Barometer companies projected 5-year Earnings Per Share are used to calculate the Group Average Dividend Growth Estimate.

Development of a Representative Dividend Growth Rate
for the Barometer Group of Electric Companies

		5 Year Forecast					
						Avgerage	
	Value Line	Value Line	Zack's	Yahoo	Morningstar	Earnings	Growth
	DPS	EPS	EPS	EPS	EPS	Growth	Estimate
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Allete, Inc.	3.50	6.00	NA	7.00	NA	6.50	6.50
Alliant Energy Corp	7.00	5.50	5.80	5.50	6.70	5.88	5.88
Ameren Corp	7.00	6.00	7.30	7.50	7.40	7.05	7.05
American Electric Power	5.50	6.50	5.70	6.15	5.80	6.04	6.04
AVANGRID, Inc.	1.50	6.00	5.50	5.00	9.10	6.40	6.40
Avista Corp	4.00	1.00	6.90	6.90	NA	4.93	4.93
CMS Energy Corp	7.00	7.50	6.90	7.20	7.10	7.18	7.18
Consolidated Edison	3.00	2.50	2.00	2.95	2.90	2.59	2.59
DTE Energy Company	6.50	6.00	5.70	4.65	-0.90	3.86	3.86
Duke Energy Company	2.50	5.00	5.20	5.00	3.90	4.78	4.78
Edison International	4.00	12.00	4.30	-0.50	2.30	4.53	2.03
Entergy Corp.	4.50	3.00	5.10	5.50	4.10	4.43	4.43
Eversource Energy	6.00	6.50	6.80	7.05	7.60	6.99	6.99
Exelon Corp	5.50	4.00	2.30	-0.34	0.50	1.62	1.62
Fortis Inc.	6.00	4.00	6.20	NA	NA	5.10	5.10
IDACORP, Inc..	6.50	4.50	3.00	3.00	NA	3.50	3.50
MGE Energy, Inc.	5.50	4.50	4.70	4.70	NA	4.63	4.63
NextEra Energy, Inc.	10.50	10.50	7.80	8.49	9.10	8.97	8.97
NorthWestern Corp	4.00	2.50	4.40	4.58	NA	3.83	3.83
OGE Energy Corp	4.50	4.00	4.40	3.80	3.40	3.90	3.90
Otter Tail Corp	5.50	7.00	NA	9.00	NA	8.00	8.00
Pinnacle West Capital Corp	6.00	4.50	3.40	3.50	3.60	3.75	3.75
Portland General Electric Co.	6.00	4.00	13.40	13.40	3.90	8.68	3.95
PPL Corporation	1.50	2.50	NA	-16.20	2.60	-3.70	2.55
Public Service Enterprise Group	4.00	5.00	3.80	2.45	3.60	3.71	3.71
Southern Company	3.00	3.50	5.00	6.49	5.80	5.20	5.20
WEC Energy Group, Inc.	6.50	6.50	6.10	6.10	6.60	6.33	6.33
Xcel Energy Inc.	6.00	6.00	6.20	6.30	6.20	6.18	6.18
Group Average	5.11	5.23	5.52	4.64	4.82	5.03	4.99
USE							5.00

Sources: Value Line Investment Survey, April 15, 2021
Zacks, April 16, 2021 (www.zacks.com)
Yahoo!, April 16, 2021 (http://finance.yahoo.com/)
Morningstar, April 16, 2021 (http://financials.morningstar.com)
* NA signifies that a forecast was not available

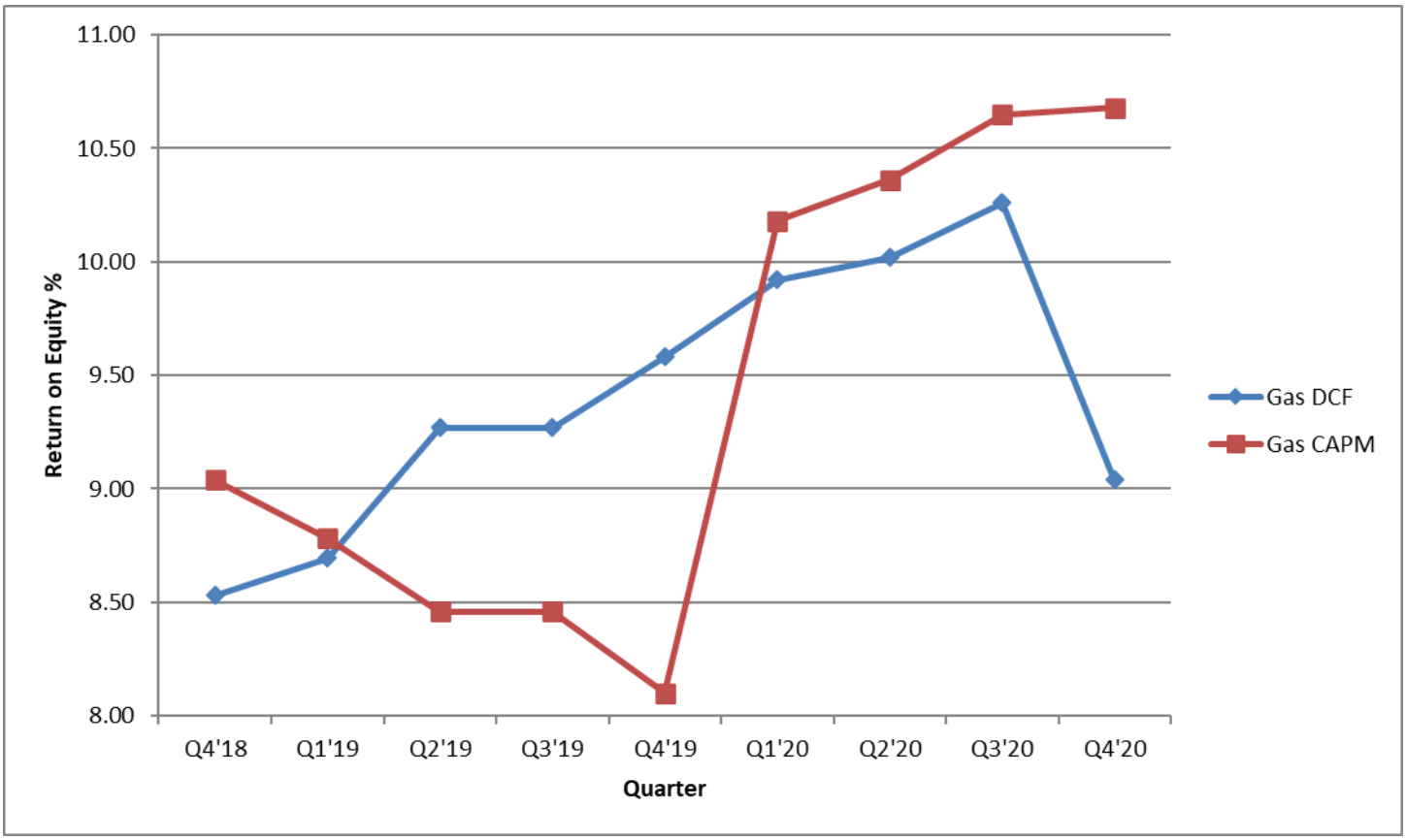
The market indicated common equity cost rate range consists of data used from the barometer groups and is based on a series of calculations to average the DCF methods.

Market Based Returns on Common Equity[1]	
April 15, 2021	
Gas Distribution Company Barometer Group	
	Cost Rates
	%
(1) Current DCF:	8.95
(2) 52-Week Average DCF:	9.13
(3) Overall DCF ((1) + (2)) / 2 :	9.04
(4) Market Indicated Common Equity Cost Rate Range:	8.24-9.84
@ 1 standard deviation around the mean.[2]	
(5) CAPM Check of DCF Reasonableness:	10.68
(6) Recent Commission Approved ROEs[3]:	9.86*
*Columbia Gas of Pennsylvania, Inc.	
R-2020-3018835	
(7) Distribution System Improvement Charge (DSIC) Return[4]:	**10.20%**
[1] As calculated by the Bureau of Technical Utility Services	
[2] Standard Deviation of 18 DCF observations	
[3] Base rate case ROEs within last two years, fully litigated or stipulated for DSIC purposes	
[4] Commission authorized Return on Equity (ROE) for DSIC purposes	
Any questions concerning DSIC should be directed to Marc Hoffer	
of the Bureau of Technical Utility Services at (717) 787-1869.	

Historic Gas Industry DCF and CAPM Average ROEs

Gas		
	DCF	CAPM
Q4'18	8.53	9.04
Q1'19	8.69	8.78
Q2'19	9.27	8.46
Q3'19	9.27	8.46
Q4'19	9.58	8.10
Q1'20	9.92	10.18
Q2'20	10.02	10.36
Q3'20	10.26	10.65
Q4'20	9.04	10.68

Graph of Historic Gas Industry DCF and CAPM Average ROEs



Barometer gas companies are used to calculate a current DCF in the first chart. The second chart demonstrates the companies 52-week average DCF. A final average of the two calculations is also shown at the bottom.

Gas Company Barometer Group
Calculation of a Current Dividend Yield

	Closing Market Price (Po) 4/15/2021 ($)	Latest Indicated Dividend (Do) ($)	Ind. Div. Plus 1/2 Div. Growth Rate (D1) ($)	Current Dividend Yield(D1/Po) (%)	DCF (%)
Atmos Energy	101.32	2.50	2.59	2.56	9.70
Chesapeake Utilities Corporation	119.37	1.76	1.83	1.53	8.15
New Jersey Resources	41.68	1.33	1.37	3.28	8.90
NiSource Inc.	25.58	0.88	0.90	3.52	9.51
Northwest Natural Gas	55.34	1.92	1.92	3.48	7.38
ONE Gas, Inc.	79.85	2.32	2.40	3.01	8.51
South Jersey Industries	24.52	1.21	1.23	5.03	9.43
Southwest Gas Holdings, Inc.	72.32	2.38	2.43	3.36	9.03
Spire Inc.	77.40	2.60	2.66	3.43	9.63
Group Average	66.38	1.88	1.93	3.25	8.92
Group Average G				5.70	
DCF				**8.95**	

Gas Company Barometer Group
52-week Average Dividend Yield Calculation

	High ($)	Low ($)	Average (Pa) ($)	Latest Indicated Dividend (Do) ($)	Average Dividend Yield (Do/Pa) (%)	DCF (%)
Atmos Energy	111.34	84.59	97.97	2.50	2.55	9.69
Chesapeake Utilities Corporation	121.04	72.89	96.97	1.76	1.82	8.44
New Jersey Resources	42.57	25.87	34.22	1.33	3.89	9.51
NiSource Inc.	27.24	21.09	24.17	0.88	3.64	9.63
Northwest Natural Gas	67.24	41.71	54.48	1.92	3.52	7.42
ONE Gas, Inc.	90.24	65.51	77.88	2.32	2.98	8.48
South Jersey Industries	30.25	18.24	24.25	1.21	4.99	9.39
Southwest Gas Holdings, Inc.	81.62	57.00	69.31	2.38	3.43	9.10
Spire Inc.	77.99	50.58	64.29	2.60	4.04	10.24
Group Average	72.17	48.61	60.39	1.88	3.43	9.10
Group Average G					5.70	
DCF					**9.13**	
		Average of Current and 52-Week			**9.04**	

Multiple sources of the Barometer companies projected 5-year Earnings Per Share are used to calculate the Group Average Dividend Growth Estimate.

Development of a Representative Dividend Growth Rate
for the Barometer Group of Gas Companies
5 Yr Forecast

	Value Line DPS (%)	Value Line EPS (%)	Zack's EPS (%)	Yahoo EPS (%)	Morningstar EPS (%)	Avgerage Earnings Growth (%)	Growth Estimate (%)
Atmos Energy	7.50	7.00	7.30	7.17	7.10	7.14	7.14
Chesapeake Utilities Corporation	8.00	8.50	NA	4.74	0.00	4.41	6.62
New Jersey Resources	5.50	1.50	6.00	6.00	9.00	5.63	5.63
NiSource Inc.	4.50	10.00	5.00	4.37	4.60	5.99	5.99
Northwest Natural Gas	0.50	5.50	NA	3.10	3.10	3.90	3.90
ONE Gas, Inc.	7.00	6.50	5.00	5.00	NA	5.50	5.50
South Jersey Industries	4.00	10.50	4.40	4.40	NA	6.43	4.40
Southwest Gas Holdings, Inc.	4.50	8.00	5.00	4.00	NA	5.67	5.67
Spire Inc.	4.50	9.00	5.00	5.70	5.10	6.20	6.20
Group Average	5.11	7.39	5.39	4.94	4.82	5.65	5.67
USE							5.70

Sources: Value Line Investment Survey, April 15, 2021
Zacks, April 16, 2021 (www.zacks.com)
Yahoo!, April 16, 2021 (http://finance.yahoo.com/)
Morningstar, April 16, 2021 (http://financials.morningstar.com)
* NA signifies that a forecast was not available

The market indicated common equity cost rate range consists of data used from the barometer groups and is based on a series of calculations to average the DCF methods.

Market Based Returns on Common Equity [1]	
April 15, 2021	
Water Company Barometer Group	
	Cost Rates
	%
(1) Current DCF	8.79
(2) 52-Week Average DCF	8.91
(3) Average DCF	8.85
(4) Market Indicated Common Equity Cost Rate Range	6.55-11.16
@ 1 standard deviation around the mean.[2]	
(5) CAPM Check of DCF Reasonableness	9.64
(6) Recent Commission Approved ROEs[3]:	*
*None within last two years	
(7) Distribution System Improvement Charge (DSIC) Return[4]:	**9.85%**

[1] As calculated by the Bureau of Technical Utility Services

[2] Standard Deviation of 14 DCF observations

[3] ROEs from base rate cases within last two years, fully litigated or stipulated for DSIC purposes

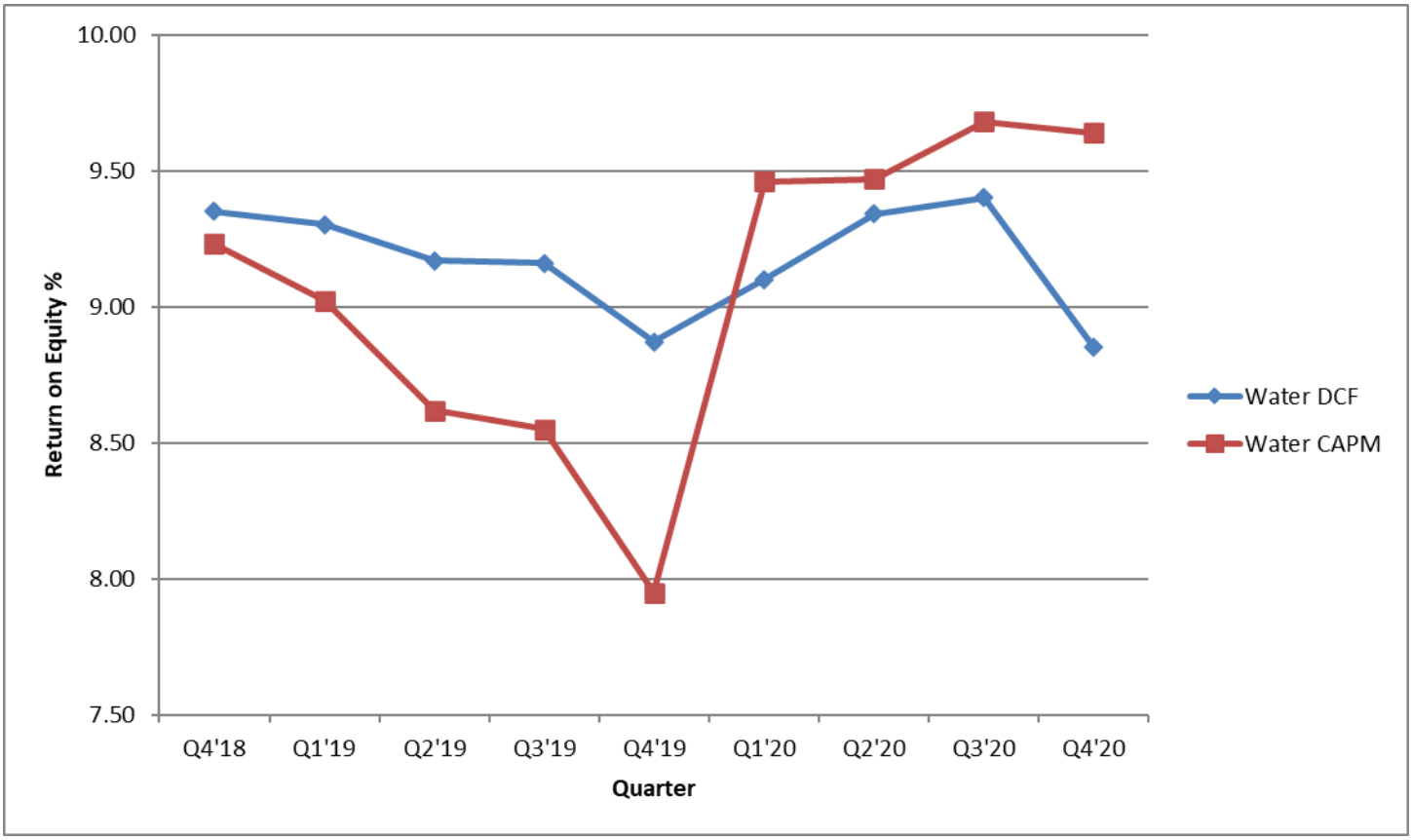
[4] Commission authorized Return on Equity (ROE) for DSIC purposes

Any questions concerning DSIC should be directed to Marc Hoffer
of the Bureau of Technical Utility Services at (717) 787-1869.

Historic Water Industry DCF and CAPM Average ROEs

Water		
	DCF	CAPM
Q4'18	9.35	9.23
Q1'19	9.30	9.02
Q2'19	9.17	8.62
Q3'19	9.16	8.55
Q4'19	8.87	7.95
Q1'20	9.10	9.46
Q2'20	9.34	9.47
Q3'20	9.40	9.68
Q4'20	8.85	9.64

Chart of Historic Water Industry DCF and CAPM Average ROEs



Barometer water companies are used to calculate a current DCF in the first chart. The second chart demonstrates the companies 52-week average DCF. A final average of the two calculations is also shown at the bottom.

Water Company Barometer Group
Calculation of a Current Dividend Yield

	Closing Market Price (Po) 4/15/2021 ($)	Latest Indicated Dividend (Do) ($)	Ind. Div. Plus 1/2 Div. Growth Rate (D1) ($)	Current Dividend Yield(D1/Po) (%)	Growth (%)	DCF (%)
American States Water Company	80.59	1.34	1.40	1.74	5.43	7.18
American Water Works Co., Inc.	159.16	2.20	2.29	1.44	8.50	9.94
California Water Service Group	60.55	0.92	0.95	1.57	9.58	11.15
Essential Utilities, Inc.	47.12	1.00	1.04	2.20	7.40	9.60
Middlesex Water Company	82.18	1.06	1.09	1.33	3.60	4.93
SJW Group	67.70	1.36	1.40	2.07	9.25	11.32
The York Water Company	51.48	0.75	0.77	1.50	5.70	7.20
Group Average	78.40	1.23	1.28	1.69	7.07	8.76
Group Average G				7.10		
DCF				**8.79**		

52-week High-Low Dividend Yield Calculation

	High ($)	Low ($)	Average (Pa) ($)	Latest Indicated Dividend (Do) ($)	Average Dividend Yield (Do/Pa) (%)	Growth (%)	DCF (%)
American States Water Company	89.96	69.25	79.61	1.34	1.68	5.43	7.12
American Water Works Co., Inc.	172.56	112.50	142.53	2.20	1.54	8.50	10.04
California Water Service Group	60.88	41.19	51.04	0.92	1.80	9.58	11.39
Essential Utilities, Inc.	48.89	37.37	43.13	1.00	2.32	7.40	9.72
Middlesex Water Company	85.92	56.44	71.18	1.06	1.49	3.60	5.09
SJW Group	71.69	50.85	61.27	1.36	2.22	9.25	11.47
The York Water Company	51.90	39.50	45.70	0.75	1.64	5.70	7.34
Group Average	83.11	58.16	70.64	1.23	1.81	7.07	8.88
Group Average G					7.10		
DCF					**8.91**		
		Average of Current and 52-Week			**8.85**		

Multiple sources of the Barometer companies projected 5-year Earnings Per Share are used to calculate the Group Average Dividend Growth Estimate.

Development of a Representative Dividend Growth Rate
for the Barometer Group of Water Companies

	5 Yr Forecast						
	Value Line DPS (%)	Value Line EPS (%)	Zacks EPS (%)	Yahoo EPS (%)	Morningstar EPS (%)	Avgerage Earnings Growth (%)	Growth Estimate (%)
American States Water Company	9.50	6.50	NA	4.60	5.20	5.43	5.43
American Water Works Co., Inc.	8.50	8.50	8.10	8.60	8.80	8.50	8.50
California Water Service Group	6.50	6.50	NA	10.75	11.50	9.58	9.58
Essential Utilities, Inc.	7.50	10.00	6.20	6.40	7.00	7.40	7.40
Middlesex Water Company	5.50	4.50	NA	2.70	NA	3.60	3.60
SJW Group	6.00	13.00	NA	5.50	47.10	21.87	9.25
The York Water Company	6.00	6.50	NA	4.90	NA	5.70	5.70
Group Average	7.07	7.93	7.15	6.21	15.92	8.87	7.07
USE							7.10

Sources: Value Line Investment Survey April 15, 2020
Zacks, April 16, 2021 (www.zacks.com)
Yahoo!, April 16, 2021 (http://finance.yahoo.com/)
Morningstar, April 16, 2021 (http://financials.morningstar.com)
* NA signifies that a forecast was not available

East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

Market Approach
Value Line Investment Surveys and Selected Yields
Water Industry
Market and Financial Ratios

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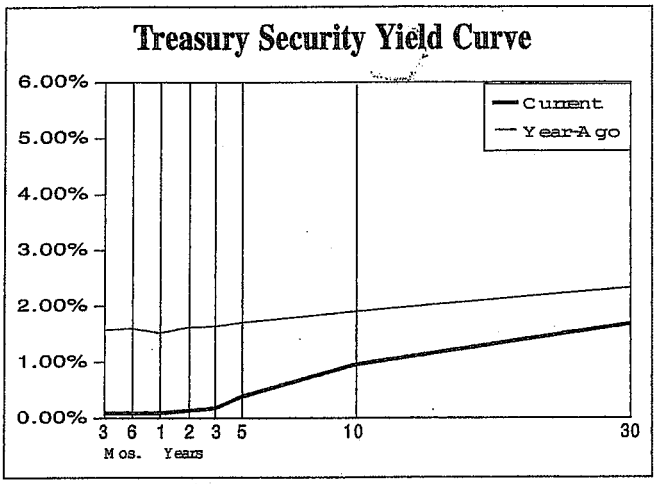
Selected Yields

TAXABLE	Recent (12/21/20)	3 Months Ago (9/21/20)	Year Ago (12/24/19)
Market Rates			
Discount Rate	0.25	0.25	2.25
Federal Funds	0.00-0.25	0.00-0.25	1.50-1.75
Prime Rate	3.25	3.25	4.75
30-day CP (A1/P1)	0.10	0.13	1.87
3-month LIBOR	0.24	0.22	1.96
U.S. Treasury Securities			
3-month	0.09	0.10	1.57
6-month	0.09	0.11	1.60
1-year	0.09	0.12	1.52
5-year	0.39	0.27	1.71
10-year	0.95	0.68	1.90
10-year (inflation-protected)	-1.00	-0.94	0.22
30-year	1.68	1.43	2.33
30-year Zero	N/A	N/A	2.35
Common Stocks			
VL Stocks (Median)	2.00	2.40	2.10
DJ Industrials (12-mo. est.)	2.00	2.20	2.40
VL Utilities	3.80	4.00	3.20



TAXABLE	Recent (12/21/20)	3 Months Ago (9/21/20)	Year Ago (12/24/19)
Corporate Bonds			
Financial (10-year) A	1.75	1.76	2.71
Industrial (25/30-year) A	2.60	2.67	3.35
Utility (25/30-year) A	2.76	2.79	3.43
Utility (25/30-year) Baa/BBB	3.08	3.06	3.80
S&P 500 High Yield Corp. Bond Index	3.60	4.24	3.95
Foreign Bonds (10-Year)			
Canada	0.73	0.54	1.61
Germany	-0.58	-0.53	-0.24
Japan	0.02	0.01	-0.02
United Kingdom	0.21	0.15	0.77
Mortgage-Backed Securities			
GNMA 5.5%	2.23	2.72	3.58
FHLMC 5.5% (Gold)	2.14	2.35	3.70
FNMA 5.5%	2.56	2.72	3.64
Preferred Stock			
Utility A	6.09	6.23	5.99
Financial BBB	5.26	5.46	5.34
Financial Adjustable A	N/A	N/A	5.46
TAX-EXEMPT			
Bond Buyer Indexes			
20-Bond Index (GOs)	2.12	2.22	2.74
25-Bond Index (Revs)	2.57	2.72	3.21
General Obligation Bonds (GOs)			
1-year AAA	0.11	0.11	1.04
1-year A	0.49	0.44	1.14
5-year AAA	0.19	0.26	1.12
5-year A	0.60	0.69	1.29
10-year AAA	0.67	0.80	1.47
10-year A	1.10	1.27	1.81
25/30-year AAA	1.35	1.51	2.03
25/30-year A	1.90	2.02	2.48
Revenue Bonds (Revs) (15 Years)			
Education AA	1.22	1.53	1.98
Electric AA	1.09	1.33	1.92
Water/Sewer AA	1.06	1.34	1.93
Hospital AA	1.27	1.63	2.02
Toll Road AA	1.38	1.81	1.96

Source: Bloomberg Finance L.P.

Federal Reserve Data

BANK RESERVES *(One-Month Period; in Billions, Not Seasonally Adjusted)*

	Recent Levels			Average Level Over the Last...		
	11/20	10/20	Change	3 Mos.	6 Mos.	12 Mos.
Total Reserves	3034.7	2876.6	158.1	2921.4	2887.7	2561.4
Borrowed Reserves	66.6	74.1	-7.5	73.0	82.1	64.1
Non-Borrowed Reserves	2968.1	2802.5	165.6	2848.4	2805.5	2497.3

MONEY SUPPLY *(One-Week Period; in Billions, Seasonally Adjusted)*

	Recent Levels			Annual Growth Rates Over the Last...		
	12/7/20	11/30/20	Change	3 Mos.	6 Mos.	12 Mos.
M1 (Currency+demand deposits)	6272.9	6060.7	212.2	85.4%	54.0%	58.7%
M2 (M1+savings+small time deposits)	19226.1	18998.0	228.1	15.0%	13.3%	26.0%

Source: United States Federal Reserve Bank

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THE VALUE LINE Investment Survey®

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Part 3 Ratings & Reports

ISSUE 9

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January 8, 2021

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★★ Rank 1 (Highest) for Timeliness.
★ Rank 2 (Above Average).

ESPECIALLY NOTEWORTHY:

On December 20th, ***Aerojet Rocketdyne Holdings*** *inked a definitive agreement with Lockheed Martin under which the latter would acquire the outstanding shares of AJRD. Turn to page 1746 for the terms of the deal, which has been unanimously approved by each company's Board of Directors.*

Financial services titan ***Morgan Stanley*** *is looking to further bolster its wealth management business. Just months off its industry-altering acquisition of E*TRADE, the company announced that it has agreed to purchase industry mate Eaton Vance. See our take on this development on page 1811.*

Slack Technologies *has continued to see breakneck top-line growth, and this has not gone unnoticed. Indeed, the business technology software operator recently agreed to be acquired by customer relationship management leader* ***salesforce.com****. Specifics of the deal are on pages 1834 and 1832, respectively.*

Meanwhile, commerce company ***Shopify*** *also continues to gain significant traction with consumers, benefiting from favorable demand trends as well as growth initiatives that should remain catalysts for the foreseeable future. Turn to page 1833 to learn more.*

In three parts: Part 1 is the Summary & Index. Part 2 is Selection & Opinion. This is Part 3, Ratings & Reports. Volume LXXVI, No. 22

Published weekly by VALUE LINE PUBLISHING LLC, 551 Fifth Avenue, New York, NY 10176.

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See back cover for important disclosures.

The Water Utility Industry consists of companies that provide water services mostly to residential customers. The group continues to be highly ranked among the 96 industries that are followed by *Value Line*.

Over the past three months since our last report, these stocks have had a wider range of returns than is typical for this industry. Even though theses equities are sought out by investors for their well-defined earnings and good dividend growth prospects, they have performed well, despite the recent strong market showing. We attribute this partially to investors willing to pay a steep premium to own these relatively scarce stocks.

The fundamentals of the Water Industry have not changed much in the past 10 years. Previously, in order to keep customers' bills low, water companies did not invest the funds required to keep their pipelines and wastewater facilities in top condition. As a result, over the past decade, they have been pouring large amounts of money into upgrading their assets. Despite the progress made, much of the nation's water infrastructure is in less than ideal shape, with some systems having pipes that were installed 50 to 75 years ago.

Most water districts in the United States are run by municipalities and states. Indeed, when the smallest districts are included, there are over 100,000 separate domestic entities that provide water services. Consolidation has been ongoing in this sector, as the smaller less-efficient operators are being absorbed, by larger players.

External debt is used frequently to fund these major construction projects that are in progress.

As regulated companies, the members of this group are allowed to act as monopolies. However, to offset the lack of competition, water utilities permit state regulators to determine the rates they can charge. Unlike other regulated industries, water stands out for its generally constructive relationship with its overseers. This is a major reason why the equities of these companies have been so successful.

Strong Demand, Few Stocks

One of the trademarks of the Water Utility Industry is that there are only eight publicly traded equities that we follow. Moreover, of this group only two fall under the definition of being Large Cap stocks (having a market capitalization of over $10 billion (*American Water Works* and *Essential Utilities*.) Four are classified as Mid Cap ($1 billion to under $5 billion). Included in this group, are *American States Water*, *California Water*, *Middlesex Water*, and *SJW Group*. The Small Cap stocks (under $1 billion) are *Consolidated Water* and *York Water*. Combined, the total market cap of the entire industry is under $50 billion. Thus, there is a limited pool of shares for investors wanting to have a presence in the space. It's also one of the reasons why water stocks trade with such high Price Earnings ratios, as people are willing to pay a steep premium to own them.

Industry Fundamentals

As we mentioned, the average age of water pipelines in the United States is estimated to be more than 50 years old, with it not being unusual for some pipes to having been laid 75 to 100 years ago. Thus, capital budgets are usually burdensome, as miles and miles of new pipe are installed annually. Also, because of the size of the outlays, not all of the expenditures can be financed with internally generated funds. Many in the industry have to rely upon debt. Thus, while the normal Financial Strength rating in the group is a B+ to a B++, *California Water* is the only one that rates a grade as high as A.

Consolidation remains ongoing, as many of the smaller water companies are inefficient and undercapitalized. The large caps often absorb many water districts each year. Regulators are usually not bothered by this because the results can be better service for the customers and sometimes even lower bills. *American Water Works* uses the growth by acquisition strategy more than its peers, and we don't think that the situation will change anytime soon.

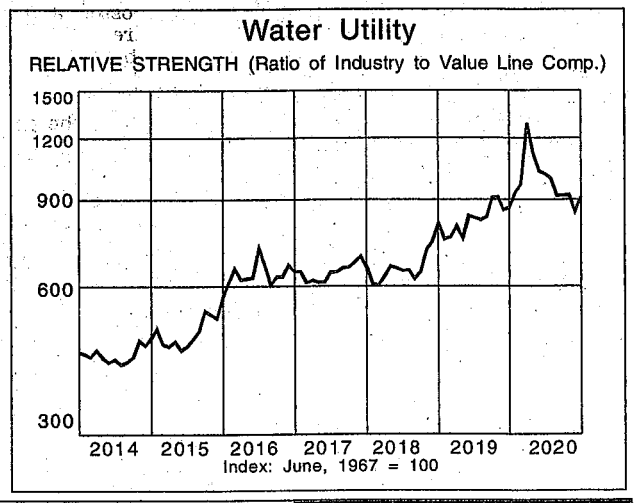
Another of the industry's attractive attributes is its regulatory climate, or basically the relationship between the water companies and authorities. Regulated businesses and utilities are often involved in disagreements and lawsuits. An example of this would be electric and gas companies and the states they operate in. Since authorities establish the rate of return that utilities can earn, a constructive relationship between the parties cannot be underestimated.

INDUSTRY TIMELINESS: 9 (of 96)

Conclusion

As noted, there are a handful of opportunities here that momentum accounts may find attractive. However, due to the strong showing of many of the stocks, long-term total return potential here is often not just underwhelming, but well below that of the average stock covered by *Value Line*. Unfortunately, this seems to be the case even on a risk-adjusted basis. Indeed, many of these equities are already trading within their 2023-2025 projected Target Price Range. Thus, despite all of its positives, investors with a long-term horizon may want to look elsewhere, as a lot of good news is already factored into share prices. As always, we advise subscribers to read each individual report before investing to better understand the level of risk being assumed.

James A. Flood



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AMER. STATES WATER NYSE-AWR

RECENT PRICE 79.15 | P/E RATIO 34.0 (Trailing: 35.3 / Median: 22.0) | RELATIVE P/E RATIO 1.60 | DIV'D YLD 1.8% | VALUE LINE 1789

TIMELINESS 4 Lowered 12/11/20
SAFETY 2 Raised 7/20/12
TECHNICAL 4 Lowered 12/25/20
BETA .65 (1.00 = Market)

18-Month Target Price Range

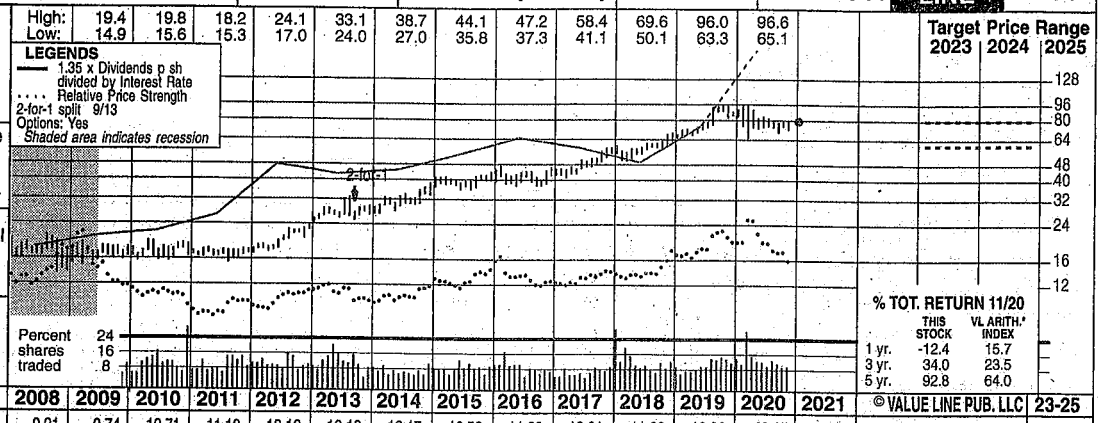
Low-High	Midpoint (% to Mid)
$65-$124	$95 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	80	(NIL)	3%
Low	60	(-25%)	-4%

Institutional Decisions

	1Q2020	2Q2020	3Q2020
to Buy	125	135	121
to Sell	166	129	135
Hld's(000)	26162	25635	25731



2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
6.81	7.03	7.88	8.75	9.21	9.74	10.71	11.12	12.12	12.19	12.17	12.56	11.92	12.01	11.88	12.86	*12.95*	*13.40*	Revenues per sh	*16.40*
1.11	1.32	1.45	1.65	1.69	1.70	2.11	2.13	2.48	2.65	2.67	2.81	2.70	2.96	2.84	3.26	*3.25*	*3.50*	"Cash Flow" per sh	*4.50*
.53	.66	.67	.81	.78	.81	1.11	1.12	1.41	1.61	1.57	1.61	1.62	1.88	1.72	2.28	*2.25*	*2.40*	Earnings per sh A	*2.90*
.44	.45	.46	.48	.50	.51	.52	.55	.64	.76	.83	.87	.91	.99	1.06	1.16	*1.28*	*1.40*	Div'd Decl'd per sh B■	*1.85*
2.51	2.12	1.95	1.45	2.23	2.09	2.12	2.13	1.77	2.52	1.89	2.39	3.55	3.08	3.44	4.12	*3.40*	*3.60*	Cap'l Spending per sh	*3.75*
7.51	7.86	8.32	8.77	8.97	9.70	10.13	10.84	11.80	12.72	13.24	12.77	13.52	14.45	15.19	16.33	*17.30*	*18.50*	Book Value per sh D	*21.35*
33.50	33.60	34.10	34.46	34.60	37.06	37.26	37.70	38.53	38.72	38.29	36.50	36.57	36.68	36.76	36.85	*37.00*	*37.25*	Common Shs Outst'g C	*37.50*
23.2	21.9	27.7	24.0	22.6	21.2	15.7	15.4	14.3	17.2	20.1	24.6	25.6	25.7	34.0	34.4	*35.5*		Avg Ann'l P/E Ratio	*23.5*
1.23	1.17	1.50	1.27	1.36	1.41	1.00	.97	.91	.97	1.06	1.24	1.34	1.29	1.84	1.87	*1.79*		Relative P/E Ratio	*1.30*
3.6%	3.1%	2.5%	2.5%	2.9%	2.9%	3.0%	3.2%	3.1%	2.7%	2.6%	2.2%	2.2%	2.0%	1.8%	1.5%	*1.6%*		Avg Ann'l Div'd Yield	*2.6%*
398.9	419.3	466.9	472.1	465.8	458.6	436.1	440.6	486.8	473.9	*480*	*500*	Revenues ($mill)	*615*
41.4	42.0	54.1	62.7	61.1	60.5	59.7	69.4	63.9	84.3	*83.0*	*89.0*	Net Profit ($mill)	*110*
43.2%	41.7%	39.9%	36.3%	38.4%	38.4%	36.8%	36.0%	22.0%	22.6%	*25.0%*	*23.0%*	Income Tax Rate	*23.0%*
5.8%	2.0%	2.5%	--	--	--	--	--	2.5%	--	*1.0%*	*1.0%*	AFUDC % to Net Profit	*1.0%*
44.3%	45.4%	42.2%	39.8%	39.1%	41.1%	39.4%	38.0%	40.5%	44.4%	*41.0%*	*41.5%*	Long-Term Debt Ratio	*49.5%*
55.7%	54.6%	57.8%	60.2%	60.9%	58.9%	60.6%	62.0%	59.5%	55.6%	*49.0%*	*48.5%*	Common Equity Ratio	*51.5%*
677.4	749.1	787.0	818.4	832.6	791.5	815.3	854.9	938.4	1082.5	*1085*	*1180*	Total Capital ($mill)	*1565*
855.0	896.5	917.8	981.5	1003.5	1060.8	1150.9	1205.0	1296.3	1415.7	*1495*	*1575*	Net Plant ($mill)	*1780*
7.6%	7.1%	8.3%	8.9%	8.6%	9.0%	8.6%	9.3%	7.9%	8.9%	*9.0%*	*8.5%*	Return on Total Cap'l	*8.5%*
11.0%	10.3%	11.9%	12.7%	12.0%	13.0%	12.1%	13.1%	11.4%	14.0%	*13.0%*	*13.0%*	Return on Shr. Equity	*14.0%*
11.0%	10.3%	11.9%	12.7%	12.0%	13.0%	12.1%	13.1%	11.4%	14.0%	*13.0%*	*13.0%*	Return on Com Equity	*14.0%*
5.8%	5.3%	6.6%	6.8%	5.7%	6.0%	5.3%	6.2%	4.5%	6.9%	*6.0%*	*5.5%*	Retained to Com Eq	*5.0%*
47%	49%	45%	47%	53%	54%	56%	52%	61%	51%	*57%*	*58%*	All Div'ds to Net Prof	*64%*

CAPITAL STRUCTURE as of 9/30/20
Total Debt $440.7 mill. **Due in 5 Yrs** $6.9 mill.
LT Debt $440.3 mill. **LT Interest** $25.0 mill.
(41% of Cap'l)

Leases, Uncapitalized: Annual rentals $2.7 mill.
Pension Assets-12/19 $192.5 mill.
Oblig. $231.9 mill.

Pfd Stock None

Common Stock 36,889,061 shs.
as of 10/30/20

MARKET CAP: $2.9 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2018	2019	9/30/20
Cash Assets	7.1	1.3	8.1
Accts Receivable	23.4	20.9	33.7
Other	101.0	100.3	97.6
Current Assets	131.5	122.5	139.4
Accts Payable	59.5	55.6	53.6
Debt Due	40.3	5.3	.4
Other	46.8	55.1	59.5
Current Liab.	146.6	116.0	113.5

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	3.0%	--	*5.0%*
"Cash Flow"	6.0%	3.0%	*7.0%*
Earnings	9.5%	5.0%	*6.5%*
Dividends	8.0%	7.5%	*9.5%*
Book Value	5.5%	4.0%	*5.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	98.8	113.2	124.4	104.2	440.6
2018	94.7	106.9	124.2	111.0	436.8
2019	101.7	124.7	134.5	113.0	473.9
2020	109.1	121.3	133.7	*115.9*	*480*
2021	*110*	*125*	*145*	*120*	*500*

Calendar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.34	.62	.57	.35	1.88
2018	.29	.44	.62	.37	1.72
2019	.35	.72	.76	.45	2.28
2020	.38	.69	.72	*.46*	*2.25*
2021	*.43*	*.72*	*.75*	*.50*	*2.40*

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.242	.242	.255	.255	.99
2018	.255	.255	.275	.275	1.06
2019	.275	.275	.305	.305	1.16
2020	.305	.305	.335	.335	
2021					

BUSINESS: American States Water Co. operates as a holding company. Through its principal subsidiary, Golden State Water Co., it supplies water to 260,708 customers in 10 California counties. Service areas include the metropolitan areas of Los Angeles and Orange Counties. The company also provides electricity to 24,420 customers in Big Bear Lake and San Bernardino Cnty. Provides water & wastewater services to U.S. military bases through its ASUS subsidiary. Sold Chaparral City Wtr. of AZ. (6/11). Employs 841. BlackRock, Inc. owns 15.9% of out. shares; Vanguard, 11.9%; off. & dir. 1.0%. (4/20 Proxy). Chairman: Lloyd Ross. Pres. & CEO: Robert Sprowls. Inc: CA. Address: 630 East Foothill Blvd., San Dimas, CA 91773. Tel: 909-394-3600. Internet: www.aswater.com.

American States Water probably turned in flattish results in 2020. In the key water segment, higher rates implemented retroactively in 2019 caused a reduction in administrative costs that wasn't replicated last year. A higher effective tax rate and an increase in other operating expenses also contributed to a weaker showing. Nonregulated operations also likely posted a negative comparison due to a decrease in construction activity on military bases. An improved performance from the electric business was not enough to offset these negatives. All told, for the full year, the company's share net likely declined about $0.03, to $2.25.

We look for earnings to get back on track this year, however. This is based on our expectations that the company's expense ratios revert to normal levels. The nonregulated businesses should also do much better, as more military bases in the United States are privatized (more below). In sum, share earnings could well advance a healthy 7%, to $2.40.

A new application for rates should not be ruled upon for some time. As per California procedure, Golden States Water filed a general rate case last year seeking higher tariffs for the years 2022-2024. A final decision by state authorities is not expected until very late this year. The outcome will have a major impact on the utility's profits for this three-year period. We are assuming a reasonable decision in our projections, as relations with the state regulators have generally been constructive.

Nonregulated business should provide an earnings boost. American States' contract service operations ought to make inroads in this market as, more domestic military installations conduct bidding processes to have outside companies provide water to these bases. Returns in this sector are higher than the regulated businesses. The company has already proven itself in this area, as it has won a number of these 50-year contracts.

These shares do not stand out at this time. AWR is ranked to underperform the market averages in the year ahead. Furthermore, long-term prospects are not bright either, as the equity is currently trading near the high end of our 2023-2025 Target Price Range.

James A. Flood *January 8, 2021*

(A) Primary earnings. Excludes nonrecurring gains/(losses): '04, 7¢; '05, 13¢; '06, 3¢; '08, (14¢); '10, (23¢); '11, 10¢. Next earnings report due mid-February.
(B) Dividends historically paid in early March, June, September, and December. ■ Div'd reinvestment plan available.
(C) In millions, adjusted for split.
(D) Includes intangibles. As of 9/30/20; $1.1 million/$0.03 a share.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	95
Earnings Predictability	85

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AMERICAN WATER NYSE-AWK

RECENT PRICE 149.65 | P/E RATIO 37.1 (Trailing: 41.0 Median: 22.0) | RELATIVE P/E RATIO 1.74 | DIV'D YLD 1.6% | VALUE LINE 1790

TIMELINESS 2 Lowered 11/13/20
SAFETY 3 New 7/25/08
TECHNICAL 2 Lowered 1/8/21
BETA .85 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$109-$244	$177 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	140	(-5%)	Nil
Low	90	(-40%)	-9%

Institutional Decisions

	1Q2020	2Q2020	3Q2020
to Buy	333	363	401
to Sell	415	371	337
Hld's(000)	151948	151102	150689

High: 23.0 25.8 32.8 39.4 45.1 56.2 61.2 85.2 92.4 98.2 129.9 172.6
Low: 16.2 19.4 25.2 31.3 37.0 41.1 48.4 58.9 70.0 76.0 88.0 92.0

LEGENDS
1.10 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2023 2024 2025

Percent shares traded 21 14 7

% TOT. RETURN 11/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	28.2	15.7
3 yr.	76.2	23.5
5 yr.	190.9	64.0

2004	2005	2006E	2007E	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
--	--	13.08	13.84	14.61	13.98	15.49	15.18	16.25	16.28	16.78	17.72	18.54	18.81	19.04	19.97	20.95	22.00	Revenues per sh	24.75
--	--	.65	d.47	2.87	2.89	3.56	3.73	4.27	4.36	4.75	5.13	5.26	5.14	6.15	6.65	7.25	7.90	"Cash Flow" per sh	8.75
--	--	d.97	d2.14	1.10	1.25	1.53	1.72	2.11	2.06	2.39	2.64	2.62	2.38	3.15	3.43	3.90	4.25	Earnings per sh A	4.90
--	--	--	--	.40	.82	.86	.90	1.21	.84	1.21	1.33	1.47	1.62	1.78	1.96	2.15	2.35	Div'd Decl'd per sh B■	2.90
--	--	4.31	4.74	6.31	4.50	4.38	5.27	5.25	5.50	5.33	6.51	7.36	8.04	8.78	9.15	10.50	9.20	Cap'l Spending per sh	9.00
--	--	23.86	28.39	25.64	22.91	23.59	24.11	25.11	26.52	27.39	28.25	29.24	30.13	32.42	33.83	36.10	37.90	Book Value per sh D	42.50
--	--	160.00	160.00	160.00	174.63	175.00	175.66	176.99	178.25	179.46	178.28	178.10	178.44	180.68	180.81	181.50	182.00	Common Shs Outst'g C	189.00
--	--	--	--	18.9	15.6	14.6	16.8	16.7	19.9	20.0	20.5	27.7	33.8	27.3	32.9	35.3		Avg Ann'l P/E Ratio	23.5
--	--	--	--	1.14	1.04	.93	1.05	1.06	1.12	1.05	1.03	1.45	1.70	1.47	1.79	1.78		Relative P/E Ratio	1.30
--	--	--	--	1.9%	4.2%	3.8%	3.1%	3.4%	2.0%	2.5%	2.5%	2.0%	2.0%	2.1%	1.7%	1.6%		Avg Ann'l Div'd Yield	2.5%
						2710.7	2666.2	2876.9	2901.9	3011.3	3159.0	3302.0	3357.0	3440.0	3610.0	3800	4000	Revenues ($mill)	4675
						267.8	304.9	374.3	369.3	429.8	476.0	468.0	426.0	567.0	621.0	708	775	Net Profit ($mill)	925
						40.4%	39.5%	40.7%	39.1%	39.4%	39.1%	39.2%	53.3%	28.2%	25.5%	21.5%	21.5%	Income Tax Rate	21.0%
						--	--	6.2%	5.1%	--	--	--	--	5.1%	4.0%	5.0%	5.0%	AFUDC % to Net Profit	5.0%
						56.8%	55.7%	53.9%	52.4%	52.4%	53.7%	52.4%	54.7%	56.3%	58.5%	59.5%	60.0%	Long-Term Debt Ratio	59.0%
						43.2%	44.2%	46.1%	47.6%	47.4%	46.2%	47.5%	45.3%	43.6%	41.4%	40.5%	40.0%	Common Equity Ratio	41.0%
						9561.3	9580.3	9635.5	9940.7	10364	10911	10967	11875	13433	14760	16150	17200	Total Capital ($mill)	20000
						11059	11021	11739	12391	12900	13933	14992	16246	17409	18232	19250	20250	Net Plant ($mill)	22200
						4.4%	4.8%	5.4%	5.1%	5.5%	5.7%	5.6%	4.9%	5.4%	5.4%	6.5%	5.5%	Return on Total Cap'l	6.0%
						6.5%	7.2%	8.4%	7.8%	8.7%	9.4%	9.0%	7.9%	9.7%	10.1%	11.0%	11.0%	Return on Shr. Equity	11.5%
						6.5%	7.2%	8.4%	7.8%	8.7%	9.4%	9.0%	7.9%	9.7%	10.1%	11.0%	11.5%	Return on Com Equity	11.5%
						2.8%	3.5%	3.6%	4.7%	4.3%	4.7%	4.0%	2.5%	4.2%	4.4%	5.0%	4.5%	Retained to Com Eq	4.5%
						56%	52%	57%	40%	50%	50%	56%	68%	56%	57%	55%	55%	All Div'ds to Net Prof	59%

CAPITAL STRUCTURE as of 9/30/20
Total Debt $10691 mil. **Due in 5 Yrs** $2500 mil.
LT Debt $9580 mil. **LT Interest** $354 mil. (60% of Cap'l)

Leases, Uncapitalized: Annual rentals $14.0 mill.
Pension Assets12/19 $1747.0 mill **Oblig.** $2161.0 mill.
Pfd Stock $4.0 mill. **Pfd Div'd** $.3 mill

Common Stock 181,271,995 shares as of 10/28/20

MARKET CAP: $27.1 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	9/30/20
Cash Assets	158	91	599
Accts Receivable	301	294	358
Other	322	900	1010
Current Assets	781	1285	1967
Accts Payable	175	203	162
Debt Due	1035	814	1111
Other	884	1028	987
Current Liab.	2094	2045	2260

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	3.0%	3.0%	4.5%
"Cash Flow"	13.0%	6.0%	6.5%
Earnings	45.5%	6.5%	8.5%
Dividends	16.0%	10.5%	8.5%
Book Value	2.5%	4.0%	5.0%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	756	844	936	821	3357
2018	761	853	976	850	3440
2019	813	882	1013	902	3610
2020	844	931	1079	*946*	*3800*
2021	*885*	*970*	*1145*	*1000*	*4000*

Calendar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.52	.73	1.12	.01	2.38
2018	.59	.91	1.03	.62	3.15
2019	.62	.94	1.33	.54	3.43
2020	.68	.97	1.46	*.79*	*3.90*
2021	*.73*	*1.05*	*1.60*	*.87*	*4.25*

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.375	.415	.415	.415	1.62
2018	.415	.455	.455	.455	1.78
2019	.455	.50	.50	.50	1.96
2020	.50	.55	.55	.55	
2021					

BUSINESS: American Water Works Company, Inc. is the largest investor-owned water and wastewater utility in the U.S., providing services to approximately 15 million people in 46 states. Nonregulated business assists municipalities and military bases with the maintenance and upkeep as well. Regulated operations made up 86% of 2019 revenues. New Jersey is its largest market accounting for 24.6% of regulated revenues; Pennsylvania, 22.3%; Missouri, 10.5%. Has 6,800 employees. The Vanguard Grp, owns 12.4% of outstanding shares; BlackRock, Inc., 8.7%; officers & directors, less than 1.0%. (3/20 Proxy). President & CEO: Susan N. Story. Chairman: George MacKenzie. Address: 1 Water Street, Camden, NJ 08102. Tel.: 856-346-8200. Internet: www.amwater.com.

American Water Works probably completed another strong year. In 2020, we think the water utility posted solid earnings growth for the third consecutive year. Indeed, we estimate that its share net rose nearly 14% to $3.90. Much of this can be attributed to the demand for water by residential customers not being impacted much by the state of the economy.

The positive profit trend should continue this year. Through the bottom-line gain will likely not match last year's rate, American Water should still see a solid 9% increase in earnings per share.

Acquisitions should remain a key part of the growth strategy. The utility has been purchasing many smaller municipally run water districts for years. Many of these entities are extremely inefficient and lack the financial wherewithal to replace their aging pipelines. American Water has a proven track record of absorbing new assets and streamlining costs, all while improving service. It's likely because of these two factors that regulators have treated the company so constructively.

The construction budget is enormous, but manageable. Management targeted $1.9 billion to refurbish and expand its existing water infrastructure in 2019. What's more, the cost of continuing the program should average about $2 billion annually over the next decade. Internally generated funds should cover a good deal of the funds needed, but the company has been issuing bonds to finance the difference. Indeed, its long-term debt-to-total capital ratio has reached the 60% mark. New equity issuance has been very restrained, and shares outstanding have increased only around 4% over the past 11 years. As the equity has performed well over that time span, management may want to consider selling new stock as a way of improving its finances.

The dividend ought to be hiked later this year. At the next meeting in February, we expect the quarterly payout to be raised 9.3%, or $0.05 per share, to $0.60. Moreover, this healthy rate of growth is probably sustainable through mid-decade.

These shares remain timely. However, like most in the water utility group, total return prospects through 2023-2025 are well below the *Value Line* median.

James A. Flood *January 8, 2021*

Company's Financial Strength	B++
Stock's Price Stability	85
Price Growth Persistence	80
Earnings Predictability	85

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(A) Diluted earnings. Excludes nonrecur. losses: '08, $4.62; '09, $2.63; '11, $0.07. Disc. oper.: '06, ($0.04); '11, $0.03; '12, ($0.10); '13,($0.01). GAAP used as of 2014. Next earnings report due mid-February
(B) Dividends paid in March, June, September, and December. ■ Div. reinvestment available.
(C) In millions. (D) Includes intangibles. On 9/30/20: $1.562 billion, $8.62/share.
(E) Pro forma numbers for '06 & '07.

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CALIFORNIA WATER NYSE-CWT

RECENT PRICE 54.21 | P/E RATIO 19.1 (Trailing: 29.0) (Median: 23.0) | RELATIVE P/E RATIO 0.90 | DIV'D YLD 1.6% | VALUE LINE 1791

TIMELINESS 2 Raised 11/20/20
SAFETY 3 Lowered 7/27/07
TECHNICAL 4 Lowered 1/8/21
BETA .65 (1.00 = Market)

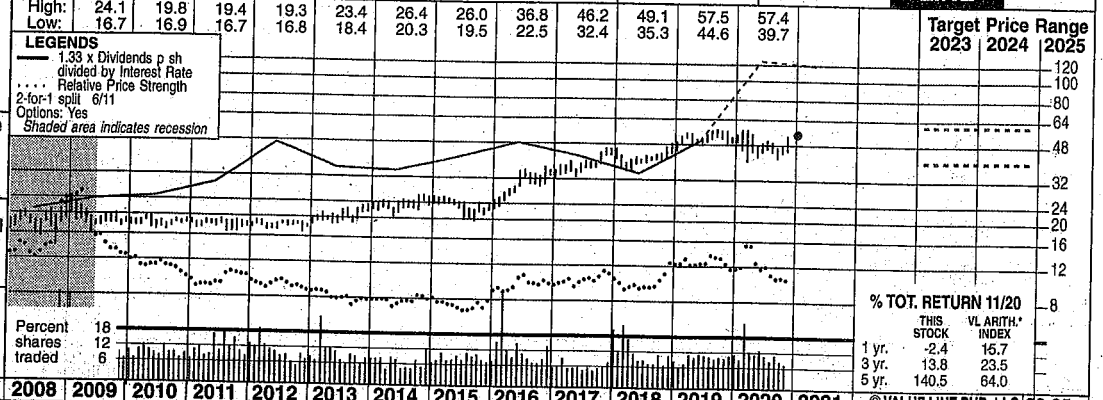
18-Month Target Price Range
Low-High Midpoint (% to Mid)
$42-$79 $61 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	60	(+10%)	5%
Low	40	(-25%)	-5%

Institutional Decisions

	1Q2020	2Q2020	3Q2020
to Buy	104	109	101
to Sell	118	107	106
Hld's(000)	35792	35580	36492



2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
8.59	8.72	8.10	8.88	9.90	10.82	11.05	12.00	13.34	12.23	12.50	12.29	12.70	13.89	14.53	14.72	*16.00*	*16.00*	Revenues per sh	*16.05*
1.42	1.52	1.36	1.56	1.86	1.93	1.93	2.07	2.32	2.21	2.47	2.22	2.34	3.00	3.11	3.14	*3.60*	*3.45*	"Cash Flow" per sh	*3.65*
.73	.74	.67	.75	.95	.98	.91	.86	1.02	1.02	1.19	.94	1.01	1.40	1.36	1.31	*2.00*	*1.90*	Earnings per sh A	*2.15*
.57	.57	.58	.58	.59	.59	.60	.62	.63	.64	.65	.67	.69	.72	.75	.79	*.85*	*.89*	Div'd Decl'd per sh B ■	*1.05*
1.87	2.01	2.14	1.84	2.41	2.66	2.97	2.83	3.04	2.58	2.76	3.69	4.77	5.40	5.65	5.64	*4.85*	*4.75*	Cap'l Spending per sh	*4.25*
7.83	7.90	9.07	9.25	9.72	10.13	10.45	10.76	11.28	12.54	13.11	13.41	13.75	14.44	15.19	16.07	*18.00*	*18.15*	Book Value per sh C	*19.35*
36.73	36.78	41.31	41.33	41.45	41.53	41.67	41.82	41.98	47.74	47.81	47.88	47.97	48.01	48.07	48.53	*50.00*	*51.00*	Common Shs Outst'g D	*53.00*
20.1	24.9	29.2	26.1	19.8	19.7	20.3	21.3	17.9	20.1	19.7	24.8	29.6	26.9	30.3	39.3	*24.5*		Avg Ann'l P/E Ratio	*23.0*
1.06	1.33	1.58	1.39	1.19	1.31	1.29	1.34	1.14	1.13	1.04	1.25	1.55	1.35	1.64	2.13	*1.24*		Relative P/E Ratio	*1.30*
3.9%	3.1%	2.9%	3.0%	3.1%	3.1%	3.2%	3.4%	3.5%	3.1%	2.8%	2.9%	2.3%	1.9%	1.8%	1.5%	*1.7%*		Avg Ann'l Div'd Yield	*2.1%*
460.4	501.8	560.0	584.1	597.5	588.4	609.4	666.9	698.2	714.6	*800*	*815*	Revenues ($mill) E	*850*
37.7	36.1	42.6	47.3	56.7	45.0	48.7	67.2	65.6	63.1	*100*	*97.0*	Net Profit ($mill)	*115*
39.5%	40.5%	37.5%	30.3%	33.0%	36.0%	35.5%	30.1%	24.5%	19.1%	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
4.2%	7.6%	8.0%	4.3%	2.7%	4.3%	6.1%	3.5%	3.1%	5.8%	*5.0%*	*5.0%*	AFUDC % to Net Profit	*5.0%*
52.4%	51.7%	47.8%	41.6%	40.1%	44.4%	44.6%	42.7%	49.3%	50.2%	*45.5%*	*44.0%*	Long-Term Debt Ratio	*39.0%*
47.6%	48.3%	52.2%	58.4%	59.9%	55.6%	55.4%	57.3%	50.7%	49.8%	*54.5%*	*56.0%*	Common Equity Ratio	*61.0%*
914.7	931.5	908.2	1024.9	1045.9	1154.4	1191.2	1209.3	1440.2	1566.7	*1650*	*1650*	Total Capital ($mill)	*1675*
1294.3	1381.1	1457.1	1515.8	1590.4	1701.8	1859.3	2048.0	2232.7	2406.4	*2550*	*2575*	Net Plant ($mill)	*2700*
5.5%	5.5%	6.3%	6.0%	6.3%	5.2%	5.5%	7.1%	5.9%	5.5%	*7.0%*	*6.5%*	Return on Total Cap'l	*7.5%*
8.6%	8.0%	9.0%	7.9%	9.1%	7.0%	7.4%	9.7%	9.0%	8.1%	*11.0%*	*10.5%*	Return on Shr. Equity	*11.0%*
8.6%	8.0%	9.0%	7.9%	9.1%	7.0%	7.4%	9.7%	9.0%	8.1%	*11.0%*	*10.5%*	Return on Com Equity	*11.0%*
3.0%	2.3%	3.4%	3.4%	4.1%	2.0%	2.4%	4.7%	4.0%	3.2%	*6.5%*	*5.5%*	Retained to Com Eq	*5.5%*
66%	71%	62%	56%	55%	71%	68%	51%	55%	60%	*43%*	*47%*	All Div'ds to Net Prof	*49%*

CAPITAL STRUCTURE as of 9/30/20
Total Debt $1182.1 mill. **Due in 5 Yrs** $357.0 mill.
LT Debt $785.1 mill. **LT Interest** $40.0 mill.
(Total interest coverage: 11.2x) (50% of Cap'l)

Pension Assets-12/19 $573.6 mill.
Oblig. $812.0 mill.

Pfd Stock None

Common Stock 49,840,000 shs.

MARKET CAP: $2.7 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2018	2019	9/30/20
Cash Assets	47.2	42.7	113.3
Other	141.5	142.0	192.5
Current Assets	188.7	184.7	305.8
Accts Payable	95.6	108.5	127.2
Debt Due	170.0	197.0	397.0
Other	55.6	53.2	79.6
Current Liab.	321.2	358.7	603.8

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	4.0%	2.5%	*2.0%*
"Cash Flow"	5.5%	5.5%	*3.0%*
Earnings	4.5%	4.5%	*8.0%*
Dividends	2.5%	3.5%	*5.5%*
Book Value	4.5%	4.5%	*4.0%*

Calendar	QUARTERLY REVENUES ($ mill.) E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	122.1	171.1	211.7	162.0	666.9
2018	134.6	174.9	221.3	167.4	698.2
2019	126.1	179.0	232.6	176.9	714.6
2020	125.6	175.5	304.1	*194.8*	*800*
2021	*155*	*205*	*255*	*200*	*815*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.02	.39	.70	.29	1.40
2018	d.02	.31	.75	.32	1.36
2019	d.16	.35	.88	.24	1.31
2020	d.42	.11	1.94	*.37*	*2.00*
2021	*.08*	*.45*	*.95*	*.42*	*1.90*

Calendar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.18	.18	.18	.18	.72
2018	.1875	.1875	.1875	.1875	.75
2019	.1975	.1975	.1975	.1975	.79
2020	.2125	.2125	.2125	.2125	
2021					

BUSINESS: California Water Service Group provides regulated and nonregulated water service to 489,600 customers in 100 communities in the state of California. Accounts for over 94% of total customers. Also operates in Washington, New Mexico, and Hawaii. Main service areas: San Francisco Bay area, Sacramento Valley, Salinas Valley, San Joaquin Valley & parts of Los Angeles. Acquired Rio Grande Corp; West Hawaii Utilities (9/08). Revenue breakdown, '19: residential, 67%; business, 20%; industrial, 5%; public authorities, 5%; other 3%. Off. and dir. own 1% of common stock (4/20 proxy). Has 1,184 employees. Pres. and CEO: Martin A. Kropelnicki. Inc.: DE. Addr.: 1720 North First St., San Jose, CA 95112-4598. Tel.: 408-367-8200. Internet: www.calwatergroup.com.

California Water Service Group's 2018 general rate case has officially been approved. The California Public Utilities Commission (CPUC) has fully adopted the proposal. Specifically, the subsequent to CPUC giving California Water the nod, the company is now authorized to invest more than $825 million through 2021 for various infrastructure upgrades, such as improvements to its water distribution system, treatment facilities, and piping systems. Because of this development, California Water's third-quarter financial results reflect the application and recording of certain assets and revenues recovered under the new rate decision. Moreover, the company has been approved to boost revenues by increasing customer rates beginning this year through 2022.

All things considered, our financial projections are being raised across the board. For 2020, the company likely generated share profits of $2.00 (up from our previous call of $0.85) from revenues of $800 million (up from $730 million). Modest top-line growth is probably in the cards this year, given the favorable rate case decision mentioned above, coupled with the likelihood for sustainable water consumption, though the bottom line may contract by a dime, largely due to the tough year-over-year comparison.

California Water's subsidiary, Hawaii Water, announced it will acquire wastewater system assets from Keauhou Community Services. The deal, which would add roughly 1,500 customers to Hawaii Water's roster, is pending approval by local regulators. Financial details were not disclosed. Finally, the asset purchase comes off the heels of its recent acquisition of Rainier Water Company in Washington State. On top of expanding populations, we think bolt-on asset agreements will be par for the course.

Short-term investors are best suited here. The issue has been upgraded one notch for Timeliness, to 2 (Above Average). Notably, the stock price has risen more than 15% since our October review. That said, we think it would be prudent for patient accounts to remain on the sidelines, for now, as total return potential out to 2023-2025 does not stand out at recent levels.

Nicholas P. Patrikis *January 8, 2021*

(A) Basic EPS. Excl. nonrecurring gain (loss): '11, 4¢. Next earnings report due early Feb.
(B) Dividends historically paid in late Feb., May, Aug., and Nov. ■ Div'd reinvestment plan available.
(C) Incl. intangible assets. In '19 : $24.9 mill., $0.51/sh.
(D) In millions, adjusted for split.
(E) Excludes non-regulated revenues

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	70
Earnings Predictability	65

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CONSOL. WATER CO. NDQ-CWCO

RECENT PRICE 12.33 | P/E RATIO 27.4 (Trailing: 37.4 Median: 24.0) | RELATIVE P/E RATIO 1.29 | DIV'D YLD 2.8% | VALUE LINE 1792

TIMELINESS 4 Lowered 1/8/21
SAFETY 3 New 1/17/14
TECHNICAL 5 Lowered 1/8/21
BETA .85 (1.00 = Market)

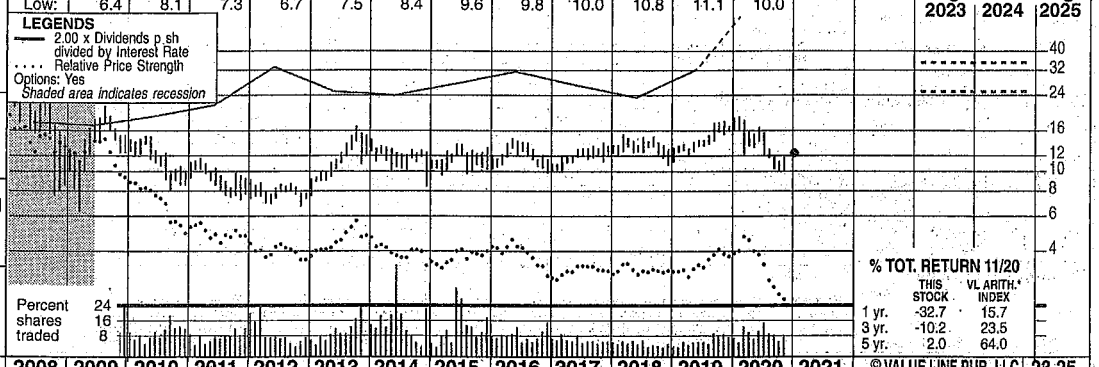
18-Month Target Price Range
Low-High Midpoint (% to Mid)
$8-$20 $14 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	35	(+185%)	33%
Low	25	(+105%)	23%

Institutional Decisions

	1Q2020	2Q2020	3Q2020
to Buy	47	48	28
to Sell	42	45	57
Hld's(000)	8750	8027	7661



% TOT. RETURN 11/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-32.7	15.7
3 yr.	-10.2	23.5
5 yr.	2.0	64.0

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
2.02	1.12	2.71	3.41	4.52	3.99	3.49	3.79	4.49	4.35	4.46	3.86	3.89	4.18	4.39	4.57	*4.80*	*4.20*	Revenues per sh	*9.40*
.77	.37	.87	1.20	.95	1.18	.86	.83	1.17	.96	.80	.89	.95	1.12	1.15	1.05	*.85*	*.95*	"Cash Flow" per sh	*1.95*
.49	.23	.59	.79	.50	.74	.43	.42	.64	.58	.42	.51	.27	.41	.68	.56	*.35*	*.30*	Earnings per sh A	*1.40*
.23	.12	.24	.20	.33	.28	.30	.30	.30	.30	.30	.30	.30	.31	.34	.34	*.34*	*.34*	Div'd Decl'd per sh B■	*.75*
.24	.77	1.83	.54	.46	.18	.09	.96	.31	.29	.32	.21	.23	.31	1.08	.23	*.15*	*.25*	Cap'l Spending per sh	*.50*
4.20	2.54	7.49	8.21	8.36	8.53	8.69	8.83	9.20	9.44	9.58	9.81	9.79	9.91	10.34	10.88	*10.65*	*10.80*	Book Value per sh D	*12.20*
11.51	23.46	14.13	14.40	14.53	14.54	14.55	14.57	14.59	14.69	14.72	14.78	14.87	14.92	14.98	15.05	*15.20*	*15.40*	Common Shs Outst'g C	*16.00*
23.1	80.0	43.0	35.4	37.8	19.0	26.9	22.4	12.4	20.0	28.3	22.7	44.8	29.0	19.4	25.7	*39.3*		Avg Ann'l P/E Ratio	*22.0*
1.22	4.26	2.32	1.88	2.27	1.27	1.71	1.41	.79	1.12	1.49	1.14	2.35	1.46	1.05	1.39	*1.98*		Relative P/E Ratio	*1.20*
2.0%	.7%	.9%	.7%	1.7%	2.0%	2.6%	3.2%	3.8%	2.6%	2.5%	2.6%	2.5%	2.6%	2.6%	2.4%	*2.5%*		Avg Ann'l Div'd Yield	*2.5%*
						50.7	55.2	65.5	63.8	65.6	57.1	57.9	62.3	65.7	68.8	*73.0*	*65.0*	Revenues ($mill)	*150*
						6.3	6.1	9.3	8.6	6.3	7.5	4.0	6.1	10.2	8.6	*5.5*	*4.5*	Net Profit ($mill)	*22.0*
						--	--	--	--	--	--	--	--	--	1.0%	*NMF*	*NMF*	Income Tax Rate	*NMF*
						--	4.0%	--	--	--	--	--	--	--	--	*NMF*	*NMF*	AFUDC % to Net Profit	*NMF*
						11.8%	5.1%	3.7%	--	--	--	--	--	--	--	*Nil*	*Nil*	Long-Term Debt Ratio	*Nil*
						88.2%	94.9%	96.3%	99.8%	99.8%	100.0%	100.0%	100.0%	100.0%	100.0%	*100%*	*100%*	Common Equity Ratio	*100%*
						143.3	135.6	139.4	138.9	141.2	145.0	145.6	147.9	155.0	163.8	*162*	*166*	Total Capital ($mill)	*200*
						56.2	64.3	61.6	58.6	56.4	53.7	53.1	50.5	64.9	61.2	*60.0*	*60.0*	Net Plant ($mill)	*85.0*
						4.9%	5.0%	7.0%	6.2%	4.4%	5.2%	2.7%	4.2%	6.6%	5.2%	*3.5%*	*2.5%*	Return on Total Cap'l	*11.0%*
						5.0%	4.7%	6.9%	6.2%	4.4%	5.2%	2.7%	4.2%	6.6%	5.2%	*3.5%*	*2.5%*	Return on Shr. Equity	*11.0%*
						5.0%	4.7%	6.9%	6.2%	4.4%	5.2%	2.7%	4.1%	6.6%	5.2%	*3.5%*	*2.5%*	Return on Com Equity	*11.0%*
						1.5%	1.0%	3.6%	3.0%	1.2%	2.1%	NMF	1.1%	3.3%	2.1%	*NMF*	*NMF*	Retained to Com Eq	*5.0%*
						69%	79%	48%	51%	73%	59%	112%	73%	50%	60%	*97%*	*113%*	All Div'ds to Net Prof	*54%*

CAPITAL STRUCTURE as of 9/30/20
Total Debt $0.1 Due in 5 Yrs $0.1
LT Debt $0.1 LT Interest NMF (0% of Total Cap'l)
Leases, Uncapitalized: Annual rentals $.9 mill.

No Defined Benefit Pension Plan

Pfd Stock NMF (33,059 shares out.) Div'd NMF

Common Stock 15,112,975 shs. as of 11/10/20

MARKET CAP: $175 million (Small Cap)

CURRENT POSITION ($MILL.)	2018	2019	9/30/20
Cash Assets	31.3	42.9	38.2
Accts Receivable	24.2	23.2	24.4
Other	6.9	7.3	9.0
Current Assets	62.4	73.4	71.6
Accts Payable	4.6	3.7	3.1
Debt Due	--	--	--
Other	3.3	4.5	4.6
Current Liab.	7.9	8.2	7.7

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '15-'17 to '22-'24
Revenues	5.0%	.5%	*13.5%*
"Cash Flow"	2.0%	.5%	*10.0%*
Earnings	-3.0%	-4.5%	*17.0%*
Dividends	5.0%	--	*14.5%*
Book Value	5.0%	2.0%	*2.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	15.6	15.3	16.6	14.8	62.3
2018	14.3	15.9	18.8	16.7	65.7
2019	17.0	18.3	15.9	17.6	68.8
2020	20.8	19.1	17.7	*15.4*	*73.0*
2021	*17.0*	*17.0*	*15.0*	*16.0*	*65.0*

Calendar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.18	.11	.08	.04	.41
2018	.14	.14	.30	.10	.68
2019	.17	.16	.11	.12	.56
2020	.19	d.04	.09	*.11*	*.35*
2021	*.15*	*.10*	*.10*	*.15*	*.50*

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.075	.075	.075	.075	.30
2018	.085	.085	.085	.085	.34
2019	.085	.085	.085	.085	.34
2020	.085	.085	.085	.085	
2021					

BUSINESS: Consolidated Water Co. Ltd. develops and operates desalination plants and water distribution systems in areas where naturally occurring supplies of water are scarce. It provides water in the Cayman Islands, the Bahamas, and the British Virgin Islands. At 12/31/19, it operated 12 plants with a capacity of 25.6 million gallons per day. Sold Bali operations and divested Belize assets in '19. Also manufactures products for the industry through Aerex sub. Inc.: Cayman Is. Employs 105. Pres./CEO: F. McTaggart. Based on 4/19 proxy Offs./ Dirs. own 4.8% of stock; Amundi Asset; 7.7%; BlackRock, 5.6%. (No proxy filed in 2020). Addr.: Regatta Off. Pk. Windward-Three, West Bay Rd., P.O. Box 1114 Grand Cayman, KYI-1102, Cayman Is. Tel.: (345) 945-4277. Int.: www.cwco.com.

Consolidated Water is different from all other companies in the Water Utility Industry. The builder and operator of desalination plants does the majority of its business outside of the United States. Thus, it is subject to the laws and regulations of foreign countries, which have not been beneficial to the company over the past several years.

The long-planned Mexican desalination plant has been shelved. Consolidated began planning for the proposed plant almost a decade ago. The Rosarito project was to initially supply 50 million gallons per day of potable water to the city of Tijuana. In time, the facility's capacity was to double to provide 100 million gallons per day. The company placed significant importance on this project and spent a considerable amount of funds going through a rigorous planning process. Legal issues arose in the latter part of 2019, and Consolidated's management seems to believe that it will no longer be built. The company has filed a lawsuit, but judging the outcome is difficult.

Earnings have been reclassified. In the third-quarter report, the Rosarito project is now considered a discontinued operation, and earnings statements for the entire year seem to have been restated.

The Rosarito project is the second-straight much-ballyhooed plant to fail. Several years ago, the company built a desalination plant in Bali, Indonesia to much fanfare due to the island's urgent need for fresh water. The facility was built on speculation, however. Problems with the government arose causing Consolidated to exit the business.

Finances are not as strong as they appear. Despite having just about no debt whatsoever, the possibility of Rosarito-related writeoffs could put a dent in the balance sheet.

These shares are ranked to underperform the market in the year ahead. Moreover, the company's prospects remain undefined following the problems in Mexico. While the world continues to be in great need of potable water, Consolidated is having a difficult time capitalizing on it. Much of this has to do with the fact that these arid regions often aren't easy places to conduct business.

James A. Flood *January 8, 2021*

(A) Fully diluted earnings. Excludes gains from discontinued operations: '17, $0.07 a share; '18, $0.07 a share; '19, $0.24 a share; losses in 2020 of $0.30 a share. Next earnings report due mid-February.
(B) Dividends historically paid in late January, April, July, and October. ■ Dividend reinvestment plan available.
(C) In millions, adjusted for stock split.
(D) Includes intangibles. As of 9/30/20, $17.7 million/$1.17 a share.

Company's Financial Strength	B+
Stock's Price Stability	70
Price Growth Persistence	45
Earnings Predictability	45

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ESSENTIAL UTIL. NYSE-WTRG

RECENT PRICE 46.08 | P/E RATIO 41.5 (Trailing: 46.5 / Median: 23.0) | RELATIVE P/E RATIO 1.95 | DIV'D YLD 2.3% | VALUE LINE 1793

TIMELINESS 3 Lowered 1/8/21
SAFETY 3 Lowered 1/8/21
TECHNICAL 2 Raised 1/1/21
BETA .95 (1.00 = Market)

18-Month Target Price Range

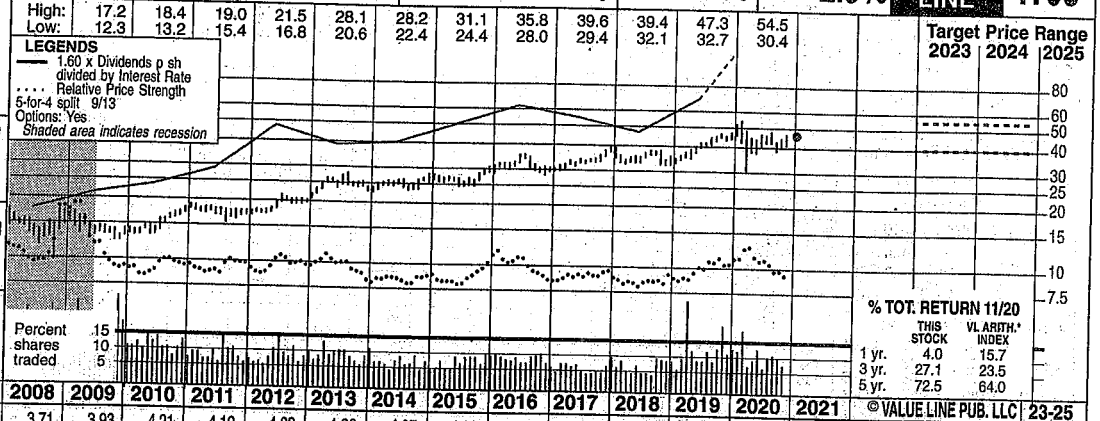
Low-High	Midpoint (% to Mid)
$35-$93	$64 (40%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+20%)	7%
Low	40	(-15%)	Nil

Institutional Decisions

	1Q2020	2Q2020	3Q2020
to Buy	252	250	237
to Sell	292	235	227
Hld's(000)	161407	161504	167838



% TOT. RETURN 11/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	4.0	15.7
3 yr.	27.1	23.5
5 yr.	72.5	64.0

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
	2.78	3.08	3.23	3.61	3.71	3.93	4.21	4.10	4.32	4.32	4.37	4.61	4.62	4.56	4.71	4.03	*6.15*	*8.15*	Revenues per sh	*8.45*
	.87	.97	1.01	1.10	1.14	1.29	1.42	1.45	1.51	1.82	1.89	1.87	2.07	2.12	1.90	1.73	*2.05*	*2.30*	"Cash Flow" per sh	*2.65*
	.51	.57	.56	.57	.58	.62	.72	.83	.87	1.16	1.20	1.14	1.32	1.35	1.08	1.04	*1.05*	*1.20*	Earnings per sh A	*1.75*
	.29	.32	.35	.38	.41	.44	.47	.50	.54	.58	.63	.69	.74	.79	.85	.91	*.97*	*1.04*	Div'd Decl'd per sh B■	*1.30*
	1.23	1.47	1.64	1.43	1.58	1.66	1.89	1.90	1.98	1.73	1.84	2.07	2.16	2.69	2.78	2.49	*2.75*	*4.00*	Cap'l Spending per sh	*4.75*
	4.71	5.04	5.57	5.85	6.26	6.50	6.81	7.21	7.90	8.63	9.27	9.78	10.43	11.02	11.28	17.58	*18.55*	*18.75*	Book Value per sh	*20.00*
	158.97	161.21	165.41	166.75	169.21	170.61	172.46	173.60	175.43	177.93	178.59	176.54	177.39	177.71	178.09	220.76	*251.25*	*252.00*	Common Shs Outst'g C	*260.00*
	25.1	31.8	34.7	32.0	24.9	23.1	21.1	21.3	21.9	21.2	20.8	23.5	23.9	24.7	32.6	39.1	*42.2*		Avg Ann'l P/E Ratio	*27.0*
	1.33	1.69	1.87	1.70	1.50	1.54	1.34	1.34	1.39	1.19	1.09	1.18	1.25	1.24	1.76	2.12	*2.13*		Relative P/E Ratio	*1.50*
	2.3%	1.8%	1.8%	2.1%	2.8%	3.1%	3.1%	2.8%	2.8%	2.4%	2.5%	2.6%	2.3%	2.4%	2.4%	2.2%	*2.2%*		Avg Ann'l Div'd Yield	*2.7%*
							726.1	712.0	757.8	768.6	779.9	814.2	819.9	809.5	838.1	889.7	*1550*	*2050*	Revenues ($mill)	*2200*
							124.0	144.8	153.1	205.0	213.9	201.8	234.2	239.7	192.0	224.5	*265*	*300*	Net Profit ($mill)	*455*
							39.2%	32.9%	39.0%	10.0%	10.5%	6.9%	8.2%	6.6%	6.6%	6.6%	*1.5%*	*3.5%*	Income Tax Rate	*8.0%*
							--	--	--	1.1%	2.4%	3.1%	3.8%	6.3%	6.8%	7.2%	*4.5%*	*7.0%*	AFUDC % to Net Profit	*7.0%*
							56.6%	52.7%	52.7%	48.9%	48.5%	50.3%	48.4%	50.6%	54.4%	43.1%	*53.0%*	*57.0%*	Long-Term Debt Ratio	*40.5%*
							43.4%	47.3%	47.3%	51.1%	51.5%	49.7%	51.6%	49.4%	45.6%	56.9%	*47.0%*	*43.0%*	Common Equity Ratio	*59.5%*
							2706.2	2646.8	2929.7	3003.6	3216.0	3469.5	3587.7	3965.4	4407.8	6824.2	*9880*	*10370*	Total Capital ($mill)	*12800*
							3469.3	3612.9	3936.2	4167.3	4402.0	4688.9	5001.6	5399.9	5930.3	6345.8	*9525*	*10160*	Net Plant ($mill)	*12000*
							5.9%	6.9%	6.6%	8.0%	7.8%	6.9%	7.6%	7.1%	5.5%	4.2%	*3.5%*	*4.0%*	Return on Total Cap'l	*4.5%*
							10.6%	11.6%	11.0%	13.4%	12.9%	11.7%	12.7%	12.2%	9.6%	5.8%	*5.5%*	*6.5%*	Return on Shr. Equity	*9.0%*
							10.6%	11.6%	11.0%	13.4%	12.9%	11.7%	12.7%	12.2%	9.6%	5.8%	*5.5%*	*6.5%*	Return on Com Equity	*9.0%*
							3.7%	4.6%	4.3%	6.7%	6.1%	4.7%	5.6%	5.1%	2.1%	.9%	*NMF*	*1.0%*	Retained to Com Eq	*2.5%*
							65%	60%	61%	50%	52%	60%	56%	59%	79%	84%	*92%*	*87%*	All Div'ds to Net Prof	*74%*

CAPITAL STRUCTURE as of 9/30/20
Total Debt $5444.0 mill. Due in 5 Yrs $496.0 mill.
LT Debt $5191.0 mill. LT Interest $196.0 mill. (53% of Cap'l)

Pension Assets-12/19 $266.4 mill. Oblig. $310.5 mill.

Pfd Stock None
Common Stock 245,271,727 shares as of 10/23/20

MARKET CAP: $11.3 billion (Large Cap)

CURRENT POSITION ($MILL.)	2018	2019	9/30/20
Cash Assets	3.6	1868.9	8.5
Receivables	101.2	67.1	126.8
Inventory (AvgCst)	15.8	18.4	66.6
Other	26.6	58.3	109.3
Current Assets	147.2	2012.7	311.2
Accts Payable	77.3	74.9	158.2
Debt Due	160.0	130.8	253.0
Other	161.7	113.1	255.8
Current Liab.	399.0	318.8	667.0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	1.5%	.5%	*11.5%*
"Cash Flow"	5.0%	2.0%	*5.5%*
Earnings	7.0%	1.5%	*7.0%*
Dividends	7.5%	8.0%	*7.5%*
Book Value	8.0%	9.0%	*7.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	187.8	203.4	215.0	203.3	809.5
2018	194.3	211.9	226.2	205.7	838.1
2019	201.1	218.9	243.6	226.1	889.7
2020	255.6	384.5	348.6	*561.3*	*1550*
2021	*550*	*450*	*450*	*600*	*2050*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.28	.34	.43	.30	1.35
2018	.29	.37	.44	d.02	1.08
2019	.09	.25	.38	.28	1.04
2020	.20	.29	.22	*.34*	*1.05*
2021	*.22*	*.33*	*.33*	*.32*	*1.20*

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.1913	.1913	.2047	.2047	.79
2018	.2047	.2047	.219	.219	.85
2019	.219	.219	.2343	.2343	.91
2020	.2343	.2343	.2507	.2507	
2021					

BUSINESS: Essential Utilities, Inc. became the new name for Aqua America on Feb. 3, 2020, to reflect the acquisition of Peoples, a natural gas utility, which occurred in 3/20. In 2019, Aqua Amer. provided water and wastewater services to about three million people in PA, OH, TX, IL, NC, NJ, IN, and VA. Employed 1,583. Acquired AquaSource, 7/13; North Maine Utilities, 7/15; and others. Water supply revenues 2019: residential, 58%; commercial, 16%; industrial, wastewater & other, 26%. Off. & dir. own less than 1% of the common stock; BlackRock, 10.5%; Vanguard, 10.4%; (4/20 proxy). Canadian Pension Plan about 8.8%. Pres. & CEO: Christopher Franklin. Inc.: PA Addr.: 762 West Lancaster Ave., Bryn Mawr, PA 19010. Tel.: 610-525-1400. Int.: www.essential.co.

Essential Utilities' prospects should be better defined going forward. The basic makeup of the company was greatly altered last March when the water company (formerly know as Aqua America), paid $4.3 billion, and assumed over $1 billion in debt, to acquire Peoples, a large natural gas concern. Due to the transaction, Essential had to absorb a number of one-time charges related to the acquisition. Following this year's first quarter, year-over-year comparisons will become more meaningful. All told, eliminating some of the costs incurred in 2020, we estimate that Essential's share net can climb 14%, to $1.20, in 2021. *(Please note: Management was scheduled to hold a conference call providing guidance for 2021 shortly after this report was made public.)*

Dividend growth prospects are good. Following the merger, the board raised the quarterly payout 7%. We expect this rate to be maintained over the next three- to five-year period.

The company has an ambitious capital spending program. On the water side of the business, like almost all of its peers, Essential is in the midst of spending heavily to replace aging pipelines. It's also making outlays to modernize the natural gas infrastructure. Overall, the construction budget should total close to $3.0 billion over the 2020-2022 period.

Finances have weakened. Despite the large acquisition and assumption of debt, the balance sheet is in decent shape with long-term debt accounting for slightly over half of total capital. Nevertheless, we are lowering its Financial Strength two notches to B+, which is an average rating.

Regulation will continue to have a huge impact on operations. In the water utility sector, state authorities treat companies under their domain relatively constructively. In the gas business, the same cannot be said, as regulators and gas utilities seem to clash more often regarding rate hikes and allowed returns.

Shares of Essential have done well since our October report. They are ranked to only perform in line with the market averages in the coming year, though. Moreover, as is the case with most members of this group, CWCO's total return prospects to 2023-2025 are subpar.

James A. Flood *January 8, 2021*

(A) Diluted eqs. Excl. nonrec. gains: '12, 18¢. Excl. gain from disc. operations: '12, 7¢; '13, 9¢; '14, 11¢. Quarterly EPS do not add in '19 due to a large change in the number of shares outstanding in the Dec. period. Next earnings report mid-February. (B) Dividends historically paid in early March, June, Sept., & Dec. ■ Div'd. reinvestment plan available (5% discount). (C) In millions, adjusted for stock splits. (D) Includes intangibles: 9/30/20, $2,342.5 bill./$9.55 a share.

Company's Financial Strength	B+
Stock's Price Stability	90
Price Growth Persistence	70
Earnings Predictability	60

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MIDDLESEX WATER NDQ-MSEX

RECENT PRICE 72.38 | P/E RATIO 32.8 (Trailing: 33.4) (Median: 21.0) | RELATIVE P/E RATIO 1.54 | DIV'D YLD 1.5% | VALUE LINE 1794

TIMELINESS 1 Raised 11/13/20
SAFETY 2 New 10/21/11
TECHNICAL 2 Raised 1/1/21
BETA .75 (1.00 = Market)

18-Month Target Price Range

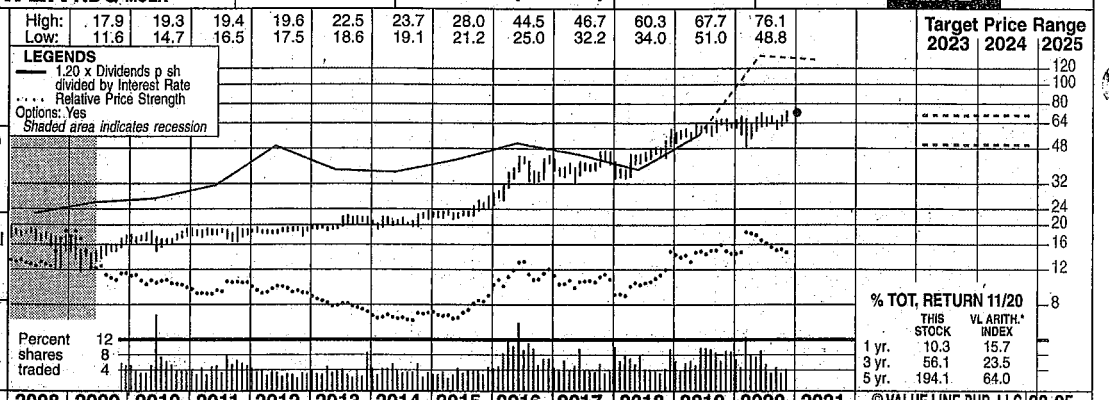
Low-High	Midpoint (% to Mid)
$57-$102	$80 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(-5%)	1%
Low	50	(-30%)	-6%

Institutional Decisions

	1Q2020	2Q2020	3Q2020
to Buy	55	68	52
to Sell	70	55	69
Hld's(000)	10280	10359	10357



% TOT. RETURN 11/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	10.3	15.7
3 yr.	56.1	23.5
5 yr.	194.1	64.0

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
6.25	6.44	6.16	6.50	6.79	6.75	6.60	6.50	6.98	7.19	7.26	7.77	8.16	8.00	8.42	7.72	*8.05*	*8.45*	Revenues per sh	*9.15*
1.28	1.33	1.33	1.49	1.53	1.40	1.55	1.46	1.56	1.72	1.84	1.97	2.17	2.24	2.89	2.90	*3.05*	*3.15*	"Cash Flow" per sh	*3.65*
.73	.71	.82	.87	.89	.72	.96	.84	.90	1.03	1.13	1.22	1.38	1.38	1.96	2.01	*2.20*	*2.25*	Earnings per sh [A]	*2.65*
.66	.67	.68	.69	.70	.71	.72	.73	.74	.75	.76	.78	.81	.86	.91	.98	*1.04*	*1.10*	Div'd Decl'd per sh [B■]	*1.25*
2.54	2.18	2.31	1.66	2.12	1.49	1.90	1.50	1.36	1.26	1.40	1.59	2.91	3.08	4.40	5.11	*3.95*	*4.50*	Cap'l Spending per sh	*5.00*
8.02	8.26	9.52	10.05	10.03	10.33	11.13	11.27	11.48	11.82	12.24	12.74	13.40	14.02	15.17	18.57	*16.15*	*16.50*	Book Value per sh	*17.50*
11.36	11.58	13.17	13.25	13.40	13.52	15.57	15.70	15.82	15.96	16.12	16.23	16.30	16.35	16.40	17.43	*17.65*	*17.75*	Common Shs Outst'g [C]	*18.00*
26.4	27.4	22.7	21.6	19.8	21.0	17.8	21.7	20.8	19.7	18.5	19.1	25.6	28.4	22.2	29.7	*29.8*		Avg Ann'l P/E Ratio	*23.0*
1.39	1.46	1.23	1.15	1.19	1.40	1.13	1.36	1.32	1.11	.97	.96	1.34	1.43	1.20	1.61	*1.50*		Relative P/E Ratio	*1.30*
3.4%	3.5%	3.7%	3.7%	4.0%	4.7%	4.2%	4.0%	4.0%	3.7%	3.7%	3.3%	2.3%	2.2%	2.1%	1.6%	*1.6%*		Avg Ann'l Div'd Yield	*2.1%*
						102.7	102.1	110.4	114.8	117.1	126.0	132.9	130.8	138.1	134.6	*142*	*150*	Revenues ($mill)	*165*
						14.3	13.4	14.4	16.6	18.4	20.0	22.7	22.8	32.5	33.9	*34.0*	*40.0*	Net Profit ($mill)	*48.0*
						32.1%	32.7%	33.9%	34.1%	35.0%	34.5%	34.0%	32.7%	2.8%	2.8%	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
						6.8%	6.1%	3.4%	1.9%	1.7%	1.9%	2.7%	3.1%	1.4%	3.4%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*2.5%*
						43.1%	42.3%	41.5%	40.4%	40.5%	39.4%	37.9%	37.5%	37.8%	41.5%	*44.5%*	*42.5%*	Long-Term Debt Ratio	*38.5%*
						55.8%	56.6%	57.4%	58.7%	58.8%	59.8%	61.5%	61.8%	61.6%	58.2%	*55.5%*	*57.0%*	Common Equity Ratio	*61.0%*
						310.5	312.5	316.5	321.4	335.8	345.4	355.4	370.7	404.1	556.7	*515*	*515*	Total Capital ($mill)	*520*
						405.9	422.2	435.2	446.5	465.4	481.9	517.8	557.2	618.5	705.7	*720*	*735*	Net Plant ($mill)	*775*
						5.7%	5.2%	5.4%	5.9%	6.3%	6.6%	7.1%	6.9%	8.9%	6.7%	*8.0%*	*8.5%*	Return on Total Cap'l	*9.5%*
						8.1%	7.5%	7.8%	8.7%	9.2%	9.6%	10.3%	9.8%	12.9%	10.4%	*13.5%*	*13.5%*	Return on Shr. Equity	*15.0%*
						8.2%	7.5%	7.8%	8.7%	9.3%	9.6%	10.3%	9.9%	13.0%	10.4%	*13.5%*	*13.5%*	Return on Com Equity	*15.0%*
						2.1%	1.0%	1.4%	2.4%	3.1%	3.5%	4.3%	3.8%	7.0%	5.4%	*7.0%*	*7.0%*	Retained to Com Eq	*8.0%*
						75%	87%	83%	73%	67%	63%	58%	62%	46%	48%	*47%*	*49%*	All Div'ds to Net Prof	*47%*

CAPITAL STRUCTURE as of 9/30/20
Total Debt $278.2 mill. **Due in 5 Yrs** $43.7 mill.
LT Debt $234.5 mill. **LT Interest** $7.2 mill.
(Total interest coverage: 8.5x)
(42% of Cap'l)

Pension Assets-12/19 $80.4 mill.
Oblig. $100.9 mill.
Pfd Stock $2.4 mill. **Pfd Div'd:** $.1 mill.

Common Stock 17,469,410 shs.
as of 10/29/20

MARKET CAP: $1.3 billion (Mid-Cap)

CURRENT POSITION ($MILL.)	2018	2019	9/30/20
Cash Assets	3.7	2.2	5.3
Other	27.1	26.9	32.6
Current Assets	30.8	29.1	37.9
Accts Payable	19.3	23.3	24.9
Debt Due	55.8	27.2	43.7
Other	19.3	14.5	16.8
Current Liab.	94.4	65.0	85.4

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	2.0%	2.5%	*2.0%*
"Cash Flow"	6.0%	9.5%	*5.5%*
Earnings	8.0%	12.0%	*7.0%*
Dividends	2.5%	4.0%	*5.5%*
Book Value	4.5%	6.0%	*1.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	30.1	33.0	36.2	31.5	130.8
2018	31.2	34.9	38.7	33.3	138.1
2019	30.7	33.4	37.8	32.7	134.6
2020	31.8	35.3	39.9	*35.0*	*142*
2021	*33.0*	*37.0*	*44.0*	*36.0*	*150*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.27	.33	.46	.32	1.38
2018	.27	.52	.74	.43	1.96
2019	.39	.49	.66	.46	2.01
2020	.44	.55	.72	*.49*	*2.20*
2021	*.45*	*.55*	*.73*	*.52*	*2.25*

Calendar	QUARTERLY DIVIDENDS PAID [B■] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.21125	.21125	.21125	.22375	.86
2018	.22375	.22375	.22375	.24	.91
2019	.24	.24	.24	.2562	.98
2020	.2562	.2562	.2562	.2725	
2021					

BUSINESS: Middlesex Water Company engages in the ownership and operation of regulated water utility systems in New Jersey, Delaware, and Pennsylvania. It also operates water and wastewater systems under contract on behalf of municipal and private clients in NJ and DE. Its Middlesex System provides water services to 61,000 retail customers, primarily in Middlesex County, New Jersey. In 2019, the Middlesex System accounted for 60% of operating revenues. At 12/31/19, the company had 352 employees. Incorporated: NJ. President, CEO, and Chairman: Dennis W. Doll. Officers & directors own 3.1% of the com. stock; BlackRock Inst. Trust Co., 7.7% (4/20 proxy). Add.: 485 C Route 1 South, Suite 400, Iselin, NJ 08830. Tel.: 732-634-1500. Int.: www.middlesexwater.com.

Middlesex Water reported better-than-expected bottom-line results in the third quarter. Notably, the company earned $0.72 a share, or 9% above the previous-year tally. The strong performance stemmed largely from lower taxes due to regulatory accounting changes, as well as higher operating income. Meanwhile, despite slightly missing our $42 million mark, revenues of nearly $40 million (up 6% year over year) were aided by increased residential and wholesale water consumption, along with a wider customer base in its Delaware system.

All in all, we now expect Middlesex Water to close out 2020 with revenues of $142 million (down from our previous call of $145 million) and share net of $2.20 (up from $2.15). For this year, modest top- and bottom-line growth is probably in the cards. Water consumption should stay elevated as personal hygiene remains a top priority. Assuming the economy gets back on track in the near term, we expect the reopening of businesses and resumed construction and industrial projects to boost wholesale consumption.

Infrastructure spending is apt to be robust through mid-decade. Specifically, Middlesex's Water For Tomorrow initiative has earmarked investment funds of $300 million that will be used to improve watermains, pipe systems, wastewater treatment facilities, and other vital infrastructure upgrades. To supplement its spending, we suspect management can pass along some of these costs to consumers via periodic regulator-approved rate hikes.

The stock etched a fresh high-water mark during the December interim. Based on our Timeliness Ranking System, Middlesex shares are slated as a top selection (1) for relative year-ahead price performance and, thus, ought to appeal to momentum accounts. On the other hand, we continue to recommend that subscribers with a long-term bent remain on the sidelines, as most of the growth we envision over the coming three to five years appears to already be factored into the current quotation. Moreover, even after recently increasing the quarterly payout by 6%, the dividend yield is subpar.

Nicholas P. Patrikis *January 8, 2021*

(A) Diluted earnings. Next earnings report due early February.
(B) Dividends historically paid in mid-Feb., May, Aug., and November. ■ Div'd reinvestment plan available.
(C) In millions.

Company's Financial Strength	B++
Stock's Price Stability	80
Price Growth Persistence	65
Earnings Predictability	80

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SJW GROUP NYSE-SJW

RECENT PRICE 69.04 | P/E RATIO 30.3 (Trailing: 34.2) (Median: 21.0) | RELATIVE P/E RATIO 1.42 | DIV'D YLD 1.9% | VALUE LINE 1795

TIMELINESS — Suspended 5/4/18
SAFETY 3 New 4/22/11
TECHNICAL — Suspended 5/4/18
BETA .85 (1.00 = Market)

18-Month Target Price Range

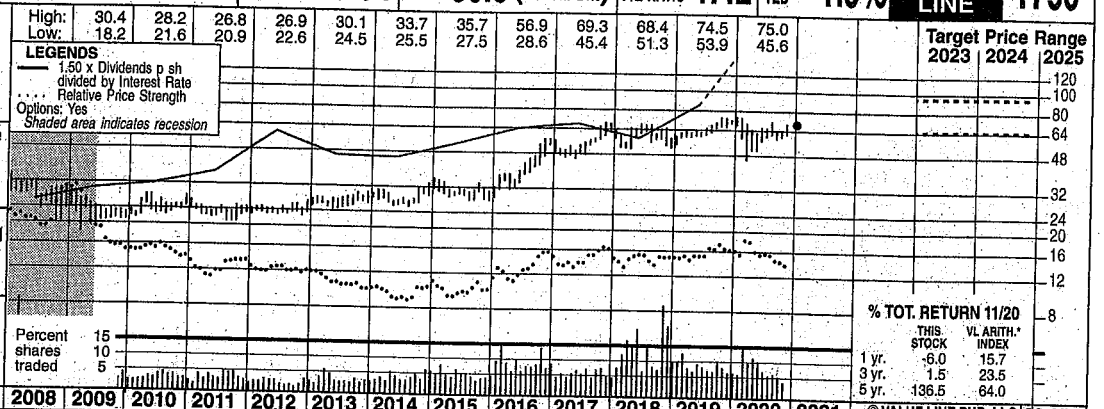
Low-High	Midpoint (% to Mid)
$51-$120	$86 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	95	(+40%)	10%
Low	65	(-5%)	1%

Institutional Decisions

	1Q2020	2Q2020	3Q2020
to Buy	72	78	62
to Sell	95	75	77
Hld's(000)	19448	19939	19827



High:	30.4	28.2	26.8	26.9	30.1	33.7	35.7	56.9	69.3	68.4	74.5	75.0
Low:	18.2	21.6	20.9	22.6	24.5	25.5	27.5	28.6	45.4	51.3	53.9	45.6

% TOT. RETURN 11/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	6.0	15.7
3 yr.	1.5	23.5
5 yr.	136.5	64.0

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
9.14	9.86	10.35	11.25	12.12	11.68	11.62	12.85	14.01	13.73	15.76	14.97	16.61	18.97	14.00	14.78	*19.30*	*20.00*	Revenues per sh	*21.65*
1.89	2.21	2.38	2.30	2.44	2.21	2.38	2.80	2.97	2.90	4.42	3.86	4.76	5.24	3.29	3.67	*3.85*	*4.25*	"Cash Flow" per sh	*5.30*
.87	1.12	1.19	1.04	1.08	.81	.84	1.11	1.18	1.12	2.54	1.85	2.57	2.86	1.82	1.35	*2.10*	*2.55*	Earnings per sh A	*3.65*
.51	.53	.57	.61	.65	.66	.68	.69	.71	.73	.75	.78	.81	1.04	1.12	1.20	*1.28*	*1.36*	Div'd Decl'd per sh B■	*1.66*
2.31	2.83	3.87	6.62	3.79	3.17	5.65	3.75	5.67	4.68	5.02	5.24	6.95	7.26	5.08	6.25	*5.25*	*5.75*	Cap'l Spending per sh	*6.50*
10.11	10.72	12.48	12.90	13.99	13.66	13.75	14.20	14.71	15.92	17.75	18.83	20.61	22.57	31.31	31.27	*32.25*	*35.60*	Book Value per sh	*39.15*
18.27	18.27	18.28	18.36	18.18	18.50	18.55	18.59	18.67	20.17	20.29	20.38	20.46	20.52	28.40	28.46	*29.00*	*29.50*	Common Shs Outst'g C	*30.00*
19.6	19.7	23.5	33.4	26.2	28.7	29.1	21.2	20.4	24.3	11.2	16.6	15.7	18.8	32.7	47.8	*30.6*		Avg Ann'l P/E Ratio	*22.0*
1.04	1.05	1.27	1.77	1.58	1.91	1.85	1.33	1.30	1.37	.59	.84	.82	.95	1.77	2.58	*1.54*		Relative P/E Ratio	*1.20*
3.0%	2.4%	2.0%	1.7%	2.3%	2.8%	2.8%	2.9%	3.0%	2.7%	2.6%	2.5%	2.0%	1.9%	1.9%	1.9%	*2.0%*		Avg Ann'l Div'd Yield	*2.1%*
215.6	239.0	261.5	276.9	319.7	305.1	339.7	389.2	397.7	420.5	*560*	*590*	Revenues ($mill)	*650*
15.8	20.9	22.3	23.5	51.8	37.9	52.8	59.2	38.8	38.7	*61.0*	*75.0*	Net Profit ($mill)	*110*
38.8%	41.1%	41.1%	38.7%	32.5%	38.1%	38.8%	36.7%	20.6%	25.3%	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
--	--	--	--	--	--	--	--	2.0%	1.5%	*1.5%*	*1.5%*	AFUDC % to Net Profit	*1.5%*
53.7%	56.6%	55.0%	51.1%	51.6%	49.8%	50.7%	48.2%	32.7%	59.1%	*58.0%*	*53.5%*	Long-Term Debt Ratio	*39.0%*
46.3%	43.4%	45.0%	48.9%	48.4%	50.2%	49.3%	51.8%	67.3%	40.9%	*42.0%*	*46.5%*	Common Equity Ratio	*61.0%*
550.7	607.9	610.2	656.2	744.5	764.6	855.0	894.3	1320.7	2173.6	*2235*	*2250*	Total Capital ($mill)	*1925*
785.5	756.2	831.6	898.7	963.0	1036.8	1146.4	1239.3	1328.8	2206.5	*2300*	*2450*	Net Plant ($mill)	*2775*
4.3%	4.9%	5.0%	5.0%	8.3%	6.3%	7.4%	7.9%	3.9%	2.5%	*3.5%*	*4.0%*	Return on Total Cap'l	*6.5%*
6.2%	7.9%	8.1%	7.3%	14.4%	9.9%	12.5%	12.8%	4.4%	4.3%	*6.5%*	*7.0%*	Return on Shr. Equity	*9.5%*
6.2%	7.9%	8.1%	7.3%	14.4%	9.9%	12.5%	12.8%	4.4%	4.3%	*6.5%*	*7.0%*	Return on Com Equity	*9.5%*
1.2%	3.1%	3.3%	2.8%	10.2%	5.7%	8.6%	8.2%	1.8%	.5%	*2.5%*	*3.5%*	Retained to Com Eq	*5.0%*
80%	61%	59%	62%	29%	42%	31%	36%	60%	88%	*61%*	*53%*	All Div'ds to Net Prof	*45%*

CAPITAL STRUCTURE as of 9/30/20
Total Debt $1379.5 mill. **Due in 5 Yrs** $22.4 mill.
LT Debt $1307.6 mill. **LT Interest** $50.0 mill.
(LT Interest Coverage: 4.9x)
(60% of Cap'l)

Pension Assets-12/19 $243.5 mill.
Oblig. $338.2 mill.
Pfd Stock None.
Common Stock 28,552,177 shs.

MARKET CAP: $2.0 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2018	2019	9/30/20
Cash Assets	420.7	17.9	20.2
Accts Receivable	19.2	36.3	51.4
Other	62.8	67.8	83.3
Current Assets	502.7	122.0	154.9
Accts Payable	24.9	34.9	33.8
Debt Due	--	22.3	71.9
Other	139.1	177.4	199.7
Current Liab.	164.0	234.6	305.4

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	3.0%	2.0%	*5.5%*
"Cash Flow"	6.0%	3.5%	*4.5%*
Earnings	7.5%	4.5%	*10.5%*
Dividends	6.0%	9.0%	*7.0%*
Book Value	7.5%	12.0%	*5.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	69.0	102.1	124.6	93.5	389.2
2018	75.0	99.1	124.9	98.7	397.7
2019	77.7	103.0	114.0	126.0	420.5
2020	115.8	147.2	165.9	*131.1*	*560*
2021	*120*	*150*	*175*	*145*	*590*

Calendar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.18	.90	.94	.84	2.86
2018	.06	.62	.76	.38	1.82
2019	.21	.47	.33	.34	1.35
2020	.08	.69	.91	*.42*	*2.10*
2021	*.20*	*.75*	*.95*	*.65*	*2.55*

Calendar	QUARTERLY DIVIDENDS PAID BD■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.2175	.2175	.2175	.3875	1.04
2018	.28	.28	.28	.28	1.12
2019	.30	.30	.30	.30	1.20
2020	.32	.32	.32	.32	
2021					

BUSINESS: SJW Group engages in the production, purchase, storage, purification, distribution, and retail sale of water. It provides water service to approximately 231,000 connections with a total population of roughly one million people in the San Jose area and 16,000 connections that reach about 49,000 residents in the region between San Antonio and Austin, Texas. The company merged with Connecticut Water (10/19) which provides service to approx. 138,000 connections with a total population of 450,000 people. Has 361 employees. Officers and directors own 8.3% of outstanding shares (3/20 proxy). Chairman & CEO: Richard Roth. Incorporated: California. Address: 110 West Taylor Street, San Jose, CA 95110. Telephone: (408) 279-7800. Internet: www.sjwater.com.

SJW Group reported solid third-quarter financial results. The regulated water utility posted revenues of $166 million, a jump of 46% year over year, and earnings of $0.91 per share, nearly triple the year-earlier tally in the September interim. Underpinning the impressive advance was approximately $37 million in new revenues associated with the CTWS merger, roughly $5 million linked to water rate increases and higher customer usage, and about $10 million in reserve revenues recognized from previous years. Moreover, COVID-19-related disruptions that hampered results in previous periods have largely subsided, and merger-related expenses have notably waned.

Our 2020 share-profit forecast sits a nickel above management's upper guidance range. Our slightly-more-optimistic call for earnings of $2.10 per share stems from the recent outperformance, as well as improving post-merger operating metrics. Meanwhile, we are adding $5 million to our top-line estimate, to $560 million. For 2021, we currently look for revenues and earnings to expand 5% and 21%, respectively.

SJW Group is well positioned for long-term growth, in our view. For one, its recently bolstered geographic footprint now spans four states, which augurs well for an expanding customer base and increased operational synergies. Too, the top line ought to get a boost from the implementation of periodic rate hikes. Meanwhile, we think aggressive capital investment to replace and upgrade aging infrastructure, such as watermains, pipe systems, and treatment facilities is likely on tap. Lastly, an improving economic backdrop and a renewed focus on personal hygiene from the general public should support higher consumer water consumption in the coming years.

Strong business prospects aside, we are hesitant to recommend the stock at recent levels. Unranked SJW shares have risen about 10% in value since our October review, and are currently trading inside our 3- to 5-year Target Price Range. The dividend yield is merely average, as well. Thus, we suggest interested subscribers remain on the sidelines until a better entry point is available.

Nicholas P. Patrikis *January 8, 2021*

(A) Diluted earnings. Excludes nonrecurring losses: '04, $3.78; '05, $1.09; '06, $16.36; '08, $1.22; '10, $0.46. GAAP accounting as of 2013. Next earnings report due early Feb.
Quarterly egs. may not add due to rounding.
(B) Dividends historically paid in early March, June, September, and December. ■ Div'd reinvestment plan available.
(C) In millions.
(D) Paid special dividend of $0.17 per share on 11/17.
(E) Suspended due to recent CTWS merger.

Company's Financial Strength	B+
Stock's Price Stability	75
Price Growth Persistence	70
Earnings Predictability	45

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YORK WATER NDQ-YORW

RECENT PRICE	P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
47.16	36.3 (Trailing: 37.7 Median: 26.0)	1.70	1.6%	1796

TIMELINESS 2 Raised 5/29/20
SAFETY 3 Lowered 7/17/15
TECHNICAL 2 Raised 1/1/21
BETA .80 (1.00 = Market)

18-Month Target Price Range

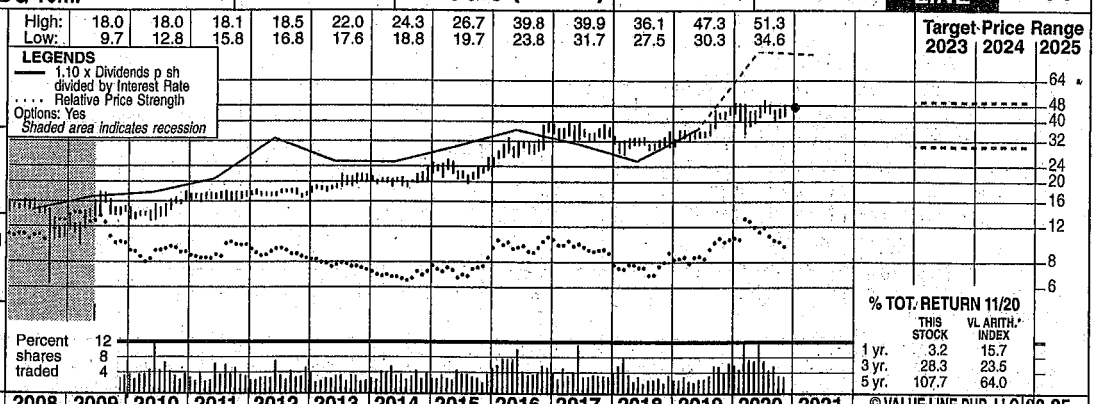
Low-High	Midpoint (% to Mid)
$37-$78	$58 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	50	(+5%)	3%
Low	30	(-35%)	-8%

Institutional Decisions

	1Q2020	2Q2020	3Q2020
to Buy	61	59	46
to Sell	52	48	53
Hld's(000)	5387	5479	5302



2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
2.18	2.58	2.56	2.79	2.89	2.95	3.07	3.18	3.21	3.27	3.58	3.68	3.70	3.77	3.74	3.96	4.10	4.20	Revenues per sh	5.10
.65	.79	.77	.86	.88	.95	1.07	1.09	1.12	1.19	1.36	1.45	1.42	1.53	1.58	1.70	1.90	1.95	"Cash Flow" per sh	2.40
.49	.56	.58	.57	.57	.64	.71	.71	.72	.75	.89	.97	.92	1.01	1.04	1.11	1.30	1.35	Earnings per sh [A]	1.60
.39	.42	.45	.48	.49	.51	.52	.53	.54	.55	.57	.60	.63	.65	.67	.70	.73	.78	Div'd Decl'd per sh [B]	.95
2.50	1.69	1.85	1.69	2.17	1.18	.83	.74	.94	.76	1.10	1.11	1.03	1.95	1.95	.16	.85	1.35	Cap'l Spending per sh	1.85
4.65	4.85	5.84	5.97	6.14	6.92	7.19	7.45	7.73	7.98	8.15	8.51	8.88	9.28	9.75	10.31	11.15	11.60	Book Value per sh	12.50
10.33	10.40	11.20	11.27	11.37	12.56	12.69	12.79	12.92	12.98	12.83	12.81	12.85	12.87	12.94	13.02	13.00	12.95	Common Shs Outst'g [C]	12.80
25.7	26.3	31.2	30.3	24.6	21.9	20.7	23.9	24.4	26.3	23.1	23.5	32.8	34.6	30.3	33.8	34.9		Avg Ann'l P/E Ratio	25.0
1.36	1.40	1.68	1.61	1.48	1.46	1.32	1.50	1.55	1.48	1.22	1.18	1.72	1.74	1.64	1.83	1.76		Relative P/E Ratio	1.40
3.1%	2.9%	2.5%	2.8%	3.5%	3.6%	3.5%	3.1%	3.1%	2.8%	2.8%	2.6%	2.1%	1.9%	2.1%	1.9%	1.6%		Avg Ann'l Div'd Yield	2.4%
						39.0	40.6	41.4	42.4	45.9	47.1	47.6	48.6	48.4	51.6	53.5	54.5	Revenues ($mill)	65.0
						8.9	9.1	9.3	9.7	11.5	12.5	11.8	13.0	13.4	14.4	17.0	17.5	Net Profit ($mill)	20.5
						38.5%	35.3%	37.6%	37.6%	29.8%	27.5%	31.3%	25.9%	15.7%	13.5%	18.5%	21.0%	Income Tax Rate	21.0%
						1.2%	1.1%	1.1%	.8%	1.8%	1.6%	1.9%	6.7%	1.7%	2.5%	1.5%	1.5%	AFUDC % to Net Profit	1.5%
						48.3%	47.1%	46.0%	45.1%	44.8%	44.4%	42.6%	43.0%	42.5%	41.3%	44.0%	40.0%	Long-Term Debt Ratio	36.0%
						51.7%	52.9%	54.0%	54.9%	55.2%	55.6%	57.4%	57.0%	57.5%	58.7%	56.0%	60.0%	Common Equity Ratio	64.0%
						176.4	180.2	184.8	188.4	189.4	196.3	198.7	209.5	219.5	228.7	260	250	Total Capital ($mill)	250
						228.4	233.0	240.3	244.2	253.2	261.4	270.9	288.8	299.2	313.2	315	320	Net Plant ($mill)	335
						6.5%	6.4%	6.4%	6.5%	7.4%	7.6%	7.2%	7.5%	7.3%	7.4%	7.5%	8.0%	Return on Total Cap'l	9.0%
						9.8%	9.5%	9.3%	9.3%	11.0%	11.5%	10.4%	10.9%	10.6%	10.7%	11.5%	11.5%	Return on Shr. Equity	13.0%
						9.8%	9.5%	9.3%	9.3%	11.0%	11.5%	10.4%	10.9%	10.6%	10.7%	11.5%	11.5%	Return on Com Equity	13.0%
						2.7%	2.5%	2.4%	2.4%	3.9%	4.4%	3.4%	4.0%	3.8%	4.0%	5.0%	5.0%	Retained to Com Eq	5.0%
						72%	73%	74%	74%	64%	62%	67%	63%	64%	62%	56%	58%	All Div'ds to Net Prof	59%

CAPITAL STRUCTURE as of 9/30/20
Total Debt $116.8 mill. **Due in 5 Yrs** $42.5 mill.
LT Debt $116.8 mill. **LT Interest** $5.5 mill.

(45% of Cap'l)

Pension Assets12/19 $49.3 mill.
Oblig. $47.3 mill.

Pfd Stock None

Common Stock 13,049,237 shs.

MARKET CAP: $625 million (Small Cap)

CURRENT POSITION ($MILL.)	2018	2019	9/30/20
Cash Assets	--	--	10.9
Accounts Receivable	4.8	4.4	5.2
Inventory (Avg. Cost)	.9	1.0	1.2
Other	3.3	4.0	4.5
Current Assets	9.0	9.4	21.8
Accts Payable	3.0	3.4	6.8
Debt Due	1.0	6.5	--
Other	6.8	5.3	5.1
Current Liab.	10.8	15.2	11.9

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	3.0%	2.5%	5.0%
"Cash Flow"	6.0%	5.5%	7.0%
Earnings	6.0%	6.0%	7.0%
Dividends	3.0%	4.0%	6.0%
Book Value	4.5%	4.0%	4.0%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	11.3	12.3	12.7	12.3	48.6
2018	11.6	12.0	12.7	12.1	48.4
2019	11.8	13.0	13.7	13.1	51.6
2020	12.9	13.3	14.3	13.0	53.5
2021	13.0	13.5	14.5	13.5	54.5

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.20	.23	.31	.27	1.01
2018	.20	.26	.29	.29	1.04
2019	.22	.28	.35	.26	1.11
2020	.31	.32	.36	.31	1.30
2021	.28	.35	.37	.35	1.35

Calendar	QUARTERLY DIVIDENDS PAID [B] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.1602	.1602	.1602	.1666	.647
2018	.1666	.1666	.1666	.1733	.673
2019	.1733	.1733	.1733	.1802	.70
2020	.1802	.1802	.1802	.1874	
2021					

BUSINESS: The York Water Company is the oldest investor-owned regulated water utility in the United States. It has operated continuously since 1816. As of December 31, 2019, the company's average daily availability was 35.4 million gallons and its service territory had an estimated population of 201,000. Has more than 71,400 customers. Residential customers accounted for 65% of 2019 revenues; commercial and industrial (28%); other (7%). It also provides sewer billing services. Incorporated: PA. York had 106 full-time employees at 12/31/19. President/Chief Executive Officer: J.T. Hand. Officers/directors own 1.2% of the common stock (3/20 proxy). Address: 130 East Market Street, York, Pennsylvania 17401. Telephone: (717) 845-3601. Internet: www.yorkwater.com.

York Water raised its quarterly dividend payment for the 24th-consecutive year. The distribution was increased 4%, to $0.1874 per share, equating to an annual return of about 1.6%. Though the water utility has historically been a consistent income generator, given several years of share-price advances, conservative yield-seeking investors might be better suited elsewhere at this juncture.

We think York delivered strong top- and bottom-line growth in 2020, which will likely be followed up by moderate expansion in 2021. The company posted revenues of $14.3 million and earnings of $0.36 a share in the September period, improving decently on a year-over-year basis and falling relatively in line with expectations. Fourth-quarter results were probably solid, too, driven by higher household water consumption and an expanding customer base. For this year, we are reiterating our calls for low single-digit revenue and earnings growth, to $54.5 million and $1.35 per share, respectively.

Long-term business prospects are bright, and should be accompanied by aggressive spending on infrastructure upgrades. Since our previous review, management invested nearly $7 million on a standpipe and other construction projects, with an estimated $12 million allocation likely tapped in the December period. Over the coming years, as the company's water delivery infrastructure ages and its customer base expands, York ought to spend heavily on pipe replacements, wastewater treatment facilities, service lines, and pumping stations. Overall, York should be able to recoup most of these investments via increased customer rates through its Distribution Systems Improvement Charge program, which requires approval from Pennsylvania regulators.

The stock price is hovering around recently etched all-time highs. Over the coming six to 12 months, YORW shares are pegged to outpace the broader market averages, thus ought to appeal to subscribers with a short-term horizon. On the other hand, 3- to 5-year total return potential is unenticing at recent levels. In fact, long-time investors might want to consider booking some profits at these elevated valuations.

Nicholas P. Patrikis *January 8, 2021*

(A) Diluted earnings. Next earnings report due early February.
(B) Dividends historically paid in late February, June, September, and December.
(C) In millions, adjusted for split.

Company's Financial Strength	B+
Stock's Price Stability	75
Price Growth Persistence	65
Earnings Predictability	100

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East Whiteland Township's Wastewater System

Appraisal Work Papers
As of January 8, 2021

East Whiteland Township
Financials 2016 through 2019
Budgets 2019 & 2021
Rates and Customers

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

East Whiteland Financials
Sewer Fund

	2016	2017	2018	2019	
Assets					
Current Assets					
Cash and Cash Equivalents	6,580,678	7,518,955	9,567,007	10,083,775	
		938,277	2,048,052	516,768	
		17.98%	**30.66%**	**9.52%**	**19.39%**
Account Receivables	1,161,871	683,599	848,468	1,151,871	
	24.04%	**13.10%**	**12.70%**	**21.22%**	**17.77%**
Due from other Fund		11,339	147,915		**37.15%**
Total Current Assets	**7,742,549**	**8,213,893**	**10,563,390**	**11,235,646**	
Noncurrent Assets					
Capital Assets	32,785,377	34,244,259	36,333,876	37,387,925	
Other Capital	11,538,573	11,085,242	11,417,162	11,285,015	
Accumulated Depreciation	(12,377,360)	(13,065,252)	(13,754,484)	(14,529,267)	
Total Noncurrent Assets	**31,946,590**	**32,264,249**	**33,996,554**	**34,143,673**	
Total Assets	**39,689,139**	**40,478,142**	**44,559,944**	**45,379,319**	
Deferred Outflows of Resources					
Deferred Amounts related to Pensions	70,666	109,842	183,740	113,838	
Deferred amount on Refunding	215,921	190,519	28,363	130,298	
Deferred amount on refunding				139,715	
Total Deferred Outflows of Resources	**286,587**	**300,361**	**165,117**	**383,851**	
Liabilities					
Current Liabilities					
Accounts Payable	123,100	138,497	82,760	417,065	
Accrued Liabilities	13,831	10,221	10,708	13,689	
Due to other funds	371	210,243	78	18,493	
			12,396		
Compensated absences	6,015	5,417	4,953	3,114	
Unearned Revenues	830,898	917,045	931,069	971,503	
Accrued Interest	188,258	197,363	191,523	185,646	
Bond Payable	725,000	745,000	715,000	735,000	
Totl Current Libilities	**1,887,473**	**2,223,786**	**1,948,487**	**2,344,510**	
	39.05%	**42.62%**	**29.17%**	**43.19%**	**38.51%**
Noncurrent Liabilities					
Compensated absences	34,085	30,694	28,065	17,649	
Bonds Payable	17,466,860	16,741,396	16,045,932	15,330,468	
Net Pension Liability	137,571	163,903	333,457	192,049	
Other post-employment benefits and obligatons	232,724	294,321	1,239,417	921,823	
Total Noncurrent Liabilities	**17,871,240**	**17,230,314**	**17,646,871**	**16,461,989**	
Total Liabilities	**19,758,713**	**19,454,100**	**19,595,358**	**18,806,499**	
Deferred inflow of Resource					
Deferred amount related to pensions	11,356	44,990	6,206	82,821	
Deferred amount related to OPEB			59,866	426,073	
Total Deferred Inflow of Resource	**11,356**	**44,990**	**66,072**	**508,894**	
Net Position					
Net investment in Capital Assets	13,970,651	14,968,372	17,400,739	18,217,920	
Unrestricted	6,232,006	6,311,041	7,874,995	8,229,857	
Total Net Position	**20,202,657**	**21,279,413**	**25,275,734**	**26,447,777**	

Statement of Revenues, Expenses, and Change in Net Position

Operating Revenues					
Charge for Services					
Sewer Service	3,312,268	3,294,177	3,809,229	3,761,787	
Tapping fees	844,300	1,706,800	1,306,657	984,100	
Miscellaneous	677,340	216,471	1,563,159	682,780	
Total Operating Revenues	**4,833,908**	**5,217,448**	**6,679,045**	**5,428,667**	
		7.93%	28.01%	-18.72%	5.74%
Operating Expenses					
Sewer and collection fees	1,484,102	1,155,032	1,174,936	1,779,913	19.93%
Salaries. Wages and benefits	651,954	731,028	867,750	687,311	5.42%
Repair and Maintenance	140,341	643,587	57,793	236,403	68.45%
Contracted Services	85,418	57,917	96,819	41,140	-51.84%
Utilities	95,347	84,883	85,609	86,097	-9.70%
Insurance	38,276	35,780	37,641	40,288	5.26%
Depreciation	673,195	687,892	718,700	774,783	15.09%
Other	57,227	156,422	86,958	202,088	253.13%
Total Operating Expenses	**3,225,860**	**3,552,541**	**3,126,206**	**3,848,023**	19.29%
		10.13%	-12.00%	23.09%	7.07%
Operating income	**1,608,048**	**1,664,907**	**3,552,839**	**1,580,644**	
NonOpertating Revenues (Expenses)					
Interest Income	15,300	19,510	27,696	137,057	
Interest expense	(605,904)	(607,118)	(578,450)	(561,324)	
Transfers Out	(30,000)	(3,543)	(166,320)	(166,165)	
Total NonOpertating Revenues (Expenses)	**(620,604)**	**(591,151)**	**(717,074)**	**(590,432)**	
Capital Contribution			2,057,746	181,831	
Change in Net Position	**987,444**	**1,073,756**	**4,893,511**	**1,172,043**	
Net Position at Beginning of Year	19,218,213	**20,205,657**	**20,382,223**	**25,275,734**	
Net Position at end of Year	**20,205,657**	**21,279,413**	**25,275,734**	**26,447,777**	

Projections

Forecast Parameters for Periods

			1-5	6-15	6-15	16-20	21-26	27-33	34-40	40-46	47-53	54-60
See Rate Increase Schedule on tab: DCF Investor Owned Cells: L263:BS263												
	Inflation since 3.0%											
	1.061		1-5	6-15	16-19	20-26	27-33	34-40	40-46	47-53	54-60	
Revenue Forecast												
Annual Subscriber Growth	Annual Subscriber Growth: All Periods (		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Periodic Subscriber Growth	Periodic Customer Growth: All period 0		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Growth	0%											
Period every ? years	5											
	2019	2021										
Revenues	5,428,667	1.061 5,759,816	3.0%	3.0%	3.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 1: Sewer & Collection Fees	1,779,913	1.061 1,888,488	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 2: Wages & Benefits	687,311	1.061 729,237	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 3: Repair & Maintenance	236,403	1.061 250,824	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 4: Contracted Services	41,140	1.061 43,650	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 5: Utilities	86,097	1.061 91,349	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 6: Insurance & Other	242,376	1.061 257,161	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Expense Level 7: Depreciation	774,783	1.061 822,045										
Total Expenses	3,848,023	4,082,754										
check												
Operating Income	1,580,644	1,677,062										
Working Capital		Use										
Current Assets	**37.15%**	28.0% 37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	37.2%	
Current Liabilities	**38.51%**	22.6% 38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	

FINANCIALS 2016-2019

COMPREHENSIVE ANNUAL FINANCIAL REPORT

EAST WHITELAND TOWNSHIP
CHESTER COUNTY
PENNSYLVANIA

For the Year Ended December 31, 2016
East Whiteland Township Finance Department

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Certified Public Accountants and Business Consultants

EAST WHITELAND TOWNSHIP
CHESTER COUNTY
PENNSYLVANIA

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Year Ended December 31, 2016

East Whiteland Township Finance Department
John B. Nagel, Township Manager

EAST WHITELAND TOWNSHIP

Statement of Net Position
Proprietary Funds
December 31, 2016

	Sewer Fund
ASSETS	
CURRENT ASSETS	
Cash and cash equivalents	$ 6,580,678
Accounts receivable	1,161,871
TOTAL CURRENT ASSETS	7,742,549
NONCURRENT ASSETS	
Capital assets	32,785,377
Other capital assets	11,538,573
Accumulated depreciation	(12,377,360)
TOTAL NONCURRENT ASSETS	31,946,590
TOTAL ASSETS	39,689,139
DEFERRED OUTFLOWS OF RESOURCES	
Deferred amount related to pensions	70,666
Deferred amount on refunding	215,921
TOTAL DEFERRED OUTFLOWS OF RESOURCES	286,587
LIABILITIES	
CURRENT LIABILITIES	
Accounts payable	123,100
Accrued liabilities	13,831
Due to other funds	371
Compensated absences	6,015
Unearned revenue	830,898
Accrued interest	188,258
Bonds payable	725,000
TOTAL CURRENT LIABILITIES	1,887,473
NONCURRENT LIABILITIES	
Compensated absences	34,085
Bonds payable	17,466,860
Net pension liability	137,571
Other post-employment benefits and obligations	232,724
TOTAL NONCURRENT LIABILITIES	17,871,240
TOTAL LIABILITIES	19,758,713
DEFERRED INFLOWS OF RESOURCES	
Deferred amount related to pensions	11,356
NET POSITION	
Net investment in capital assets	13,970,651
Unrestricted	6,235,006
TOTAL NET POSITION	$ 20,205,657

See accompanying notes to the basic financial statements.

EAST WHITELAND TOWNSHIP

Statement of Revenues, Expenses and
Changes in Net Position
Proprietary Funds
Year Ended December 31, 2016

	Sewer Fund
OPERATING REVENUES	
Charges for services	
Sewer service	$ 3,312,268
Tapping fees	844,300
Miscellaneous	677,340
TOTAL OPERATING REVENUES	4,833,908
OPERATING EXPENSES	
Sewer and collection fees	1,484,102
Salaries, wages and benefits	651,954
Repairs and maintenance	140,341
Contracted services	85,418
Utilities	95,347
Insurance	38,276
Depreciation	673,195
Other	57,227
TOTAL OPERATING EXPENSES	3,225,860
OPERATING INCOME	1,608,048
NONOPERATING REVENUES (EXPENSES)	
Interest income	15,300
Interest expense	(605,904)
Transfers out	(30,000)
TOTAL NONOPERATING REVENUES (EXPENSES)	(620,604)
CHANGE IN NET POSITION	987,444
NET POSITION AT BEGINNING OF YEAR	19,218,213
NET POSITION AT END OF YEAR	$ 20,205,657

See accompanying notes to the basic financial statements.

EAST WHITELAND TOWNSHIP

Statement of Cash Flows
Proprietary Funds
Year Ended December 31, 2016

	Sewer Fund
CASH FLOWS FROM OPERATING ACTIVITIES	
Cash received from customers	$ 4,058,022
Cash payments to suppliers for goods and services	(1,823,910)
Cash payments to employees for services	(579,944)
NET CASH PROVIDED BY OPERATING ACTIVITIES	1,654,168
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES	
Transfers to other funds	(30,000)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES	
Acquisition and construction of capital assets	(1,188,175)
Principal paid on capital debt	(720,000)
Interest paid on capital debt	(564,911)
NET CASH USED BY CAPITAL AND RELATED FINANCING ACTIVITIES	(2,473,086)
CASH FLOWS FROM INVESTING ACTIVITIES	
Earnings on investments	15,300
NET DECREASE IN CASH AND CASH EQUIVALENTS	(833,618)
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	7,414,296
CASH AND CASH EQUIVALENTS AT END OF YEAR	$ 6,580,678

See accompanying notes to the basic financial statements.

EAST WHITELAND TOWNSHIP

Statement of Cash Flows
Proprietary Funds
Year Ended December 31, 2016

	Sewer Fund
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES	
Operating income	$ 1,608,048
Adjustments to reconcile operating income to net cash provided by operating activities	
Depreciation	673,195
Pension expense	(7,223)
Increase in	
Receivables	(854,661)
Increase (decrease) in	
Accounts payable	85,824
Accrued liabilities	(12,619)
Due to other funds	(9,023)
Compensated absences	17,849
Unearned revenue	78,775
Other post-employment benefits and obligations	74,003
NET CASH PROVIDED BY OPERATING ACTIVITIES	$ 1,654,168

See accompanying notes to the basic financial statements.

NOTE C - CAPITAL ASSETS (Continued)

Depreciation expense was charged to governmental functions as follows:

GOVERNMENTAL ACTIVITIES	
General Government	$ 49,852
Public Safety	137,236
Public works, highways and streets	1,865,306
Parks and recreation	37,769
	$ 2,090,163

	Balance January 1, 2016	Increases	Decreases	Balance December 31, 2016
BUSINESS-TYPE ACTIVITIES				
Capital assets, not being depreciated				
Construction in progress	$ -	$ 453,331	$ -	$ 453,331
Capacity rights	11,085,242	-	-	11,085,242
TOTAL CAPITAL ASSETS NOT BEING DEPRECIATED	11,085,242	453,331	-	11,538,573
Capital assets being depreciated				
Sewer Infrasture	31,749,001	734,844	-	32,483,845
Machinery and equipment	99,324	-	-	99,324
Vehicles	202,208	-	-	202,208
TOTAL CAPITAL ASSETS BEING DEPRECIATED	32,050,533	734,844	-	32,785,377
Accumulated depreciation				
Sewer Infrasture	(11,490,881)	(657,803)	-	(12,148,684)
Machinery and equipment	(68,275)	(6,481)	-	(74,756)
Vehicles	(145,009)	(8,911)	-	(153,920)
TOTAL ACCUMULATED DEPRECIATION	(11,704,165)	(673,195)	-	(12,377,360)
TOTAL CAPITAL ASSETS BEING DEPRECIATED, net	20,346,368	61,649	-	20,408,017
BUSINESS-TYPE ACTIVITIES CAPITAL ASSETS, net	$ 31,431,610	$ 514,980	$ -	$ 31,946,590

COMPREHENSIVE ANNUAL FINANCIAL REPORT

EAST WHITELAND TOWNSHIP
CHESTER COUNTY
PENNSYLVANIA

For the Year Ended December 31, 2017
East Whiteland Township Finance Department

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EAST WHITELAND TOWNSHIP
CHESTER COUNTY
PENNSYLVANIA

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Year Ended December 31, 2017

East Whiteland Township Finance Department
John B. Nagel, Township Manager

EAST WHITELAND TOWNSHIP
STATEMENT OF NET POSITION
PROPRIETARY FUNDS
DECEMBER 31, 2017

	Sewer Fund
ASSETS	
CURRENT ASSETS	
Cash and cash equivalents	$ 7,518,955
Accounts receivable	683,599
Due from other funds	11,339
TOTAL CURRENT ASSETS	8,213,893
NONCURRENT ASSETS	
Capital assets	34,244,259
Other capital assets	11,085,242
Accumulated depreciation	(13,065,252)
TOTAL NONCURRENT ASSETS	32,264,249
TOTAL ASSETS	40,478,142
DEFERRED OUTFLOWS OF RESOURCES	
Deferred amount related to pensions	109,842
Deferred amount on refunding	190,519
TOTAL DEFERRED OUTFLOWS OF RESOURCES	300,361
LIABILITIES	
CURRENT LIABILITIES	
Accounts payable	138,497
Accrued liabilities	10,221
Due to other funds	210,243
Compensated absences	5,417
Unearned revenue	917,045
Accrued interest	197,363
Bonds payable	745,000
TOTAL CURRENT LIABILITIES	2,223,786
NONCURRENT LIABILITIES	
Compensated absences	30,694
Bonds payable	16,741,396
Net pension liability	163,903
Other post-employment benefits and obligations	294,321
TOTAL NONCURRENT LIABILITIES	17,230,314
TOTAL LIABILITIES	19,454,100
DEFERRED INFLOWS OF RESOURCES	
Deferred amount related to pensions	44,990
NET POSITION	
Net investment in capital assets	14,968,372
Unrestricted	6,311,041
TOTAL NET POSITION	$ 21,279,413

See accompanying notes to the basic financial statements.

EAST WHITELAND TOWNSHIP

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2017

	Sewer Fund
OPERATING REVENUES	
Charges for services	
Sewer service	$ 3,294,177
Tapping fees	1,706,800
Miscellaneous	216,471
TOTAL OPERATING REVENUES	5,217,448
OPERATING EXPENSES	
Sewer and collection fees	1,155,032
Salaries, wages and benefits	731,028
Repairs and maintenance	643,587
Contracted services	57,917
Utilities	84,883
Insurance	35,780
Depreciation	687,892
Other	156,422
TOTAL OPERATING EXPENSES	3,552,541
OPERATING INCOME	1,664,907
NONOPERATING REVENUES (EXPENSES)	
Interest income	19,510
Interest expense	(607,118)
TOTAL NONOPERATING REVENUES (EXPENSES)	(587,608)
INCOME BEFORE TRANSFERS	1,077,299
TRANSFERS OUT	(3,543)
CHANGE IN NET POSITION	1,073,756
NET POSITION AT BEGINNING OF YEAR	20,205,657
NET POSITION AT END OF YEAR	$ 21,279,413

See accompanying notes to the basic financial statements.

EAST WHITELAND TOWNSHIP
STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2017

	Sewer Fund
CASH FLOWS FROM OPERATING ACTIVITIES	
Cash received from customers	$ 5,781,867
Cash payments to suppliers for goods and services	(1,919,691)
Cash payments to employees for services	(656,240)
NET CASH PROVIDED BY OPERATING ACTIVITIES	3,205,936
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES	
Transfers to other funds	(3,543)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES	
Acquisition and construction of capital assets	(1,005,551)
Principal paid on capital debt	(725,000)
Interest paid on capital debt	(553,075)
NET CASH USED BY CAPITAL AND RELATED FINANCING ACTIVITIES	(2,283,626)
CASH FLOWS FROM INVESTING ACTIVITIES	
Earnings on investments	19,510
NET INCREASE IN CASH AND CASH EQUIVALENTS	938,277
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	6,580,678
CASH AND CASH EQUIVALENTS AT END OF YEAR	$ 7,518,955

See accompanying notes to the basic financial statements.

EAST WHITELAND TOWNSHIP
STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2017

	Sewer Fund
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES	
Operating income	$ 1,664,907
Adjustments to reconcile operating income to net cash provided by operating activities	
Depreciation	687,892
Pension expense	20,790
(Increase) Decrease in	
Receivables	478,272
Due from other funds	(11,339)
Increase (decrease) in	
Accounts payable	15,397
Accrued liabilities	(3,610)
Due to other funds	209,872
Compensated absences	(3,989)
Unearned revenue	86,147
Other post-employment benefits and obligations	61,597
NET CASH PROVIDED BY OPERATING ACTIVITIES	$ 3,205,936

See accompanying notes to the basic financial statements.

NOTE C - CAPITAL ASSETS (Continued)

Depreciation expense was charged to governmental functions as follows:

GOVERNMENTAL ACTIVITIES	
General government	$ 45,955
Public safety	121,307
Public works, highways and streets	1,910,264
Parks and recreation	47,694
	$ 2,125,220

	Balance January 1, 2017	Increases	Decreases	Balance December 31, 2017
BUSINESS-TYPE ACTIVITIES				
Capital assets, not being depreciated				
Construction in progress	$ 453,331	$ -	$ (453,331)	$ -
Capacity rights	11,085,242	-	-	11,085,242
TOTAL CAPITAL ASSETS NOT BEING DEPRECIATED	11,538,573	-	(453,331)	11,085,242
Capital assets being depreciated				
Sewer Infrasture	32,483,845	1,458,882	-	33,942,727
Machinery and equipment	99,324	-	-	99,324
Vehicles	202,208	-	-	202,208
TOTAL CAPITAL ASSETS BEING DEPRECIATED	32,785,377	1,458,882	-	34,244,259
Accumulated depreciation				
Sewer Infrasture	(12,148,684)	(672,500)	-	(12,821,184)
Machinery and equipment	(74,756)	(6,481)	-	(81,237)
Vehicles	(153,920)	(8,911)	-	(162,831)
TOTAL ACCUMULATED DEPRECIATION	(12,377,360)	(687,892)	-	(13,065,252)
TOTAL CAPITAL ASSETS BEING DEPRECIATED, net	20,408,017	770,990	-	21,179,007
BUSINESS-TYPE ACTIVITIES CAPITAL ASSETS, net	$ 31,946,590	$ 770,990	$ (453,331)	$ 32,264,249

COMPREHENSIVE ANNUAL FINANCIAL REPORT

EAST WHITELAND TOWNSHIP
CHESTER COUNTY
PENNSYLVANIA

For the Year Ended December 31, 2018
East Whiteland Township Finance Department

EAST WHITELAND TOWNSHIP
CHESTER COUNTY
PENNSYLVANIA

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Year Ended December 31, 2018

East Whiteland Township Finance Department
John B. Nagel, Township Manager

EAST WHITELAND TOWNSHIP
STATEMENT OF NET POSITION
PROPRIETARY FUNDS
DECEMBER 31, 2018

	Sewer Fund
ASSETS	
CURRENT ASSETS	
Cash and cash equivalents	$ 9,567,007
Accounts receivable	848,468
Due from other funds	147,915
TOTAL CURRENT ASSETS	10,563,390
NONCURRENT ASSETS	
Capital assets	36,333,876
Other capital assets	11,417,162
Accumulated depreciation	(13,754,484)
TOTAL NONCURRENT ASSETS	33,996,554
TOTAL ASSETS	44,559,944
DEFERRED OUTFLOWS OF RESOURCES	
Deferred amount related to pensions	183,740
Deferred amount related to OPEB	28,363
Deferred amount on refunding	165,117
TOTAL DEFERRED OUTFLOWS OF RESOURCES	377,220
LIABILITIES	
CURRENT LIABILITIES	
Accounts payable	82,760
Accrued liabilities	10,708
Due to other funds	78
Due to Fiduciary Funds	12,396
Compensated absences	4,953
Unearned revenue	931,069
Accrued interest	191,523
Bonds payable	715,000
TOTAL CURRENT LIABILITIES	1,948,487
NONCURRENT LIABILITIES	
Compensated absences	28,065
Bonds payable	16,045,932
Net pension liability	333,457
Other post-employment benefits and obligations	1,239,417
TOTAL NONCURRENT LIABILITIES	17,646,871
TOTAL LIABILITIES	19,595,358
DEFERRED INFLOWS OF RESOURCES	
Deferred amount related to pensions	6,206
Deferred amount related to OPEB	59,866
TOTAL DEFERRED INFLOWS OF RESOURCES	66,072
NET POSITION	
Net investment in capital assets	17,400,739
Unrestricted	7,874,995
TOTAL NET POSITION	$ 25,275,734

See accompanying notes to the basic financial statements.

EAST WHITELAND TOWNSHIP

RECONCILIATION OF THE GOVERNMENTAL FUNDS STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES TO THE STATEMENT OF ACTIVITIES

YEAR ENDED DECEMBER 31, 2018

NET CHANGE IN FUND BALANCES - TOTAL GOVERNMENTAL FUNDS	$	3,237,452
Capital outlays are reported in Governmental Funds as expenditures. However, in the statement of activities, the cost of those assets is allocated over their estimated useful lives as depreciation expense. This is the amount by which depreciation exceeds (2,026,819) capital outlays ($1,444,679) in the current period.		(582,140)
Because some property taxes will not be collected for several months after the Township's fiscal year ends, they are not considered as "available" revenues in the Governmental Funds. Deferred tax revenues increased by this amount this year.		(999)
The issuance of long-term debt (e.g., bonds, leases) provides current financial resources to Governmental Funds, while the repayment of the principal of long-term debt consumes the current financial resources of Governmental Funds. Neither transaction, however, has any effect on net position. Also, Governmental Funds report the effect of issuance costs, premiums, discounts and similar items when debt is first issued, whereas these amounts are deferred and amortized in the statement of activities. This amount is the net effect of these differences in the treatment of long-term debt and related items.		
Repayment of bond principal		285,000
Amortization of bond discount and premium		1,801
Amortization of deferred amount on refunding		(15,444)
Repayment of capital lease		2,913
Some expenses reported in the statement of activities do not require the use of current financial resources and, therefore, are not reported as expenditures in the Governmental Funds.		(1,713,590)
In the statement of activities, compensated absences (vacations and sick leave) are measured by the amounts earned during the year. In the Governmental Funds, however, expenditures for these items are measured by the amount of financial resources used (essentially, the amounts paid).		25,802
Interest on long-term debt in the statement of activities differs from the amount reported in the Governmental Funds because interest is recognized as an expenditure in the funds when it is due and thus requires the use of current financial resources. In the statement of activities, however, interest expense is recognized as the interest accrues, regardless of when it is due.		17,604
CHANGE IN NET POSITION OF GOVERNMENTAL ACTIVITIES	$	1,258,399

See accompanying notes to the basic financial statements.

EAST WHITELAND TOWNSHIP

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2018

	Sewer Fund
OPERATING REVENUES	
Charges for services	
Sewer service	$ 3,809,229
Tapping fees	1,306,657
Miscellaneous	1,563,159
TOTAL OPERATING REVENUES	6,679,045
OPERATING EXPENSES	
Sewer and collection fees	1,174,936
Salaries, wages and benefits	867,750
Repairs and maintenance	57,793
Contracted services	96,819
Utilities	85,609
Insurance	37,641
Depreciation	718,700
Other	86,958
TOTAL OPERATING EXPENSES	3,126,206
OPERATING INCOME	3,552,839
NONOPERATING REVENUES (EXPENSES)	
Interest income	27,696
Interest expense	(578,450)
TOTAL NONOPERATING REVENUES (EXPENSES)	(550,754)
INCOME BEFORE CAPITAL CONTRIBUTIONS AND TRANSFERS	3,002,085
CAPITAL CONTRIBUTIONS	2,057,746
TRANSFERS OUT	(166,320)
CHANGE IN NET POSITION	4,893,511
NET POSITION AT BEGINNING OF YEAR, restated	20,382,223
NET POSITION AT END OF YEAR	$ 25,275,734

See accompanying notes to the basic financial statements.

EAST WHITELAND TOWNSHIP
STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2018

	Sewer Fund
CASH FLOWS FROM OPERATING ACTIVITIES	
Cash received from customers	$ 6,528,200
Cash payments to suppliers for goods and services	(1,942,234)
Cash payments to employees for services	(721,681)
NET CASH PROVIDED BY OPERATING ACTIVITIES	3,864,285
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES	
Transfers to other funds	(166,320)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES	
Acquisition and construction of capital assets	(393,256)
Principal paid on capital debt	(745,000)
Interest paid on capital debt	(539,353)
NET CASH USED BY CAPITAL AND RELATED FINANCING ACTIVITIES	(1,677,609)
CASH FLOWS FROM INVESTING ACTIVITIES	
Earnings on investments	27,696
NET INCREASE IN CASH AND CASH EQUIVALENTS	2,048,052
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	7,518,955
CASH AND CASH EQUIVALENTS AT END OF YEAR	$ 9,567,007

See accompanying notes to the basic financial statements.

EAST WHITELAND TOWNSHIP
STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2018

	Sewer Fund
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES	
Operating income	$ 3,552,839
Adjustments to reconcile operating income to net cash provided by operating activities	
Depreciation	718,700
Pension and OPEB expense	136,279
(Increase) decrease in	
Receivables	(164,869)
Due from other funds	(136,576)
Increase (decrease) in	
Accounts payable	(55,737)
Accrued liabilities	487
Due to other funds	(210,165)
Due to fiduciary funds	12,396
Compensated absences	(3,093)
Unearned revenue	14,024
NET CASH PROVIDED BY OPERATING ACTIVITIES	$ 3,864,285

See accompanying notes to the basic financial statements.

NOTE C - CAPITAL ASSETS (Continued)

Depreciation expense was charged to governmental functions as follows:

GOVERNMENTAL ACTIVITIES	
General government	$ 45,497
Public safety	108,179
Public works, highways and streets	1,817,729
Parks and recreation	55,414
	$ 2,026,819

	Balance January 1, 2018	Increases	Decreases	Balance December 31, 2018
BUSINESS-TYPE ACTIVITIES				
Capital assets, not being depreciated				
Construction in progress	$ -	$ 331,920	$ -	$ 331,920
Capacity rights	11,085,242	-	-	11,085,242
TOTAL CAPITAL ASSETS NOT BEING DEPRECIATED	11,085,242	331,920	-	11,417,162
Capital assets being depreciated				
Sewer Infrasture	33,942,727	2,111,820	-	36,054,547
Machinery and equipment	99,324	-	-	99,324
Vehicles	202,208	7,265	(29,468)	180,005
TOTAL CAPITAL ASSETS BEING DEPRECIATED	34,244,259	2,119,085	(29,468)	36,333,876
Accumulated depreciation				
Sewer Infrasture	(12,821,184)	(702,804)	-	(13,523,988)
Machinery and equipment	(81,237)	(6,481)	-	(87,718)
Vehicles	(162,831)	(9,415)	29,468	(142,778)
TOTAL ACCUMULATED DEPRECIATION	(13,065,252)	(718,700)	29,468	(13,754,484)
TOTAL CAPITAL ASSETS BEING DEPRECIATED, net	21,179,007	1,400,385	-	22,579,392
BUSINESS-TYPE ACTIVITIES CAPITAL ASSETS, net	$ 32,264,249	$ 1,732,305	$ -	$ 33,996,554

COMPREHENSIVE ANNUAL FINANCIAL REPORT

EAST WHITELAND TOWNSHIP
CHESTER COUNTY
PENNSYLVANIA

For the Year Ended December 31, 2019
East Whiteland Township Finance Department

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Expertise Beyond The Numbers®
Certified Public Accountants and Business Consultants

EAST WHITELAND TOWNSHIP
CHESTER COUNTY
PENNSYLVANIA

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Year Ended December 31, 2019

East Whiteland Township Finance Department
John B. Nagel, Township Manager

EAST WHITELAND TOWNSHIP
STATEMENT OF NET POSITION
PROPRIETARY FUNDS
DECEMBER 31, 2019

	Sewer Fund
ASSETS	
CURRENT ASSETS	
Cash and cash equivalents	$ 10,083,775
Accounts receivable	1,151,871
TOTAL CURRENT ASSETS	11,235,646
NONCURRENT ASSETS	
Capital assets	37,387,925
Other capital assets	11,285,015
Accumulated depreciation	(14,529,267)
TOTAL NONCURRENT ASSETS	34,143,673
TOTAL ASSETS	45,379,319
DEFERRED OUTFLOWS OF RESOURCES	
Deferred amount related to pensions	113,838
Deferred amount related to OPEB	130,298
Deferred amount on refunding	139,715
TOTAL DEFERRED OUTFLOWS OF RESOURCES	383,851
LIABILITIES	
CURRENT LIABILITIES	
Accounts payable	417,065
Accrued liabilities	13,689
Due to other funds	18,493
Compensated absences	3,114
Unearned revenue	971,503
Accrued interest	185,646
Bonds payable	735,000
TOTAL CURRENT LIABILITIES	2,344,510
NONCURRENT LIABILITIES	
Compensated absences	17,649
Bonds payable	15,330,468
Net pension liability	192,049
Net OPEB liability	921,823
TOTAL NONCURRENT LIABILITIES	16,461,989
TOTAL LIABILITIES	18,806,499
DEFERRED INFLOWS OF RESOURCES	
Deferred amount related to pensions	82,821
Deferred amount related to OPEB	426,073
TOTAL DEFERRED INFLOWS OF RESOURCES	508,894
NET POSITION	
Net investment in capital assets	18,217,920
Unrestricted	8,229,857
TOTAL NET POSITION	$ 26,447,777

See accompanying notes to the basic financial statements.

EAST WHITELAND TOWNSHIP

STATEMENT OF REVENUES, EXPENSES AND CHANGES
IN NET POSITION
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2019

	Sewer Fund
OPERATING REVENUES	
Charges for services	
Sewer service	$ 3,761,787
Tapping fees	984,100
Miscellaneous	682,780
TOTAL OPERATING REVENUES	5,428,667
OPERATING EXPENSES	
Sewer and collection fees	1,779,913
Salaries, wages and benefits	687,311
Repairs and maintenance	236,403
Contracted services	41,140
Utilities	86,097
Insurance	40,288
Depreciation	774,783
Other	202,088
TOTAL OPERATING EXPENSES	3,848,023
OPERATING INCOME	1,580,644
NONOPERATING REVENUES (EXPENSES)	
Interest income	137,057
Interest expense	(561,324)
TOTAL NONOPERATING REVENUES (EXPENSES)	(424,267)
INCOME BEFORE CAPITAL CONTRIBUTIONS AND TRANSFERS	1,156,377
CAPITAL CONTRIBUTIONS	181,831
TRANSFERS OUT	(166,165)
CHANGE IN NET POSITION	1,172,043
NET POSITION AT BEGINNING OF YEAR	25,275,734
NET POSITION AT END OF YEAR	$ 26,447,777

See accompanying notes to the basic financial statements.

EAST WHITELAND TOWNSHIP
STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2019

	Sewer Fund
CASH FLOWS FROM OPERATING ACTIVITIES	
Cash received from customers	$ 5,165,698
Cash payments to suppliers for goods and services	(1,885,294)
Cash payments to employees for services	(757,194)
NET CASH PROVIDED BY OPERATING ACTIVITIES	2,523,210
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES	
Transfers to other funds	(166,165)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES	
Acquisition and construction of capital assets	(740,070)
Principal paid on capital debt	(715,000)
Interest paid on capital debt	(522,264)
NET CASH USED BY CAPITAL AND RELATED FINANCING ACTIVITIES	(1,977,334)
CASH FLOWS FROM INVESTING ACTIVITIES	
Earnings on investments	137,057
NET INCREASE IN CASH AND CASH EQUIVALENTS	516,768
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	9,567,007
CASH AND CASH EQUIVALENTS AT END OF YEAR	$ 10,083,775

See accompanying notes to the basic financial statements.

EAST WHITELAND TOWNSHIP
STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2019

	Sewer Fund
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES	
Operating income	$ 1,580,644
Adjustments to reconcile operating income to net cash provided by operating activities	
Depreciation	774,783
Pension and OPEB expense	(48,213)
(Increase) decrease in	
Receivables	(303,403)
Due from other funds	147,915
Increase (decrease) in	
Accounts payable	334,305
Accrued liabilities	2,981
Due to other funds	18,415
Due to fiduciary funds	(12,396)
Compensated absences	(12,255)
Unearned revenue	40,434
NET CASH PROVIDED BY OPERATING ACTIVITIES	$ 2,523,210
SCHEDULE OF NON-CASH CAPITAL AND RELATED FINANCING ACTIVITIES	
Contributions of capital assets	$ 181,831

See accompanying notes to the basic financial statements.

NOTE C - CAPITAL ASSETS (Continued)

Depreciation expense was charged to governmental functions as follows:

GOVERNMENTAL ACTIVITIES	
General government	$ 55,557
Public safety	130,524
Public works, highways and streets	1,723,851
Parks and recreation	58,965
	$ 1,968,897

	Balance January 1, 2019	Increases	Decreases	Balance December 31, 2019
BUSINESS-TYPE ACTIVITIES				
Capital assets, not being depreciated				
Construction in progress	$ 331,920	$ -	$ -	$ 331,920
Capacity rights	11,085,242	306,995	(439,142)	10,953,095
TOTAL CAPITAL ASSETS NOT BEING DEPRECIATED	11,417,162	306,995	(439,142)	11,285,015
Capital assets being depreciated				
Sewer Infrasture	36,054,547	1,021,158	-	37,075,705
Machinery and equipment	99,324	-	-	99,324
Vehicles	180,005	32,891	-	212,896
TOTAL CAPITAL ASSETS BEING DEPRECIATED	36,333,876	1,054,049	-	37,387,925
Accumulated depreciation				
Sewer Infrasture	(13,523,988)	(758,947)	-	(14,282,935)
Machinery and equipment	(87,718)	(4,493)	-	(92,211)
Vehicles	(142,778)	(11,343)	-	(154,121)
TOTAL ACCUMULATED DEPRECIATION	(13,754,484)	(774,783)	-	(14,529,267)
TOTAL CAPITAL ASSETS BEING DEPRECIATED, net	22,579,392	279,266	-	22,858,658
BUSINESS-TYPE ACTIVITIES CAPITAL ASSETS, net	$ 33,996,554	$ 586,261	$ (439,142)	$ 34,143,673

Budget FY 2019

2019 Final Budget

Adopted December 12, 2018

PROJECTION: 20191 2019 Budget

FOR PERIOD 99

ACCOUNTS FOR:

Sewer Fund			2017 ACTUAL	2018 ORIG BUD	2018 REVISED BUD	2018 ACTUAL	2018 PROJECTION	2019 Final	PCT CHANGE
08341	Interest								
08341	34101	Interest E	-3,447.39	-6,000.00	-6,000.00	-4,211.16	-4,600.00	-4,500.00	-25.0%
TOTAL Interest			-3,447.39	-6,000.00	-6,000.00	-4,211.16	-4,600.00	-4,500.00	-25.0%
08364	Sewer Dept. Earning								
08364	36400	Sewer Rent	-173,711.00	-180,000.00	-180,000.00	-238,376.00	-195,000.00	-195,376.00	8.5%
	Charlestown Twp - VFSA $70,000 Malvern Borough - Based on usage $125,000								
08364	36411	Sewer Conn	-71,800.00	-52,500.00	-52,500.00	-78,050.00	-82,000.00	-52,500.00	.0%
	Estimated 150 new connections at $350 each.								
08364	36412	Sewer Rent	-3,117,050.85	-3,303,048.00	-3,303,048.00	-4,257,141.34	-3,500,000.00	-3,760,000.00	13.8%
	Existing residential & business sewer EDU billings (District A&B) - $2,709,976 Existing high volume commercial sewer billings - $538,752 plus 10% rate increase $55,000 Existing Malvern Hunt sewer billings (District D) $279*150 per Qtr - $167,400 Lochwood Chase sewer billings (District C) East Goshen $135.50*28 per Qtr - $15,176 Atwater (District E) $120 per Qtr - $273,600								
TOTAL Sewer Dept. Earning			-3,362,561.85	-3,535,548.00	-3,535,548.00	-4,573,567.34	-3,777,000.00	-4,007,876.00	13.4%
08380	Miscellaneous Revenue								
08380	36244	Sewer Cert	-3,415.00	-3,000.00	-3,000.00	-6,100.00	-6,000.00	-5,000.00	66.7%
08380	38002	Other Non-	.00	.00	.00	-314.45	.00	.00	.0%

PROJECTION: 20191 2019 Budget FOR PERIOD 99

ACCOUNTS FOR:

Sewer Fund			2017 ACTUAL	2018 ORIG BUD	2018 REVISED BUD	2018 ACTUAL	2018 PROJECTION	2019 Final	PCT CHANGE
08380	38003	Refund fro	-124,904.00	-124,750.00	-124,750.00	.00	.00	-100,000.00	-19.8%
	2018 Refund ($119,000) retained by VFSA for settlement								
08380	38004	Refund	-91,567.00	.00	.00	.00	.00	.00	.0%
TOTAL Miscellaneous Revenue			-219,886.00	-127,750.00	-127,750.00	-6,414.45	-6,000.00	-105,000.00	-17.8%
08429	Sewer Dept. Expenses								
08429	12000	Salary - D	118,533.33	125,567.00	125,567.00	117,492.85	125,567.00	129,000.00	2.7%
08429	13000	Wages - Se	173,299.46	225,268.00	225,268.00	132,266.86	155,000.00	215,750.00	-4.2%
	1 Crew Leader and 3 Sewer Maintenance Workers.								
08429	13200	Mechanic	6,278.91	6,346.00	6,346.00	5,838.11	6,346.00	6,346.00	.0%
08429	13500	Wages - Ot	9,078.99	.00	.00	6,211.36	8,000.00	.00	.0%
	Represents PWs EEs working in Sewer; For 2018 & 2019 EEs are budgeted in their respective departments.								
08429	14000	Wages/Sala	82,904.41	144,584.00	144,584.00	134,483.23	144,584.00	176,107.00	21.8%
	Utility Billing Coordinator and allocated Administration and Finance positions. Includes new PT office assistant for park permits and accounts receivable.								
08429	15300	Disability	1,803.38	2,016.00	2,016.00	2,383.12	2,400.00	3,100.00	53.8%
08429	15400	MedPrem	-146.25	.00	.00	-67.50	.00	.00	.0%
08429	15600	Medical In	139,953.48	220,941.00	220,941.00	168,351.09	220,941.00	230,050.00	4.1%
	2018 and 2019 also includes allocated positions.								

PROJECTION: 20191 2019 Budget

ACCOUNTS FOR: FOR PERIOD 99

Sewer Fund			2017 ACTUAL	2018 ORIG BUD	2018 REVISED BUD	2018 ACTUAL	2018 PROJECTION	2019 Final	PCT CHANGE
08429	15650	OPEB	91,216.23	33,265.00	33,265.00	20,869.27	33,265.00	24,000.00	-27.9%
	Employer Contribution to OPEB Trust Fund: 1 Retiree - $19,000. Fund Trust - $5,000								
08429	15700	Drug & Alc	.00	525.00	525.00	.00	525.00	525.00	.0%
	NTA Random Drug Testing Program - 25% of Annual Program Maintenance Fee plus cost per tests.								
08429	15800	Life Insur	1,403.20	1,698.00	1,698.00	1,882.40	1,900.00	2,325.00	36.9%
08429	16000	Pension/Re	60,807.00	38,144.00	38,144.00	38,350.00	38,144.00	76,140.00	99.6%
08429	16100	FICA (Soc.	30,210.86	38,385.00	38,385.00	33,216.26	38,385.00	41,950.00	9.3%
08429	17000	Vacat Pay	4,696.42	2,900.00	2,900.00	.00	2,900.00	2,900.00	.0%
	2018 based on 2017 actuals.								
08429	17700	Sick Payou	-3,989.00	.00	.00	.00	.00	.00	.0%
08429	18200	Longevity	8,203.00	8,372.00	8,372.00	9,503.00	9,503.00	6,110.00	-27.0%
	Per CBA								
08429	18300	Overtime	6,776.53	12,000.00	12,000.00	13,052.94	14,000.00	12,000.00	.0%
	Based on 4 year average.								
08429	20000	Material &	2,998.70	4,000.00	4,000.00	1,395.45	4,000.00	4,000.00	.0%
	Office and cleaning supplies								

PROJECTION: 20191 2019 Budget

ACCOUNTS FOR: FOR PERIOD 99

Sewer Fund			2017 ACTUAL	2018 ORIG BUD	2018 REVISED BUD	2018 ACTUAL	2018 PROJECTION	2019 Final	PCT CHANGE
08429	21300	Small Item	.00	8,735.00	8,735.00	462.97	8,735.00	8,735.00	.0%
	Moved from account #75000-Capital purchases. Megohmmeter, jetter nozzle, cable locator, safety harness, air monitor								
08429	23000	Utilities	84,883.49	91,200.00	91,200.00	79,297.59	91,200.00	91,200.00	.0%
	Electric - approx. $7,000/mo - $84,000 Water - approx. $600/mo - $7,200								
08429	23100	Vehicle Fu	7,611.22	10,000.00	10,000.00	6,812.71	10,000.00	10,000.00	.0%
08429	23800	Uniforms	3,124.74	3,800.00	3,800.00	2,047.20	3,800.00	3,800.00	.0%
	Shoe Allowance per CBA (5 @ $300) - $1,500 Uniform cleaning ($150/mo) - $1,800 Shirts and coats - $500								
08429	31100	Financial	8,500.00	9,000.00	9,000.00	7,500.00	9,000.00	9,000.00	.0%
	Annual Audit/CAFR - 25% allocated to Sewer								
08429	31300	Twp. Engin	36,344.11	75,000.00	75,000.00	53,566.21	75,000.00	55,000.00	-26.7%
	Based on 4 year average. Estimated sewer related general engineering services - approx. $54,000 PA One Call System (approx. $150/mo split between GF & SF) - $900 2018 includes a rate study ($20,000).								
08429	31400	Legal Serv	13,073.00	15,000.00	15,000.00	15,627.50	15,000.00	15,000.00	.0%
	Solicitor - liens, easements								
08429	31900	Compu Serv	11,956.74	12,000.00	12,000.00	9,232.14	12,000.00	25,000.00	108.3%
	Allocated and direct software, data processing, network and computer support.								
08429	32100	Telephone	12,411.72	15,570.00	15,570.00	12,710.82	15,500.00	15,500.00	-.4%
	Verizon - Pump stations - approx. $1,065/mo - $12,780 Verizon - mobile phones - approx. $160/mo - $1,920 Sensaphone - Annual Contract - $300 Broadview - desk phones - $480								

PROJECTION: 20191 2019 Budget FOR PERIOD 99

ACCOUNTS FOR:

Sewer Fund			2017 ACTUAL	2018 ORIG BUD	2018 REVISED BUD	2018 ACTUAL	2018 PROJECTION	2019 Final	PCT CHANGE
08429	32500	Postage &	3,000.00	7,475.00	7,475.00	4,600.00	7,475.00	7,475.00	.0%
	Postage for sewer bills (4,000 bills/qtr and 50% of annual permit fee - Southeastern post office Copier Lease - Rothwell (50% sewer and 50% PW)								
08429	33100	Training,	2,461.00	2,500.00	2,500.00	340.00	2,500.00	2,500.00	.0%
	Training for office staff & sewer maintenance workers.								
08429	34000	Advertisin	3,645.60	3,400.00	3,400.00	3,194.84	3,400.00	4,000.00	17.6%
	Based on 4 year average. Forms - sewer bills, etc. Advertising - Legal ads & notices Water consumption reports								
08429	35200	Insurance	28,427.57	28,436.00	28,436.00	30,350.03	30,350.03	31,900.00	12.2%
08429	35400	Worker's C	7,352.41	4,086.00	4,086.00	7,290.56	7,290.56	7,460.00	82.6%
08429	37000	Office Equ	1,928.00	1,200.00	1,200.00	760.00	1,200.00	1,200.00	.0%
	Maintenance agreement w. Bantec for folding/sealing machine - $700 Misc other equipment repair and service (i.e. plotter) - $500								
08429	37100	Sewer Syst	80,755.76	116,580.00	116,580.00	95,888.85	116,580.00	118,320.00	1.5%
	Contracted services for Malvern Hunt (ARRO) $3,750/mo plus $1,200 misc exp - $46,200 Materials - Sodium Chloride for Malvern Hunt Sewer System - $12,000 Estimated repairs (service and materials) to maintain sewer system - $60,000 Nitrogen gas / Cylinder Rent for shoring operations ($10/mo) - $120								
08429	37200	Road Maint	.00	3,000.00	3,000.00	.00	3,000.00	3,000.00	.0%
	Sewer sinkhole repairs, etc.								
08429	37300	Pump Stati	77,443.04	76,000.00	76,000.00	65,696.59	76,000.00	76,000.00	.0%
	Estimated emergency repairs to pump stations - $60,000 Annual service contracts for pumps - $7,000 Annual service contracts for generators - $5,000 Estimated other R&M - parts, inspections, calibrations, weed control, etc. - $3,800 Monthly Cylinder Rent - $200								

PROJECTION: 20191 2019 Budget

FOR PERIOD 99

ACCOUNTS FOR:

Sewer Fund			2017 ACTUAL	2018 ORIG BUD	2018 REVISED BUD	2018 ACTUAL	2018 PROJECTION	2019 Final	PCT CHANGE
08429	37400	Equipment	1,214.90	700.00	700.00	38.75	700.00	700.00	.0%
	Batteries, cameras, tools, gloves, etc. - based on average history.								
08429	37500	Vehicle -	4,094.99	6,000.00	6,000.00	6,780.74	7,000.00	6,000.00	.0%
	Estimated vehicle repairs, services, parts, inspections, cleaning, etc.								
08429	38500	Sewer Rent	1,155,031.93	1,200,000.00	1,200,000.00	1,151,663.03	1,200,000.00	1,313,690.00	9.5%
	Valley Forge Sewer Authority estimate per rate study (awaiting draft from VFSA) - $1,012,690 Tredyffrin/Valley Creek Trunk - $205,000 (this can vary depending on plan) Tredyffrin/Atwater Drive - $80,000 East Goshen Twp. / Lochwood Chase - $16,000								
08429	70000	Computers	3,543.00	.00	.00	.00	.00	.00	.0%
	Current year technology operating expenses are budgeted in account #31900.								
08429	74000	Vehicles	6,904.50	38,000.00	38,000.00	33,010.00	38,000.00	38,000.00	.0%
	2018: Truck 406 replacement - $38,000								
	2019: Truck 407 replacement - $38,000								
08429	80000	Deprec	687,892.00	.00	.00	.00	.00	.00	.0%
	TOTAL Sewer Dept. Expenses		2,975,628.37	2,591,693.00	2,591,693.00	2,272,098.97	2,539,190.59	2,773,783.00	7.0%
08470	Debt - Sewer Dept.								
08470	25522	GOB 2013	.00	25,000.00	25,000.00	25,000.00	25,000.00	50,000.00	100.0%
08470	25523	GOB 12 A	.00	720,000.00	720,000.00	720,000.00	720,000.00	665,000.00	-7.6%

PROJECTION: 20191 2019 Budget

FOR PERIOD 99

ACCOUNTS FOR:

Sewer Fund			2017 ACTUAL	2018 ORIG BUD	2018 REVISED BUD	2018 ACTUAL	2018 PROJECTION	2019 Final	PCT CHANGE
08470	47000	Debt Servi	593,625.38	552,000.00	552,000.00	551,051.08	552,000.00	534,041.00	-3.3%
	GOB Series 2012A, 2012B & 2013A								
TOTAL Debt - Sewer Dept.			593,625.38	1,297,000.00	1,297,000.00	1,296,051.08	1,297,000.00	1,249,041.00	-3.7%
08475	Fiscal Agent Fees								
08475	47600	Fiscal Age	3,616.25	3,150.00	3,150.00	3,116.25	3,150.00	3,150.00	.0%
	For 2012A, 2012B & 2013A (2017 includes 1 $500 pmt related to prior year). FFA fees - $500 per Series - $1,500 US Bank Fees - $1,650								
TOTAL Fiscal Agent Fees			3,616.25	3,150.00	3,150.00	3,116.25	3,150.00	3,150.00	.0%
08492	Interfund Operating Transfers								
08492	49201	Transfer t	.00	166,320.00	166,320.00	332,640.00	166,320.00	166,165.00	-.1%
	Rent - Sewer Dept share of bldg debt service ($503,530) based on authorized FTEs (5 or6/15ths) Range 33% - 40% = $166,165 - $201,412								
TOTAL Interfund Operating Tr			.00	166,320.00	166,320.00	332,640.00	166,320.00	166,165.00	-.1%
TOTAL Sewer Fund			-13,025.24	388,865.00	388,865.00	-680,286.65	218,060.59	74,763.00	-80.8%
		TOTAL REVENUE	-3,585,895.24	-3,669,298.00	-3,669,298.00	-4,584,192.95	-3,787,600.00	-4,117,376.00	12.2%
		TOTAL EXPENSE	3,572,870.00	4,058,163.00	4,058,163.00	3,903,906.30	4,005,660.59	4,192,139.00	3.3%
		GRAND TOTAL	-13,025.24	388,865.00	388,865.00	-680,286.65	218,060.59	74,763.00	-80.8%

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PROJECTION: 20191 2019 Budget

FOR PERIOD 99

ACCOUNTS FOR:

Sewer Reserve Fund			2017 ACTUAL	2018 ORIG BUD	2018 REVISED BUD	2018 ACTUAL	2018 PROJECTION	2019 Final	PCT CHANGE
09341	Interest								
09341	34101	Interest E	-16,062.95	-8,000.00	-8,000.00	-18,801.55	-20,000.00	-20,000.00	150.0%
TOTAL Interest			-16,062.95	-8,000.00	-8,000.00	-18,801.55	-20,000.00	-20,000.00	150.0%
09364	Sewer Reserve - Earnings								
09364	36411	Sewer Tapp	-1,635,000.00	-980,000.00	-980,000.00	-1,154,857.19	-1,200,000.00	-1,572,000.00	60.4%

2019:
Uptown Worthington - 75 EDUs - $300,000
Atwater - estimate 75 connections @ $4,000 each - $300,000
Celia Tract - 10 EDUs - $40,000
99 Church Rd. - 32 EDUs - $128,000
Swedesford 66 - 33 EDUs - $$132,000
GMH Apartments - $460,000
Ivy Prep - $92,000
Loch Aerie - $68,000
Misc EDU's - $52,000

2018 Projection includes:
Uptown Worthington - 75 EDUs - $300,000
Atwater - estimate 100 connections @ $4,000 each - $400,000
Celia Tract - 60 EDUs - $240,000
99 Church Rd. - 10 EDUs - $40,000

TOTAL Sewer Reserve - Earnin			-1,635,000.00	-980,000.00	-980,000.00	-1,154,857.19	-1,200,000.00	-1,572,000.00	60.4%
09429	Sewer Expenses								
09429	60000	Capital Co	471,245.34	2,050,000.00	2,050,000.00	11,037.94	100,000.00	2,500,000.00	22.0%

Per Capital Project Schedule:
Sidley/Moores Road Gravity Sewer (CIPP) Lining - $500,000
401 Corridor Extension (Act 537 Plan Area 1) - $200,000
Planebrook Road Sewer Extension (Act 537 Plan Area 3) - $1,000,000
Bacton Hill Road Sewer Extension (Act 537 Plan Area 2) - $300,000
Church Road Sewer Extension (Act 537 Plan Area 4) - $500,000

PROJECTION: 20191 2019 Budget

FOR PERIOD 99

ACCOUNTS FOR:

Sewer Reserve Fund			2017 ACTUAL	2018 ORIG BUD	2018 REVISED BUD	2018 ACTUAL	2018 PROJECTION	2019 Final	PCT CHANGE
09429	60100	ValleyCr	93,896.00	533,986.00	533,986.00	30,847.00	533,986.00	150,000.00	-71.9%
	2019 Capital Projects VFSA Treatment Plant - $136,000 Misc Professional Services VCTS - $14,000								
09429	60200	Capital Co	-.23	500,000.00	500,000.00	513,262.93	500,000.00	.00	-100.0%
	2019: $0 2018: Planebrook Road Sewer Extension (Act 537 Plan - Area 3) Pump Station - $500,000								
	TOTAL Sewer Expenses		565,141.11	3,083,986.00	3,083,986.00	555,147.87	1,133,986.00	2,650,000.00	-14.1%
09470	Bond Interest Exp								
09470	47000	Debt Serv	13,493.00	.00	.00	.00	.00	.00	.0%
	TOTAL Bond Interest Exp		13,493.00	.00	.00	.00	.00	.00	.0%
09472	Bond Amortization								
09472	47270	Amortiz	11,699.00	.00	.00	.00	.00	.00	.0%
	TOTAL Bond Amortization		11,699.00	.00	.00	.00	.00	.00	.0%
	TOTAL Sewer Reserve Fund		-1,060,729.84	2,095,986.00	2,095,986.00	-618,510.87	-86,014.00	1,058,000.00	-49.5%
		TOTAL REVENUE	-1,651,062.95	-988,000.00	-988,000.00	-1,173,658.74	-1,220,000.00	-1,592,000.00	61.1%
		TOTAL EXPENSE	590,333.11	3,083,986.00	3,083,986.00	555,147.87	1,133,986.00	2,650,000.00	-14.1%
		GRAND TOTAL	-1,060,729.84	2,095,986.00	2,095,986.00	-618,510.87	-86,014.00	1,058,000.00	-49.5%

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Budget FY 2021

7. OPERATING EXPENSES

FOR 2021 03

	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USED
GRAND TOTAL	205,182	0	205,182	-408,509.25	22,894.32	590,796.93	-187.6

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FOR 2021 03

ACCOUNTS FOR: 08 Sewer Fund	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USED
TOTAL Sewer Fund	205,182	0	205,182	-408,509.25	22,894.32	590,796.93	-187.[illegible]
TOTAL REVENUES	-4,340,000	0	-4,340,000	-990,878.98	.00	-3,349,121.02	
TOTAL EXPENSES	4,545,182	0	4,545,182	582,369.73	22,894.32	3,939,917.95	

FOR 2021 03

ACCOUNTS FOR: 08 Sewer Fund		ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USED
08429 25000	Utilities - Pump St	91,200	0	91,200	19,724.36	.00	71,475.64	21.6
08429 25100	Vehicle Fuel	10,000	0	10,000	1,078.36	.00	8,921.64	10.8
08429 25800	Uniforms	3,800	0	3,800	273.06	.00	3,526.94	7.2
08429 31100	Financial Services	9,000	0	9,000	662.50	.00	8,337.50	7.4
08429 31300	Twp. Engineering Se	55,000	0	55,000	2,864.33	.00	52,135.67	5.2
08429 31400	Legal Services	15,000	0	15,000	1,102.50	.00	13,897.50	7.4
08429 31900	Computer Serv. / Da	27,250	0	27,250	92.99	.00	27,157.01	.3
08429 32100	Telephone (incl. Mo	15,500	0	15,500	2,562.11	.00	12,937.89	16.5
08429 32500	Postage & Courier	7,500	0	7,500	.00	.00	7,500.00	.0
08429 33100	Training, Conferenc	2,500	0	2,500	.00	.00	2,500.00	.0
08429 34000	Advertising, Printi	4,000	0	4,000	75.00	.00	3,925.00	1.9
08429 35100	Insurance - Liabili	34,000	0	34,000	8,341.30	.00	25,658.70	24.5
08429 35400	Worker's Comp Insur	8,000	0	8,000	1,715.40	.00	6,284.60	21.4
08429 37000	Office Equipment Ma	1,200	0	1,200	.00	.00	1,200.00	.0
08429 37100	Sewer System - Main	121,920	0	121,920	17,795.24	7,894.39	96,230.37	21.1
08429 37200	Road Maintenance &	1,000	0	1,000	.00	.00	1,000.00	.0
08429 37300	Pump Stations - Mai	76,000	0	76,000	6,795.17	14,999.93	54,204.90	28.7
08429 37400	Equipment - Maint.	700	0	700	.00	.00	700.00	.0
08429 37500	Vehicle - Maint. &	6,000	0	6,000	1,555.71	.00	4,444.29	25.9
08429 38500	Sewer Rentals - Oth	1,760,000	0	1,760,000	441,744.07	.00	1,318,255.93	25.1
TOTAL Sewer Dept. Expenses		3,122,278	0	3,122,278	582,369.79	22,894.32	2,517,013.89	19.4
08470 Debt - Sewer Dept.								
08470 25522	SE 2013 Bond - Pri	50,000	0	50,000	.00	.00	50,000.00	.0
08470 25523	SE 2013 A Bond - P	350,000	0	350,000	.00	.00	350,000.00	.0
08470 25524	SE 2013B Bond - Pri	335,000	0	335,000	.00	.00	335,000.00	.0
08470 47000	Interest Exp. - Deb	516,409	0	516,409	.00	.00	516,409.00	.0
TOTAL Debt - Sewer Dept.		1,251,409	0	1,251,409	.00	.00	1,251,409.00	.0
08475 Fiscal Agent Fees								
08475 47600	Fiscal Agent Fees	3,150	0	3,150	.00	.00	3,150.00	.0
TOTAL Fiscal Agent Fees		3,150	0	3,150	.00	.00	3,150.00	.0
08492 Interfund Operating Transfers								
08492 49201	Transfer to General	168,345	0	168,345	.00	.00	168,345.00	.0
TOTAL Interfund Operating Transfers		168,345	0	168,345	.00	.00	168,345.00	.0

FOR 2021 03

ACCOUNTS FOR: 08 Sewer Fund	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USED
08341 Interest							
08341 34101 Interest Earnings	-12,000	0	-12,000	-311.58	.00	-11,688.42	2.6
Total Interest	-12,000	0	-12,000	-311.58	.00	-11,688.42	2.6
08364 Sewer Dept. Earning							
08364 36400 Sewer Rents - Other	-210,000	0	-210,000	-57,646.00	.00	-152,354.00	27.5
08364 36411 Sewer Connection Fe	-35,000	0	-35,000	-5,400.00	.00	-29,600.00	15.4
08364 36411 Sewer Rents	-3,703,000	0	-3,703,000	-926,440.40	.00	-2,776,559.60	25.0
Total Sewer Dept. Earning	-3,948,000	0	-3,948,000	-989,492.40	.00	-2,958,507.60	25.1
08380 Miscellaneous Revenue							
08380 38244 Sewer Certification	-5,000	0	-5,000	-1,075.00	.00	-3,925.00	21.5
08380 38801 Refund from VPSA	-375,000	0	-375,000	.00	.00	-375,000.00	.0
Total Miscellaneous Revenue	-380,000	0	-380,000	-1,075.00	.00	-378,925.00	.3
08429 Sewer Dept. Expenses							
08429 10000 Wages - Sewer Maint	500,000	0	500,000	90,796.13	.00	409,203.87	18.2
08429 15300 Disability Insurance	3,000	0	3,000	778.35	.00	2,221.65	25.9
08429 15400 Medical Insurance	119,000	0	119,000	37,746.82	.00	81,253.18	31.7
08429 15450 Retiree Benefit (O	17,000	0	17,000	4,843.43	.00	12,156.57	28.5
08429 15500 Drug & Alcohol and	525	0	525	.00	.00	525.00	.0
08429 15600 Life Insurance	2,325	0	2,325	466.98	.00	1,858.02	20.1
08429 16000 Pension Retirement	158,000	0	158,000	.00	.00	158,000.00	.0
08429 16100 FICA (Soc. Sec.) &	89,000	0	89,000	2,955.92	.00	86,044.08	3.3
08429 17000 Vacation Payout	2,500	0	2,500	.00	.00	2,500.00	.0
08429 18200 Longevity Pay	7,358	0	7,358	.00	.00	7,358.00	.0
08429 18300 Overtime	15,000	0	15,000	.00	.00	15,000.00	.0
08429 20000 Material & Supplies	4,000	0	4,000	.00	.00	4,000.00	.0
08429 21300 Small Items of Equi	5,000	0	5,000	.00	.00	5,000.00	.0

Rates & Customers

EAST WHITELAND TOWNSHIP

District A/B $100.00 Qtr or $400.00 per year (Majority of billing, residential and business – approximately 3,050 accounts)

District C- $135.50 Qtr or $542.00 per year (Lochwood Chase 28 homes)

District D - $150.00 Qtr or $600.00 per year (Malvern Hunt-This billing is based off a spray irrigation system. Does not go to VFSA Treatment Plant.) – 279 homes

District E- $120.00 Qtr or $480.00 per year (Atwater, residential and business 545 accounts @ 2/2021)

High Volume- Water Use customers based on water meter reading (about 15 customers) $6.20 per thousand gallons. It averages about $90,000.00 Qtr or $360,000.00 per year.

Two Intermunicipal Agreements with Charlestown Township & Malvern Borough based off an annual formula. Charlestown Twp- $20,071.00 Qtr or $80,068. 00 per year. Malvern Boro- $37,575.00 Qtr or $150,300.00 per year.

Approximate # of Accounts – 3,900

HIGH VOLUME CUSTOMERS FOR 2019 AND 2020

COMPANY NAME	1QTR GALLONS	BILLED	2QTR GALLONS	BILLED	3QTR GALLONS	BILLED	4QTR GALLONS	BILLED	ANNUAL BILL
WEGMANS-2019	11,431	$7,087.22	11,372	$7,050.64	10,076	$6,247.12	10,340	$6,406.46	$26,791.44
WEGMANS-2020	10,776	$6,681.12	6,366	$3,946.92	7,579	$4,699	$7,427	$4,604.74	$19,931.78
GENERAL WARREN INN-2019	1,649	$1,022.38	1,670	$1,035.40	1,760	$1,091.20	1,874	$1,161.88	$4,310.86
GENERAL WARREN INN-2020	1,471	$912.02	441	$273.42	1,088	$674.56	1,136	$704.32	$2,564.32
CHESTER VALLEY CC-2019	2,240	1,388.80	3,770	$2,337.40	3,860	$2,393.20	2,990	$1,853.80	$7,973.20
CHESTER VALLEY CC-2020	1,900	$1,178.00	1,570	$973.40	2,900	$1,798.00	2,030	$1,258.60	$5,208.00
CERTAIN TEED-2019	9,455	$5,862.10	13,593	$8,427.66	24,691	$15,308.42	10,941	$6,783.42	$36,381.60
CERTAIN TEED- 2020	7,796	$4,833.52	4,297	$2,664.14	14,783	$9,165.46	5,779	$3,582.98	$20,246.10
STEDI INC-2019	1,085	$672.70	1,125	$697.50	995	$616.90	1,140	$706.80	$2,693.90
STEDI INC-2020	835	$517.70	30	$186.00	165	$102.30	515	$319.30	$1,125.30
MALVERN INSTITUTE-2019	3,780	$2,343.60	6,010	$3,726.20	4,515	$2,799.30	4,015	$2,489.30	$11,358.40
MALVERN INSTITUTE-2020	4,020	$2,492.40	3,580	$2,219.60	4,090	$2,535.80	2,830	$1,754.60	$9,002.40
J & J -90 GVP-2019	106,568	$66,072.16	98,128	$60,839.36	93,666	$58,072.92	39,076	$24,227.12	$209,211.56
J & J-90 GVP-2020	23,256	$14,542	109,183	$67,693.46	126,356	$78,340.72	110,255	$68,355.00	$228,931.18
J & J 256- GVP-2019	4,255	$2,638.10	5,670	$3,515.40	5,460	$3,385.20	5,865	$3,636.30	$13,175.00
J & J-256 GVP-2020	6,090	$3,775.80	4,805	$2,979.10	5,065	$3,140.30	5,540	$3,434.80	$13,330.00

HIGH VOLUME CUSTOMERS FOR 2019 AND 2020

COMPANY NAME	1QTR GALLONS	BILLED	2QTR GALLONS	BILLED	3QTR GALLONS	BILLED	4QTR GALLONS	BILLED	ANNUAL BILL
J & J-40 GVP -2019	5,835	$3,617.70	4,260	$2,641.20	4,820	$2,988.40	4,525	$2,805.50	$12,052.80
J & J-40 GVP- 2020	3,330	$2,064.60	2,305	$1,429.10	2,285	$1,416.70	2,170	$1,345.40	$6,255.80
J & J- 84 GVP-2019	490	$303.80	500	$310.00	440	$272.80	490	$303.80	$1,190.40
J & J-84 GVP- 2020	440	$272.80	160	$99.20	160	$99.20	330	$204.60	$675.80
CERTAIN TEED # 2 - 2019	10,955	$6,792.10	10,550	$6,541.00	13,825	$8,571.50	12,600	$7,812.00	$29,716.60
CERTAIN TEED #2-2020	11,265	$6,984.30	12,630	$7,830.60	11,685	$7,244.70	10,180	$6,311.60	$28,371.20
MICRON TECH - 2019	2,825	$1,751.50	1,558	$965.96	2,576	$1,597.12	2,079	$1,288.98	$5,603.56
MICRON TECH - 2020	1,612	$999.44	2,537	$1,572.94	4,489	$2,783.18	3,229	$2,001.98	$7,357.54
DFKS MGMT LLC-2019	1330	$824.60	890	$551.80	650	$403.00	1520	$942.40	$2,721.80
DFKS MGMT LLC-2020	1630	$1,010.60	1600	$992.00	1795	$1,112.90	1899	$1,177.38	$4,292.88

Jerry Weinert

From: Garrett Moore <mooreg@pfm.com>
Sent: Thursday, June 10, 2021 8:34 AM
To: Jerry Weinert
Cc: Scott Shearer
Subject: FW: [EXTERNAL] RE: East Whiteland - Weekly Call

Hi Jerry,

See below.

Thanks,

Garrett F. Moore
Senior Analyst

PFM Financial Advisors LLC | Public Financial Management, Inc.
mooreg@pfm.com | 717.232.2723 **OFFICE** | 717.232.8610 **FAX**
213 Market Street | Harrisburg, PA 17101

From: John Neild <jneild@eastwhiteland.org>
Sent: Thursday, June 10, 2021 9:25 AM
To: Stahl, Alexander R <astahl@aquaamerica.com>; CHARLES FAULKNER <CFaulkner@Pennoni.com>; Garrett Moore <mooreg@pfm.com>; John Nagel <jnagel@eastwhiteland.org>; jmcgrory <jmcgrory@hrmml.com>; kimberley.farmer <kimberley.farmer@obermayer.com>; Thomas.Wyatt <Thomas.Wyatt@obermayer.com>; Scott Shearer <SHEARERS@pfm.com>; Rafferty, Thomas F <tfrafferty@aquaamerica.com>; Joyce, Kimberly A <KAJoyce@essential.co>
Subject: RE: [EXTERNAL] RE: East Whiteland - Weekly Call

EXTERNAL EMAIL: Use care with links and attachments.

Alex,
The total number of accounts billed for the last quarter of 2020 was:

District A/B – 3053
District C - 28
District D - 279
District E - 522
High Volume – 13

Total accounts – 3,895

District E (Atwater) has been built out since the last bill of 2020 for a total of 545 accounts.

Thank you,

John Neild
Director of Public Works
East Whiteland Township

Jerry Weinert

From: Garrett Moore <mooreg@pfm.com>
Sent: Wednesday, June 9, 2021 1:43 PM
To: Jerry Weinert; Scott Shearer
Subject: RE: East Whiteland Customers
Attachments: High Volume Sewer Customers 2019 - 2020.pdf; Sewer Rates per District-2021.docx

Hi Jerry,

Please see attached. Does this help?

Thanks,

Garrett F. Moore
Senior Analyst

PFM Financial Advisors LLC | Public Financial Management, Inc.
mooreg@pfm.com | 717.232.2723 **OFFICE** | 717.232.8610 **FAX**
213 Market Street | Harrisburg, PA 17101

From: Jerry Weinert <weinertj@auswest.net>
Sent: Wednesday, June 9, 2021 1:34 PM
To: Scott Shearer <SHEARERS@pfm.com>; Garrett Moore <mooreg@pfm.com>
Subject: East Whiteland Customers

EXTERNAL EMAIL: Use care with links and attachments.

Gentlemen,

I could use a customer count for East Whiteland.

Jerry

EAST WHITELAND TOWNSHIP
SEWERAGE FACILITIES
ENGINEERING ASSESSMENT AND ORIGINAL COST

East Whiteland Township
Chester County, PA

Prepared for:

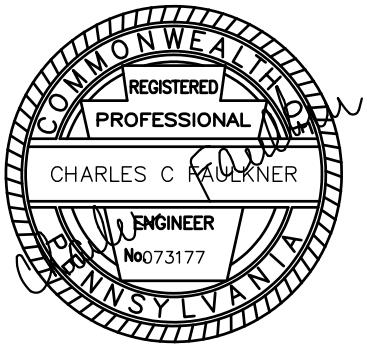
East Whiteland Township
209 Conestoga Road
Frazer, PA 19355

Aqua Pennsylvania Wastewater, Inc.
762 W. Lancaster Avenue
Bryn Mawr, PA 19010

Submitted By:

Pennoni Associates Inc.
1900 Market St, Suite 300
Philadelphia, PA 19103

Frank A. Ciufo, PE
Pennoni Associates Inc.



Charles Faulkner, PE
Pennoni Associates Inc.

EWTPX17000.03

May 20, 2021,
revised June 17, 2021

CONTENTS

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APPENDICES

APPENDIX A – SYSTEM MAPS

- A1 – East Whiteland Township Sanitary Sewer Collection System

APPENDIX B

- Uniform System of Accounts - Section 300
- PA ACT 12 of 2016

APPENDIX C – OWNED PROPERTY & EASEMENTS OF VALUE

- (TO BE PROVIDED)

APPENDIX D – SUPPORTING DOCUMENTS

- Exhibit No. 3
- Exhibit No. 4
- Exhibit No. 5
- Pricing Structure

1. EXECUTIVE SUMMARY

As required by PA Act 12 of 2016 and following the guidelines of the "Uniform System of Accounts for Class A Wastewater Utilities", an assessment of the tangible assets of facilities and equipment of the East Whiteland Township wastewater utility has been prepared as part of the asset purchase agreement with Aqua Pennsylvania Wastewater, Inc. (Aqua). Each facility and class of equipment was coded based on Section 300 of the "Wastewater Utility Plant Accounts" of the Guidelines. The Asset Survey included the 12 Township owned pump stations and associated force mains, and approximately 60 miles of gravity sewers. Asset cost information was derived from various sources. Site visits to each of the facilities were conducted to inventory the equipment and assess conditions.

Site inventories and facility conditions were documented on facility information sheets and summarized in the facility description summaries.

Conditions of the Pump Stations varies from fair to very good based on the age and/or completion of recent improvements.

Gravity sewer and force main conditions were not determined. The piping installation period ranges from approximately the late 1970s to 2019.

A complete list of the assets and available original costs is provided in Section 8 of this report.

2. PURPOSE OF REPORT

The purpose of this report is to "conduct an assessment of the tangible assets of the selling utility" per the requirements of PA Act 12 of 2016.

This engineering assessment will be used by the Utility Value Experts (UVEs) retained by both the seller (East Whiteland Township) and buyer (AQUA). The engineering assessment followed the practices and procedures of the Public Utility Commission (PUC) and National Association of Regulatory Utility Commissioners (NARUC) Systems of Accounts. The engineering assessment report documents the conditions and original costs of East Whiteland Township's assets that will be used as the common list for the UVEs to develop their appraisal of the system.

The report preparation process included meeting with key Township and Aqua representatives to identify and confirm specific information needed to support the assessment and to prepare the report, providing a mutually agreed upon scope of work with East Whiteland Township and Aqua. The inventory is a compilation of data gathered by the Township and Pennoni, developed from institutional knowledge, available records, maps, work orders, payment records from construction projects, GIS, site evaluations, and other sources to provide an inventory and listing.

This report contains the following:

- An inventory of the used and useful assets to be transferred, compiled by year and account (codes).
- A list of non-depreciable property such as land and rights-of-way.
- A review of system components, plans, and reports of key facilities. This includes:
  - Permitted discharges, including regulatory requirements
  - Pumping Stations (12 each), including force mains
  - Gravity collection system
  - Metering stations
- Summary of the operation and maintenance expenses based upon review of Township operating records.
- An assessment of the identified assets.
- Determination and/or establishment of an original cost of construction for each asset.

Assets were identified through various sources. Force main sizes and quantities were taken from GIS and project drawings. Pump Stations were field inventoried and evaluated; and, supplemented with information obtained from drawings, where available. Asset costs are based on Construction Escrow Releases/Estimates where available or estimated current cost and back calculated to the year of installation using the ENR Construction Cost Index.

A coding system as described in Section 300 of the Uniform System of Accounts for Class A Wastewater Utilities was used for classifying various assets. Section 300 as well as the listing of codes can be found in Appendix B. The entire Uniform System of Accounts can be found in the Digital Files.

3. SYSTEM DESCRIPTION

System Summary

East Whiteland Township is responsible for the safe collection and transmission of an average over 1.062 million gallons per day (MGD) of wastewater generated in southeastern Pennsylvania (A map of the service areas is located in Appendix A, Figure A1). East Whiteland Township's facilities serve residential, commercial, institutional, and industrial customers all within Chester County. The Township owns and operates a system consisting of 12 pump stations and associated force mains, and approximately 60 miles of gravity collection system mains and interceptor sewers for the conveyance of wastewater to the Valley Forge Sewer Authority Wastewater Treatment Plant via the Valley Creek Trunk Sewer. The Township does not have any property held for future use.

In addition to customers within the Township, East Whiteland Township also collects/conveys sewage to/from municipalities that border the Township including Malvern Borough, Tredyffrin Township Charlestown Township and Willistown Township. Agreements with these municipalities, (or entities operating their respective system) outline the responsibilities regarding this relationship.

PUMP STATION LIST

East Whiteland Township

PUMP STATION	PUMP STATION NO.	Address
Deer Run	P.S. 1	15 Deer Run Ln
Mill Lane	P.S. 2	202 Conestoga Rd
Wilburdale	P.S. 3	101 Flat Rd.
Lee Boulevard	P.S. 4	13 Lee Blvd
Meadowview	P.S. 5	317 Swedesford Rd
Flat Road	P.S. 6	601 Flat Rd
Lapp Road	P.S. 7	510 Lapp Rd
Westgate	P.S. 8	331 Lancaster Ave
Hillbrook Circle	P.S. 11	379 Conestoga Rd
King Road	P.S. 12	340 King Rd
Malvern Hunt	P.S. 13	30 Corbin Dr
Planebrook Road	P.S. 14	170 Cricket Dr

4. INVENTORY OF ASSETS

4.1. PUMP STATIONS

P.S. 1 - AKA Deer Run PS

Facility Description (see attached Information Sheet)

P.S. 1 is located at 15 Deer Run Lane and is equipped with (2) 90-GPM dry pit submersible pumps. Wastewater is discharged through an 830 foot, 4-inch ACP force main that ties into the existing sewage collection system at Manhole 826 located on Conestoga Road near Deer Run Ln. The pump station was installed in 1976.

The pump wet well is (5-ft diameter, 12-ft deep) with 24-inch MH cover hatchway. The control panel is custom manufactured.

The Building (10-ft x 12-ft) is constructed of concrete with brick facade and asphalt shingle roof in good condition. The building contains florescent lighting and 1 steel door.

The Generator is a Generac SD00353G163, 35 KW unit with 132-gallon fuel tank. The Automatic Transfer Switch (ATS) is manufactured by Cummins Power Command.

The property is surrounded by a 136 LF 6-ft chain link with barbed wire fence.

Property Condition

The building is in good condition, the roof is in good condition and all HVAC systems appear to be in good condition.

Figure 1 – Facility Site

Figure 2 – Pump Control Panel and ATS

Figure 3 – Dry Pit Pump

Figure 4 – Generator

PUMP STATION #		P.S. 1		**Scheduled Visit Date:**		
Station Name		Deer Run				
Location		15 Deer Run Ln				
Start Up Date		1976				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
371.3		Condition	Good			
		No. of Pumps	2			
		Type	Dry Pit Submersible			
		Pump Manufacturer	Flygt			
		Pump Model Number	CT3127			
		Year Installed	1976			
		Pump GPM	90			
		Pump TDH Ft.				
		Outlet Size				
		Motor HP	7.5			
		Motor Voltage	230			
371.3		Pump Control (VFD?)				
370.3		**WET WELL**				
		Condition	good			
		Size	5' diam x 12 deep			
		Material				
		Lined				
		Hatch	24' MH cover			
		Vent				
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	custom			
		Year Installed				
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material	ACP			
		Diameter	8"			
371		**GRINDER**				
		Manufacturer				
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**				
		Manufacturer				
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type				
		Manufacturer				
		Size				
		#				
		Year Installed				
355		**GENERATOR**				
		Manufacturer	Generac SD00353G163			
		Generator KW	35			
		Generator KVA	44			
		Fuel Tank (Gals)	132			
355		ATS (manf/model #)	Cummins Power Command			
		Year Installed	2018			
360		**FORCE MAIN**				
		Force Main Size	4"			
		Force Main Mat.	ACP			
		Length in Feet	830			
		Year Installed	1976			
		Discharge Point	MH 826			
		Discharge Point Location	Conestoga Road near Deer Run Ln			

354.2		**BUILDING**				
		Condition	good			
		Size	10' x 12			
		Main Structure Material	concrete with brick facade			
		Roof Type	asphalt shingle			
		Roof Condition	good			
		Doors (number /material)	1 - steel			
		Lighting (Type)	florescent			
		Year Installed				
		ELECTRICAL				
371.3		MCC	100 amp panel			
396		Alarm System (manf/ model)	Ademco - auto dial			**COMMENTS**
		Year Installed				
354.3		**HVAC**				
		Condition	good	good		
		Type	In-line pipe exhaust	electric unit heater		
		Manufacturer		Q-Mark		
		Year Installed				
364		Flow Meter				
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length	136'			
		Fence Type	6' chain link w/ barb wire			
		Year Installed				
354.3		Paving and Walkways	asphalt drive			
371.3		**ODOR CONTROL**				
		Manufacturer				
		Type				
		MISCELLANEOUS				
		Other Buildings				
		Spare Parts	**DESCRIPTION OF FACILITY**			
		Vac Truck Suitable	Yes			
		Spare Parts				
		Vac Truck Suitable				
OVERALL BUILDING AND FACILITY ASSESSMENT						
Pumps and controls are original and in fair condition. Building and other facilities are in good condition. Generator is was replaced in 2018 and is in very good condition.						

P.S. 2 - AKA Mill Lane PS

Facility Description (see attached Information Sheet)

P.S. 2 is located at 202 Conestoga Rd and is equipped with (3) 1600-GPM dry pit submersible pumps. Wastewater is discharged through a 3400 LF, 14-inch DIP force main that ties into the existing sewage collection system at Manhole 826 located on Conestoga Road near Deer Run Lane. The pump station was installed in 1976 and reconstructed 2013.

The pump wet well is Concrete (9-ft x 30-inch x 31-ft deep) with 42-inch x 42-inch and 36-inch x 36-inch hatchways. The control panel is manufactured by Healy-Ruff. There are (6) 12-inch gate valves and (3) 12-inch check valves installed in 2013. The influent line to the wet well contains a bar screen.

The Building (32-ft x 22-ft) is constructed of masonry block and asphalt shingle roof in good condition. The building contains 2 steel doors.

The Generator is an Onan DFEK-1207638, 500 KW unit with 850-gallon fuel tank. The Automatic Transfer Switch (ATS) is an ASCO 7000 series.

The property is surrounded by a 600 LF 6-ft cyclone with barbed wire fence.

Property Condition

The building is in very good condition, the roof is in good condition and all HVAC systems are in very good condition.

Figure 1 – Facility Site

Figure 2 – Pump Building - Front

Figure 3 – Dry Pit Pumps

Figure 4 – Dry Pit Pumps

Figure 5 -Dry Pit Pump

Figure 6 - MCC

Figure 7 - Pump Control Panel

Figure 8- Pump Control Interface

Figure 9 -Crane

Figure 10 - Generator

Figure 11 -Scada System

Figure 12 -Bar Screen

Figure 13 -VFDs

Figure 14 – Old Pump Building

Figure 15 – Old Pump Bldg. Upper Floor

Figure 16- Old Pump Bldg. Pump Dry Pit

PUMP STATION #		P.S. 2		**Scheduled Visit Date:**		2/10/2021
Station Name		Mill Lane				
Location		202 Conestoga Rd				
Start Up Date		1976, Reconstructed 2014				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
371.3		Condition	Very Good			
		No. of Pumps	3			
		Type	Dry Pit Submersible			
		Pump Manufacturer	Fairbanks Morse			
		Pump Model Number	C5446			
		Year Installed	2013			
		Pump GPM	1600			
		Pump TDH Ft.	200			
		Outlet Size	5"			
		Motor HP	150			
		Motor Voltage	460			
371.3		Pump Control (VFD)	VFD Eaton EPX9000			
370.3		**WET WELL**				
		Condition	Very Good			
		Size	9'x30'x31'Deep			
		Material	Concrete			
		Lined				
		Hatch	42"x42", 36"x36"			
		Vent				
		Rails				
		Cable				
		Piping	Ductile Iron			
371.3		**CONTROL PANEL**				
		Manufacturer	Healy-Ruff			
		Year Installed				
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**				
		Manufacturer	Bar Screen			
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**				
		Manufacturer	Shaw-Box			
		Model/Serial number	2-Ton			
		Year Installed	2013			
360		**VALVES (DISCHARGE)**				
		Type	Gate	Check		
		Manufacturer	Milliken	Milliken		
		Size	12"	12"		
		#	6	3		
		Year Installed	2013	2013		
355		**GENERATOR**				
		Manufacturer	Onan DFEK-1207638			
		Generator KW	500			
		Generator KVA	625			
		Fuel Tank (Gals)	850			
355		ATS (manf/model #)	ASCO 7000			
		Year Installed	2013			
360		**FORCE MAIN**				
		Force Main Size	14"			
		Force Main Mat.	DIP			
		Length in Feet	3400			
		Year Installed	1976			
		Discharge Point	MH 826			
		Discharge Point Location	Conestoga Road near Deer Run Ln			

354.2		**BUILDING**				
		Condition	Very Good			
		Size	32' x 22'			
		Main Structure Material	Masonary Block			
		Roof Type	Asphalt Shingle			
		Roof Condition	Good			
		Doors (number /material)	2 - Steel			
		Lighting (Type)				
		Year Installed				
		ELECTRICAL				
371.3		MCC	Allen Bradley 800 Amp	225 Amp &125 Amp service panels		
396		Alarm System (manf/ model)	Sensaphone Scada			**COMMENTS**
		Year Installed				
354.3		**HVAC**				
		Condition	Very Good			
		Type	2 Wall and 2 Roof units			
		Manufacturer	Greenheck			
		Year Installed	2013			
364		Flow Meter	Rosemont Magmeter			
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length	600'			
		Fence Type	6' cyclone w/ barbed wire			
		Year Installed				
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**				
		Manufacturer	N/A			
		Type				
		MISCELLANEOUS				
		Other Buildings	Old Pump Bldg. - 20' x 20' Brick			
		Spare Parts	**DESCRIPTION OF FACILITY**			
		Vac Truck Suitable				
		Spare Parts				
		Vac Truck Suitable				
OVERALL BUILDING AND FACILITY ASSESSMENT						
The pump station was built in 2013 and is in excellent condition. The property is shared with the Police Department which includes their impoundment lot. The former pump station is used for storage, pumps and related equipment have been removed.						

P.S. 3 - AKA Wilburdale PS

Facility Description (see attached Information Sheet)

P.S. 3 is located at 101 Flat Rd. and is equipped with (2) 930-GPM submersible pumps. Wastewater is discharged through a 1935 LF, 10-inch PVC force main that ties into the existing sewage collection system at Manhole 1202 located on Flat Road by Sidley Road. The pump station was installed in 1979 and reconstructed 2017.

The pump wet well is precast concrete (12-ft dia. x appr. 18-ft deep) with 6-ft x 4.5-ft hatchway. There are (3) 4-inch gate valves, (2) 4-inch check valves within a (12.5-ft x 10-ft x 5-ft deep) valve box installed in 2017. The control panel is manufactured by Stacon.

The Building (15-ft x 13-ft) is constructed of concrete block and asphalt shingle roof in very good condition. The building contains outdoor walpacks lighting and 1 steel door.

The Generator is an MTU 4R0113DS50 50 KW unit with 185-gallon fuel tank. The Automatic Transfer Switch (ATS) is an ASCO 7000 series.

The property is not fenced.

Property Condition

The building is in very good condition, the roof is in very good condition.

Figure 1 – Facility Site

Figure 2 – Pump Station

Figure 3 – Pump Control Panel

Figure 4 – Generator

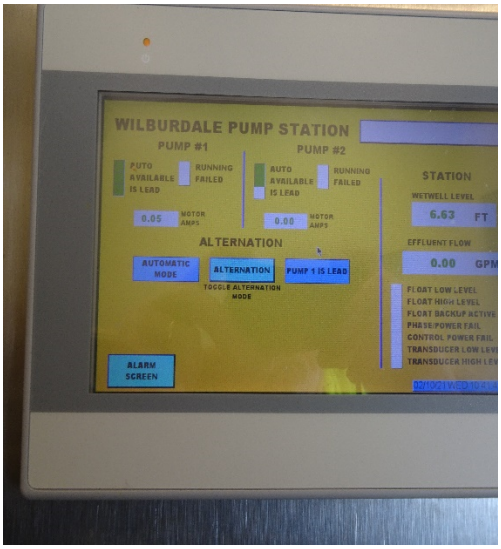

Figure 5 – Pump Control Interface

Figure 6 – Valve Chamber

Figure 7 – Automatic Transfer Switch

Figure 8 – Valve Chamber

PUMP STATION #		P.S. 3		**Scheduled Visit Date:**		2/10/2021
Station Name		Wilburdale				
Location		101 Flat Rd.				
Start Up Date		1979, Reconstructed 2017				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
371.3		Condition	Very Good			
		No. of Pumps	2			
		Type	Submersible			
		Pump Manufacturer	Flygt			
		Pump Model Number	NP3153HT			
		Year Installed	2017			
		Pump GPM	930			
		Pump TDH Ft.				
		Outlet Size	4"			
		Motor HP	15			
		Motor Voltage	230			
371.3		Pump Control (VFD?)				
370.3		**WET WELL**				
		Condition				
		Size	2 dia. X appr. 18' Deep			
		Material	precast concrete			
		Lined				
		Hatch	6' x 4.5 '			
		Vent				
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	Stacon			
		Year Installed	2017			
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**				
		Manufacturer	N/A			
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**				
		Manufacturer	Davit Crane			
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	Gate	Check	valve box	
		Manufacturer	Valmatic	Valmatic		
		Size	4"	4"	12.5' x 10' x 5' D	
		#	3	2		includes hook up for portable pump
		Year Installed	2017			
355		**GENERATOR**				
		Manufacturer	MTU 4R0113DS50			4' x 4' exhaust lovers
		Generator KW	50			
		Generator KVA	620			
		Fuel Tank (Gals)	185			
355		ATS (manf/model #)	ASCO 7000			incl. Total Protection Service surge protector
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	10"			
		Force Main Mat.	PVC			
		Length in Feet	1935			
		Year Installed	2016			
		Discharge Point	MH 1202			
		Discharge Point Location	Flat Road by Sidley Road			

354.2		**BUILDING**				
		Condition	Very Good			
		Size	15' x 13'			
		Main Structure Material	concrete block			
		Roof Type	asphalt shingle			
		Roof Condition	Very Good			
		Doors (number /material)	1 - Steel			
		Lighting (Type)	outdoor walpacks			
		Year Installed				
		ELECTRICAL				
371.3		MCC	Amp Panel, 200 Amp Main			
396		Alarm System (manf/ model)	Sensaphone Sentinal			**COMMENTS**
		Year Installed				
354.3		**HVAC**				
		Condition				
		Type	4' x 4' motorize louvers	Electric unit heaters	2' x 2' exhaut fan	
		Manufacturer		Q-Mark		
		Year Installed				
364		Flow Meter				
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length				
		Fence Type				
		Year Installed				
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**				
		Manufacturer				
		Type				
		MISCELLANEOUS				
		Other Buildings				
		Spare Parts	**DESCRIPTION OF FACILITY**			
		Vac Truck Suitable				
		Spare Parts				
		Vac Truck Suitable				
OVERALL BUILDING AND FACILITY ASSESSMENT						
The facility was installed in 2017 and is in excellent condition.						

P.S. 4 - AKA Lee Boulevard PS

Facility Description (see attached Information Sheet)

P.S. 4 is located at 13 Lee Blvd and is equipped with (2) 470-GPM Submersible pumps. Wastewater is discharged through a 3310 LF, 8-inch DIP force main that ties into the existing sewage collection system at Manhole 1582 located on Yellow Spring Road at Lee Boulevard. The pump station was installed in 1987 and reconstructed 2007.

The pump wet well is precast concrete (9-ft diam. X 15-ft deep (est)) with 4.5-ft x 4.5-ft aluminum hatchway. There are (2) 6-inch check valves and (2) 6-inch gate valves. The control panel is manufactured by Flygt.

The Building (11.5-ft x 15.5-ft) is constructed of prefabricated masonry and asphalt shingle roof in good condition. The building contains Halogen wall pack lighting and 1 steel door.

The Generator is an Katolight D50FJJ4T2 50 KW unit with 140-gallon fuel tank. The Automatic Transfer Switch (ATS) is manufactured by ASCO.

The property is surrounded by a 115 LF 6-ft cyclone with barbed wire fence.

Property Condition

The building is in very good condition, the roof is in good condition.

Figure 1 – Facility Site

Figure 2 – Pump Station

Figure 3 – Pump Control Panel

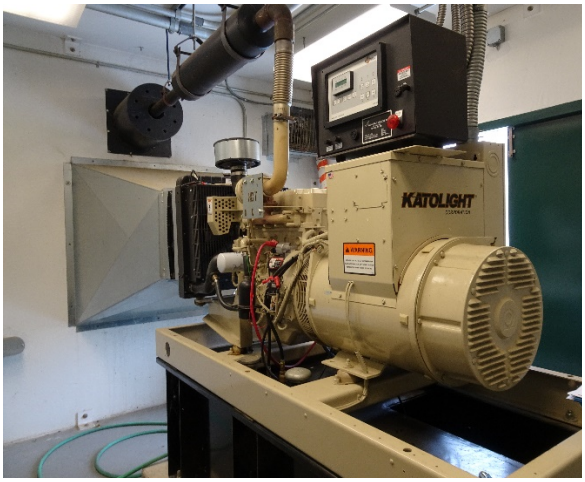

Figure 4 – Generator

Figure 5 – Pump Control Interface

Figure 6 – Valve Chamber

Figure 7 – Scada System Interface

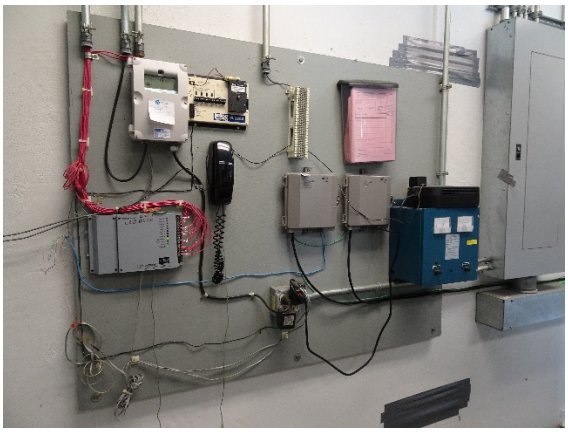

Figure 8 –Auto Dialer, flow readout and electrical panel

PUMP STATION #		P.S. 4		**Scheduled Visit Date:**		2/10/2021
Station Name		Lee Boulevard				
Location		13 Lee Blvd				
Start Up Date		1987, Reconstructed 2007				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
371.3		Condition	Very Good			
		No. of Pumps	2			
		Type	Submersible			
		Pump Manufacturer	Flygt			
		Pump Model Number	CP3126			
		Year Installed	2007			
		Pump GPM	470			
		Pump TDH Ft.				
		Outlet Size				
		Motor HP	11			
		Motor Voltage	230			
371.3		Pump Control	Multitrode MT2PC			
370.3		**WET WELL**				
		Condition				
		Size	9' diam. X 15' deep (est)			
		Material	precast concrete			
		Lined				
		Hatch	4.5' x 4.5' aluminum			
		Vent				
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	Flygt			
		Year Installed				
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**				
		Manufacturer	N/A			
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**				
		Manufacturer	N/A			
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	Check	Gate		Meter pit - 7' diam, 6' deep
		Manufacturer	Mueller	Mueller		4' x 4' hatch
		Size	6"	6"		
		#	2	2		
		Year Installed				
355		**GENERATOR**				
		Manufacturer	Katolight D50FJJ4T2			
		Generator KW	50			80 HP
		Generator KVA	63			4' x 4' exhaust vent
		Fuel Tank (Gals)	140			
355		ATS (manf/model #)	ASCO			
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	8"			
		Force Main Mat.	DIP			
		Length in Feet	3310			
		Year Installed	1987			
		Discharge Point	MH 1582			
		Discharge Point Location	Yellow Spring Road at Lee Boulevard			

354.2		**BUILDING**				
		Condition	Very Good			
		Size	11.5 x 15.5			
		Main Structure Material	Pre-Fab Masonary			
		Roof Type	Asphalt Shingle			
		Roof Condition	Good			
		Doors (number /material)	1 - Steel			
		Lighting (Type)	Halogen wall packs			
		Year Installed				
		ELECTRICAL				
371.3		MCC	225 Amp panel			
396		Alarm System (manf/ model)	ACS Scadapack, Sensaphone 2000			**COMMENTS**
		Year Installed				
354.3		**HVAC**				
		Condition				
		Type	5' x 4' Motorized louvers	18" x 18" exhaust fan		
		Manufacturer				
		Year Installed				
364		Flow Meter				
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length	115'			
		Fence Type	cyclone w/ Barbed Wire			
		Year Installed				
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**				
		Manufacturer	N/A			
		Type				
		MISCELLANEOUS				
		Other Buildings				
		Spare Parts	**DESCRIPTION OF FACILITY**			
		Vac Truck Suitable				
		Spare Parts				
		Vac Truck Suitable				
OVERALL BUILDING AND FACILITY ASSESSMENT						
The pump equipment, building and generator are all in very good condition.						

P.S. 5 - AKA Meadowview PS

Facility Description (see attached Information Sheet)

P.S. 5 is located at 317 Swedesford Rd and is equipped with (2) 80-GPM submersible pumps. Wastewater is discharged through a 1245 LF, 4-inch ACP force main that ties into the existing sewage collection system at Manhole 822 located on Manor View Circle by Valley Creek Road. The pump station was installed in 1980.

The pump wet well is precast concrete (6-ft dia. x 12-ft deep) with 3-ft x 6-ft hatchway. There are (2) 4-inch check valves and (2) 4-inch plug valves. The control panel is custom manufactured.

The property is surrounded by a 112 LF chain link and wood stockade fence.

Property Condition

The facility is in fair condition.

Figure 1 – Facility Site

Figure 2 – Pump Station and Valve Chamber

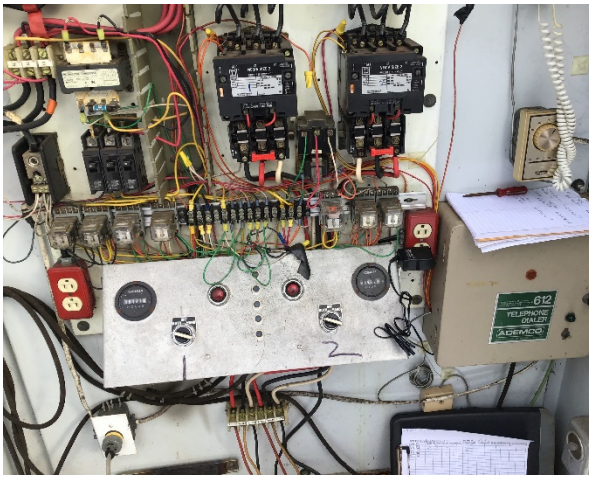

Figure 3 – Pump Control Panel

Figure 4 –Pump Wetwell

PUMP STATION #		P.S. 5		**Scheduled Visit Date:**		
Station Name		Meadowview				
Location		317 Swedesford Rd				
Start Up Date		1980				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
371.3		Condition	Fair			
		No. of Pumps	2			
		Type	submersible			
		Pump Manufacturer	Flygt			
		Pump Model Number	CP3127			
		Year Installed	1980			
		Pump GPM	80			
		Pump TDH Ft.				
		Outlet Size				
		Motor HP	6.5			
		Motor Voltage	230			
371.3		Pump Control	floats			
370.3		**WET WELL**				
		Condition	good			
		Size	6' dia. X 12' deep			
		Material	precast concrete			
		Lined				
		Hatch	3' x 6'			steel double door
		Vent				
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	custom			
		Year Installed	1980			
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**	N/A			
		Manufacturer				
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	check	Plug		pre-cast valve chamber
		Manufacturer				
		Size	4"	4"		
		#	2	2		
		Year Installed				
355		**GENERATOR**	N/A			
		Manufacturer				
		Generator KW				
		Generator KVA				
		Fuel Tank (Gals)				
355		ATS (manf/model #)				
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	4"			
		Force Main Mat.	ACP			
		Length in Feet	1245			
		Year Installed	1980			
		Discharge Point	MH 822			
		Discharge Point Location	Manor View Circle by Valley Creek Road			

354.2		**BUILDING**	N/A			
		Condition				
		Size				
		Main Structure Material				
		Roof Type				
		Roof Condition				
		Doors (number /material)				
		Lighting (Type)				
		Year Installed				
		ELECTRICAL				
371.3		MCC	100 amp feed			In control panel
396		Alarm System (manf/ model)				
		Year Installed				
354.3		**HVAC**	N/A			
		Condition				
		Type				
		Manufacturer				
		Year Installed				
364		Flow Meter				
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length	112'			
		Fence Type	chain link and wood stockade			
		Year Installed				
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**	N/A			
		Manufacturer				
		Type				
		MISCELLANEOUS				
		Other Buildings				
		Spare Parts	**DESCRIPTION OF FACILITY**			
		Vac Truck Suitable	yes			
		Spare Parts				
		Vac Truck Suitable				
OVERALL BUILDING AND FACILITY ASSESSMENT						
Overall condition of the facilites is fair.						

P.S. 6 - AKA Flat Road PS

Facility Description (see attached Information Sheet)

P.S. 6 is located at 601 Flat Rd and is equipped with (2) 275-GPM submersible pumps. Wastewater is discharged through a 1655 LF, 6-inch ACP force main that ties into the existing sewage collection system at Manhole 1323 located on Great Valley Parkway parallel to Flat Road. The original pump station was installed in 1979. In January of 2019 a sinkhole developed at the station. This required the station to be reconstructed at a new location. The new station went online in 2019. Components, such as the control panel and pumps (2002), were incorporated from the decommissioned Frame Avenue Pump Station.

The pump wet well is precast concrete (8-ft diam. x 16.85-ft deep) with a 3-ft x 4-ft hatchway. There are (2) 4-inch check valves and (2) 4-inch gate valves. The control panel is manufactured by Flygt. The facility has no generator.

The property is not fenced in.

Property Condition

The facility is in very good condition.

Figure 1 – Facility Site

Figure 2 – Pump Station Wetwell

Figure 3 – Pump Control Panel

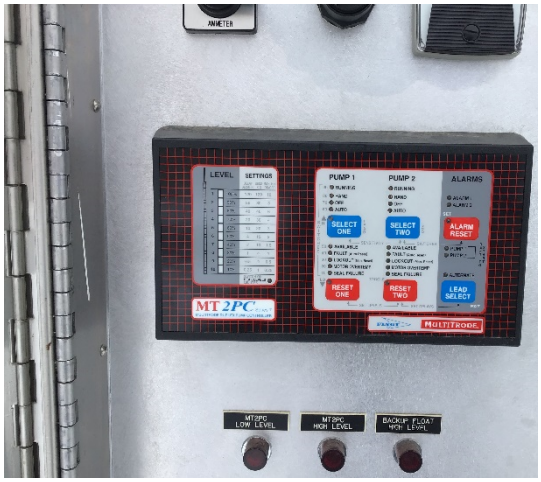

Figure 4 – Pump Control Interface

Figure 5 – MCC and Disconnects

Figure 6 – Valve Chamber

Figure 7 – Electrical Panel

Figure 8 –Auto Dialer

PUMP STATION #		P.S. 6		**Scheduled Visit Date:**		
Station Name		Flat Road				
Location		601 Flat Rd				
Start Up Date		Original construction in 1979, Reconstructed 2019				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
371.3		Condition	Very good			
		No. of Pumps	2			
		Type	submersible			
		Pump Manufacturer	Flygt			
		Pump Model Number	NP 3153			
		Year Installed	2002			
		Pump GPM	275			
		Pump TDH Ft.				
		Outlet Size				
		Motor HP	18			
		Motor Voltage	230			
371.3		Pump Control (VFD?)	Flygt Multitrode			
370.3		**WET WELL**				
		Condition	Very good			
		Size	8-ft diam. x 16.85-ft deep			
		Material	precast concrete			
		Lined				
		Hatch	3-ft x 4-ft			
		Vent				
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	Flygt			
		Year Installed	2002			
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**	N/A			
		Manufacturer				
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	check	gate		4' x 4' concrete valve chamber
		Manufacturer				
		Size	4"	4"		
		#	2	2		
		Year Installed				
355		**GENERATOR**	N/A			
		Manufacturer				
		Generator KW				
		Generator KVA				
		Fuel Tank (Gals)				
355		ATS (manf/model #)				
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	6"			
		Force Main Mat.	ACP			
		Length in Feet	1655			
		Year Installed	1979			
		Discharge Point	MH 1323			
		Discharge Point Location	Manor View Circle by Valley Creek Road			

354.2		**BUILDING**	N/A			
		Condition				
		Size				
		Main Structure Material				
		Roof Type				
		Roof Condition				
		Doors (number /material)				
		Lighting (Type)				
		Year Installed				
		ELECTRICAL				
371.3		MCC	200 Amp Panel	150 Amp sub		
396		Alarm System (manf/ model)	Sensaphone			
		Year Installed				
354.3		**HVAC**	N/A			
		Condition				
		Type				
		Manufacturer				
		Year Installed				
364		Flow Meter				
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length				
		Fence Type				
		Year Installed				
354.3		Paving and Walkways	asphalt paving			
371.3		**ODOR CONTROL**	N/A			
		Manufacturer				
		Type				
		MISCELLANEOUS				
		Other Buildings				
		Spare Parts	**DESCRIPTION OF FACILITY**			
		Vac Truck Suitable				
		Spare Parts				
		Vac Truck Suitable				
OVERALL BUILDING AND FACILITY ASSESSMENT						
In January of 2019 a sinkhole developed at the station. This required the station to be reconstructed at a new location. The new station went online in 2019. Components, such as the control panel and pumps (2002), were incorporated from the decommissioned Frame Avenue Pump Station. All in very good condition.						

P.S. 7 - AKA Lapp Road PS

Facility Description (see attached Information Sheet)

P.S. 7 is located at 510 Lapp Rd and is equipped with (2) 315-GPM submersible pumps. Wastewater is discharged through a 3715 LF, 6-inch PVC force main that ties into the existing sewage collection system at Manhole 746 located on Valley Stream Parkway near Morehall Road. The pump station was installed in 1995 and upgraded in 2000.

The pump wet well is precast concrete (6-ft dia x 20-ft deep (est)) with 4-ft x 4-ft aluminum hatchway. There are (2) 4-inch check valves and (2) 4-inch gate valves. The control panel is manufactured by Flygt.

The Generator is an Onan DGDA-3384553 80 KW unit. The Automatic Transfer Switch (ATS) is an ASCO 300 series. The wet well is oversized to accommodate excess volume to compensate for the lack of a generator.

The property is surrounded by a 150 LF 60-ft chain link with barbed wire fence.

Property Condition

The facility is in fair condition.

Figure 1 – Facility Site

Figure 2 – Pump Station Wetwell

Figure 3 – Pump Control Panel and ATS

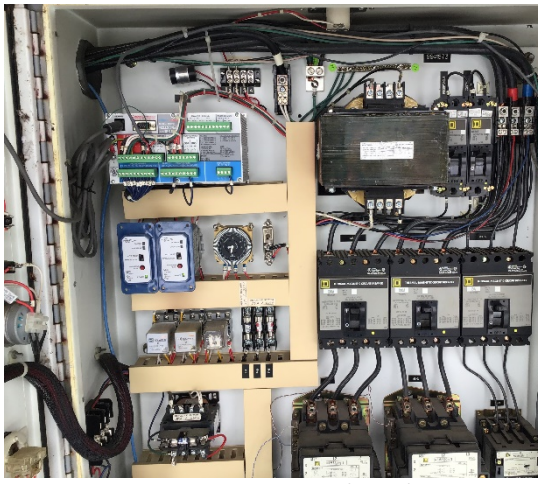

Figure 4 – Pump Control Panel

Figure 5 – Automatic Transfer Switch

Figure 6 – Valve Chamber

Figure 7 – Generator

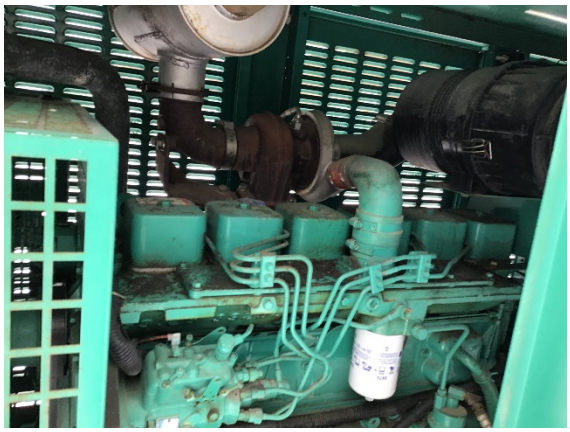

Figure 8 –Generator

PUMP STATION #		P.S. 7		**Scheduled Visit Date:**		
Station Name		Lapp Road				
Location		510 Lapp Rd				
Start Up Date		1987, upgraded in 2006				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
371.3		Condition	Good			
		No. of Pumps	2			
		Type	submersible			
		Pump Manufacturer	Flygt			
		Pump Model Number	CP3152			
		Year Installed	2000			
		Pump GPM	315			
		Pump TDH Ft.				
		Outlet Size				
		Motor HP	23			
		Motor Voltage	230			
371.3		Pump Control (VFD?)	Flygt Multitrode			
370.3		**WET WELL**				
		Condition	fair			
		Size	6' dia x 20' deep (est)			
		Material	precast concrete			
		Lined				
		Hatch	4' x 4' alum			double door
		Vent				
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	Flygt			
		Year Installed	2006			upgraded
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**	N/A			
		Manufacturer				
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	check	gate		
		Manufacturer				
		Size	4"	4"		
		#	2	2		
		Year Installed				
355		**GENERATOR**				
		Manufacturer	Onan DGDA-3384553			
		Generator KW	80			
		Generator KVA	100			
		Fuel Tank (Gals)				
355		ATS (manf/model #)	ASCO 300			
		Year Installed	2000			
360		**FORCE MAIN**				
		Force Main Size	6"			
		Force Main Mat.	PVC			
		Length in Feet	3715			
		Year Installed	1987			
		Discharge Point	MH 746			
		Discharge Point Location	Valley Stream Parkway near Morehall Road			

354.2		**BUILDING**	N/A			
		Condition				
		Size				
		Main Structure Material				
		Roof Type				
		Roof Condition				
		Doors (number /material)				
		Lighting (Type)				
		Year Installed				
		ELECTRICAL				
371.3		MCC	100 amp Panel			
396		Alarm System (manf/ model)	Sensaphone 2000			
		Year Installed				
354.3		**HVAC**				
		Condition				
		Type				
		Manufacturer				
		Year Installed				
364		Flow Meter				
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length	150'			
		Fence Type	6' - chain link with barb wire			
		Year Installed				
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**	N/A			
		Manufacturer				
		Type				
		MISCELLANEOUS				
		Other Buildings				
		Spare Parts	**DESCRIPTION OF FACILITY**			
		Vac Truck Suitable				
		Spare Parts				
		Vac Truck Suitable				
OVERALL BUILDING AND FACILITY ASSESSMENT						
The overall facility condition is fair. Pump control panel was upgraded in 2006. Generator enclosure is rusting, generator is in good condition.						

P.S. 8 - AKA Westgate PS

Facility Description (see attached Information Sheet)

P.S. 8 is located at 331 Lancaster Ave and is equipped with (2) 700-GPM pumps. Wastewater is discharged through a 1620 LF, 8-in PVC force main that ties into the existing sewage collection system at Manhole 530 located on Lancaster Avenue near Maple Linden Lane. The pump station was installed in 1988 and upgraded in 2001.

The pump wet well is precast concrete (9-ft dia. x 12-ft deep) with aluminum 3-ft x 6-ft hatchway. There are (2) 6-inch check valves and (2) 6-inch gate valves. The control panel is manufactured by Flygt.

The Generator is an Onan DGEA 125 KW unit with integral fuel tank. The Automatic Transfer Switch (ATS) is manufactured by Onan.

The property is surrounded by a 150 LF 6-ft chain link with barbed wire fence.

Property Condition

The facility is in fair condition.

Figure 1 – Facility Site

Figure 2 – Pump Station Wetwell

Figure 3 – Pump Control Pane, Elec. Panel and ATS

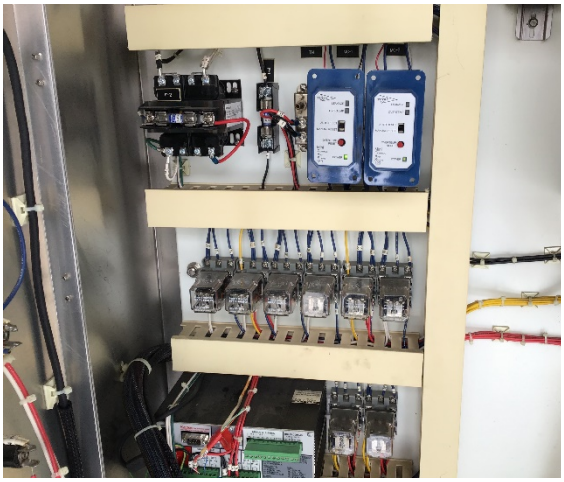

Figure 4 – Pump Control Panel

Figure 5 – Automatic Transfer Switch

Figure 6 – Valve Chamber

Figure 7 – Generator

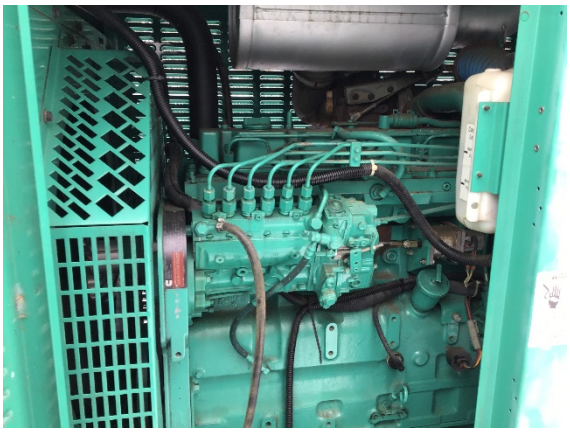

Figure 8 –Generator

PUMP STATION #		P.S. 8		**Scheduled Visit Date:**		
Station Name		Westgate				
Location		331 Lancaster Ave				
Start Up Date		1988, Upgraded 2001				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
371.3		Condition				
		No. of Pumps	2			
		Type				
		Pump Manufacturer	Flygt			
		Pump Model Number	CP3201, NP3171			
		Year Installed	2001			
		Pump GPM	700			
		Pump TDH Ft.				
		Outlet Size				
		Motor HP	30			
		Motor Voltage	230			
371.3		Pump Control	Multitrode			
370.3		**WET WELL**				
		Condition	fair			
		Size	9' dia. X 12' deep			
		Material	precast concrete			
		Lined				
		Hatch	aluminum 3' x 6'			double doors
		Vent				
		Rails				
		Cable				
		Piping	DIP			
371.3		**CONTROL PANEL**				
		Manufacturer	Flygt			
		Year Installed	2000			
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material	PVC			
		Diameter				
371		**GRINDER**				
		Manufacturer	N/A			
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	check	gate		8' diam concrete chamber
		Manufacturer				
		Size	6"	6"		
		#	2	2		
		Year Installed	2000	2000		
355		**GENERATOR**				
		Manufacturer	Onan DGEA			
		Generator KW	125			
		Generator KVA	156			
		Fuel Tank (Gals)				
355		ATS (manf/model #)	Onan			
		Year Installed	2000			
360		**FORCE MAIN**				
		Force Main Size	8"			
		Force Main Mat.	PVC			
		Length in Feet	1620			
		Year Installed	1988			
		Discharge Point	MH 530			
		Discharge Point Location	Lancaster Avenue near Maple Linden Lane			

354.2		**BUILDING**				
		Condition	good			3-sided shed
		Size				
		Main Structure Material	wood			
		Roof Type	asphalt shingle			
		Roof Condition				
		Doors (number /material)				
		Lighting (Type)				
		Year Installed				
		ELECTRICAL				
371.3		MCC	250 Amp Panel			
396		Alarm System (manf/ model)				
		Year Installed				
354.3		**HVAC**	N/A			
		Condition				
		Type				
		Manufacturer				
		Year Installed				
364		Flow Meter				
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length	150'			
		Fence Type	chain link with barb wire			
		Year Installed				
354.3		Paving and Walkways	asphalt drive, stone			
371.3		**ODOR CONTROL**	N/A			
		Manufacturer				
		Type				
		MISCELLANEOUS				
		Other Buildings				
		Spare Parts	**DESCRIPTION OF FACILITY**			
		Vac Truck Suitable				
		Spare Parts				
		Vac Truck Suitable				
OVERALL BUILDING AND FACILITY ASSESSMENT						
The facility is in fair condition.						

P.S. 11 - AKA Hillbrook Circle PS

Facility Description (see attached Information Sheet)

P.S. 11 is located at 379 Conestoga Rd and is equipped with (2) 295-GPM submersible pumps. Wastewater is discharged through a 785 LF, 4-inch PVC force main that ties into the existing sewage collection system at Manhole 985 located on Clover Mill Lane near Craig Lane. The pump station was installed in 2000.

The pump wet well is precast concrete (8-ft diam x 25-ft deep) with 3-ft x 5-ft alum hatchway. There are (2) 4-inch check valves and (2) 4-inch gate valves. The control panel is manufactured by Flygt.

The Building (12-ft x 15-ft) is constructed of concrete block and asphalt shingle roof in good condition. The building contains florescent lighting and 1 steel door.

The Generator is an Onan DGCA-5007330GS 50 KW unit. The Automatic Transfer Switch (ATS) is manufactured by Cummins.

The property is not fenced.

Property Condition

The overall facility is in good condition. The building is in very good condition and the roof is in good condition.

Figure 1 – Facility Site

Figure 2 – Pump Station Wetwell

Figure 3 – Pump Control Panel

Figure 4 – Pump Control Panel Interface

Figure 5 – Electrical Panel

Figure 6 – Valve Chamber

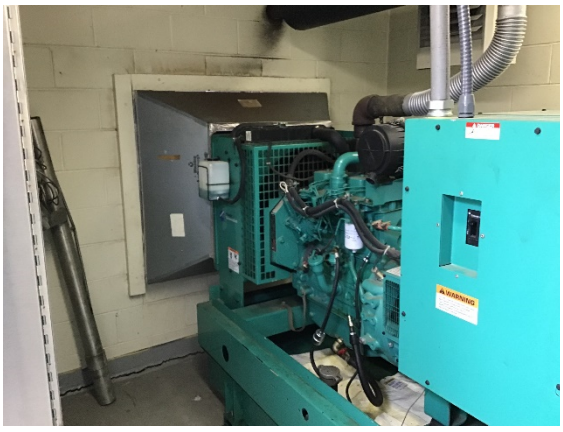

Figure 7 – Generator

Figure 8 –Automatic Transfer Switch

PUMP STATION #		P.S. 11		**Scheduled Visit Date:**		
Station Name		Hillbrook Circle				
Location		379 Conestoga Rd				
Start Up Date		2000				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
371.3		Condition	good			
		No. of Pumps	2			
		Type	submersible			
		Pump Manufacturer	Flygt			
		Pump Model Number	CP3127			
		Year Installed	2000			
		Pump GPM	295			
		Pump TDH Ft.				
		Outlet Size				
		Motor HP	10			
		Motor Voltage	230			
371.3		Pump Control	Multitrode			
370.3		**WET WELL**				
		Condition	good			
		Size	8' diam x 25' deep			
		Material	precast concrete			
		Lined				
		Hatch	3' x 5' alum			
		Vent				
		Rails				
		Cable				
		Piping	DIP			
371.3		**CONTROL PANEL**				
		Manufacturer	Flygt			
		Year Installed	2000			
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**				
		Manufacturer	N/A			
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	check	gate		6' dia concrete chamber
		Manufacturer	Clow	Clow		
		Size	4"	4"		
		#	2	2		
		Year Installed				
355		**GENERATOR**				
		Manufacturer	Onan DGCA-5007330GS			
		Generator KW	50			
		Generator KVA	62			
		Fuel Tank (Gals)				
355		ATS (manf/model #)	Cummins			
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	4"			
		Force Main Mat.	PVC			
		Length in Feet	785			
		Year Installed	2000			
		Discharge Point	MH 985			
		Discharge Point Location	Clover Mill Lane near Craig Lane			

354.2		**BUILDING**				
		Condition	very good			
		Size	12' x 15			
		Main Structure Material	concrete block			
		Roof Type	asphalt shingle			
		Roof Condition	good			
		Doors (number /material)	1 - steel			
		Lighting (Type)	florescent			
		Year Installed				
		ELECTRICAL				
371.3		MCC	250 amp panel			
396		Alarm System (manf/ model)				**COMMENTS**
		Year Installed				
354.3		**HVAC**				
		Condition	4' x 4' louver			
		Type				
		Manufacturer				
		Year Installed				
364		Flow Meter				
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length				
		Fence Type				
		Year Installed				
354.3		Paving and Walkways	stone			
371.3		**ODOR CONTROL**	N/A			
		Manufacturer				
		Type				
		MISCELLANEOUS				
		Other Buildings				
		Spare Parts	**DESCRIPTION OF FACILITY**			
		Vac Truck Suitable				
		Spare Parts				
		Vac Truck Suitable				
OVERALL BUILDING AND FACILITY ASSESSMENT						
The overall facility is in good condition. The building is in very good condition and the roof is in good condition.						

P.S. 12 - AKA King Road PS

Facility Description (see attached Information Sheet)

P.S. 12 is located at 340 King Rd within an easement in Williston Township and is equipped with (2) 258-GPM Submersible pumps. Wastewater is discharged through a 2400 LF, 4-inch PVC force main that ties into the existing sewage collection system at Manhole 338 located on Amy Lane near W. King Road. The pump station was installed in 2004.

The pump wet well is precast concrete (7-ft diam. x 15-ft est) with 4-ft x 4.5-ft aluminum hatchway. There are (2) 4-inch check valves and (2) 4-inch gate valves. The control panel is manufactured by Flygt.

The Building (13-ft x 10-ft) is constructed of concrete block and asphalt shingle roof in good condition. The building contains halogen wall pack lighting and 1 steel door.

The Generator is an Onan DGHE-5636689B 50 KW unit with 145-gallon fuel tank. The Automatic Transfer Switch (ATS) is manufactured by Cummin Power Command.

The property is not fenced.

Property Condition

The building is in very good condition, the roof is in good condition and all HVAC systems are in good condition.

Figure 1 – Facility Site

Figure 2 – Pump Station Wetwell

Figure 3 – Pump Control Panel

Figure 4 – Pump Control Panel Interface

Figure 5 – Electrical Panel

Figure 6 – Valve Chamber

Figure 7 – Generator

Figure 8 –Automatic Transfer Switch

PUMP STATION #		P.S. 12		**Scheduled Visit Date:**		2/10/2021
Station Name		King Road				
Location		340 King Rd				
Start Up Date		2004				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
371.3		Condition				
		No. of Pumps	2			
		Type	Submersible			
		Pump Manufacturer	Flygt			
		Pump Model Number	NP3102			
		Year Installed	2004			
		Pump GPM	258			
		Pump TDH Ft.				
		Outlet Size	4"			
		Motor HP	6.5			
		Motor Voltage	230			
371.3		Pump Control (VFD?)	Multitrode MT2PC			
370.3		**WET WELL**				
		Condition	good			
		Size	7' diam. X 15' est			
		Material	precast concrete			
		Lined				
		Hatch	4' x 4.5 ' aluminum			
		Vent				
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	Flygt			
		Year Installed				
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**				
		Manufacturer	N/A			
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**				
		Manufacturer	N/A			
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	check	gate		Crispen air release valve
		Manufacturer				
		Size	4"	4"		
		#	2	2		
		Year Installed				
355		**GENERATOR**				
		Manufacturer	Onan DGHE-5636689B			30" x 30" exhaust louvers
		Generator KW	50			
		Generator KVA	63			
		Fuel Tank (Gals)	145			
355		ATS (manf/model #)	Cummin Power Command			
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	4"			
		Force Main Mat.	PVC			
		Length in Feet	2400			
		Year Installed	2004			
		Discharge Point	MH 338			
		Discharge Point Location	Amy Lane near W. King Road			

354.2		**BUILDING**				
		Condition	Very Good			
		Size	13' x 10'			
		Main Structure Material	concrete block			
		Roof Type	asphalt shingle			
		Roof Condition	good			
		Doors (number /material)	1 - steel			
		Lighting (Type)	halogen wall pack	LED on stanchion		
		Year Installed				
		ELECTRICAL				
371.3		MCC	225 Amp Panel			
396		Alarm System (manf/ model)	Sensaphone 2000			**COMMENTS**
		Year Installed				
354.3		**HVAC**				
		Condition	good			
		Type	5.5' x 3' motorized louver			
		Manufacturer				
		Year Installed	2004			
364		Flow Meter				
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length				
		Fence Type				
		Year Installed				
354.3		Paving and Walkways	asphalt driveway			
371.3		**ODOR CONTROL**				
		Manufacturer				
		Type				
		MISCELLANEOUS				
		Other Buildings				
		Spare Parts	**DESCRIPTION OF FACILITY**			
		Vac Truck Suitable				
		Spare Parts				
		Vac Truck Suitable				
OVERALL BUILDING AND FACILITY ASSESSMENT						
The overall facility was in very good condition. The roof was in good condition.						

P.S. 13 - AKA Malvern Hunt PS

Facility Description (see attached Information Sheet)

P.S. 13 is located at 30 Corbin Dr and is equipped with (2) 300-GPM submersible pumps. Wastewater is discharged through a 2860 LF, 6-inch DIP force main that ties into the existing sewage collection system at Manhole 101 located on Chester Valley Trail near Swedesford Road. The pump station was installed in 2000.

The pump wet well is precast concrete (9-ft dia. x 15-ft deep (est)) with 7.5-ft x 6-ft aluminum hatchway. The control panel is manufactured by Flygt. There are (2) 6-inch check valves and (2) 6-inch gate valves. The influent line to the wet well contains a 3 HP Muffin Monster.

The Building (14-ft x 16-ft) is constructed of concrete block with stucco and asphalt shingle roof in very good condition. The building contains halogen wall pack lighting and 1 steel door.

The Generator is an Katolight D50FJJ4 50 KW unit with 150-gallon fuel tank. The Automatic Transfer Switch (ATS) is manufactured by Katolight.

The property is surrounded by a 200 LF 6-ft cyclone fence. This facility also has a chemical dosing system, which contains 100-gallon fuel tank and LMI Dosing pump. The system is not currently in use.

Property Condition

The building is in fair condition, the roof is in very good condition and all HVAC systems are in very good condition.

Figure 1 – Facility Site

Figure 2 – Pump Station Wetwell

Figure 3 – Pump Control Panel

Figure 4 – Grinder Control Panel

Figure 5 – Electrical Panel

Figure 6 – Valve Chamber

Figure 7 – Generator

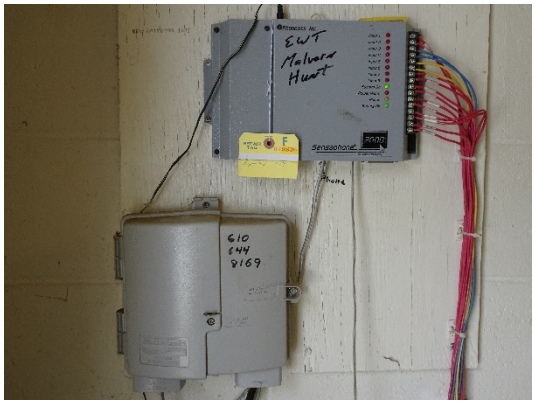

Figure 8 –Auto Dialer

Figure 9 – Flowmeter readout

Figure 10 – Flow Meter

Figure 11 – Chemical Dosing System (abandoned)

Figure 12 –Old Grinder (to be replaced)

PUMP STATION #		P.S. 13		**Scheduled Visit Date:**		2/10/2021
Station Name		Malvern Hunt				
Location		30 Corbin Dr				
Start Up Date		2000				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
371.3		Condition	Fair			
		No. of Pumps	2			
		Type	submersible			
		Pump Manufacturer	Flygt			
		Pump Model Number	CP3127			
		Year Installed	2000?			
		Pump GPM	300			
		Pump TDH Ft.				
		Outlet Size				
		Motor HP	7.5			
		Motor Voltage	230			
371.3		Pump Control	level probe			
370.3		**WET WELL**				
		Condition	Good			
		Size	9' dia. X 15' deep (est)			
		Material	precast concrete			
		Lined				
		Hatch	7.5' x 6' aluminum			
		Vent				
		Rails	galv. Steel			showing rust
		Cable				
		Piping	DIP			
371.3		**CONTROL PANEL**				
		Manufacturer	Flygt			
		Year Installed				
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**				
		Manufacturer	Muffin Monster			new grinder on order
		Model/Serial number				
		HP	3			
		Year Installed	2021			
371		**CRAIN/HOIST**				
		Manufacturer	Davit Crane			
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	Check	Gate		chamber - 7' x 7' x 6' deep
		Manufacturer	Clow	Clow		4' x 4' aluminum hatch
		Size	6"	6"		
		#	2	2		
		Year Installed				
355		**GENERATOR**				
		Manufacturer	Katolight D50FJJ4			4' x 4' exhaust louvers
		Generator KW	50			
		Generator KVA	62			
		Fuel Tank (Gals)	150			
355		ATS (manf/model #)	Katolight			
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	6"			
		Force Main Mat.	DIP			
		Length in Feet	2860			
		Year Installed	2000			
		Discharge Point	MH 101			
		Discharge Point Location	Chester Valley Trail near Swedesford Road			

354.2		**BUILDING**				
		Condition	Very Good			
		Size	14' x 16'			
		Main Structure Material	Conc. Block w/ stucco			
		Roof Type	asphalt shingle			
		Roof Condition	Very Good			
		Doors (number /material)	1 - steel			
		Lighting (Type)	halogen wall packs			
		Year Installed				
		ELECTRICAL				
371.3		MCC	225 amp panel			
396		Alarm System (manf/ model)	Sensaphone 2000			**COMMENTS**
		Year Installed				
354.3		**HVAC**				
		Condition	Very Good	good		
		Type	5' x 5' grav. Louvers	elec. unit heater		
		Manufacturer				
		Year Installed				
364		Flow Meter	Rosemount Magmeter			
364		Chart Recorder	rosemount totalizer			
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length	200'			
		Fence Type	6' cyclone			
		Year Installed				
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**				System abandoned
		Manufacturer		LMI		
		Type	100 gallon tank	dosing pump		
		MISCELLANEOUS				
		Other Buildings				
		Spare Parts	**DESCRIPTION OF FACILITY**			
		Vac Truck Suitable				
		Spare Parts				
		Vac Truck Suitable				
OVERALL BUILDING AND FACILITY ASSESSMENT						
The building, generator and control panels are all in fair condition. The pump station guide rails and some support bracket have begun to rust.						

P.S. 14 - AKA Planebrook Road PS

Facility Description (see attached Information Sheet)

P.S. 14 is located at 170 Cricket Drive and is equipped with (2) 390-GPM submersible pumps. Wastewater is discharged through a 2545 LF, 8-inch PVC force main that ties into the existing sewage collection system at Manhole 113 located on Phoenixville Pike at Chester Valley Trail. The pump station was installed in 2018.

The pump wet well is precast concrete (9-ft dia. x 18-ft Deep) with 6-ft x 6-ft aluminum hatchway. There are (2) 4-inch check valves and (6) 4-inch gate valves. The control panel is manufactured by Flygt/Stacon.

The Building (12.5-ft x 15.5-ft) is constructed of Concrete Block and asphalt shingle roof in very good condition. The building contains LED wall pack lighting and 1 steel door.

The Generator is an MTU4R0113 DS50 50 KW unit with 185-gallon fuel tank. The Automatic Transfer Switch (ATS) is an ASCO 7000 series.

The property is surrounded by a 225 LF 6-ft cyclone fence.

Property Condition

The building is in very good condition, the roof is in very good condition and all HVAC systems are in good condition.

Figure 1 – Facility Site

Figure 2 – Facility Site

Figure 3 – Pump Station

Figure 4 – Pump Station Wetwell

Figure 5 – Pump Control Panel

Figure 6 – Valve Chamber

Figure 7 – Valve Chamber

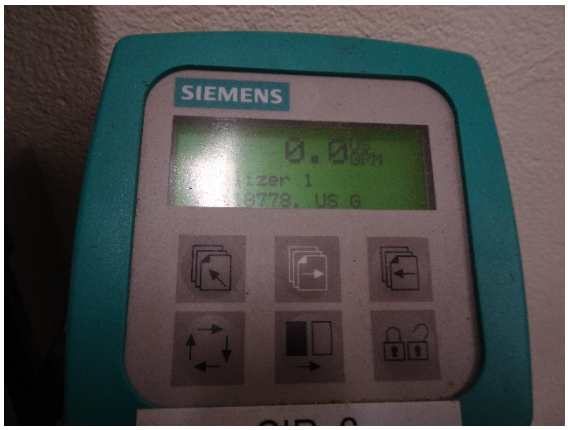

Figure 8 –Flow Meter Totalizer

Figure 9 - Generator

Figure 10 – Automatic Transfer Switch

Figure 11 – MCC and Disconnects

Figure 12 –Auto Dialer System)

PUMP STATION #		P.S. 14		**Scheduled Visit Date:**		2/10/2021
Station Name		Planebrook	Phone #			
Location		170 Cricket Drive				
Start Up Date		2018				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
371.3		Condition	Very Good			
		No. of Pumps	2			
		Type	Submersible			
		Pump Manufacturer	Flygt			
		Pump Model Number	NP 3127			
		Year Installed	2018			
		Pump GPM	390			
		Pump TDH Ft.	45			
		Outlet Size	4"			
		Motor HP	10			
		Motor Voltage	230			
371.3		Pump Control	Flygt Multitrode MT2PC			
370.3		**WET WELL**				
		Condition	Very Good			
		Size	9' dia. X 18' Deep			
		Material	Precast Concrete			
		Lined				
		Hatch	6' x 6' aluminum			
		Vent				
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	Flygt/Stacon			
		Year Installed				
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**				
		Manufacturer				
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**				
		Manufacturer	Thern Davit crane			
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	Check	Gate		Valve chamber - 7' x 17' x 6' deep
		Manufacturer	APCO	APCO		Hatches - 3' x 3', 4' x 4'
		Size	4"	4"		
		#	2	6		Includes emergency connection
		Year Installed				for portable pump
355		**GENERATOR**				
		Manufacturer	MTU4R0113 DS50			4' x 4' exhaust hood
		Generator KW	50			
		Generator KVA	62			
		Fuel Tank (Gals)	185			
355		ATS (manf/model #)	ASCO 7000			
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	8"			
		Force Main Mat.	PVC			
		Length in Feet	2545			
		Year Installed	2018			
		Discharge Point	MH 113			
		Discharge Point Location	Phoenixville Pike at Chester Valley Trail			

354.2		**BUILDING**				
		Condition	Very Good			
		Size	12.5' x 15.5'			
		Main Structure Material	Concrete Block			
		Roof Type	asphalt shingle			
		Roof Condition	Very Good			
		Doors (number /material)	1 - steel			
		Lighting (Type)	LED wall Packs			
		Year Installed				
		ELECTRICAL				
371.3		MCC	?????	50 amp panel		
396		Alarm System (manf/ model)	Sensaphone Sentinal			**COMMENTS**
		Year Installed				
354.3		**HVAC**				
		Condition				
		Type	4' x 4' Motorize louvers	Electric unit heater	12" x 12" exhaust fan	
		Manufacturer			Qmark	
		Year Installed				
364		Flow Meter	E&H magmeter			
364		Chart Recorder	Seimens Totalizer			
354.3		Hydrants	1 - yard			
		GROUNDS				
354.3		Fence Length	225'			
		Fence Type	6' cyclone			
		Year Installed				
354.3		Paving and Walkways	asphalt drive			
371.3		**ODOR CONTROL**				
		Manufacturer				
		Type				
		MISCELLANEOUS				
		Other Buildings				
		Spare Parts	**DESCRIPTION OF FACILITY**			
		Vac Truck Suitable				
		Spare Parts				
		Vac Truck Suitable				
OVERALL BUILDING AND FACILITY ASSESSMENT						
The facility was built in 2018, all components are in very good condition.						

4.2. COLLECTION SYSTEM

East Whiteland Township owns the collection system identified within this report. There are also privately owned systems within the Township that connect to the Township system. collection system generally consists of 8-inch to 36-inch gravity piping and laterals within the right of way. A map of the collection system can be found in Appendix A, Figure A1. Related cost data for the collection system can be found in Section 8 under account codes 361.21, 361.23, and 360.21.

4.3. METER PITS

A total of eleven (11) meter pits measure flow to/from the Township. However, East Whiteland Township only owns the following three (3):

- Erin Glen Meter located within the vicinity of Kerry lane and Iris way adjacent to Malvern Borough.
- Woodview Apartments Meter located within the East Whiteland Township portion of the apartment complex at the southeast corner of the Township.
- Mathews Road meter located on the border with Tredyffrin Township at the southeast corner of the Township.

All other meters are owned and operated by other municipalities or the Valley Forge Sewer Authority.

Figure 1 – Erin Glen Meter Pit

Figure 2 – Erin Glen Meter Pit

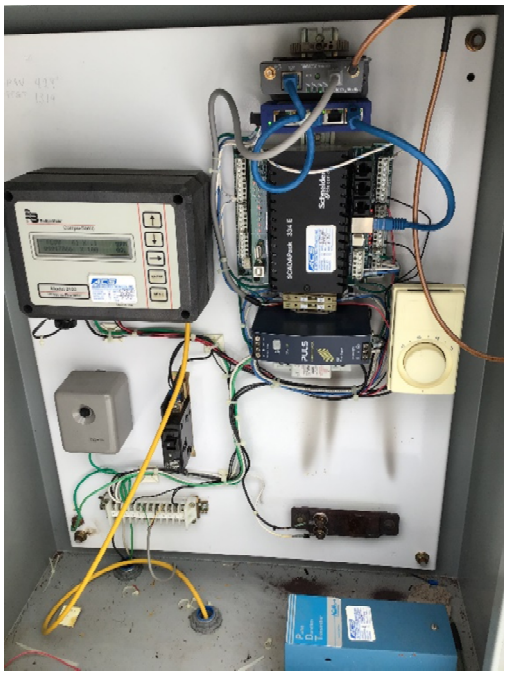

Figure 3 – Erin Glen Meter Pit

Figure 4 –Matthews Road Meter Pit

Figure 5 –Matthews Road Meter Pit

Figure 6 – Woodview Apartment Facility Site

Figure 7 – Woodview Apartment Flow Totalizer and SCADA Unit

Figure 8 – Woodview Apartment Meter Chamber

5. OWNED PROPERTY & EASEMENTS OF VALUE

Property that was directly purchased by the Township and easements acquired are listed in Section 8 – "List of Assets and Costs". The value of said easements are listed with a purchase price of $1 and included in the original purchase price of the facilities listed in Section 8 – "List of Assets and Costs".

6. REGULATORY REQUIREMENTS

3800-PM-WSFR0015 1/2011
Permit

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WATER QUALITY MANAGEMENT PERMIT

PERMIT NO. 1599418

AMENDMENT NO. _____

APS ID. 916602

AUTH. ID. 1139890

A. PERMITTEE (Name and Address): CLIENT ID#: **78789** **East Whiteland Township** **209 Conestoga Road** **Frazer, PA 19355**	B. PROJECT/FACILITY (Name): **Malvern Hunt WWTP**
C. LOCATION (Municipality, County): **East Whiteland Township, Chester County**	SITE ID#: **527339**

D. THIS PERMIT APPROVES THE OPERATION OF SEWAGE FACILITIES CONSISTING OF:

The Malvern Hunt Pump Station with comminutor, an influent bar screen, a two sell aerated treatment lagoon, a storage lagoon, a chlorine disinfection system, and spray fields.

Pump Stations: _____	Manure Storage:	Sewage Treatment Facility:		
Design Capacity: _____ GPM	Volume: _____ MG	Annual Average Flow:	**0.105**	MGD
	Freeboard: _____ inches	Design Hydraulic Capacity:	**0.128**	MGD
		Design Organic Capacity:	**222**	lb/day

E. APPROVAL GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING:

1. **Permit Renewal:** All operations and procedures shall be in accordance with the Water Quality Management Permit application dated **5/23/2016**, its supporting documentation and addendums dated _____, which are hereby made a part of this permit.

   Amendments: All construction, operations and procedures shall be in accordance with the Water Quality Management Permit Amendment application dated _____ and its supporting documentation and addendums dated _____, which are hereby made a part of this amendment.

   Except for any herein approved modifications, all terms, conditions, supporting documentation and addendums approved under Water Quality Management Permit No. _____ dated _____ shall remain in effect.

   Transfers: Water Quality Management Permit No. _____ dated _____ and conditions, supporting documentation and addendums are also made part of this transfer.

2. Permit Conditions Relating to Sewerage are attached and made part of this permit.
3. Special Conditions **1 through XVII** are attached and made part of this permit.

F. THE AUTHORITY GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING FURTHER QUALIFICATIONS:

1. If there is a conflict between the application or its supporting documents and amendments and the attached conditions, the attached conditions shall apply.
2. Failure to comply with the rules and regulations of DEP or with the terms or conditions of this permit shall void the authority given to the permittee by the issuance of this permit.
3. This permit is issued pursuant to the Clean Streams Law Act of June 22, 1937, P.L. 1987, as amended 35 P.S. §691.1 *et seq.* Issuance of this permit shall not relieve the permittee of any responsibility under any other law.

PERMIT ISSUED: November 21, 2016

BY: _____

TITLE: **Jenifer L. Fields, P.E.**
Clean Water Program Manager
Southeast Regional Office

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

SPECIAL CONDITIONS

Water Quality Management Permit No. 1599418

Malvern Hunt WWTP

East Whiteland Township, Chester County

I. Discharge Limitations and Monitoring Requirements

Effluent from the sewage treatment plant shall be sampled at a point after chlorination and shall be limited at all times as follows:

	Discharge Limitations (mg/l)			Monitoring Requirements	
Parameter	Average Monthly	Average Weekly	Instantaneous Maximum	Measurement Frequency	Sample Type
Influent Flow (mgd)	0.105			Continuous	Recorded
$CBOD_5$	25		50	1/Month	Grab
Suspended Solids	30		60	1/Month	Grab
Fecal Coliform	200/100 ml as geometric average			1/Month	Grab
pH	Within limits of 6.0 to 9.0 standard units at all times			1/Month	Grab

Additional treatment requirements include the satisfactory disposal of sludge and the reduction of quantities of oils, greases, acids, alkalis, toxic, taste and odor producing substances, inimical to the public interest to levels which will not pollute the receiving waters.

Monitoring results shall be reported monthly on the Discharge Monitoring Report (DMR). The term "grab" sample means an individual sample collected in less than 15 minutes. Samples and measurements taken as required, herein, shall be representative of the volume and nature of the monitored discharge.

II. Copies of monthly Discharge Monitoring Reports must be submitted within 28 days of the end of the monitoring period to:

Department of Environmental Protection
Southeast Regional Office
Water Management
2 East Main Street
Norristown, PA 19401

III. Groundwater Monitoring Requirements

The permittee shall effectively monitor the quality of the groundwater. The parameters to be tested, and frequency of analysis and other monitoring requirements shall be as follows:

A. Quarterly analysis of groundwater sampled at groundwater monitoring wells **MW-L1, MW-L2, MW-L3, MW-S1, MW-S2, MW-S3, MW-S6, MW-S7, and MW-S8,** shall consist of: static water level, sampling depth, turbidity, pH, chloride, total phosphorus, ammonia nitrogen, nitrate nitrogen, nitrite nitrogen, total dissolved solids, fecal coliform, and alkalinity.

B. Groundwater elevations must be measured prior to purging the groundwater monitoring well.

C. Before collection of the groundwater sample, a groundwater monitoring well shall be properly purged and allowed to recover to at least 90 percent of the well volume that was present prior to purging.

D. All groundwater samples shall be collected from within the top five feet of the water elevation within the well column.

IV. Groundwater Monitoring Data Reporting Requirements

All groundwater data shall be submitted to DEP **annually** and be in **report form.** The report shall be due to DEP within 28 days of the end of the month of permit issuance. For example, if your permit was issued on March 4th, then your annual report is due by April 28th. The annual report shall be mailed under separate cover and addressed to:

Department of Environmental Protection
Southeast Regional Office
Water Management Program
2 East Main Street
Norristown, PA 19401

Attention: Hydrogeologist
Planning Section

V. The annual groundwater monitoring report shall include the following information:

A. General Information

i. Facility name
ii. Facility permit number
iii. Facility location (including municipality and county)
iv. Facility contact information:

a. permittee name, address, and telephone number
b. contact name and title
c. facility operator name, address, and telephone number
d. facility consultant name, address, and telephone number

B. Site Data

i. A brief narrative that provides the date and description of any facility event which may have impacted any part of the groundwater monitoring program. (e.g., collapse of groundwater monitoring well, etc.).

ii. Average effluent flow for the year covered by this report.

iii. In tabular form, the following information needs to be provided for at least the last 5 years of system operation:

a. Date of sampling
b. Groundwater elevations
c. Sampling depth
d. Identification of upgradient and downgradient wells
e. The results of the analysis of the samples

iii. Background groundwater data generated prior to system start-up. **This information is absolutely needed and needs to be included in the data tabulation.**

C. Comprehensive Groundwater Evaluation (CGE)

As part of the facility's 5-year permit renewal application, the permittee shall submit a report that is a result of a comprehensive evaluation of the systems impact on groundwater. A Registered P.G. must identify any trends which may pose a threat to human health or certify that none are present. Should adverse impacts to groundwater be identified, the permittee needs to recommend actions to address the potential threat.

D. **Groundwater Background Report**

Within 60 days of system start up, or upon issuance of permit renewal a Groundwater Background Report shall be submitted to DEP. The report shall include the follow information:

i. Site Information

a. Brief narrative, including site limitations.
b. Soil type and bedrock lithology beneath the absorption areas.
c. Site drawings showing general location of absorption fields and monitoring wells. Drawings must show site topography.

ii. Construction details of each groundwater monitoring well shall include:

a. Well depth.
b. Casing depth.
c. Static water levels.
d. Surface elevation.
e. Well log.
f. Water bearing zones.
g. Top of casing elevation.
h. Ground surface elevation.

VI. Unless, otherwise, specified in this permit, the test procedures for analysis of pollutants shall be those contained in 40 C.F.R. Part 136, or alternative test procedures approved pursuant to that Part. For the analysis of CBOD5, consult Section 507 of Standard Methods.

VII. Effective disinfection to control disease producing organisms shall be the production of an effluent which will contain a concentration neither greater than 200/100 ml of Fecal Coliform organisms, as a geometric average value nor greater than 1000/100 ml of these organisms in a more than 10 percent of the samples tested.

VIII. If the permittee monitors any pollutant more frequently than the permit requires, the results of this monitoring shall be incorporated, as appropriate, into the calculations used to report self-monitoring data on the DMR.

IX. The authorization to discharge contained in Section D of this permit shall expire in five years from the date of issuance, or reissuance. Application for renewal of this permit, or notification of intent to cease discharging by the expiration date, must be submitted to the Department at least 180 days prior to the above expiration date (unless permission has been granted by the Department for submission at a later date). In the event that a timely and complete application for renewal has been submitted and the Department is unable, through no fault of the permittee, to reissue the permit before the above expiration date, the terms and conditions of this permit will be automatically continued and will remain fully effective and enforceable pending the grant or denial of the application for permit renewal. The application for renewal shall be submitted on the appropriate Water Quality Management Part II Application forms and shall include a tabulated summary of all groundwater monitoring data for the previous five years, including a discussion of groundwater quality trends resulting from this discharge.

X. Sprayfield Weekly Maximum Hydraulic Loadings

A. Effluent flows to each sprayfield must be consistent with the maximum hydraulic loading requirements of the following tables, which provide the weekly maximum gallons for each irrigation zone.

MAXIMUM WEEKLY SPRAYFIELD HYDRAULIC LOADINGS IN GALLONS

Spray Zone 1 6.16 Acres Woods		
Month	Inches/Acre/Week	Maximum/Week Gallons
January	0.50	83,671
February	0.50	83,671
March	1.27	212,539
April	1.50	251,020
May	2.00	334,691
June	2.50	418,369
July	2.50	418,369
August	2.50	418,369
September	2.50	418,369
October	1.55	259,410
November	1.16	194,126
December	0.50	83,671

Spray Zone 2 6.19 Acres Woods		
Month	Inches/Acre/Week	Maximum/Week Gallons
January	0.50	84,079
February	0.50	84,079
March	1.27	213,574
April	1.50	252,243
May	2.00	336,321
June	2.50	420,406
July	2.50	420,406
August	2.50	420,406
September	2.50	420,406
October	1.55	260,673
November	1.16	195,072
December	0.50	84,079

Spray Zone 3 6.15 Acres Woods		
Month	Inches/Acre/Week	Maximum/Week Gallons
January	0.50	83,536
February	0.50	83,536
March	1.27	212,194
April	1.50	250,613
May	2.00	334,148
June	2.50	417,690
July	2.50	417,690
August	2.50	417,690
September	2.50	417,690
October	1.55	258,989
November	1.16	193,811
December	0.50	83,536

B. The permittee shall include with the monthly Discharge Monitoring Report a Supplemental Land Application System Form 3800-FM-BPNPSM0449 that indicates the gallons per day discharged to the spray irrigation zones.

C. Spray irrigation events shall consist of simultaneous operation of two zones with one zone left off for a week-long resting period. All zones shall be rested each month.

D. Application of the effluent shall be managed to prevent runoff from the permitted spray fields and ponding of effluent.

E. No irrigation is to occur on frozen soils.

F. No irrigation is to occur if more than 0.5 inches of rainfall has fallen during the previous 24 hours.

G. The operator is to assess soil moisture content and soil/vegetation conditions frequently. It is the operator's responsibility to inspect the fields on a routine basis to prevent and/or address damage to the irrigation fields.

H. The spray fields shall be maintained to ensure that vegetation does not interfere with or impair proper operation of the spray heads.

I. Fallen trees in wooded spray fields are required to be removed. All work must be conducted during dry or frozen soil conditions to prevent damage to the soil.

XI. At all times, the wastewater level in the storage lagoon shall be managed within the low and high water level parameters as designed. The water level shall be controlled so that a freeboard of at least 24 inches is maintained at all times. The Department must be notified if the water level is anticipated to enter freeboard.

XII. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

A. The exact place, date, and time of sampling or measurement.
B. The person(s) who performed the sampling or measurement.
C. The dates the analyses were performed.
D. The person(s) who performed the analyses.
E. The analytical techniques or methods used.
F. The results of such analyses.

XIII. Recordkeeping and Retention

The permittee shall keep records of operation and efficiency of the wastewater treatment facilities. All records of monitoring activities and results (including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records), copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained by the permittee for three (3) years. The three-year period shall be extended as requested by the Department.

XIV. The facility shall be operated under the charge of a responsible operator(s) certified under the Pennsylvania Water and Wastewater Systems Operations Certification Act (Act 11). The operator(s) shall comply with the continuing education requirements required under the regulations and guidelines related to Act 11.

XV. Laboratory Certification

Facilities that test or analyze environmental samples used to demonstrate compliance with this permit shall be in compliance with laboratory accreditation requirements of act 90 of 2002 (27 Pa. Code C.S. §§ 4101-4113) and 25 Pa. Code Chapter 252, relating to environmental laboratory accreditation. An environmental laboratory is any facility engaged in the testing or analysis of environmental samples required by a statute administered by the Department relating to the protection of the environment or of public health, safety, and welfare.

XVI. Right of Entry

Pursuant to Sections 5(b) and 305 of Pennsylvania's Clean Stream Law, the permittee shall allow authorized representatives of Department of Environmental Protection upon the presentation of credentials and other documents as may be required by law:

A. To enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.

B. To have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.

C. To inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.

D. To sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act or The Clean Streams Law, any substances or parameters at any location.

XVII. If there is a change in ownership of this facility or in permittee name, an application for transfer of permit must be submitted to the Department.

7. OPERATING EXPENSES

FOR 2021 03

ACCOUNTS FOR: 08 Sewer Fund		ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USED
08341 Interest								
08341 34101	Interest Earnings	-12,000	0	-12,000	-311.58	.00	-11,688.42	2.6%
TOTAL Interest		-12,000	0	-12,000	-311.58	.00	-11,688.42	2.6%
08364 Sewer Dept. Earning								
08364 36400	Sewer Rents - Other	-210,000	0	-210,000	-57,646.00	.00	-152,354.00	27.5%
08364 36411	Sewer Connection Fe	-35,000	0	-35,000	-5,400.00	.00	-29,600.00	15.4%
08364 36412	Sewer Rents	-3,703,000	0	-3,703,000	-926,446.40	.00	-2,776,553.60	25.0%
TOTAL Sewer Dept. Earning		-3,948,000	0	-3,948,000	-989,492.40	.00	-2,958,507.60	25.1%
08380 Miscellaneous Revenue								
08380 36244	Sewer Certification	-5,000	0	-5,000	-1,075.00	.00	-3,925.00	21.5%
08380 38003	Refund from VFSA	-375,000	0	-375,000	.00	.00	-375,000.00	.0%
TOTAL Miscellaneous Revenue		-380,000	0	-380,000	-1,075.00	.00	-378,925.00	.3%
08429 Sewer Dept. Expenses								
08429 13000	Wages - Sewer Maint	500,000	0	500,000	30,796.13	.00	469,203.87	6.2%
08429 15300	Disability Insuranc	3,000	0	3,000	778.35	.00	2,221.65	25.9%
08429 15600	Medical Insurance	119,000	0	119,000	37,746.82	.00	81,253.18	31.7%
08429 15650	Retiree Benefits (O	17,000	0	17,000	4,343.43	.00	12,656.57	25.5%
08429 15700	Drug & Alcohol and	525	0	525	.00	.00	525.00	.0%
08429 15800	Life Insurance	2,325	0	2,325	466.98	.00	1,858.02	20.1%
08429 16000	Pension/Retirement	158,000	0	158,000	.00	.00	158,000.00	.0%
08429 16100	FICA (Soc. Sec.) &	39,000	0	39,000	2,355.92	.00	36,644.08	6.0%
08429 17000	Vacation Payout	2,500	0	2,500	.00	.00	2,500.00	.0%
08429 18200	Longevity Pay	7,358	0	7,358	.00	.00	7,358.00	.0%
08429 18300	Overtime	15,000	0	15,000	.00	.00	15,000.00	.0%
08429 20000	Material & Supplies	4,000	0	4,000	.00	.00	4,000.00	.0%
08429 21300	Small Items of Equi	5,000	0	5,000	.00	.00	5,000.00	.0%

FOR 2021 03

ACCOUNTS FOR: 08 Sewer Fund		ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USED
08429 23000	Utilities - Pump St	91,200	0	91,200	19,724.36	.00	71,475.64	21.6%
08429 23100	Vehicle Fuel	10,000	0	10,000	1,078.36	.00	8,921.64	10.8%
08429 23800	Uniforms	3,800	0	3,800	273.06	.00	3,526.94	7.2%
08429 31100	Financial Services	9,000	0	9,000	662.50	.00	8,337.50	7.4%
08429 31300	Twp. Engineering Se	55,000	0	55,000	2,364.33	.00	52,635.67	4.3%
08429 31400	Legal Services	15,000	0	15,000	1,102.50	.00	13,897.50	7.4%
08429 31900	Computer Serv. / Da	27,250	0	27,250	92.99	.00	27,157.01	.3%
08429 32100	Telephone (incl. Mo	15,500	0	15,500	2,562.11	.00	12,937.89	16.5%
08429 32500	Postage & Courier	7,500	0	7,500	.00	.00	7,500.00	.0%
08429 33100	Training, Conferenc	2,500	0	2,500	.00	.00	2,500.00	.0%
08429 34000	Advertising, Printi	4,000	0	4,000	75.00	.00	3,925.00	1.9%
08429 35200	Insurance - Liabili	34,000	0	34,000	8,341.30	.00	25,658.70	24.5%
08429 35400	Worker's Comp Insur	8,000	0	8,000	1,715.40	.00	6,284.60	21.4%
08429 37000	Office Equipment Ma	1,200	0	1,200	.00	.00	1,200.00	.0%
08429 37100	Sewer System - Main	121,920	0	121,920	17,795.24	7,894.39	96,230.37	21.1%
08429 37200	Road Maintenance &	1,000	0	1,000	.00	.00	1,000.00	.0%
08429 37300	Pump Stations - Mai	76,000	0	76,000	6,795.17	14,999.93	54,204.90	28.7%
08429 37400	Equipment - Maint.	700	0	700	.00	.00	700.00	.0%
08429 37500	Vehicle - Maint. &	6,000	0	6,000	1,555.71	.00	4,444.29	25.9%
08429 38500	Sewer Rentals - Oth	1,760,000	0	1,760,000	441,744.07	.00	1,318,255.93	25.1%
TOTAL Sewer Dept. Expenses		3,122,278	0	3,122,278	582,369.73	22,894.32	2,517,013.95	19.4%
08470 Debt - Sewer Dept.								
08470 25522	GOB 2013 Bond - Pri	50,000	0	50,000	.00	.00	50,000.00	.0%
08470 25523	GOB 2012 A Bond - P	350,000	0	350,000	.00	.00	350,000.00	.0%
08470 25524	GOB 2012B Bond - Pr	335,000	0	335,000	.00	.00	335,000.00	.0%
08470 47000	Interest Exp. - Deb	516,409	0	516,409	.00	.00	516,409.00	.0%
TOTAL Debt - Sewer Dept.		1,251,409	0	1,251,409	.00	.00	1,251,409.00	.0%
08475 Fiscal Agent Fees								
08475 47600	Fiscal Agent Fees	3,150	0	3,150	.00	.00	3,150.00	.0%
TOTAL Fiscal Agent Fees		3,150	0	3,150	.00	.00	3,150.00	.0%
08492 Interfund Operating Transfers								
08492 49201	Transfer to General	168,345	0	168,345	.00	.00	168,345.00	.0%
TOTAL Interfund Operating Transfers		168,345	0	168,345	.00	.00	168,345.00	.0%

FOR 2021 03

ACCOUNTS FOR: 08 Sewer Fund		ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USED
TOTAL Sewer Fund		205,182	0	205,182	-408,509.25	22,894.32	590,796.93	-187.9%
	TOTAL REVENUES	-4,340,000	0	-4,340,000	-990,878.98	.00	-3,349,121.02	
	TOTAL EXPENSES	4,545,182	0	4,545,182	582,369.73	22,894.32	3,939,917.95	

FOR 2021 03

	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USED
GRAND TOTAL	205,182	0	205,182	-408,509.25	22,894.32	590,796.93	-187.9%

** END OF REPORT - Generated by Usha Hogan **

8. LIST OF ASSETS AND COSTS

EAST WHITELAND TOWNSHIP WASTEWATER SYSTEM
SUMMARY OF ANALYSIS OF ORIGINAL COST OF WASTEWATER SYSTEM
AS OF JUNE 17, 2021

ACCOUNT	DESCRIPTION		ORIGINAL COST ($)
353.2	LAND AND LAND RIGHTS - COLLECTION	$	668.00
353.3	LAND AND LAND RIGHTS - PUMPING	$	13.00
354.2	STRUCTURES AND IMPROVEMENTS - COLLECTION PLANT	$	11,085,241.50
354.3	STRUCTURES AND IMPROVEMENTS - PUMPING	$	8,005,275.38
360.21	COLLECTION SEWERS - FORCE - MAINS	$	2,304,354.55
361.21	COLLECTION SEWERS - GRAVITY - MAINS	$	10,767,737.96
361.23	COLLECTION SEWERS - GRAVITY - MANHOLES	$	4,350,867.01
363.2	SERVICES TO CUSTOMERS	$	6,619,976.03
365.2	FLOW MEASURING INSTALLATIONS	$	78,670.00
390.7	COMPUTER AND SOFTWARE	$	21,550.00
391.7	TRANSPORTATION EQUIPMENT	$	212,955.81
	SYSTEM TOTAL	$	43,447,309.24

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
353.20	LAND AND LAND RIGHTS - COLLECTION						
	DEER RUN DRAINAGE AREA (DR)	(DR 2) UPI: 42-4K-57 - Gravity Line & Force Main, MB: 197/260			Easement - Yes		$ 1.00
	DEER RUN DRAINAGE AREA (DR)	(DR 3) UPI: 42-4K-60 - Gravity Line & Force Main, MB: 199/67			Easement - Yes		$ 1.00
	DEER RUN DRAINAGE AREA (DR)	Deer Run Lane - Gravity Line & Force Main, DB: P40/251			ROW - Yes		$ 1.00
	DEER RUN DRAINAGE AREA (DR)	Fawn Circle - Gravity Line & Force Main, DB: P40/251			ROW - Yes		$ 1.00
	DEER RUN DRAINAGE AREA (DR)	Doe Lane - Gravity Line, DB: P40/246 DB: W31/40			ROW - Yes		$ 1.00
	DEER RUN DRAINAGE AREA (DR)	Buck Run Lane - Gravity Line, DB: W31/40			ROW - Yes		$ 1.00
	DEER RUN DRAINAGE AREA (DR)	Conestoga Road - Force Main,			ROW - Yes		$ 1.00
	FLAT ROAD DRAINAGE AREA (FR)	(FR 3) UPI: 42-4-15.10 - Gravity Line & Force Main, MB: 574/402 PB: 69/1			Easement - Yes		$ 1.00
	FLAT ROAD DRAINAGE AREA (FR)	(FR 4) UPI: 42-4-15.10A - Gravity Line & Force Main, MB: 574/402 PB: 69/1			Easement - Yes		$ 1.00
	FLAT ROAD DRAINAGE AREA (FR)	(FR 5) UPI: 42-4-15.7 - Force Main, Plan No. 16670 PB: 69/1			Easement - Yes		$ 1.00
	FLAT ROAD DRAINAGE AREA (FR)	Flat Road - , DB: U28/28			ROW - Yes		$ 1.00
	FLAT ROAD DRAINAGE AREA (FR)	Great Valley Parkway - , DB: D62/327 MB: 634/200			ROW - Yes		$ 1.00
	HILLBROOK CIRCLE DRAINAGE AREA (HB)	(HB 1) UPI: 35-3-102 - Gravity Line, DB: 7037/1110			Easement - Yes		$ 1.00
	HILLBROOK CIRCLE DRAINAGE AREA (HB)	(HB 2) UPI: 42-3-32.2 - Gravity Line,			Easement - No		$ -
	HILLBROOK CIRCLE DRAINAGE AREA (HB)	(HB 3) UPI: 42-3-32.1 - Gravity Line,			Easement - No		$ -
	HILLBROOK CIRCLE DRAINAGE AREA (HB)	(HB 4) UPI: 42-3-32 - Gravity Line,			Easement - No		$ -
	HILLBROOK CIRCLE DRAINAGE AREA (HB)	(HB 5) UPI: 42-3-33 - Gravity Line,			Easement - No		$ -
	HILLBROOK CIRCLE DRAINAGE AREA (HB)	(HB 6) UPI: 42-3-33.1 - Gravity Line,			Easement - No		$ -
	HILLBROOK CIRCLE DRAINAGE AREA (HB)	(HB 7) UPI: 42-3-107.3P - Gravity Line & Force Main, DB: 6267/2370			Easement - Yes		$ 1.00
	HILLBROOK CIRCLE DRAINAGE AREA (HB)	Willing Way - Gravity Line, DB: 9377/1312			ROW - Yes		$ 1.00
	HILLBROOK CIRCLE DRAINAGE AREA (HB)	Hillbrook Circle - Gravity Line, DB: K34/292			ROW - Yes		$ 1.00
	HILLBROOK CIRCLE DRAINAGE AREA (HB)	Hillbrook Court - Gravity Line, DB: K34/292			ROW - Yes		$ 1.00
	HILLBROOK CIRCLE DRAINAGE AREA (HB)	Conestoga Road - Gravity Line & Force Main, MB: 964/552 DB: G52/532			ROW - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 2) UPI: 42-7-53 - Force Main, Plan No. 7631			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	KING ROAD DRAINAGE AREA (KR)	(KR 3) UPI: 42-7B-101 - Gravity Line & Force Main, DB: 689/549			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 4) UPI: 42-7B-102 - Gravity Line & Force Main, DB: 9549/1435			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 5) UPI: 42-7B-133 - Gravity Line & Force Main, DB: 10200/763			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 6) UPI: 42-7B-132 - Gravity Line & Force Main, DB: 3587/954			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 7) UPI: 42-7B-119 - Gravity Line & Force Main, DB: F53/118			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 8) UPI: 42-7B-120 - Gravity Line & Force Main, DB: 3827/1452			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 9) UPI: 42-7B-118 - Gravity Line & Force Main, DB: 10117/2299			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 10) UPI: 42-7B-85 - Gravity Line & Force Main, DB: 6737/2373			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 11) UPI: 42-7B-86 - Gravity Line & Force Main, DB: 8800/2081			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 12) UPI: 42-7B-84 - Gravity Line & Force Main, DB: 3532/2014			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 13) UPI: 42-7B-83 - Gravity Line & Force Main, DB: 9636/2118			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 14) UPI: 42-7B-82 - Gravity Line & Force Main, DB: 9839/713			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 15) UPI: 42-7B-81 - Gravity Line & Force Main, DB: 9179/23			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 16) UPI: 42-7B-80 - Gravity Line & Force Main, DB: 3584/1943			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 17) UPI: 42-7B-52 - Gravity Line, PB: 16/45 DB: 5686/920			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 18) UPI: 42-7-52.2 - Gravity Line, PB: 16/45			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 19) UPI: 42-7-52.3 - Gravity Line, PB: 16/45 DB: 5648/601			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 20) UPI: 42-7-52.1A - Gravity Line, PB: 16/45 Plan No. 1193			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 21) UPI: 42-7-50.1 - Gravity Line, Plan No. 17279			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 22) UPI: 42-7-50 - Gravity Line, Plan No. 17279			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	Kings Circle - Gravity Line, DB: N29/595			ROW - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	Madeline Drive - Gravity Line, DB: V28/663			ROW - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	Kevin Way - Gravity Line, DB: V28/663			ROW - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	Queen Anne Lane - Gravity Line , DB: V28/671			ROW - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	KING ROAD DRAINAGE AREA (KR)	Carol Lane - Gravity Line, DB: V28/671			ROW - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	King Road - Gravity Line & Force Main,			ROW - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 1) UPI: 42-4-29.2 - Gravity Line, Plan No. 16792			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 2) UPI: 42-4-29.1 - Force Main, Plan No. 18373			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 4) UPI: 42-4-29 - Gravity Line & Force Main, Plan No. 15770 DB: 9846/637			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 5) UPI: 42-4-28.2 - Force Main, DB: 6765/1762			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 6) UPI: 42-4-42 - Gravity Line & Force Main, DB: 6765/1780			Easement - GL: No FM: Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 7) UPI: 42-4-25 - Gravity Line, DB: 6773/273			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 8) UPI: 42-4-25.3 - Gravity Line, DB: 6773/273			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 10) UPI: 42-4-26.2 - Force Main, DB: 6773/273			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 12) UPI: 42-2-12.2 - Gravity Line, Plan No. 4520			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 13) UPI: 42-2-12.1 - Gravity Line, Plan No. 4520			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 14) UPI: 42-2-12.3 - Gravity Line, Plan No. 4521			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 15) UPI: 42-2-12 - Gravity Line, Plan No. 4521			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 16) UPI: 42-4-52 - Gravity Line, Plan No. 5010			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 17) UPI: 42-4-52.5 - Gravity Line, Plan No. 5010			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 18) UPI: 42-4-52.6 - Gravity Line, Plan No. 5010			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 19) UPI: 42-4-15.15 - Gravity Line, DB: 6773/273 MB: 581/59			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 20) UPI: 42-4-15.12 - Gravity Line, MB: 581/59			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 21) UPI: 42-4-15.16 - Gravity Line, DB: 6773/273 MB: 581/59			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 22) UPI: 42-4-15.17A - Gravity Line, DB: 6773/273 DB: 581/59			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 23) UPI: 42-4-15.17 - Gravity Line, DB: 6773/273			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 24) UPI: 42-4-15.18A - Gravity Line, DB: 6773/273			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 25) UPI: 42-4-15.20 - Gravity Line, DB: 6773/273			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	LAPP ROAD DRAINAGE AREA (LR)	(LR 26) UPI: 42-4-17 - Gravity Line, DB: 6773/273			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 27) UPI: 42-4-16 - Gravity Line, DB: 6765/1789			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 28) UPI: 42-4-15.18 - Gravity Line, DB: 6773/273			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 29) UPI: 42-4-15.27 - Gravity Line, DB: 6773/273			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 30) UPI: 42-4-16.1 - Gravity Line, DB: 6773/273			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	Technology Drive - Gravity Line, DB: 6773/251			ROW - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	Lapp Road - Gravity Line , DB: 6773/251 DB: A36/1025 MB: 173/277			ROW - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	Valley Stream Parkway - Force Main, DB: 6773/219 DB: 6773/235			ROW - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	Old Morehall Road - Gravity Line & Force Main,			ROW - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	Morehall Road - Force Main,			ROW - Yes		$ 1.00
	LEE BOULEVARD DRAINAGE AREA (LB)	(LB 3) UPI: 42-2-10.5A - Gravity Line, PB: 64/30			Easement - Yes		$ 1.00
	LEE BOULEVARD DRAINAGE AREA (LB)	(LB 4) UPI: 42-2-10.1 - Gravity Line & Force Main, Plan No. 10751			Easement - Yes		$ 1.00
	LEE BOULEVARD DRAINAGE AREA (LB)	(LB 5) UPI: 42-2-10.3A - Gravity Line, Plan No. 5369			Easement - Yes		$ 1.00
	LEE BOULEVARD DRAINAGE AREA (LB)	(LB 6) UPI: 42-2-10.3 - Gravity Line, Plan No. 5349			Easement - Yes		$ 1.00
	LEE BOULEVARD DRAINAGE AREA (LB)	(LB 7) UPI: 42-2-10.2B - Gravity Line, PB: 59/18			Easement - Yes		$ 1.00
	LEE BOULEVARD DRAINAGE AREA (LB)	Lee Boulevard - Gravity Line & Force Main, DB: S51/92			ROW - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 2) UPI: 42-3-350 - Gravity Line, Plan No. 15562			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 3) UPI: 42-3-351 - Gravity Line, Plan No. 15562			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 4) UPI: 42-3-497 - Gravity Line, Plan No. 16381			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 5) UPI: 42-3-498 - Gravity Line, Plan No. 16381			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 6) UPI: 42-3-336 - Gravity Line, DB: 7234/1961			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 7) UPI: 42-3-337 - Gravity Line, DB: 7234/1961			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 8) UPI: 42-3-375 - Gravity Line, DB: 7234/1961			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 9) UPI: 42-3-376 - Gravity Line, DB: 7234/1961			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 10) UPI: 42-3-378 - Gravity Line, DB: 7234/1961			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 11) UPI: 42-3-64.22 - Gravity Line, DB: 7234/1961			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 12) UPI: 42-3-64.23 - Gravity Line, DB: 7234/1961			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 13) UPI: 42-3-64.89 - Gravity Line, DB: 7234/1961			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 14) UPI: 42-3-64.90 - Gravity Line, DB: 7234/1961			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 15) UPI: 42-3-127 - Gravity Line & Lagoon, DB: 7234/1972			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 16) UPI: 42-3-47 - Gravity Line & Spray Field, DB: 7234/1978			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	All Internal Roads - Gravity Line & Force Main, DB: 6986/1454			ROW - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	Swedesford Road - Force Main, Plan No. 15562			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Doe Lane - Gravity Line, DB: P40/246 DB: W31/40			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Buck Run Lane - Gravity Line, DB: W31/40			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 1) UPI: 42-5-1.1 - Gravity Line, MB: 197/878			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 2) UPI: 42-4-266 - Gravity Line, DB: 8443/1099 Plan No. 18668			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 3) UPI: 42-4-260.2 - Gravity Line, Plan No. 20382 Plan No. 15178			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 4) UPI: 42-4-260.2A - Gravity Line, Plan No. 15178			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 6) UPI: 42-4-257.2 - Gravity Line, Plan No. 4470			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 7) UPI: 42-4-255-E - Gravity Line,			Easement - No		$ -
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 8) UPI: 42-4-268.1 - Gravity Line, DB: 3559/1973			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 9) UPI: 42-4-269 - Gravity Line, DB: 3559/1973			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 10) UPI: 42-4-270 - Gravity Line,			Easement - No		$ -
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 11) UPI: 42-4-272 - Gravity Line, DB: 3559/1973			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 13) UPI: 42-4-339 - Gravity Line, DB: 4373/191			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 14) UPI: 42-5-16.1 - Gravity Line, DB: 4373/180			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 15) UPI: 42-4-132 - Gravity Line, Plan No. 10214 Plan No. 9327			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 16) UPI: 42-4-132.2 - Gravity Line, MB: 199/73 1972-00522			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 17) UPI: 42-4-332 - Gravity Line, MB: 199/54 MB: 284/241			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 18) UPI: 42-4-331 - Gravity Line, MB: 284/237 1975-00649			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 19) UPI: 42-4-330 - Gravity Line, MB: 284/233 1975-00648			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 20) UPI: 42-4-329 - Gravity Line, MB: 284/229 1975-00647			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 21) UPI: 42-4-328 - Gravity Line, MB: 287/5 1975-00684			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 22) UPI: 42-4-327 - Gravity Line, MB: 284/224 1975-00646			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 23) UPI: 42-4-326 - Gravity Line, MB: 284/221 1975-00645			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 24) UPI: 42-4-325 - Gravity Line, MB: 284/217 1975-00644			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 25) UPI: 42-4-324 - Gravity Line, MB: 284/213 1975-00643			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 26) UPI: 42-4-323 - Gravity Line, MB: 284/209 1975-00642			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 27) UPI: 42-4-322 - Gravity Line, MB: 284/205 1975-00641			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 28) UPI: 42-4-322.9 - Gravity Line, MB: 284/205 1975-00641			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 29) UPI: 42-4-322.8 - Gravity Line, MB: 284/201 1975-00640			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 30) UPI: 42-4-322.7 - Gravity Line, MB: 284/197 1975-00639			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 31) UPI: 42-4-322.6 - Gravity Line, MB: 287/13 1975-00686			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 32) UPI: 42-4-322.5 - Gravity Line, MB: 390/33 MB: 284/193			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 33) UPI: 42-4-322.4 - Gravity Line, MB: 287/189 1975-00637			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 34) UPI: 42-4-322.2 - Gravity Line, MB: 287/185 1975-00636			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 35) UPI: 42-4-322.1 - Gravity Line, MB: 284/181 1975-00635			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 36) UPI: 42-4-318 - Gravity Line, MB: 284/177 1975-00634			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 37) UPI: 42-4-317.2 - Gravity Line, MB: 284/169 MB: 287/17			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 38) UPI: 42-4-317.1 - Gravity Line, MB: 284/173 1975-00633			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 39) UPI: 42-4-317 - Gravity Line , MB: 284/169 MB: 287/17			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 40) UPI: 42-4-316 - Gravity Line, MB: 284/165 1975-00631			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 41) UPI: 42-4-315 - Gravity Line, MB: 284/161 MB: 287/157			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 42) UPI: 42-4-313 - Gravity Line, MB: 284/153 MB: 287/157			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 43) UPI: 42-4-132.1 - Gravity Line, MB: 199/27 MB: 284/245			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 44) UPI: 42-4-139 - Gravity Line, MB: 287/1 1975-00683			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 45) UPI: 42-4-140 - Gravity Line, MB: 287/9 1975-00685			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 46) UPI: 42-4-141 - Gravity Line, MB: 284/249 1975-00652			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 47) UPI: 42-4-130 - Gravity Line, DB: 6523/952			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 48) UPI: 42-4-127 - Gravity Line, MB: 284/261 1975-00655			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 49) UPI: 42-4-129 - Gravity Line, MB: 284/257 MB: 284/265			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 50) UPI: 42-4-125.2 - Gravity Line, MB: 284/257 MB: 284/265			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 51) UPI: 42-4-125.3 - Gravity Line, MB: 284/269 1975-00657			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 52) UPI: 42-4-125.3A - Gravity Line, MB: 284/269 1975-00657			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 53) UPI: 42-4-125.8 - Gravity Line, MB: 287/273 1975-00658			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 54) UPI: 42-4-125 - Gravity Line, MB: 345/130 MB: 284/273			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 55) UPI: 42-4-102.2 - Gravity Line, MB: 401/378 MB: 284/277			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 56) UPI: 42-4-102.4 - Gravity Line, MB: 401/378 MB: 284/277			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 57) UPI: 42-4-103 - Gravity Line, MB: 284/281 1975-00660			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 58) UPI: 42-4-104 - Gravity Line, MB: 399/399 MB: 284/285			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 59) UPI: 42-4-106.1 - Gravity Line, MB: 284/253 1975-00653			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 60) UPI: 42-4-97.1 - Gravity Line, MB: 284/289 MB: 284/293			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 61) UPI: 42-4-98.1 - Gravity Line, MB: 284/289 1975-00664			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 62) UPI: 42-4-98.4 - Gravity Line, MB: 284/302 1975-00665			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 63) UPI: 42-4-98 - Gravity Line , MB: 286/336 MB: 284/302			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 64) UPI: 42-4-100 - Gravity Line, MB: 983/401 MB: 284/306			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 65) UPI: 42-4-89.1B - Gravity Line, MB: 286/336 1975-00679			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 66) UPI: 42-4-89.1A - Gravity Line, MB: 546/424			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 67) UPI: 42-4-101.1 - Gravity Line, MB: 983/337 1987-0872			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 68) UPI: 42-4-87.2 - Gravity Line & Force Main, MB: 983/349 1987-08872			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 69) UPI: 42-4-333 - Gravity Line,			Easement - No		$ -
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 70) UPI: 42-4-334-E - Gravity Line,			Easement - No (2 Crossings)		$ -
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 71) UPI: 42-4-335 - Gravity Line, MB: 206/582 MB: 199/30			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 72) UPI: 42-4-338 - Gravity Line, MB: 197/274			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 73) UPI: 42-4-350 - Gravity Line, MB: 197/274			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 74) UPI: 42-4-352 - Gravity Line & Meter, MB: 199/61 1972-00518			Easement - No		$ -
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 75) UPI: 42-4-351 - Gravity Line, Plan No. 7654			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 76) UPI: 42-4-352.1 - Gravity Line, Plan No. 7654			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 77) UPI: 42-4-352.2 - Gravity Line, Plan No. 7654			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 78) UPI: 42-4-352.3 - Gravity Line,			Easement - No		$ -
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 79) UPI: 42-4-343 - Gravity Line, MB: 199/79 1972-00524			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 80) UPI: 42-4R-26 - Gravity Line, MB: 345/56 MB: 284/347			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 81) UPI: 42-4R-34 - Gravity Line, MB: 402/164 MB: 285/1			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 82) UPI: 42-4R-33 - Gravity Line, MB: 345/56			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 83) UPI: 42-4R-32 - Gravity Line, MB: 285/5 1975-00675			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 84) UPI: 42-4R-25 - Gravity Line, MB: 345/56			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 85) UPI: 42-4R-21 - Gravity Line, MB: 286/344 1975-00681			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 86) UPI: 42-4R-19 - Gravity Line, MB: 284/339 1975-00671			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 87) UPI: 42-4R-20 - Gravity Line, MB: 284/343 1975-00672			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 88) UPI: 42-4-321.2 - Gravity Line, MB: 197/888			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 89) UPI: 42-4-278.20 - Gravity Line, DB: 3877/431			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 90) UPI: 42-4-281.47 - Gravity Line, DB: 6267/2378 DB: 4643/95			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 91) UPI: 42-4-281 - Gravity Line, DB: 6267/2378 DB: 4643/95			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 92) UPI: 42-4-281.28 - Gravity Line, DB: 6267/2378 DB: 4643/95			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 93) UPI: 42-4-281.29 - Gravity Line, DB: 6267/2378 DB: 4643/95			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 94) UPI: 42-4-281.30 - Gravity Line, DB: 6267/2378 DB: 4643/95			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 95) UPI: 42-4-281.31 - Gravity Line, DB: 6267/2378 DB: 4643/95			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 96) UPI: 42-4-294-E - Gravity Line,			Easement - No (4 Crossings)		$ -
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 97) UPI: 42-7C-5 - Gravity Line, DB: 5648/615			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 98) UPI: 42-4Q-169 - Gravity Line, DB: 5648/607			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 99) UPI: 42-4Q-157 - Gravity Line, MB: 427/203			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 100) UPI: 42-4Q-156 - Gravity Line, MB: 427/203			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 101) UPI: 42-4Q-155 - Gravity Line, MB: 419/341			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 102) UPI: 42-4Q-179 - Gravity Line, PB: 43/4			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 103) UPI: 42-4Q-180 - Gravity Line, PB: 43/4			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 104) UPI: 42-4Q-172 - Gravity Line, PB: 43/4			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 105) UPI: 42-4Q-171 - Gravity Line, PB: 43/4			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 106) UPI: 42-7B-138.10 - Gravity Line, DB: 2603/389			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 107) UPI: 42-7B-138.11 - Gravity Line, DB: 2603/389			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 108) UPI: 42-7-64.4 - Gravity Line, MB: 960/194			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 109) UPI: 42-7-64.2 - Gravity Line, MB: 960/190			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 110) UPI: 42-4P-28-E - Gravity Line, DB: H49/87			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 111) UPI: 42-4-295.1 - Gravity Line, MB: 284/327 1975-00668			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 112) UPI: 42-4-321 - Gravity Line, MB: 284/340 1975-00680			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 113) UPI: 42-4-321.1 - Gravity Line, MB: 286/323 1975-00667			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 114) UPI: 42-4K-143 - Gravity Line,			Easement - No		$ -
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 115) UPI: 42-4K-142 - Gravity Line,			Easement - No		$ -
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 116) UPI: 42-4K-28 - Gravity Line, MB: 197/271			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 117) UPI: 42-4K-27 - Gravity Line, MB: 196/996			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 118) UPI: 42-4K-7 - Gravity Line, MB: 196/1002			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 119) UPI: 42-4K-6 - Gravity Line, MB: 197/1021			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 120) UPI: 42-4K-30 - Gravity Line, MB: 197/262 MB: 347/323			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 121) UPI: 42-4K-17 - Gravity Line, MB: 196/999 MB: 347/323			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 122) UPI: 42-4-109 - Gravity Line, MB: 377/134			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 123) UPI: 42-4-110 - Gravity Line, MB: 345/134			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 124) UPI: 42-4-143 - Gravity Line, Plan No. 5498 MB: 197/268			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 125) UPI: 42-4-144 - Gravity Line, MB: 336/282			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 126) UPI: 42-4-240.3 - Gravity Line, MB: 199/51 PB: 49/27			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 127) UPI: 42-4-240.1 - Gravity Line, MB: 202/41 MB: 199/48			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 128) UPI: 42-4-142 - Gravity Line, MB: 197/268			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 129) UPI: 42-4-252 - Gravity Line, MB: 197/883			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 130) UPI: 42-4-249 - Gravity Line, MB: 345/52			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 131) UPI: 42-4-253-E - Gravity Line, DB: O31/211			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 132) UPI: 42-4-257.1 - Gravity Line, MB: 199/57			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 133) UPI: 42-4-254 - Gravity Line, MB: 347/326 MB: 199/57			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 134) UPI: 42-4-260.6-E - Gravity Line, DB: 554/536			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 135) UPI: 42-4-53.14 - Gravity Line, DB: 2603/325 Plan No. 9429			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 136) UPI: 42-4-53.15 - Gravity Line, DB: 2603/380 Plan No. 8837			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 137) UPI: 42-4-53.16 - Gravity Line, DB: 554/536 Plan No. 7496			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 138) UPI: 42-4-53.6 - Gravity Line & Force Main, Plan No. 5076 DB: 6765/1748			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 139) UPI: 42-4-53.10 - Gravity Line & Force Main, Plan No. 5434 DB: 6765/1748			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 140) UPI: 42-4-53.7 - Gravity Line & Force Main, Plan No. 5434 DB:6765/1748			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 141) UPI: 42-4-53.12 - Gravity Line, Plan No. 6432 DB: 554/536			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 143) UPI: 42-4-53.5 - Gravity Line, Plan No. 4799			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 144) UPI: 42-4-53.3 - Gravity Line, DB: 6773/235			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 145) UPI: 42-4-53.11 - Gravity Line, Plan No. 19299 DB: 554/536			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 146) UPI: 42-4-53 - Gravity Line, DB: 554/536			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 147) UPI: 42-4-53.8 - Gravity Line, DB: 554/536			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	(MR 148) UPI: 42-2-8.1 - Gravity Line, Plan No. 19233 Plan No. 15830			Easement - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Oak Hill Circle - Gravity Line, DB: H49/60 DB: S54/414			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Forest Way - Gravity Line, DB: H49/60 DB: S54/414			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Amy Lane - Gravity Line & Force Main , DB: 2603/308			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Birch Road - Gravity Line, DB: Q35/224 DB: Q35/243 DB: P40/443			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Locust Road - Gravity Line, DB: Q35/224			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Pine Road - Gravity Line, DB: Q35/239			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Willow Drive - Gravity Line, DB: P40/443			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Sycamore Drive - Gravity Line, DB: P40/443			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Beth Circle - Gravity Line, DB: T49/241			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Village Way - Gravity Line, DB: N27/627 DB: Q24/523 DB: W24/133			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Spring Road - Gravity Line, DB: S36/52 DB: W31/64			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Woodview Road - Gravity Line, DB: W31/64			ROW - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MATTHEWS ROAD DRAINAGE AREA (MR)	Fahnestock Road - Gravity Line, DB: A28/493 DB: V28/667 DB: Q24/521 DB: X24/35			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Longview Road - Gravity Line , DB: A28/493 DB: V28/667 DB: Q24/521 DB: X24/35			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Lantern Lane - Gravity Line, DB: X24/35			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Old Lincoln Highway/ Old Lancaster Road - Gravity Line, DB: 2603/365			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Roberts Road - Gravity Line, DB: N29/192 DB: O31/215 DB: O31/222			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Elbow Lane - Gravity Line, DB: N29/192 DB: O31/215 DB: O31/222			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Winding Way - Gravity Line, DB: N29/192 DB: O31/215			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Wood Lane - Gravity Line, DB: N29/192 DB: O31/215 DB: O31/222			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Beth Lane - Gravity Line, DB: N29/192 DB: O31/215 DB: O31/222			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Hillside Drive - Gravity Line, DB: N29/192 DB: O31/215 DB: O31/222			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Kane Drive - Gravity Line, DB: N29/192 DB: O31/215 DB: O31/222			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Swedesford Road - Gravity Line, DB: N29/192 DB: O31/215 DB: O31/222			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Valley Stream Parkway - Gravity Line & Force Main, DB: 6773/219 DB: 6773/235			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Malin Road - Gravity Line, DB: Q35/224			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	South Malin Road - Gravity Line , DB: 2603/336			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	South Malin Road Railroad Crossing - ,			ROW - No		$ -
	MATTHEWS ROAD DRAINAGE AREA (MR)	Summit Road - Gravity Line, DB: H49/60			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	U.S. Route 202 - Gravity Line, MB: 554/536			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Lancaster Avenue - Gravity Line & Force Main,			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	East Lancaster Avenue - Gravity Line,			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Conestoga Road - Gravity Line & Force Main,			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Morehall Road - Gravity Line & Force Main,			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	East Swedesford Road - Gravity Line,			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Matthews Road - Gravity Line,			ROW - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MATTHEWS ROAD DRAINAGE AREA (MR)	Warren Avenue - Gravity Line,			ROW - Yes		$ 1.00
	MATTHEWS ROAD DRAINAGE AREA (MR)	Lindenwood Drive - Gravity Line,			ROW - Yes		$ 1.00
	MEADOW VIEW DRAINAGE AREA (MV)	Willow Drive - Gravity Line, DB: P40/443			ROW - Yes		$ 1.00
	MEADOW VIEW DRAINAGE AREA (MV)	Sycamore Drive - Gravity Line, DB: P40/443			ROW - Yes		$ 1.00
	MEADOW VIEW DRAINAGE AREA (MV)	East Swedesford Road - Gravity Line,			ROW - Yes		$ 1.00
	MEADOW VIEW DRAINAGE AREA (MV)	(MV 1) UPI: 42-4-88 - Gravity Line, MB: 546/434			Easement - Yes		$ 1.00
	MEADOW VIEW DRAINAGE AREA (MV)	(MV 2) UPI: 42-4-89.5 - Gravity Line, MB: 546/404			Easement - Yes		$ 1.00
	MEADOW VIEW DRAINAGE AREA (MV)	(MV 3) UPI: 42-4-89 - Gravity Line, MB: 546/444			Easement - Yes		$ 1.00
	MEADOW VIEW DRAINAGE AREA (MV)	(MV 4) UPI: 42-4-89.2 - Gravity Line, MB: 546/424			Easement - Yes		$ 1.00
	MEADOW VIEW DRAINAGE AREA (MV)	(MV 6) UPI: 42-4-71.2 - Force Main, Plan No. 2571			Easement - Yes		$ 1.00
	MEADOW VIEW DRAINAGE AREA (MV)	(MV 7) UPI: 42-4-71.13 - Force Main, Plan No. 2571			Easement - Yes		$ 1.00
	MEADOW VIEW DRAINAGE AREA (MV)	(MV 9) UPI: 42-4-71.8 - Force Main,			Easement - No		$ -
	MILL LANE DRAINAGE AREA (ML)	Buttonwood Avenue - Gravity Line, DB: R24/293			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Beechwood Avenue - Gravity Line, DB: R24/293			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 2) UPI: 42-4-2.2-E - Gravity Line & Force Main, DB: 3127/39			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 3) UPI: 42-4-18-E - Gravity Line & Force Main, DB: 5959/435			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 4) UPI: 42-4-41, 56 & 66 - Gravity Line & Force Main,			Easement - GL: No FM: Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 5) UPI: 42-4-39 - Force Main, DB: H64/430			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 6) UPI: 42-4-38 - Force Main, DB: 4588/1426			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 7) UPI: 42-4-71.23 - Force Main, DB: 6761/259			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 8) UPI: 42-4-71.3 - Force Main, DB: 4632/136			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 9) UPI: 42-4K-119 - Force Main, DB: 2538/22			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 10) UPI: 42-4K-120 - Force Main, DB: 85/579			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 11) UPI: 42-4K-121 - Force Main, DB: 1816/457			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MILL LANE DRAINAGE AREA (ML)	(ML 12) UPI: 42-4K-122 - Force Main, DB: S52/265			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 13) UPI: 42-4K-123 - Force Main, DB: 7799/1042			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 14) UPI: 42-4K-124 - Force Main, DB: 4193/2383			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 15) UPI: 42-4-70 - Gravity Line,			Easement - No		$ -
	MILL LANE DRAINAGE AREA (ML)	(ML 16) UPI: 42-4-71.26 - Gravity Line, DB: H49/68			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 17) UPI: 42-4-71.19 - Gravity Line, DB: H49/68			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 18) UPI: 42-4-71.18 - Gravity Line, DB: H49/68			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 19) UPI: 42-4-71.27 - Gravity Line, DB: H49/68			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 22) UPI: 42-4-60.3 - Gravity Line , PB: 61/10			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 23) UPI: 42-4-60.4 - Gravity Line, PB: 61/10			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 24) UPI: 42-4-60.5 - Gravity Line, PB: 61/10			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 25) UPI: 42-4-60.6 - Gravity Line, PB: 61/10			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 26) UPI: 42-4-60.7 - Gravity Line, PB: 61/10			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 27) UPI: 42-4-60.8 - Gravity Line, PB: 61/10			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 28) UPI: 42-4-60.9 - Gravity Line, MB: 420/341			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 29) UPI: 42-4-61.1 - Gravity Line, Plan No. 6557			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 30) UPI: 42-4-61.2 - Gravity Line, Plan No. 6557			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 31) UPI: 42-4-61.3 - Gravity Line, Plan No. 6557			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 32) UPI: 42-4-61.4 - Gravity Line, Plan No. 6557			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 33) UPI: 42-4-65.1 - Gravity Line, PB: 63/14			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 34) UPI: 42-4-65.2 - Gravity Line, PB: 63/14			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 35) UPI: 42-4-65.3 - Gravity Line, PB: 63/14			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 36) UPI: 42-4-65.4 - Gravity Line, PB: 63/14			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 37) UPI: 42-4-65.5 - Gravity Line, PB: 63/14			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MILL LANE DRAINAGE AREA (ML)	(ML 38) UPI: 42-4-65.6 - Gravity Line, PB: 63/14			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 39) UPI: 42-4-65.7 - Gravity Line, PB: 63/14			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 40) UPI: 42-4J-31 - Gravity Line, PB: 1088			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 41) UPI: 42-4J-9 - Gravity Line, MB: 964/533			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 42) UPI: 42-4J-10 - Gravity Line, MB: 964/533			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 43) UPI: 42-4J-11 - Gravity Line, MB: 964/533			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 44) UPI: 42-4J-13 - Gravity Line, MB: 964/533			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 45) UPI: 42-4J-12 - Gravity Line, MB: 964/533			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 46) UPI: 42-4J-15 - Gravity Line, MB: 964/533			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 47) UPI: 42-4J-16 - Gravity Line, MB: 964/533			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 48) UPI: 42-4J-17 - Gravity Line, MB: 964/533			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 49) UPI: 42-4J-18 - Gravity Line, MB: 964/533			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 50) UPI: 42-4J-19 - Gravity Line, MB: 964/533			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 51) UPI: 42-4J-20 - Gravity Line, MB: 964/533			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 52) UPI: 42-4J-21 - Gravity Line, MB: 964/533			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 53) UPI: 42-4-85.12 - Gravity Line, DB: 6482/1996			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 55) UPI: 42-4-2.5-E - Gravity Line, DB: 8918/1465			Township Owned Property		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 56) UPI: 42-4-2.1-E - Gravity Line, DB: 3127/39			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 57) UPI: 42-4-365-E - Gravity Line, DB: 3127/39			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 58) UPI: 42-4-59-E - Gravity Line, DB: 3520/2315			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 59) UPI: 42-4-58-E - Gravity Line, DB: 3520/2315			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 60) UPI: 42-4-58.1-E - Gravity Line, DB: A47/48			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 61) UPI: 42-3-124-E - Gravity Line, DB: 9750/2155			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 62) UPI: 42-3-123.25 - Gravity Line, DB: 9598/2270			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MILL LANE DRAINAGE AREA (ML)	(ML 63) UPI: 42-3-123.15 - Gravity Line, DB: 9598/2270			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 64) UPI: 42-3-123.14 - Gravity Line, DB: 9598/2270			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 65) UPI: 42-3-117.1 - Gravity Line, DB: 9598/2270			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 66) UPI: 42-3-117.1A - Gravity Line, DB: 9598/2270			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 67) UPI: 42-4-55-E - Gravity Line, Plan No. 14830			Easement - Partial Gap		$ -
	MILL LANE DRAINAGE AREA (ML)	(ML 71) UPI: 42-4-62.1 - Gravity Line,			Easement - No		$ -
	MILL LANE DRAINAGE AREA (ML)	(ML 72) UPI: 42-4-62.2 - Gravity Line, DB: 5151/2261 2001-10487			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 73) UPI: 42-4-62 - Gravity Line,			Easement - No		$ -
	MILL LANE DRAINAGE AREA (ML)	(ML 76) UPI: 42-4-83.1-E & 42-4-83-E - Gravity Line,			Easement - No		$ -
	MILL LANE DRAINAGE AREA (ML)	(ML 78) UPI: 42-3-119.1 - Gravity Line, DB: 7743/170			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 79) UPI: 42-3-118-E - Gravity Line, DB: 9750/2155			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 80) UPI: 42-3-115 - Gravity Line, Plan No. 20653			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 81) UPI: 42-3-115.1 - Gravity Line, DB: 3837/1431			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 82) UPI: 42-3-83-E - Gravity Line, DB: 9750/2155			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 83) UPI: 42-3-71-E - Gravity Line, DB: 9750/2155			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 84) UPI: 42-3-76-E - Gravity Line, DB: 9750/2155			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 85) UPI: 42-3-129-E - Gravity Line, DB: 9750/2155			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 86) UPI: 42-3-119 - Gravity Line, DB: 7819/2124			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 87) UPI: 42-3-199 - Gravity Line, DB: 7819/2124			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 88) UPI: 42-4-77 - Gravity Line, DB: 1357/492 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 89) UPI: 42-4-80.1 - Gravity Line, DB: 1357/496 1988—08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 90) UPI: 42-4-80 - Gravity Line, DB: 1357 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 92) UPI: 42-3-227 - Gravity Line, DB: 1357/479 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 93) UPI: 42-3-226.1 - Gravity Line, DB: 1357/4475 1988-08895			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MILL LANE DRAINAGE AREA (ML)	(ML 94) UPI: 42-3-226 - Gravity Line, DB: 1357/467 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 95) UPI: 42-3-223 - Gravity Line, DB: 1357/471 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 96) UPI: 42-3-222 - Gravity Line, DB: 1357/508 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 97) UPI: 42-3-222.1 - Gravity Line, DB: 1357/512 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 98) UPI: 42-3-221 - Gravity Line, DB: 1357/520 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 99) UPI: 42-4-220 - Gravity Line, DB: 1357/516 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 100) UPI: 42-4-218 - Gravity Line, DB: 1357/524 & 531 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 101) UPI: 42-3-217 - Gravity Line, DB: 1357/528 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 102) UPI: 42-3R-5 - Gravity Line, DB: 1678/210 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 103) UPI: 42-3R-2 - Gravity Line, DB: 1678/200 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 104) UPI: 42-3R-16 - Gravity Line, DB: 1357/540 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 105) UPI: 42-3R-6 - Gravity Line, DB: 1357/544 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 106) UPI: 42-3R-7 - Gravity Line, DB: 1357/548 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 107) UPI: 42-3R-8 - Gravity Line, DB: 1357/548 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 108) UPI: 42-3R-9 - Gravity Line, DB: 1357/556 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 109) UPI: 42-3R-10 - Gravity Line & Force Main, DB: 1357/556 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 110) UPI: 42-4-302-E - Gravity Line, DB: 1358/38 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 111) UPI: 42-4-302.1-E - Gravity Line, DB: 1358/42 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 112) UPI: 42-4-300 - Gravity Line, DB: 1358/46 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 113) UPI: 42-4-299 - Gravity Line, DB: 1358/50 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 114) UPI: 42-4-298.1 - Gravity Line, DB: 1357/422 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 115) UPI: 42-4-298 - Gravity Line, DB: 1357/418 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 116) UPI: 42-4-275 - Gravity Line, DB: 1357/426 DB: 1379/271			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 117) UPI: 42-3-239 - Gravity Line, DB: 1357/430 DB: 1357/434			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MILL LANE DRAINAGE AREA (ML)	(ML 118) UPI: 42-3-237.2 - Gravity Line, DB: 1357/438 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 119) UPI: 42-3-237.1 - Gravity Line, DB: 1357/442 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 120) UPI: 42-3-236 - Gravity Line, DB: 1357/418 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 121) UPI: 42-3-234 - Gravity Line, DB: 1357/450 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 122) UPI: 42-3-233.1 - Gravity Line, DB: 1357/458 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 123) UPI: 42-3R-40 - Gravity Line, DB: 1358/62 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 124) UPI: 42-3R-37 - Gravity Line, DB: 1358/58 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 125) UPI: 42-3R-39 - Gravity Line, DB: 1358/66 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 126) UPI: 42-3R-38 - Gravity Line, DB: 1357/462 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 127) UPI: 42-3-232 - Gravity Line, DB: 1358/70 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 128) UPI: 42-3-231 - Gravity Line, DB: 1357/536 1988-08895			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 129) UPI: 42-3-229 - Gravity Line, DB: 1678/195 DB: 1358/74 & 78			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 130) UPI: 42-3M-144 - Gravity Line, DB: 644/72			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 131) UPI: 42-3M-145 - Gravity Line, DB: 644/72			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 132) UPI: 42-3M-146 - Gravity Line, DB: 644/72			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 133) UPI: 42-3M-147 - Gravity Line, DB: 644/72			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 134) UPI: 42-3M-148 - Gravity Line, DB: 644/72			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 135) UPI: 42-3M-149 - Gravity Line, DB: 644/72			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 136) UPI: 42-3M-150 - Gravity Line, DB: 644/72			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 137) UPI: 42-3M-151 - Gravity Line, DB: 644/72			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 138) UPI: 42-3-109.11 - Gravity Line, Plan Nos. 10112- 10115			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 139) UPI: 42-3-297 - Gravity Line, Plan Nos. 10112- 10115			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 140) UPI: 42-3-251 - Gravity Line, Plan Nos. 10112- 10115			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 141) UPI: 42-3-252 - Gravity Line, Plan Nos. 10112- 10115			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MILL LANE DRAINAGE AREA (ML)	(ML 142) UPI: 42-3-245 - Gravity Line, Plan Nos. 10112- 10115			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 143) UPI: 42-3-296 - Gravity Line, Plan Nos. 10112- 10115			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 144) UPI: 42-3-295 - Gravity Line, Plan Nos. 10112- 10115			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 145) UPI: 42-3-281 - Gravity Line, Plan Nos. 10112- 10115			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 146) UPI: 42-3-280 - Gravity Line, Plan Nos. 10112- 10115			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 147) UPI: 42-3-298 - Gravity Line, Plan Nos. 10112- 10115			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 148) UPI: 42-3-298.1 - Gravity Line, DB: 4415/1866			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 150) UPI: 42-3-45.6Q - Gravity Line,			Easement - No		$ -
	MILL LANE DRAINAGE AREA (ML)	(ML 151) UPI: 42-3-334 - Gravity Line, Plan No. 13903			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 152) UPI: 42-3-45.6K - Gravity Line, PB: 31/19			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 153) UPI: 42-3-242.10 - Gravity Line, PB: 37/3			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 155) UPI: 42-4-20.2S - Gravity Line, DB: 1945/343 DB: 1945/353			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 156) UPI: 42-4-20.2Q - Gravity Line, DB: 1945/343 DB: 1945/353			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 157) UPI: 42-4-20.2P - Gravity Line, DB: 1945/343 DB: 1945/353			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 158) UPI: 42-4-4 - Gravity Line,			Easement - No		$ -
	MILL LANE DRAINAGE AREA (ML)	(ML 159) UPI: 42-4-5.2C - Gravity Line, DB: 7246/1583 DB: 7647/431			Easement - Partial Gap		$ -
	MILL LANE DRAINAGE AREA (ML)	(ML 160) UPI: 42-4-5.2D - Gravity Line, DB: 7246/1583 DB: 7647/431			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 161) UPI: 42-4-527 - Gravity Line, DB: 7246/1583 DB: 7647/431			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 162) UPI: 42-4-5.45 - Gravity Line, DB: 7246/1583 DB: 7647/431			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 163) UPI: 42-4-526 - Gravity Line, DB: 7246/1583 DB: 7647/431			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 164) UPI: 42-4-525 - Gravity Line, DB: 7246/1583 DB: 7647/431			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 165) UPI: 42-4-524 - Gravity Line, DB: 7246/1583 DB: 7647/431			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 166) UPI: 42-4-5.2B - Gravity Line, DB: 7246/1583 DB: 7647/431			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 167) UPI: 42-4-6.10 - Gravity Line,			Easement - No		$ -

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MILL LANE DRAINAGE AREA (ML)	(ML 168) UPI: 42-4-6.14 - Gravity Line, DB: 9494/1779			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 169) UPI: 42-4-5.24E - Gravity Line, DB: 3127/31			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 170) UPI: 42-3D-33 - Gravity Line, DB: 10298/1790			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 171) UPI: 42-3D-34 - Gravity Line, DB: 8784/252			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 172) UPI: 42-3D-36 - Gravity Line, Pl: 54/18 & 19			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 173) UPI: 42-3D-38 - Gravity Line, Pl: 54/18 & 19			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 174) UPI: 42-3D-37 - Gravity Line, Pl: 54/18 & 19			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 175) UPI: 42-1R-5 - Gravity Line, Pl: 54/18 & 19			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 176) UPI: 42-3D-30 - Gravity Line, DB: 1754/73			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 177) UPI: 42-3D-31 - Gravity Line, DB: 6306/1321			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 178) UPI: 42-3D-32 - Gravity Line, DB: 8432/684			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 179) UPI: 42-1R-6 - Gravity Line, Pl: 54/18 & 19			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 180) UPI: 42-2-10.2D - Gravity Line, Plan No. 5996 DB: 9405/211			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 182) UPI: 42-4-2.3 - Gravity Line, Plan No. 19563 DB: 8906/1501			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Manor View Circle - Gravity Line & Force Main, DB: H49/68			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Limekiln Drive - Gravity Line, DB: H49/68			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Valley Creek Road - Gravity Line, DB: H49/68			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Mill Creek Lane - Gravity Line, DB: Y58/546			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Knollbrook Circle - Gravity Line, DB: S51/87			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Brett Lane - Gravity Line, DB: H64/127			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Westgate Circle - Gravity Line, DB: H64/131			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Stuart Drive - Gravity Line, DB: H64/131			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Devonshire Lane - Gravity Line, DB: 6482/1996			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Charles Street - Gravity Line, DB: P30/117			ROW - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MILL LANE DRAINAGE AREA (ML)	Markel Road - Gravity Line, DB: 644/66			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Kelmar Road - Gravity Line, DB: 644/66			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Rickmar Lane - Gravity Line, MB: 964/570			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Weightman Drive - Gravity Line, DB: 7784/928			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Morris Lane - Gravity Line, DB: 7784/923			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Craig Lane - Gravity Line, DB: 4748/586			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Kenwood Court - Gravity Line, DB: 4748/586			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Clover Mill Lane - Gravity Line, DB: 3966/279 DB: 4748/586 DB: 6267/1			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Tunbridge Lane - Gravity Line, DB: 4748/586			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Atterbury Drive - Gravity Line, DB: H49/73			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Flintshire Road - Gravity Line, DB: H49/73			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Ashlawn Road - Gravity Line, DB: H49/73			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Ashlawn Circle - Gravity Line, DB: H49/73			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Oak Glen Road - Gravity Line, DB: 1288/316			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Oak Glen Drive - Gravity Line, DB: 1288/316			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Lapp Road - Gravity Line, DB: 1288/316 DB: 7647/431			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	McCoy Court - Gravity Line, DB: 7647/431			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Fetters Mill Drive - Gravity Line, DB: 7647/431			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Dale Lane - Gravity Line, DB: S54/409			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Forge Drive - Gravity Line, DB: S54/409			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Thayer Drive - Gravity Line, DB: 3127/19			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Almy Drive - Gravity Line, DB: 3127/19			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Aston Road - Gravity Line, DB: R53/410			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	James Thomas Road - Gravity Line, DB: R53/410			ROW - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	MILL LANE DRAINAGE AREA (ML)	Spruce Road - Gravity Line, DB: R53/410			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Hayes Road - Gravity Line, DB: R53/418			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Yellow Springs Road - Gravity Line, DB: R53/410			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Phoenixville Road - Gravity Line, DB: 7174/1645 DB: 4748/586 DB: R53/410 DB: R53/418 MB: 964/552			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Conestoga Road - Gravity Line/ Force Main, DB: 7174/1645 MB: 964/552 DB: H49/68			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Swedesford Road - Gravity Line, DB: H64/131 DB: H49/68 MB: 964/560			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Sidley Road - Gravity Line, DB: 7647/431 DB: 7246/1583 DB: 3127/19 DB: 117/407 DB: R53/418			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Flat Road - Gravity Line, DB: 3127/19			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Moores Road - Gravity Line, DB: 7174/1645 DB: 1945/330 DB: 644/62 DB: 440/532 DB: 440/538 DB:			ROW - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	Mill Lane - Gravity Line, DB: 420/337 DB: 117/407 DB: Y58/546 DB: S51/87			ROW - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 2) UPI: 42-3-165 - Gravity Line & Force Main, DB: 9579/478			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 3) UPI: 42-3-149.1 - Gravity Line & Force Main, DB: 1358/17 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 4) UPI: 42-3R-11.1 - Gravity Line & Force Main, DB: 1357/564 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 5) UPI: 42-3R-12 - Gravity Line & Force Main, DB: 1357/568 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 6) UPI: 42-3R-13 - Gravity Line & Force Main, DB: 1357/572 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 7) UPI: 42-3-179 - Gravity Line & Force Main, DB: 1357/576 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 8) UPI: 42-3-180 - Gravity Line & Force Main, DB: 1678/190 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 9) UPI: 42-3Q-19 - Gravity Line & Force Main, DB: 1357/584 1988/08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 10) UPI: 42-3Q-18 - Gravity Line & Force Main, DB: 1357/588 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 11) UPI: 42-3Q-9 - Gravity Line & Force Main, DB: 1357/592 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 12) UPI: 42-3-182 - Gravity Line & Force Main, DB: 1358/1 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 13) UPI: 42-3-181 - Gravity Line & Force Main, DB: 1357/592 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 14) UPI: 42-3-183 - Gravity Line & Force Main, DB: 1358/5 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 15) UPI: 42-3-184 - Gravity Line & Force Main, DB: 1358/9 1988-08895			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	PLANEBROOK DRAINAGE AREA (PB)	(PB 16) UPI: 42-3-185.1 - Gravity Line & Force Main, DB: 1358/13 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 17) UPI: 42-3-185 - Gravity Line & Force Main, DB: 1358/17 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 18) UPI: 42-3-145 - Gravity Line, DB: 1358/126 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 19) UPI: 42-6-10.1 - Gravity Line, DB: 1358/26 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 20) UPI: 42-6-10 - Gravity Line, DB: 1358/30 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 22) UPI: 42-3-228 - Gravity Line, DB: 1358/82 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 23) UPI: 42-6-23.1 - Gravity Line, DB: 1358/86 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 24) UPI: 42-6-23.4 - Gravity Line, DB: 1358/94 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 25) UPI: 42-6-23.4A - Gravity Line, DB: 1358/94 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 26) UPI: 42-6-24.2 - Gravity Line, DB: 1358/54 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 27) UPI: 42-6-21 - Gravity Line, DB: 1358/114 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 28) UPI: 42-6-23 - Gravity Line, DB: 1358/90 DB: 1379/275			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 29) UPI: 42-6-23.3 - Gravity Line, DB: 1358/98 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 30) UPI: 42-6-23.2D - Gravity Line, DB: 1358/102 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 31) UPI: 42-6-23.2 - Gravity Line, DB: 1358/122 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 32) UPI: 42-6-23.2C - Gravity Line, DB: 1358/106 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 33) UPI: 42-6-23.2B - Gravity Line, DB: 1358/110 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 34) UPI: 42-6-23.2A - Gravity Line, DB: 1358/118 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 36) UPI: 42-6-246 - Gravity Line, DB: 5406/689			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 37) UPI: 42-6-222 - Gravity Line, DB: 5406/689			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 38) UPI: 42-6-223 - Gravity Line, DB: 5406/689			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 39) UPI: 42-6-224 - Gravity Line, DB: 5406/689			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 40) UPI: 42-6-225 - Gravity Line, DB: 5406/689			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 41) UPI: 42-6-226 - Gravity Line, DB: 5406/689			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	PLANEBROOK DRAINAGE AREA (PB)	(PB 42) UPI: 42-6-227 - Gravity Line, DB: 5406/689			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 43) UPI: 42-6-228 - Gravity Line, DB: 5406/689			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 44) UPI: 42-6-229 - Gravity Line, DB: 5406/689			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 45) UPI: 42-6-230 - Gravity Line, DB: 5406/689			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 46) UPI: 42-6G-16-E - Gravity Line, DB: Y58/519			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	Whitewoods Lane - Gravity Line, DB: 5406/689			ROW - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	Glenloch Way - Gravity Line, DB: Y58/531			ROW - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	Ravine Road - Gravity Line, DB: Y58/531			ROW - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	Ravine Road Railroad Crossing - Gravity Line,			ROW - No		$ -
	PLANEBROOK DRAINAGE AREA (PB)	King Road - Gravity Line, DB: Y58/531			ROW - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	South Phoenixville Pike - Gravity Line,			ROW - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	Lancaster Avenue - Gravity Line,			ROW - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	Planebrook Road / Phoenixville Pike - Force Main,			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 2) UPI: 42-4-87.1 - Gravity Line, MB: 983/341 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 3) UPI: 42-4N-22 - Gravity Line, MB: 983/405 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 4) UPI: 42-4N-21 - Gravity Line, MB: 983/357 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 5) UPI: 42-4N-20.1 - Gravity Line, MB: 983/361 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 6) UPI: 42-4N-39 - Gravity Line, MB: 983/365 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 7) UPI: 42-4N-40 - Gravity Line, MB: 983/369 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 8) UPI: 42-4N-41 - Gravity Line, MB: 983/345 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 9) UPI: 42-4N-42 - Gravity Line, MB: 983/409 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 10) UPI: 42-4N-43 - Gravity Line, MB: 983/413 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 11) UPI: 42-4N-44 - Gravity Line, MB: 1357/504 1987-08895			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 12) UPI: 42-4-312 - Gravity Line, MB: 983/373 1987-08872			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	WESTGATE DRAINAGE AREA (WG)	(WG 13) UPI: 42-4-312.1 - Gravity Line, MB: 983/377 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 14) UPI: 42-4-311 - Gravity Line, MB: 983/381 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 15) UPI: 42-4-310.1 - Gravity Line, MB: 983/417 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 16) UPI: 42-4-310 - Gravity Line, MB: 983/385 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 17) UPI: 42-4-310.2 - Gravity Line, MB: 983/421 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 18) UPI: 42-4-309 - Gravity Line, MB: 983/421 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 19) UPI: 42-4-309.1 - Gravity Line, MB: 983/425 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 20) UPI: 42-4-308.2 - Gravity Line, MB: 983/429 Plan No. 16523			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 21) UPI: 42-4-308.1 - Gravity Line, MB: 983/369 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 22) UPI: 42-4-308 - Gravity Line, MB: 983/393 DB: 3608/825			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 23) UPI: 42-4-307 - Gravity Line, MB: 983/397 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 24) UPI: 42-4-306 - Gravity Line, MB: 983/433 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 25) UPI: 42-4-304.2 - Gravity Line, MB: 983/437, 441 445 & 449			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 26) UPI: 42-4-304-E - Gravity Line, MB: 983/453 1987-08872			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 27) UPI: 42-4-303 - Gravity Line, DB: 1358/34 Plan No. 19774			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 28) UPI: 42-4-319-E - Gravity Line,			Easement - No		$ -
	WESTGATE DRAINAGE AREA (WG)	(WG 29) UPI: 42-4-296.16 - Gravity Line, Plan No. 15362			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 30) UPI: 42-4-296.15 - Gravity Line, Plan No. 15362			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 31) UPI: 42-4-296.14 - Gravity Line, Plan No. 18412			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 32) UPI: 42-4-296.7 - Gravity Line, DB: 5792/93			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 34) UPI: 42-4-297.2 - Gravity Line, Plan No. 18267			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 35) UPI: 42-4-297.3 - Gravity Line, Plan No. 20467			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 37) UPI: 42-7B-134 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 38) UPI: 42-7B-135 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	WESTGATE DRAINAGE AREA (WG)	(WG 39) UPI: 42-4P-15 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 40) UPI: 42-4P-16 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 41) UPI: 42-4P-17 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 42) UPI: 42-4P-18 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 43) UPI: 42-4P-19 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 44) UPI: 42-4P-20 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 45) UPI: 42-4P-29 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 46) UPI: 42-4P-30 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 47) UPI: 42-4P-31 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 48) UPI: 42-4P-32 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 49) UPI: 42-7B-145 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 50) UPI: 42-7B-144 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 51) UPI: 42-7B-143 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 52) UPI: 42-7B-142 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 53) UPI: 42-4P-37 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 54) UPI: 42-4P-36 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 55) UPI: 42-7B-151 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 56) UPI: 42-7B-150 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 57) UPI: 42-7B-149 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 58) UPI: 42-7B-148 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 59) UPI: 42-7B-147 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 60) UPI: 42-7B-146 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 61) UPI: 42-7B-137 - Gravity Line , MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 62) UPI: 42-4P-27 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	WESTGATE DRAINAGE AREA (WG)	(WG 63) UPI: 42-4P-24 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 64) UPI: 42-4P-23 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 65) UPI: 42-4P-22 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 66) UPI: 42-4P-21 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 67) UPI: 42-4P-33 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 68) UPI: 42-4P-26 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 69) UPI: 42-4P-25 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 70) UPI: 42-7B-136 - Gravity Line, MB: 575/140			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 71) UPI: 42-7B-100.2 - Gravity Line, DB: 5648/717			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 72) UPI: 42-7B-100 - Gravity Line, DB: 5648/711			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 73) UPI: 42-7A-41 - Gravity Line, DB: 5648/564			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 74) UPI: 42-7A-39 - Gravity Line, DB: 5686/926			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 75) UPI: 42-7A-38 - Gravity Line, DB: 5648/558			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 76) UPI: 42-7A-37 - Gravity Line, DB: 5676/1121			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 77) UPI: 42-7A-36 - Gravity Line, DB: 5676/1145			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 78) UPI: 42-7A-35 - Gravity Line, DB: 5676/1139			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 79) UPI: 42-7A-34 - Gravity Line, DB: 5676/1096			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 80) UPI: 42-7A-33 - Gravity Line, DB: 5676/1133			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 81) UPI: 42-7A-32 - Gravity Line, DB: 5676/1151			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 82) UPI: 42-7A-31 - Gravity Line, DB: 5676/1103			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 83) UPI: 42-7A-27 - Gravity Line, DB: 5542/1669 2003-00682			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 84) UPI: 42-7A-25.3 - Gravity Line, DB: 3802/1172			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 85) UPI: 42-7A-11.9 - Gravity Line, DB: 4599/2192			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 86) UPI: 42-7A-11.10 - Gravity Line, DB: 4599/2192			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	WESTGATE DRAINAGE AREA (WG)	(WG 87) UPI: 42-7A-92.5 - Gravity Line, DB: 4599/2214			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 88) UPI: 42-7A-92.6 - Gravity Line, DB: 4599/2214			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 89) UPI: 42-7A-92.12 - Gravity Line, DB: 4599/2214			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 90) UPI: 42-7A-92.10 - Gravity Line, DB: 4599/2214			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 91) UPI: 42-7A-68 - Gravity Line, DB: 5648/577			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 92) UPI: 42-7A-69 - Gravity Line, DB: 5686/942			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 93) UPI: 42-7A-92.15 - Gravity Line, DB: 4599/2214			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 94) UPI: 42-7A-74 - Gravity Line, DB: 5648/583			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 95) UPI: 42-7A-73 - Gravity Line, DB: 5648/570			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 96) UPI: 42-7A-92.14 - Gravity Line, DB: 4599/2214			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 97) UPI: 42-7A-88 - Gravity Line, DB: 5648/699			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 99) UPI: 42-7A-55 - Gravity Line, DB: 5648/693			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 100) UPI: 42-7A-65 - Gravity Line, DB: 5676/1115			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 101) UPI: 42-7A-84 - Gravity Line, DB: 5676/1127			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 102) UPI: 42-7A-83 - Gravity Line, DB: 5648/730			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 103) UPI: 42-7A-82 - Gravity Line, DB: 5676/1109			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 104) UPI: 42-7A-81 - Gravity Line, DB: 5648/723			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 105) UPI: 42-7A-80 - Gravity Line, DB: 5542/1657 2003-00679			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 106) UPI: 42-7A-80.1 - Gravity Line, DB: 5542/1657 2003-00679			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 107) UPI: 42-7A-79 - Gravity Line, DB: 5686/912			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 108) UPI: 42-7-40 - Gravity Line, DB: 5542/1624 2003-00680			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 110) UPI: 42-7-43 - Gravity Line, DB: 5686/932			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 111) UPI: 42-7-44 - Gravity Line, DB: 5686/936			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 112) UPI: 42-7-48 - Gravity Line, DB: 5648/595			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	WESTGATE DRAINAGE AREA (WG)	(WG 113) UPI: 42-7A-60 - Gravity Line, DB: 5542/2126 2003-02145			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 114) UPI: 42-7A-59 - Gravity Line, DB: 5648/589			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 115) UPI: 42-7A-58 - Gravity Line, DB: 5542/1691 2003-00683			Easement - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Westgate Village Drive - Gravity Line & Force Main, DB: 4804/2104			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Buttonwood Avenue - Gravity Line, DB: R24/293			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Beechwood Avenue - Gravity Line, DB: R24/293			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Ridge Road - Gravity Line, DB: S60/29			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Ridgewood Drive - Gravity Line, DB: S60/29			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Sleighride Drive - Gravity Line, DB: S60/29			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Summit Road - Gravity Line, DB: S60/29 MB: 114/645 DB: 2603/357 DB: S36/49			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Carol Lane - Gravity Line, MB: 114/645			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Diane Drive - Gravity Line, MB: 114/645			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Dawn Way - Gravity Line, DB: 3802/1172			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Judith Lynn Way - Gravity Line, DB: 4599/2180			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Carla Terrace - Gravity Line, DB: 4599/2180			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Rogers Way - Gravity Line, DB: 4599/2224			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Barbara Drive - Gravity Line, DB: O34/259			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	Woodcrest Lane - Gravity Line, DB: T33/81			ROW - Yes		$ 1.00
	WILBURDALE ROAD DRAINAGE AREA (WB)	(WB 1) UPI: 42-4-15.1 - Gravity Line, MB: 634/200			Easement - Yes		$ 1.00

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	WILBURDALE ROAD DRAINAGE AREA (WB)	(WB 3) UPI: 42-4-15.21 - Gravity Line, MB: 634/200			Easement - Yes		$ 1.00
	WILBURDALE ROAD DRAINAGE AREA (WB)	(WB 4) UPI: 42-4-15.14 - Gravity Line, MB: 634/200			Easement - Yes		$ 1.00
	WILBURDALE ROAD DRAINAGE AREA (WB)	Flat Road - Gravity Line & Force Main, DB: U28/28			ROW - Yes		$ 1.00
	WILBURDALE ROAD DRAINAGE AREA (WB)	Great Valley Parkway - Gravity Line & Force Main, DB: D62/327 MB: 634/200			ROW - Yes		$ 1.00
							$ 668.00

Note 1: Each easement is designated as either Yes or No.
"Yes" easement has been confirmed with an instrument recorded in the Office of the Recorder of Deeds in and for Chester County.
"No" easement will have to be acquired by the Township.

353.30	LAND AND LAND RIGHTS - PUMPING						
	DEER RUN DRAINAGE AREA (DR)	(DR 1) UPI: 4-4F-13-E - Pump Station, DB: 8914/1465			Easement - Yes		$ 1.00
	HILLBROOK CIRCLE DRAINAGE AREA (HB)	(HB 8) UPI: 42-3-107.3N - Gravity, FM & Pump Station, DB: 6262/2370			Easement - Yes		$ 1.00
	KING ROAD DRAINAGE AREA (KR)	(KR 1) UPI: 53-2-18 & 53-2-127 - Pump Station, DB: 6033/577			Easement - Yes		$ 1.00
	LAPP ROAD DRAINAGE AREA (LR)	(LR 9) UPI: 42-4-26.1 - Gravity, FM & Pump Station, DB: 6773/273 MB: 173/277			Easement - Yes		$ 1.00
	LEE BOULEVARD DRAINAGE AREA (LB)	(LB 2) UPI: 42-2-10.4 - Gravity, FM & Pump Station, Plan No. 5369			Easement - Yes		$ 1.00
	MALVERN HUNT DRAINAGE AREA (MAL)	(MAL 1) UPI: 42-3-370 - Gravity, FM & Pump Station, DB: 7234/1961 Plan No. 16381			Easement - Yes		$ 1.00
	MEADOW VIEW DRAINAGE AREA (MV)	(MV 5) UPI: 42-4-71.2A - Pump Station & Force Main, Plan No. 2571			Easement - Yes		$ 1.00
	MILL LANE DRAINAGE AREA (ML)	(ML 1) UPI: 42-4-2.4-E - Gravity Line, FM & Pump Station, DB: 3127/39			Township Owned Property		$ 1.00
		(ML 91) UPI: 42-4-75.1 - Gravity Line & Pump Station, DB: 1357/483 & 488 1988-08895			Easement - Yes		$ 1.00
	PLANEBROOK DRAINAGE AREA (PB)	(PB 1) UPI: 42-3-153.3 - Gravity, FM & Pump Station, DB: 9950/1608 DB: 9830/1917			Easement - Yes		$ 1.00
		Frame Avenue - Gravity Line, FM & Pump Station , DB: P40/238			ROW - Yes		$ 1.00
	WESTGATE DRAINAGE AREA (WG)	(WG 1) UPI: 42-4-87.2 - Gravity, FM & Pump Station, MB: 983/353 1987-08872	(blank)	(blank)	Easement - Yes		$ 1.00
	WILBURDALE ROAD DRAINAGE AREA (WB)	(WB 2) UPI: 42-4-15.9 - Gravity, FM & Pump Station, MB: 634/200	(blank)	(blank)	Easement - Yes		$ 1.00
							$ 13.00

Note 1: Each easement is designated as either Yes or No.
"Yes" easement has been confirmed with an instrument recorded in the Office of the Recorder of Deeds in and for Chester County.
"No" easement will have to be acquired by the Township.

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
354.2	STRUCTURES AND IMPROVEMENTS - COLLECTION PLANT						
		Sewer - Capactiy Rights	2017	East Whiteland Township Fixed Asset Detail Tie Out as of December 31, 2019	Capacity Rights outside of East Whiteland Township		$ 2,168,888.00
		VFSA Capacity Rights	2013	East Whiteland Township Fixed Asset Detail Tie Out as of December 31, 2019	Capacity Rights at Valley Forge Treatment Plant		$ 8,916,353.50
	TOTAL STRUCTURES AND IMPROVEMENTS - COLLECTION PLANT						**$ 11,085,241.50**
354.30	STRUCTURES AND IMPROVEMENTS - PUMPING						
	(P.S. 1) Deer Run	(P.S. 1) Deer Run - Initial facility cost including pump station, building, generator, fencing, paving, etc.	1976	Exhibit No. 3, Appendix D			$ 78,670.00
	(P.S. 1) Deer Run	(P.S. 1) Deer Run - Generator	2018	Steele Spreadsheet			$ 51,550.00
	(P.S. 11) Hillbrook Circle	(P.S. 11) Hillbrook Circle - Initial facility cost including pump station, building, generator, fencing, paving, etc.	2000	Township Records			$ 464,526.14
	(P.S. 12) King Road	(P.S. 12) King Road - Initial facility cost including pump station, building, generator, fencing, paving, etc.	2004	Exhibit No. 3, Appendix D			$ 233,129.00
	(P.S. 13) Malvern Hunt	(P.S. 13) Malvern Hunt - Initial facility cost including pump station, building, generator, fencing, paving, etc.	2000	Escrow			$ 374,100.00
	(P.S. 14) Planebrook Road	(P.S. 14) Planebrook Road - Initial facility cost including pump station, building, generator, fencing, paving, etc.	2018	Escrow			$ 353,800.00
	(P.S. 14) Planebrook Road	(P.S. 14) Planebrook Road - Electrical	2018	Escrow			$ 79,730.00
	(P.S. 2) Mill Lane	(P.S. 2) Mill Lane - Reconstruction	2014	Exhibit No. 3, Appendix D, Township Records			$ 3,001,023.00
	(P.S. 2) Mill Lane	(P.S. 2) Mill Lane - Original Building (retained after reconstruction)	1976	Exhibit No. 3, Appendix D			$ 40,000.00
	(P.S. 3) Wilburdale	(P.S. 3) Wilburdale - Reconstruction, general	2017	Escrow			$ 469,600.00
	(P.S. 3) Wilburdale	(P.S. 3) Wilburdale - Reconstrcution, electrical	2017	Escrow			$ 95,500.00
	(P.S. 4) Lee Boulevard	(P.S. 4) Lee Boulevard - Reconstruction	2007	Township Records			$ 556,117.00
		(P.S. 4) Lee Boulevard - Pump Upgrades	2002	Estimate			$ 49,664.45
	(P.S. 5) Meadowview	(P.S. 5) Meadowview - Initial facility cost including pump station, building, generator, fencing, paving, etc.	1980	Exhibit No. 3, Appendix D			$ 106,067.00
	(P.S. 6) Flat Road	(P.S. 6) Flat Road - Reconstruction	2019	Bid Tab & estimate for Township contribution			$ 352,000.00
	(P.S. 7) Lapp Road	(P.S. 7) Lapp Road - Initial facility cost including pump station, building, generator, fencing, paving, etc.	1987	Exhibit No. 3, Appendix D			$ 179,265.00
	(P.S. 7) Lapp Road	(P.S. 7) Lapp Road - Upgrades: generator, pump control panel and transfer switch	2006	Estimate			$ 131,119.57

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
	(P.S. 8) Westgate	(P.S. 8) Westgate - Initial facility cost including pump station, building, generator, fencing, paving, etc.	1988	Exhibit No. 3, Appendix D, Township Records			$ 78,824.35
	(P.S. 8) Westgate	(P.S. 8) Westgate - Upgrades: generator, pump control panel and transfer switch	2001	Exhibit No. 3, Appendix D, Township Records			$ 89,972.00
		50KW MMD POWER PRO PORTABLE GENERATOR	2007	Township Records			$ 23,866.00
		SEWER JET (DIESEL) - TRAILER MOUNTED	2009	Township Records			$ 53,907.50
		Capacity Rights (Wilson Road Pump Station)	2014	East Whiteland Township Fixed Asset Detail Tie Out as of December 31, 2019	Capacity Rights within Wilson Road Pump Station system		$ 1,142,844.37
	TOTAL STRUCTURES AND IMPROVEMENTS - PUMPING						**$ 8,005,275.38**
360.21	COLLECTION SEWERS - FORCE - MAINS						
	(P.S. 1) Deer Run	(P.S. 1) Deer Run FM - 4" ACP	1976	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		830	$ 31,269.40
	(P.S. 11) Hillbrook Circle	(P.S. 11) Hillbrook Circle FM - 4" PVC	2000	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		785	$ 85,964.86
	(P.S. 12) King Road	(P.S. 12) King Road FM - 4" PVC	2004	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		2,400	$ 286,021.50
	(P.S. 13) Malvern Hunt	(P.S. 13) Malvern Hunt FM - 6" DIP	2000	Escrow		2,860	$ 279,122.94
	(P.S. 14) Planebrook	(P.S. 14) Planebrook FM - 8" PVC	2017	Township provided		2,545	$ 443,454.75
	(P.S. 2) Mill Lane	(P.S. 2) Mill Lane FM - 14" DIP	1976	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		3,400	$ 193,322.11
	(P.S. 3) Wilburdale Rd	(P.S. 3) Wilburdale Rd FM - 10" PVC Replacement	2016	Estimate		1,935	$ 89,428.47
	(P.S. 4) Lee Blvd	(P.S. 4) Lee Blvd FM - 8" DIP	1987	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		3,310	$ 276,127.99
	(P.S. 5) Meadow View	(P.S. 5) Meadow View FM - 4" ACP	1980	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		1,245	$ 63,237.44
	(P.S. 6) Flat Rd	(P.S. 6) Flat Rd FM - 6" ACP	1979	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		1,655	$ 77,969.12
	(P.S. 7) Lapp Rd	(P.S. 7) Lapp Rd FM - 6" PVC	1987	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		3,715	$ 340,443.41
	(P.S. 8) Westgate	(P.S. 8) Westgate FM - 8" PVC	1988	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		1,620	$ 137,992.57
	TOTAL COLLECTION SEWERS - FORCE - MAINS					**26,300**	**$ 2,304,354.55**
361.21	COLLECTION SEWERS - GRAVITY - MAINS						
		18" ACP	1975	Quantities from GIS, unit pricing from estimate		1,842	$ 58,356.08
		12" ACP	1975	Quantities from GIS, unit pricing from estimate		2,830	$ 68,677.29
		12" ACP	1978	Quantities from GIS, unit pricing from estimate		2,027	$ 61,740.49
		10" ACP	1975	Quantities from GIS, unit pricing from estimate		4,486	$ 75,582.08
		10" ACP	1977	Quantities from GIS, unit pricing from estimate		2,296	$ 45,057.04
		10" ACP	2012	Quantities from GIS, unit pricing from estimate		109	$ 7,711.37

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
		36" ACP	1967	Quantities from GIS, unit pricing from estimate		157	$ 3,625.87
		27" ACP	1967	Quantities from GIS, unit pricing from estimate		3,833	$ 67,279.78
		24" ACP	1967	Quantities from GIS, unit pricing from estimate		243	$ 3,557.15
		24" ACP	1975	Quantities from GIS, unit pricing from estimate		632	$ 19,081.73
		10" PVC	1991	Quantities from GIS, unit pricing from estimate		1,427	$ 52,555.09
		10" PVC	1992	Quantities from GIS, unit pricing from estimate		1,054	$ 40,012.42
		10" PVC	1993	Quantities from GIS, unit pricing from estimate		183	$ 7,273.99
		10" PVC	2007	Quantities from GIS, unit pricing from estimate		8,646	$ 524,646.93
		10" PVC	2019	Quantities from GIS, unit pricing from estimate		492	$ 42,281.39
		10" PVC	2020	Quantities from GIS, unit pricing from estimate		1,275	$ 111,336.08
		8" ACP	1951	Quantities from GIS, unit pricing from estimate		719	$ 2,995.29
		8" ACP	1954	Quantities from GIS, unit pricing from estimate		2,913	$ 14,038.43
		8" ACP	1967	Quantities from GIS, unit pricing from estimate		3,298	$ 27,177.06
		8" ACP	1970	Quantities from GIS, unit pricing from estimate		5,901	$ 62,533.31
		8" ACP	1971	Quantities from GIS, unit pricing from estimate		2,094	$ 25,402.60
		8" ACP	1972	Quantities from GIS, unit pricing from estimate		1,725	$ 23,205.13
		8" ACP	1973	Quantities from GIS, unit pricing from estimate		6,653	$ 96,745.87
		8" ACP	1974	Quantities from GIS, unit pricing from estimate		6,831	$ 105,874.72
		8" ACP	1975	Quantities from GIS, unit pricing from estimate		49,832	$ 845,813.84
		8" ACP	1977	Quantities from GIS, unit pricing from estimate		7,370	$ 145,673.10
		8" ACP	1978	Quantities from GIS, unit pricing from estimate		16,989	$ 361,879.62
		8" ACP	1979	Quantities from GIS, unit pricing from estimate		4,942	$ 113,876.97
		8" ACP	1981	Quantities from GIS, unit pricing from estimate		7,549	$ 204,755.08
		8" ACP	2012	Quantities from GIS, unit pricing from estimate		430	$ 30,744.03
		8" PVC	1970	Quantities from GIS, unit pricing from estimate		346	$ 3,668.20
		8" PVC	1983	Quantities from GIS, unit pricing from estimate		1,492	$ 46,541.18
		8" PVC	1984	Quantities from GIS, unit pricing from estimate		3,842	$ 122,229.73

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
		8" PVC	1985	Quantities from GIS, unit pricing from estimate		794	$ 25,549.19
		8" PVC	1987	Quantities from GIS, unit pricing from estimate		13,171	$ 445,308.18
		8" PVC	1988	Quantities from GIS, unit pricing from estimate		16,918	$ 586,647.87
		8" PVC	1990	Quantities from GIS, unit pricing from estimate		8,876	$ 322,292.20
		8" PVC	1991	Quantities from GIS, unit pricing from estimate		3,676	$ 136,365.76
		8" PVC	1992	Quantities from GIS, unit pricing from estimate		1,919	$ 73,418.31
		8" PVC	1993	Quantities from GIS, unit pricing from estimate		2,966	$ 118,574.34
		8" PVC	1994	Quantities from GIS, unit pricing from estimate		1,176	$ 48,812.47
		8" PVC	1996	Quantities from GIS, unit pricing from estimate		409	$ 17,626.35
		8" PVC	1997	Quantities from GIS, unit pricing from estimate		4,377	$ 195,693.34
		8" PVC	1998	Quantities from GIS, unit pricing from estimate		3,549	$ 161,226.12
		8" PVC	1999	Quantities from GIS, unit pricing from estimate		4,126	$ 191,811.88
		8" PVC	2000	Quantities from GIS, unit pricing from estimate		17,626	$ 841,402.41
		8" PVC	2001	Quantities from GIS, unit pricing from estimate		697	$ 33,916.65
		8" PVC	2002	Quantities from GIS, unit pricing from estimate		11,437	$ 573,796.70
		8" PVC	2003	Quantities from GIS, unit pricing from estimate		2,539	$ 130,439.13
		8" PVC	2004	Quantities from GIS, unit pricing from estimate		2,760	$ 150,691.88
		8" PVC	2005	Quantities from GIS, unit pricing from estimate		18,989	$ 1,084,944.19
		8" PVC	2006	Quantities from GIS, unit pricing from estimate		423	$ 25,135.71
		8" PVC	2007	Quantities from GIS, unit pricing from estimate		784	$ 47,935.30
		8" PVC	2011	Quantities from GIS, unit pricing from estimate		1,899	$ 132,177.28
		8" PVC	2012	Quantities from GIS, unit pricing from estimate		2,913	$ 208,075.48
		8" PVC	2013	Quantities from GIS, unit pricing from estimate		380	$ 27,836.86
		8" PVC	2014	Quantities from GIS, unit pricing from estimate		111	$ 8,385.04
		8" PVC	2017	Quantities from GIS, unit pricing from estimate		3,251	$ 267,817.00
		8" PVC	2018	Quantities from GIS, unit pricing from estimate		1,398	$ 118,706.70
		8" DIP	1954	Quantities from GIS, unit pricing from estimate		862	$ 4,154.49

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
		8" DIP	1975	Quantities from GIS, unit pricing from estimate		274	$ 4,654.72
		8" CIP	1975	Quantities from GIS, unit pricing from estimate		123	$ 2,079.98
		20" ACP	1975	Quantities from GIS, unit pricing from estimate		4,544	$ 129,196.92
		16" ACP	1975	Quantities from GIS, unit pricing from estimate		349	$ 9,050.37
		12" PVC	1970	Quantities from GIS, unit pricing from estimate		1,503	$ 22,773.69
		12" PVC	2012	Quantities from GIS, unit pricing from estimate		81	$ 8,301.62
		12" PVC	2016	Quantities from GIS, unit pricing from estimate		1,348	$ 152,918.81
		15" PVC	2013	Quantities from GIS, unit pricing from estimate		916	$ 81,957.99
		15" PVC	2017	Quantities from GIS, unit pricing from estimate		2,253	$ 226,562.48
		18" PVC	1988	Quantities from GIS, unit pricing from estimate		1,496	$ 96,804.77
		18" PVC	2013	Quantities from GIS, unit pricing from estimate		2,835	$ 387,731.42
		18" PVC	2014	Quantities from GIS, unit pricing from estimate		139	$ 19,571.48
		18" PVC	2017	Quantities from GIS, unit pricing from estimate		621	$ 95,579.17
		10" DI	2020	Quantities from GIS, unit pricing from estimate		93	$ 8,118.65
		8" CSP	1978	Quantities from GIS, unit pricing from estimate		1,049	$ 22,339.74
		8" CSP	1983	Quantities from GIS, unit pricing from estimate		2,490	$ 77,680.40
		20" PVC	2014	Quantities from GIS, unit pricing from estimate		98	$ 12,406.81
		21" PVC	2014	Quantities from GIS, unit pricing from estimate		74	$ 9,339.15
	TOTAL COLLECTION SEWERS - GRAVITY - MAINS					**302,772**	**$ 10,767,737.96**
361.23	COLLECTION SEWERS - GRAVITY - MANHOLES						
		Manholes	1951	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		6	$ 2,077.71
		Manholes	1954	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		22	$ 8,810.81
		Manholes	1967	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		35	$ 23,972.08
		Manholes	1970	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		28	$ 24,659.55
		Manholes	1971	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		9	$ 9,074.19
		Manholes	1972	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		5	$ 5,589.66

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
		Manholes	1973	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		40	$ 48,339.55
		Manholes	1974	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		30	$ 38,646.13
		Manholes	1975	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		297	$ 418,962.34
		Manholes	1977	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		50	$ 82,138.97
		Manholes	1978	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		83	$ 146,936.93
		Manholes	1979	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		24	$ 45,962.11
		Manholes	1980	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		2	$ 4,128.63
		Manholes	1981	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		36	$ 81,156.88
		Manholes	1983	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		17	$ 44,080.82
		Manholes	1984	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		24	$ 63,456.18
		Manholes	1985	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		5	$ 13,376.28
		Manholes	1987	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		67	$ 188,257.68
		Manholes	1988	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		89	$ 256,487.24
		Manholes	1990	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		40	$ 120,708.58
		Manholes	1991	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		30	$ 92,502.00
		Manholes	1992	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		16	$ 50,864.94
		Manholes	1993	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		19	$ 63,128.39
		Manholes	1994	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		7	$ 24,141.72
		Manholes	1996	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		2	$ 7,168.03
		Manholes	1997	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		23	$ 85,453.87
		Manholes	1998	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		30	$ 113,259.95
		Manholes	1999	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		20	$ 77,279.51
		Manholes	2000	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		111	$ 440,368.85
		Manholes	2001	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		4	$ 16,180.36
		Manholes	2002	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		61	$ 254,336.19
		Manholes	2003	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		13	$ 55,496.10
		Manholes	2004	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		15	$ 68,061.20

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
		Manholes	2005	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		98	$ 465,353.00
		Manholes	2006	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		4	$ 19,772.02
		Manholes	2007	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		36	$ 182,884.21
		Manholes	2011	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		9	$ 52,057.49
		Manholes	2012	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		17	$ 100,911.05
		Manholes	2013	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		14	$ 85,237.04
		Manholes	2014	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		4	$ 25,014.12
		Manholes	2016	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		5	$ 32,964.00
		Manholes	2017	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		36	$ 246,501.10
		Manholes	2018	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		11	$ 77,599.65
		Manholes	2019	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		2	$ 14,388.35
		Manholes	2020	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		8	$ 58,497.23
		Manholes	2021	Quantities from GIS, unit pricing from Exhibit No. 4, Appendix D		2	$ 14,624.31
	TOTAL COLLECTION SEWERS - GRAVITY - MANHOLES					**1,506**	**$ 4,350,867.01**
363.20	SERVICES TO CUSTOMERS						
		4" PVC	1982	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		3,190	$ 102,469.43
		4" PVC	1985	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		1,485	$ 52,315.53
		4" PVC	1986	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		1,320	$ 47,611.22
		4" PVC	1987	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		996	$ 36,853.27
		4" PVC	1988	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		2,952	$ 112,029.11
		4" PVC	1989	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		5,578	$ 216,183.43
		4" PVC	1993	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		1,629	$ 71,273.98
		4" PVC	1995	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		628	$ 28,853.50
		4" PVC	1996	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		227	$ 10,713.57
		4" PVC	1997	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		936	$ 45,795.05
		4" PVC	1998	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		2,142	$ 106,491.11
		4" PVC	1999	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		1,592	$ 81,005.82

ACCOUNT	LOCATION	ASSET	YEAR	SOURCE	COMMENTS	QUANTITY	ORIGINAL COST
		4" PVC	2000	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		622	$ 32,495.47
		4" PVC	2001	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		6,397	$ 340,755.79
		4" PVC	2002	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		2,486	$ 136,495.47
		4" PVC	2003	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		464	$ 26,084.10
		4" PVC	2004	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		6,820	$ 407,503.61
		4" PVC	2012	Number of customers since 2004. Average year and estimated length of laterals used. Estimated Unit Price used.		54,800	$ 4,283,602.02
		4" ACP	1970	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		6,016	$ 69,770.80
		4" ACP	1976	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		13,260	$ 267,367.04
		4" ACP	1978	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		2,749	$ 64,086.47
		4" ACP	1980	Quantities from Exhibit No. 5, Appendix D, unit pricing from estimate		2,951	$ 80,220.26
	TOTAL SERVICES TO CUSTOMERS					**119,240**	**$ 6,619,976.03**
365.20	FLOW MEASURING INSTALLATIONS						
	Woodview Apt., Matthew Road, and Erin Glen	Meter Pits	1976	Exhibit No. 3, Appendix D			$ 78,670.00
	TOTAL FLOW MEASURING INSTALLATIONS						**$ 78,670.00**
390.70	COMPUTER AND SOFTWARE						
		PIPE TECH SOFTWARE AND DURABOOK LAPTOP	2008	Township Records			$ 21,550.00
	TOTAL COMPUTER AND SOFTWARE						**$ 21,550.00**
391.70	TRANSPORTATION EQUIPMENT						
		2001 FORD E350 TRUCK	2001	Township Records			$ 39,952.00
		2003 GMC PICKUP TRUCK	2003	Township Records			$ 25,808.00
		2018 Carmate 20' Custom Cargo Trailer	2018	Township Records			$ 7,264.50
		2010 FORD F550 TRUCK	2010	Township Records			$ 62,722.85
		2011 GMC PICKUP TRUCK	2011	Township Records			$ 23,738.01
		2011 GMC PICKUP TRUCK	2011	Township Records			$ 20,470.45
		2019 Ford F-150 Unit	2019	Township Records			$ 33,000.00
	TOTAL TRANSPORTATION EQUIPMENT						**$ 212,955.81**
	SYSTEM TOTAL						**$ 43,447,309.24**

APPENDICES

APPENDIX A

SYSTEM MAPS

- **A1 – East Whiteland Township Sanitary Sewer Collection System**

Sanitary Sewer Collection System
East Whiteland Township
Chester County, PA

Pump Stations

1. Deer Run
2. Mill Ln
3. Wilburdale Rd
4. Lee Blvd
5. Meadow View
6. Flat Rd
7. Lapp Rd
8. Westgate
9. Planebrook Road
10. Hillbrook Circle
11. King Rd
12. Malvern Hunt

Meters

I. Old Lincoln Hwy
II. Warren Ave
III. Lee Blvd
IV. Church Rd
V. Matthews Rd
VI. Unisys
VII. Northridge/Miner Hill
VIII. Erin Glen
IX. Woodview Apt
X. Charlestown Oaks
XI. Charlestown Meadows

LEGEND

- Parcel Boundaries
- Subdivisions
- Municipal Boundaries
- Lakes & Ponds
- Streams
- Manholes
- Meters
- Pump Stations
- FMs
- Private Gravity Sewer

Gravity Sewer Pipe

SIZE

- 8" Gravity Sewer
- 10" Gravity Sewer
- 12" Gravity Sewer
- 15" Gravity Sewer
- 16" Gravity Sewer
- 18" Gravity Sewer
- 20" Gravity Sewer
- 21" Gravity Sewer
- 24" Gravity Sewer
- 27" Gravity Sewer
- 36" Gravity Sewer

N W E S

0 600 1,200
Feet

1 inch = 600 feet

Revision Date: 3/18/2021

MAP NOTES:

Mapping information was derived from various planning documents including Schoor DePalma's Sanitary Sewer Meter Location Plan, Kohli & Associates Township plan, Roy F. Weston's Master Sanitary Sewer System Plan, Chester County Recorder of Deeds Plans, and township as-built plans received by ARRO. The mapping is incomplete and will be improved as as-built and other plan information is updated into the GIS. This GIS database will provide a framework for modeling the collection system to analyze capacity issues and make recommended improvements to mitigate capacity deficiencies.

Data Sources: East Whiteland Township, Schoor DePalma, Kohli & Associates, Roy F. Weston, Chester County Recorder of Deeds and ARRO.

Charlestown Elementary School

Devault Foods

Charles Meadsows PS

XI. Charlestown Meadows Meter

Charlestown Meadows

Charlestown Oaks

X. Charlestown Oaks Meter

Willinghouse Preserve

Hillbrook Rd PS

Malvern Hunt PS

Pond 1

Pond 2

Planebrook PS

Mill Lane PS

Meadow View PS

Deer Run PS

Westgate PS

Kings Rd PS

Lee Boulevard PS

III. Lee Blvd Meter

Wilburdale Rd PS

Flat Rd PS

Lapp Road PS

IV. Church Rd Meter
(Tredyffrin Township eliminated meter on 8-3-13 due to additional gravity sewer extension.)

VI. Unisys Meter

V. Matthews Rd Meter

VII. Northridge/Miner Hill Meter

IX. Woodview Apt Meter

VIII. Erin Glen Meter

II. Warren Ave Meter

I. Old Lincoln Hwy Meter

Immaculata University

U:\Accounts\EWTP\EWTP\X17000 - Sale of System\PROJ RESOURCES\Assessment Report\DOCUMENTS\Asset List_GIS\EWTPX17000 - Service Area Map.mxd

APPENDIX B

- **Uniform System of Accounts - Section 300**
- **PA ACT 12 of 2016**

WASTEWATER UTILITY PLANT ACCOUNTS

	.1	.2
	Intangible Plant	Collection Plant
351. Organization	351.1	XXXXXXXXXX
352. Franchises	352.1	XXXXXXXXXX
353. Land and Land Rights	XXXXXXXXXX	353.2
354. Structures and Improvements	XXXXXXXXXX	354.2
355. Power Generation Equipment	XXXXXXXXXX	355.2
360. Collection Sewers - Force	XXXXXXXXXX	360.2
361. Collection Sewers - Gravity	XXXXXXXXXX	361.2
362. Special Collecting Structures	XXXXXXXXXX	362.2
363. Services to Customers	XXXXXXXXXX	363.2
364. Flow Measuring Devices	XXXXXXXXXX	364.2
365. Flow Measuring Installations	XXXXXXXXXX	365.2
366. Reuse Services	XXXXXXXXXX	XXXXXXXXXX
367. Reuse Meters and Meter Installations	XXXXXXXXXX	XXXXXXXXXX
370. Receiving Wells	XXXXXXXXXX	XXXXXXXXXX
371. Pumping Equipment	XXXXXXXXXX	XXXXXXXXXX
374. Reuse Distribution Reservoirs	XXXXXXXXXX	XXXXXXXXXX
375. Reuse Transmission and Distribution System	XXXXXXXXXX	XXXXXXXXXX
380. Treatment and Disposal Equipment	XXXXXXXXXX	XXXXXXXXXX
381. Plant Sewers	XXXXXXXXXX	XXXXXXXXXX
382. Outfall Sewer Lines	XXXXXXXXXX	XXXXXXXXXX
389. Other Plant and Misc. Equipment	389.1	389.2
390. Office Furniture and Equipment	XXXXXXXXXX	XXXXXXXXXX
391. Transportation Equipment	XXXXXXXXXX	XXXXXXXXXX
392. Stores Equipment	XXXXXXXXXX	XXXXXXXXXX
393. Tools, Shop and Garage Equipment	XXXXXXXXXX	XXXXXXXXXX
394. Laboratory Equipment	XXXXXXXXXX	XXXXXXXXXX
395. Power Operated Equipment	XXXXXXXXXX	XXXXXXXXXX
396. Communication Equipment	XXXXXXXXXX	XXXXXXXXXX
397. Miscellaneous Equipment	XXXXXXXXXX	XXXXXXXXXX
398. Other Tangible Plant	XXXXXXXXXX	XXXXXXXXXX

WASTEWATER UTILITY PLANT ACCOUNTS

.3	.4	.5	.6	.7
System Pumping Plant	Treatment and Disposal Plant	Reclaimed Water Treatment Plant	Reclaimed Water Distribution Plant	General Plant
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	352.6	XXXXXXXXXX
353.3	353.4	353.5	353.6	353.7
354.3	354.4	354.5	354.6	354.7
355.3	355.4	355.5	355.6	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	366.6	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	367.6	XXXXXXXXXX
370.3	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
371.3	XXXXXXXXXX	371.5	371.6	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	374.5	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	375.6	XXXXXXXXXX
XXXXXXXXXX	380.4	380.5	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	381.4	381.5	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	382.4	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
389.3	389.4	389.5	389.6	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	390.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	391.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	392.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	393.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	394.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	395.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	396.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	397.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	398.7

WASTEWATER UTILITY PLANT ACCOUNTS

The wastewater utility plant accounts have been designed utilizing an account matrix. The matrix employs a list of object accounts which in effect act as control accounts. The object accounts are further segregated by the matrix into classifications by functions or subaccount. The instructions for segregating the object accounts to the function subaccount are contained in Accounting Instruction 32. Listed below are the object account descriptions.

351. Organization

This account shall include all fees paid to federal or state governments for the privilege of incorporation and expenditures incident to organizing the corporation, partnership or other enterprise and putting it into readiness to do business. A sample of items to be included in this account are listed below.

1. Actual cost of obtaining certificates authorizing an enterprise to engage in the public utility business.
2. Fees and expenses for incorporation.
3. Fees and expenses for mergers or consolidations.
4. Office expenses incident to organizing the utility.
5. Stock and minute books and corporate seal.

Note A:--This account shall not include any discounts upon securities issued or assumed; nor shall it include any costs incident to negotiating loans, selling bonds or other evidences of debt, or expenses in connection with the authorization, issuance and sale of capital stock.

Note B:--Exclude from this account and include in the appropriate expense account the cost of preparing and filing papers in connection with the extension of the term of incorporation unless the first organization costs have been written off. Where charges are made to this account for expenses incurred in mergers, consolidations or reorganizations, amounts previously included herein or in similar accounts in the books of the companies concerned shall be excluded from this account.

352. Franchises

A. This account shall include amounts paid to the federal government, to a state or to a political subdivision thereof in consideration for franchises, consents or certificates, running in perpetuity or for a specified term of more than one year, together with necessary and reasonable expenses incident to procuring such franchises, consents or certificates of permission and approval, including expenses of organizing and merging separate corporations, where statutes require solely for the purpose of acquiring franchise.

B. If a franchise or certificate is acquired by assignment, the charge to this account in respect thereof shall not exceed the amount paid therefor by the utility to the assignor, nor shall it exceed the amount paid by the original grantee, plus the expense of acquisition to such grantee. Any excess of the amount actually paid by the utility over the amount specified shall be charged to account 426 - Miscellaneous Nonutility Expenses.

C. When any franchise has expired, the book cost thereof shall be credited hereto and charged to account 426 - Miscellaneous Nonutility Expenses, or to account 110.1 - Accumulated Amortization of Utility Plant in Service, as appropriate.

D. Records supporting this account shall be kept so as to show separately the book cost of each franchise.

Note:--Annual or other periodic payments under franchises shall not be included herein but in the appropriate expense account.

353. Land and Land Rights

This account shall include the cost of land and land rights used in connection with wastewater collection, pumping, treatment and disposal, reclaimed water treatment and distribution and general plant operations (See Accounting Instruction 24). A sample of items to be included in this account are listed below:

1. Bulkheads buried, not requiring maintenance or replacement.
2. Cost, first, of acquisition including mortgages and other liens assumed (but not subsequent interest thereon).
3. Condemnation proceedings, including court and counsel costs.
4. Consents and abutting damages, payment for.
5. Conveyancers' and notaries' fees.
6. Fees, commissions, and salaries to brokers, agents, and others in connection with the acquisition of the land or land rights.
7. Leases, cost of voiding upon purchase to secure possession of land.
8. Removing, relocating, or reconstructing property of others, such as buildings, highways, railroads, bridges, cemeteries, churches, telephone and power lines, etc., in order to acquire quiet possession.
9. Retaining walls unless identified with structures.
10. Special assessments levied by public authorities for public improvements on the basis of benefits for new

roads, new bridges, new sewers, new curbing, new pavements, and other public improvements, but not taxes levied to provide for the maintenance of such improvements.

11. Surveys in connection with the acquisition, but not amounts paid for topographical surveys and maps where such costs are attributable to structures or plant equipment erected or to be erected or installed on such land.
12. Taxes assumed, accrued to date of transfer of title.
13. Title, examining, clearing, insuring and registering in connection with the acquisition and defending against claims relating to the period prior to the acquisition.
14. Appraisals prior to closing title.
15. Cost of dealing with distributees or legatees residing outside of the state or county, such as recording power of attorney, recording will or exemplification of will, recording satisfaction of state tax.
16. Filing satisfaction of mortgage.
17. Documentary stamps.
18. Photographs of property at acquisition.
19. Fees and expenses incurred in the acquisition of sewer rights, and grants.
20. Cost of fill to extend bulkhead line over land under water, where riparian rights are held, which is not occasioned by the erection of a structure.
21. Sidewalks and curbs constructed by the utility on public property.
22. Labor and expenses in connection with securing rights of way, where performed by company employees and company agents.

354. Structures and Improvements

This account shall include the cost in place of structures and improvements used in connection with wastewater collection, pumping, treatment and disposal, reclaimed water treatment and distribution and general plant operations (See Accounting Instruction 25). A sample of items to be included in this account are listed below:

1. Architects' plans and specifications including supervision.
2. Boilers, furnaces, piping, wiring, fixtures, and machinery for heating, lighting, signaling, ventilating and air conditioning systems, plumbing, vacuum cleaning systems, incinerator and smoke pipe, flues, etc.

3. Bulkheads, including dredging, riprap fill, piling, decking, concrete fenders, etc., when exposed and subject to maintenance and replacement.
4. Commissions and fees to brokers, agents, architects and others.
5. Conduit (not to be removed) with its contents.
6. Damages to abutting property during construction.
7. Drainage systems.
8. Elevators, cranes, hoists, etc., and the machinery for operating them.
9. Excavation, including shoring, bracing, bridging, refill and disposal of excess excavated material, cofferdams around foundations, pumping water from cofferdam during construction, test borings.
10. Fences and fence curbs (not including protective fences isolating items of equipment, which should be charged to the appropriate equipment account).
11. Fire protection systems when forming a part of a structure.
12. Flagpole.
13. Floor covering (permanently attached).
14. Foundations and piers for machinery, constructed as a permanent part of a building or other item listed herein.
15. Grading and clearing when directly occasioned by the building of a structure.
16. Intrasite communication system, poles, pole fixtures, wires and cables.
17. Landscaping, lawns, shrubbery, etc.
18. Leases, voiding upon purchase, to secure possession of structures.
19. Leased property, expenditures on.
20. Lighting fixtures and outside lighting systems.
21. Marquee, permanently attached to building.
22. Painting, first cost.
23. Permanent paving, concrete, brick, flagstone, asphalt, etc., within the property lines.
24. Partitions, including movable.
25. Permits and privileges.
26. Power boards for services to a building.
27. Refrigerating systems for general use.
28. Retaining walls except when identified with land.
29. Roadways.
30. Roofs.
31. Scales, connected to and forming a part of a structure.
32. Water and wastewater systems, for general use.
33. Sidewalks, culverts, curbs and streets constructed by the utility on its property.

34. Sprinkling systems.
35. Stacks -- brick, steel, or concrete, when set on foundation forming part of general foundation and steelwork of a building.
36. Steel inspection during construction.
37. Storage facilities constituting a part of a building.
38. Storm doors and windows.
39. Temporary heating during construction (net cost).
40. Temporary water connection during construction (net cost).
41. Temporary shanties and other facilities used during construction (net cost).
42. Topographical maps.
43. Vaults constructed as part of a building.
44. Watchmen's sheds and clock systems (net cost when used during construction only).
45. Water meters and supply system for a building or for general company purposes.
46. Water supply piping, hydrants and wells.
47. Yard surfacing, gravel, concrete, or oil (First cost only).
48. Tunnels, intake and discharge when constructed as part of a structure including sluice gates and those constructed to house.

355. Power Generation Equipment

A. This account shall include the cost installed of any equipment used for the production of power principally used in pumping operations.

B. Subaccounts shall be maintained hereunder for the cost of equipment used for each type of power generating equipment.

360. Collecting Sewers - Force

This account shall include all sewers which are used to lift sewage from a low elevation to a higher elevation. The force sewer will include that pipe between the discharge outlet of the lift station and the receiving manhole.

361. Collecting Sewers - Gravity

This account shall include the installed cost of all gravity collecting sewers, interceptor, branch, trunk, lateral including service wye, and manholes and lampholes. Manholes shall be included as a separate unit of property.

362. Special Collecting Structures

Inverted siphon shall be included in this account but so

distinctly noted; also any other special designed structures unusual to the wastewater system should be included herein but specifically noted as to what they do.

363. Services to Customers

This account shall include the installed cost of service sewers, from collection sewer to the customer's property or curb line. A sample of items to be included in this account are listed below:

1. Jointing and jointing material.
2. Manhole or clean-out.
3. Municipal inspection and permits
4. Pavement disturbed.
5. Protection of street openings.
6. Tapping saddle.
7. Service connection wye shall be included in account 363 instead of account 361 when company owns service sewers to customers property line.

364. Flow Measuring Devices

A. This account shall include the cost of flow measuring and recording equipment and initial testing used for measuring the quantity of wastewater or wastewater effluent delivered by customers, whether actually in service or held in reserve.

B. When flow measuring equipment is permanently retired from service, the amount at which it is included herein shall be credited to this account.

C. The records covering flow measuring equipment shall be so kept that the utility can furnish information as to the number of devices of each type and size in service and in reserve, as well as the location of each device included in this account.

365. Flow Measuring Installations

A. This account shall include the cost of labor employed, materials used and expenses incurred in connection with the original installation of customers' flow measuring equipment. A sample of items to be included in this account are listed below:

1. Floats, connections, flumes, or wires.
2. Special manhole, boxes, or other separate housing.

B. When a flow measuring installation is permanently retired from service, the cost thereof shall be credited to this account.

366. Reuse Services

A. This account shall include the cost installed of reclaimed water service pipes and accessories leading to the customers' premises.

B. A complete reclaimed water service begins with the connection on the main and extends to but does not include the connection with the customer's meter. A stub service extends from the main to the property line, or the curb stop (curb stop cock).

C. Services which have been used but have become inactive shall be retired from utility plant in service immediately if there is no prospect for future use.

Items

1. Corporation stops or tees.
2. Gate valves and boxes.
3. Goose necks.
4. Jointing and jointing material.
5. Municipal inspection or permits.
6. Pavements disturbed.
7. Pipes.
8. Placing pipes and accessories.
9. Protection of street openings.
10. Service or curb boxes.
11. Service or curb stops (curb stop cocks).
12. Tapping main.
13. Tapping saddle.

367. Reuse Meters and Meter Installations

A. This account shall include the cost of meters, devices and appurtenances attached thereto, used for measuring the quantity of reclaimed water delivered to users, whether actually in service or held in reserve. It shall also include the cost of labor employed, materials used and expenses incurred in connection with the original installation of a customer's meters and devices and appurtenances attached thereto.

B. When a meter and/or meter installation is permanently retired from service, the amount at which it is included herein shall be credited to this account.

C. The records covering meters shall be so kept that the utility can furnish information as to the number of meters of each type and size in service and in reserve as well as the location of each meter included in this account.

D. A sample of items to be included in this account are listed

below:

1. Meters, including badging and initial testing.
2. Remote meter registers.
3. Installation labor (first installation only).
4. Meter coupling.
5. Meter bars.
6. Meter yokes.
7. Meter fittings, connections and shelves.
8. Meter vaults or boxes.
9. Stops.

Note A:--This account shall not include meters for recording the output of a supply or treatment plant, or those located on mains. It includes only those meters to record reclaimed water delivered to customers, including company use and for those used elsewhere in the system if a type available for general use.

Note B:--The utility shall maintain a statistical record to show separately the number of each type and size of meter or group of types and sizes as carried in the continuing property record. Underlying records shall be kept so that the utility can determine readily for each such classification the number of company-owned meters in service (subdivided between active and inactive) and the number of meters carried herein but not in service, the latter to include meters undergoing repairs; and the number of meters in service owned by customers.

370. Receiving Wells

This account shall include the cost of constructing wells at pumping stations or at other junction points along the collecting system, used for intercepting wastewater for clearing and screening, transfer to a pumping well or otherwise further convey it along the collecting system to the treatment plant or point of final
discharge. This account shall include any chemical feed apparatus and holding basins associated with the receiving well.

371. Pumping Equipment

This account shall include the cost installed of pumping equipment driven by electric power or diesel engines. A sample of items to be included in this account are listed below:

1. Motors or engines for driving pumps.
2. Pumps, including settings, gearing, shafting and belting.
3. Sewage piping within station, including valves.
4. Auxiliary equipment for motors and pumps such as oiling systems, cooling systems, condensers, etc.

5. Electrical power lines and switching.
6. Foundations, frames, and bed plates.
7. Hoist units.

374. Reuse Distribution Reservoirs

This account shall include the cost in place of reservoirs, tanks and appurtenances used in storing reclaimed water for distribution. A sample of items to be included in this account are listed below:

1. Bridges and culverts.
2. Clearing land.
3. Dams.
4. Embankments.
5. Fences.
6. Foundations.
7. Gates and gate houses.
8. Landscaping.
9. Lighting systems.
10. Piping system within reservoirs.
11. Retaining walls.
12. Roads and paths.
13. Rust-proofing apparatus.
14. Sewer drain or storm sewer.
15. Spillways and channels.
16. Standpipes.
17. Tanks.
18. Towers.
19. Valves.

375. Reuse Transmission and Distribution System

A. This account shall include the cost installed of reclaimed water transmission and distribution mains and appurtenances. A sample of items to be included in this account are listed below:

1. Air chambers.
2. Blow-offs and overflows.
3. Bridges and culverts.
4. Electrolysis control equipment.
5. Gauges and recorders.
6. Jointing and jointing material.
7. Manholes.
8. Meters and appurtenances.
9. Municipal inspection or permits.
10. Pavement disturbed, including cutting and replacing pavement, pavement base and sidewalks.
11. Pipes.
12. Fire mains.
13. Fire Hydrants.

B. Records supporting this account shall be so kept as to show separately the cost of mains of different sizes and types and of each tunnel, bridge, or river crossing.

380. Treatment and Disposal Equipment

This account shall include the cost installed of apparatus equipment and other facilities used for the treatment of wastewater, disposal of sewage wastes and the treatment of effluent for reuse. A sample of items to be included in this account are listed below:

1. Aeration chambers.
2. Chemical equipment.
3. Disinfection facilities.
4. Filters.
5. Imhoff tank.
6. Land fill equipment and appurtenances.
7. Monitoring equipment.
8. Oxidation pond or lagoon.
9. Sedimentation equipment.
10. Septic tank.
11. Screen unit.
12. Sludge system.
13. Trucks, tractors, or other equipment used primarily for sludge or other waste disposal.
14. Package mechanical treatment plant.
15. Sedimentation basin.
16. Sludge digestion equipment.
17. Sludge filtration or dewatering equipment.

381. Plant Sewers

This account shall include the cost installed of plant yard piping and appurtenances, and facilities required to dispose of treatment plant liquid effluent into the outfall sewer line. A sample of items to be included in this account are listed below:

1. Unit to unit sections of yard piping.
2. Valves and vaults.
3. Pipe tunnels and galleries.
4. Filter and filter backwash piping.

382. Outfall Sewer Lines

This account shall include the installed cost of sewer line carrying effluent from treatment facility to point of discharge. Includible in this account would be headwall or outlet.

389. Other Plant and Miscellaneous Equipment

This account shall include the cost installed of all other intangible, collection system pumping, treatment and disposal, reclaimed water treatment and reclaimed water distribution plant not provided for in the foregoing accounts.

390. Office Furniture and Equipment

A. This account shall include the cost of office furniture and equipment owned by the utility and devoted to utility service, and not permanently attached to buildings, except the cost of such furniture and equipment which the utility elects to assign to other plant accounts on a functional basis. A sample of items to be included in this account are listed below:

1. Book cases and shelves.
2. Desk, chairs, and desk equipment.
3. Drafting room equipment.
4. Electronic data processing equipment.
5. Filing, storage and other cabinets.
6. Floor covering.
7. Library and library equipment.
8. Mechanical office equipment such as accounting machines, typewriters, etc.
9. Safes.
10. Tables.

B. If the utility has equipment includible in this account at more than one location, separate records shall be maintained for each location.

391. Transportation Equipment

This account shall include the cost of transportation vehicles used for utility purposes. A sample of items to be included in this account are listed below:

1. Airplanes.
2. Automobiles.
3. Bicycles.
4. Electrical vehicles.
5. Motor trucks.
6. Motorcycles.
7. Repair cars or trucks.
8. Tractors and trailers.
9. Other transportation vehicles.

392. Stores Equipment

A. This account shall include the cost of equipment used for the receiving, shipping, handling and storage of materials and supplies.

B. If the utility has equipment includible in this account at more than one location, separate records shall be maintained for each location. A sample of items to be included in this account are listed below:

1. Chain falls.
2. Counters.
3. Cranes (portable).
4. Elevating and stacking equipment (portable).
5. Hoists.
6. Lockers.
7. Scales.
8. Shelving.
9. Storage bins.
10. Trucks, hand and power driven.
11. Wheelbarrows.

393. Tools, Shop and Garage Equipment

This account shall include the cost of tools, implements, and equipment used in construction, repair work, general shops and garages and not specifically provided for or includible in other accounts. A sample of items to be included in this account are listed below:

1. Air compressors.
2. Anvils.
3. Automobile repair shop equipment.
4. Battery charging equipment.
5. Belts, shafts and countershafts.
6. Boilers.
7. Cable pulling equipment.
8. Concrete mixers.
9. Drill presses.
10. Derricks.
11. Electric equipment.
12. Engines.
13. Forges.
14. Furnaces.
15. Foundations and settings specially constructed for and not expected to outlast the equipment for which provided.
16. Gas producers.
17. Gasoline pumps, oil pumps and storage tanks.
18. Greasing tools and equipment.

19. Hoists.
20. Ladders.
21. Lathes.
22. Machine tools.
23. Motor driven tools.
24. Motors.
25. Pipe threading and cutting tools.
26. Pneumatic tools.
27. Pumps.
28. Riveters.
29. Smithing equipment.
30. Tool racks.
31. Vises.
32. Welding apparatus.
33. Work benches.

394. Laboratory Equipment

A. This account shall include the cost installed of laboratory equipment used for general laboratory purposes and not specifically provided for or includible in other departmental or functional plant accounts. A sample of items to be included in this account are listed below:

1. Autoclaves.
2. Barometers.
3. Cameras.
4. Centrifuge.
5. Distilling apparatus.
6. Furnaces.
7. Microscopes.
8. Ovens.
9. Pitometers.
10. Rain gauges.
11. Refrigerators.
12. Scales.
13. Sterilizers.
14. Stop watches.
15. Testing machines.
16. Therometers.
17. Voltmeters.
18. Other bacteriological, electric, chemical hydraulic or research equipment.

B. If the utility has equipment includible in this account at more than one location, separate records shall be maintained for each location.

395. Power Operated Equipment

This account shall include the cost of power operated equipment used in construction of repair work exclusive of equipment includible in other accounts. Include, also, the tools and accessories acquired for use with such equipment and the vehicle on which such equipment is mounted. A sample of items to be included in this account are listed below:

1. Air compressors, including driving unit and vehicle.
2. Back filling machines.
3. Boring machines.
4. Bulldozers.
5. Cranes and joists.
6. Diggers.
7. Engines.
8. Pile drivers.
9. Pipe cleaning machines.
10. Pipe coating or wrapping machines.
11. Tractors - Crawler type.
12. Trenchers.
13. Other power operated equipment.

Note:--It is intended that this account include only such large units as are generally self-propelled or mounted on moveable equipment.

396. Communication Equipment

This account shall include the cost installed of telephone, telegraph and wireless equipment for general use in connection with utility operations. A sample of items to be included in this account are listed below:

1. Antennae.
2. Booths.
3. Cables.
4. Distribution boards.
5. Extension cords.
6. Gongs.
7. Handsets, manual and dial.
8. Insulators.
9. Intercommunicating sets.
10. Loading coils.
11. Operators desks.
12. Poles and fixtures used wholly for telephone and telegraph wires.
13. Radio transmitting and receiving sets.
14. Remote control equipment and lines.
15. Sending keys.
16. Storage batteries.

17. Switchboards.
18. Teleautograph circuit connections.
19. Telegraph receiving sets.
20. Telephone and telegraph circuits.
21. Testing instruments.
22. Towers.
23. Underground conduit used wholly for telephone or telegraph wires and cable wires.

397. Miscellaneous Equipment

This account shall include the cost of equipment, apparatus, etc., used in utility operations, and which is not includible in any other account. A sample of items to be included in this account are listed below:

1. Hospital and infirmary equipment.
2. Kitchen equipment.
3. Recreation equipment.
4. Radios.
5. Restaurant equipment.
6. Soda fountains.
7. Operator's cottage furnishings.
8. Electric signs advertising the corporate name or symbol, plant or facility name, or otherwise serving only the general purpose of acquainting the public with the facilities and services of the utility.
9. Other miscellaneous equipment.

Note:--Miscellaneous equipment of the nature indicated above wherever practicable shall be included in the utility plant accounts on a functional basis.

398. Other Tangible Plant

This account shall include the cost of tangible utility plant not provided for elsewhere.

§ 1329. Valuation of acquired water and wastewater systems.

(a) Process to establish fair market value of selling utility.--Upon agreement by both the acquiring public utility or entity and the selling utility, the following procedure shall be used to determine the fair market value of the selling utility:

(1) The commission will maintain a list of utility valuation experts from which the acquiring public utility or entity and selling utility will choose.

(2) Two utility valuation experts shall perform two separate appraisals of the selling utility for the purpose of establishing its fair market value.

(3) Each utility valuation expert shall determine fair market value in compliance with the Uniform Standards of Professional Appraisal Practice, employing the cost, market and income approaches.

(4) The acquiring public utility or entity and selling utility shall engage the services of the same licensed engineer to conduct an assessment of the tangible assets of the selling utility. The assessment shall be incorporated into the appraisal under the cost approach required under paragraph (3).

(5) Each utility valuation expert shall provide the completed appraisal to the acquiring public utility or entity and selling utility within 90 days of execution of the service contract.

(b) Utility valuation experts.--

(1) The utility valuation experts required under subsection (a) shall be selected as follows:

(i) one shall be selected by the acquiring public utility or entity; and

(ii) one shall be selected by the selling utility.

(2) The utility valuation experts shall not:

(i) derive any material financial benefit from the sale of the selling utility other than fees for services rendered; or

(ii) be an immediate family member of a director, officer or employee of either the acquiring public utility, entity or selling utility within a 12-month period of the date of hire to perform an appraisal.

(3) Fees paid to utility valuation experts may be included in the transaction and closing costs associated with acquisition by the acquiring utility or entity. Fees eligible for inclusion may be of an amount not exceeding 5% of the fair market value of the selling utility or a fee approved by the commission.

(c) Ratemaking rate base.--The following apply:

(1) The ratemaking rate base of the selling utility shall be incorporated into the rate base of:

(i) the acquiring public utility during the acquiring public utility's next base rate case; or

(ii) the entity in its initial tariff filing.

(2) The ratemaking rate base of the selling utility shall be the lesser of the purchase price negotiated by the acquiring public utility or entity and selling utility or the fair market value of the selling utility.

(d) Acquisitions by public utility.--The following apply:

(1) If the acquiring public utility and selling utility agree to use the process outlined in subsection (a), the acquiring public utility shall include the following as an attachment to its application for commission approval of the acquisition filed pursuant to section 1102 (relating to enumeration of acts requiring certificate):

(i) Copies of the two appraisals performed by the utility valuation experts under subsection (a).

(ii) The purchase price of the selling utility as agreed to by the acquiring public utility and selling utility.

(iii) The ratemaking rate base determined pursuant to subsection (c)(2).

(iv) The transaction and closing costs incurred by the acquiring public utility that will be included in its rate base.

(v) A tariff containing a rate equal to the existing rates of the selling utility at the time of the acquisition and a rate stabilization plan, if applicable to the acquisition.

(2) The commission shall issue a final order on an application submitted under this section within six months of the filing date of an application meeting the requirements of subsection (d)(1).

(3) If the commission issues an order approving the application for acquisition, the order shall include:

(i) The ratemaking rate base of the selling utility, as determined under subsection (c)(2).

(ii) Additional conditions of approval as may be required by the commission.

(4) The tariff submitted pursuant to subsection (d)(1)(v) shall remain in effect until such time as new rates are approved for the acquiring public utility as the result of a base rate case proceeding before the commission. The acquiring public utility may collect a distribution system improvement charge during this time, as approved by the commission under this chapter.

(5) The selling utility's cost of service shall be incorporated into the revenue requirement of the acquiring public utility as part of the acquiring utility's next base rate case proceeding. The original source of funding for any part of the water or sewer assets of the selling utility shall not be relevant to determine the value of said assets.

(e) Acquisitions by entity.--An entity shall provide all the information required by subsection (d)(1) to the commission as an attachment to its application for a certificate of public convenience filed pursuant to section 1102.

(f) Postacquisition projects.--The following apply:

(1) An acquiring public utility's postacquisition improvements that are not included in a distribution improvement charge shall accrue allowance for funds used during construction after the date the cost was incurred until the asset has been in service for a period of four years or until the asset is included in the acquiring public utility's next base rate case, whichever is earlier.

(2) Depreciation on an acquiring public utility's postacquisition improvements that have not been included in the calculation of a distribution system improvement charge shall be deferred for book and ratemaking purposes.

(g) Definitions.--The following words and phrases when used in this section shall have the meanings given to them in this section unless the context clearly indicates otherwise:

"Acquiring public utility." A water or wastewater public utility subject to regulation under this title that is acquiring a selling utility as the result of a voluntary arm's-length transaction between the buyer and seller.

"Allowance of funds used during construction." An accounting practice that recognizes the capital costs, including debt and equity funds that are used to finance the construction costs of an improvement to a selling utility's assets by an acquiring public utility.

"Entity." A person, partnership or corporation that is acquiring a selling utility and has filed or whose affiliate has

filed an application with the commission seeking public utility status pursuant to section 1102.

"Fair market value." The average of the two utility valuation expert appraisals conducted under subsection (a)(2).

"Ratemaking rate base." The dollar value of a selling utility which, for postacquisition ratemaking purposes, is incorporated into the rate base of the acquiring public utility or entity.

"Rate stabilization plan." A plan that will hold rates constant or phase rates in over a period of time after the next base rate case.

"Selling utility." A water or wastewater company located in this Commonwealth, owned by a municipal corporation or authority that is being purchased by an acquiring public utility or entity as the result of a voluntary arm's-length transaction between the buyer and seller.

"Utility valuation expert." A person hired by an acquiring public utility and selling utility for the purpose of conducting an economic valuation of the selling utility to determine its fair market value.

(Apr. 14, 2016, P.L.76, No.12, eff. 60 days)

2016 Amendment. Act 12 added section 1329.

APPENDIX C

OWNED PROPERTY & EASEMENTS OF VALUE

- **(TO BE PROVIDED)**

APPENDIX D

SUPPORTING DOCUMENTS

- **EXHIBIT NO. 3**
- **EXHIBIT NO. 4**
- **EXHIBIT NO. 5**
- **PRICING STRUCTURE**

Exhibit No. 3
East Whiteland Township
Chester County, Pennsylvania
Capacity System Assets - Pump Stations

Pump Station		Year Placed in Service	Original Cost	Cost Index Original	Nov. 2005	2005 Replacement Cost	Cost Index Current	Trended Current Replacement Cost
~~Mill Lane~~	Replaced 2013	~~1976~~	~~$133,739~~	~~2401~~	~~7630~~	~~$425,000~~		
Deer Run		1976	78,670	2401	7630	250,000	11184	$366,441
Flat Road		1979	98,378	3003	7630	250,000	11184	366,441
~~Wilburdale~~	Replaced 2017	~~1979~~	~~98,378~~	~~3003~~	~~7630~~	~~250,000~~		
Meadowview		1980	106,067	3237	7630	250,000	11184	366,441
Lee Boulevard		1987	144,378	4406	7630	250,000	11184	366,441
Westgate		1988	148,080	4519	7630	250,000	11184	366,441
Church Road		1989	151,201	4615	7630	250,000	11184	366,441
Lapp Road		1995	179,265	5471	7630	250,000	11184	366,441
Hillbrook Circle		2002	214,220	6538	7630	250,000	11184	366,441
Frame Avenue		2002	214,220	6538	7630	250,000	11184	366,441
King Road		2004	233,129	7115	7630	250,000	11184	366,441
Three Meter Pits		1976	78,670	2401	7630	250,000	11184	366,441
			$1,646,278			**$2,750,000**		**$4,030,851**

Developer Built Subtractions

Pump Station		Year Placed in Service	Original Cost	Cost Index Original	Nov. 2005	2005 Replacement Cost	Cost Index Current	Trended Current Replacement Cost
Flat Road		1979	$98,378	3003	7630	$250,000	11184	$366,441
~~Wilburdale~~	Replaced 2017	~~1979~~	~~98,378~~	~~3003~~	~~7630~~	~~250,000~~		
Lapp Road		1995	179,265	5471	7630	250,000	11184	366,441
			$277,643			**$500,000**		**$732,882**

Exhibit No. 3
East Whiteland Township
Chester County, Pennsylvania
Capacity System Assets - Pump Stations

Capital Projects Completed by the Township Since 2005

Description	Year Placed in Service	Original Cost	Cost Index Original	Cost Index Current	Trended Current Replacement Cost
Wilson Road PS Improvements - Tredyffrin Twp.	2012	$911,521	9308	11184	$1,095,199
Mill Lane Pump Station	2013	3,001,023	9547	11184	3,515,639
Wilburdale Pump Station	2017	533,051	10738	11184	555,196
Church Road PS Upgrade	2005	177,000	7446	11184	265,848
Deer Run PS Generator	2017	51,550	10738	11184	53,692
Lee Boulevard Pump Station and Force Main	2008	556,177	8310	11184	748,523
		$5,230,322			**$6,234,097**

Associated Retirements	Year Placed in Service	Original Cost	Cost Index Original	Cost Index Current	Trended Current Replacement Cost
Deer Run PS Generator	1975	$(10,619)	2212	11184	$(53,692)
		$(10,619)			**$(53,692)**
	Net Total	**$6,588,338**			**$9,478,375**

Exhibit No. 4
East Whiteland Township
Chester County, Pennsylvania
Capacity System Assets - Sewers

Force Mains

Year Placed in Service	Size	Length	2005 Cost Per Foot		Total 2005 Replacement Cost	Cost Index Original	Cost Index Nov. 2005	Trended Original Cost	Cost Index Current	Trended Current Replacement Cost
1976	14" DIP	3,600	$180.69		$650,484	2401	7630	$204,694	11184	$953,456
1976	4"	730	119.72		87,396	2401	7630	27,502	11184	128,101
1979	4"	1,600	119.72		191,552	3003	7630	75,378	11184	280,770.04
1979	6"	2,240	127.80		286,272	3003	7630	112,652	11184	419,607
1980	4"	1,600	119.72		191,552	3237	7630	81,269	11184	280,770
1972	6"	3,200	127.80		408,960	1753	7630	93,959	11184	599,439
1988	8"	1,700	140.84		239,428	4519	7630	141,818	11184	350,945
1989	8"	1,340	140.84		188,726	4615	7630	114,142	11184	276,627
1991	6"	2,335	127.80		298,413	4835	7630	189,102	11184	437,403
1995	6"	4,600	127.80		587,880	5471	7630	421,545	11184	861,693
2002	4"	795	119.72		95,177	6538	7630	81,556	11184	139,508
2002	6"	1,600	127.80		204,480	6538	7630	175,215	11184	299,719
2004	6"	1,600	127.80		204,480	7115	7630	190,681	11184	299,719
		26,940			**$3,634,800**			**$1,909,513**		**$5,327,759**

Exhibit No. 4
East Whiteland Township
Chester County, Pennsylvania
Capacity System Assets - Sewers

Gravity Sewer Mains

Year Placed in Service	Size	Length	2005 Cost Per Foot	Number of Manholes	2005 Cost Per Manhole	Total 2005 Replacement Cost	Cost Index Original	Cost Index Nov. 2005	Trended Original Cost	Cost Index Current	Trended Current Replacement Cost
1970	18"	320	$153.87	3	$4,748.50	$63,484	1381	7630	$11,490	11184	$93,052
1970	12"	4,410	126.51	14	4,748.50	624,388	1381	7630	113,012	11184	915,206
1970	10"	840	121.04	5	4,748.50	125,416	1381	7630	22,700	11184	183,830
1976	36"	100	$226.57	1	4,748.50	27,406	2401	7630	8,624	11184	40,170
1976	27"	4,000	190.22	12	4,748.50	817,862	2401	7630	257,364	11184	1,198,793
1976	24"	680	164.87	4	4,748.50	131,106	2401	7630	41,256	11184	192,170
1976	12"	3,221	126.51	18	4,748.50	492,962	2401	7630	155,125	11184	722,566
1976	10"	3,876	121.04	17	4,748.50	549,876	2401	7630	173,034	11184	805,988
1982	10"	2,240	$121.04	7	4,748.50	304,369	3825	7630	152,587	11184	446,133
		19,687		**81**		**$3,136,868**			**$935,192**		**$4,597,908**

Developer Built Subtractions

Year Placed in Service	Size	Length	2005 Cost Per Foot	Number of Manholes	2005 Cost Per Manhole	Total 2005 Replacement Cost	Cost Index Original	Cost Index Nov. 2005	Trended Original Cost	Cost Index Current	Trended Current Replacement Cost
1970	10"	840	$121.04	3	$4,748.50	$115,919	1381	7630	$20,981	11184	$169,910
1970	12"	4,410	126.51	14	4,748.50	624,388	1381	7630	113,012	11184	915,206
		5,250		**17**		**$740,307**			**$133,993**		**$1,085,116**

Capital Projects Completed by the Township Since 2005

Description	Year Placed in Service	Original Cost	Cost Index Original	Cost Index Current	Trended Current Replacement Cost
Conestoga Road Sewer Main	2015	$1,853,778	10036	11184	$2,065,864
		$1,853,778			**$2,065,864**
Associated Retirements					
Conestoga Road Sewer Main	1975	$(408,600)	2212	11184	$(2,065,864)
		$(408,600)			**$(2,065,864)**
	Net Total	**$2,246,377**			**$3,512,792**

Exhibit No. 5
East Whiteland Township
Chester County, Pennsylvania
Collection System Assets - Sewers

Gravity Sewer Mains

Year Placed in Service	Size	Length	2005 Cost Per Foot	Number of Manholes	2005 Cost Per Manhole	Total 2005 Replacement Cost	Cost Index Original	Cost Index Nov. 2005	Trended Original Cost	Cost Index Current	Trended Current Replacement Cost
1970	8"	23,200	$111.50	81	$4,748.50	$2,971,429	1381	7630	$537,817	11184	$4,355,413
1976	8"	51,134	111.50	214	4,748.50	6,717,620	2401	7630	2,113,893	11184	9,846,446
1978	8"	10,600	111.50	49	4,748.50	1,414,577	2776	7630	514,661	11184	2,073,435.44
1980	8"	11,380	111.50	54	4,748.50	1,525,289	3237	7630	647,132	11184	2,235,714
1982	8"	12,300	111.50	64	4,748.50	1,675,354	3825	7630	839,891	11184	2,455,674
1985	8"	5,725	111.50	27	4,748.50	766,547	4195	7630	421,425	11184	1,123,577
1986	8"	5,090	111.50	31	4,748.50	714,739	4295	7630	402,310	11184	1,047,638
1987	8"	3,840	111.50	14	4,748.50	494,639	4406	7630	285,660	11184	725,024
1988	8"	11,385	111.50	53	4,748.50	1,521,098	4519	7630	900,980	11184	2,229,571
1989	8"	21,508	111.50	94	4,748.50	2,844,501	4615	7630	1,720,370	11184	4,169,367
1993	8"	6,280	111.50	35	4,748.50	866,418	5210	7630	591,664	11184	1,269,964
1995	8"	2,420	111.50	9	4,748.50	312,567	5471	7630	224,129	11184	458,149
1996	8"	875	111.50	4	4,748.50	116,557	5622	7630	85,885	11184	170,844
1997	8"	3,610	111.50	18	4,748.50	487,988	5825	7630	372,552	11184	715,275
1998	8"	8,260	111.50	37	4,748.50	1,096,685	5920	7630	850,961	11184	1,607,481
1999	8"	6,140	111.50	40	4,748.50	874,550	6060	7630	694,539	11184	1,281,884
2000	8"	2,400	111.50	11	4,748.50	319,834	6221	7630	260,778	11184	468,800
2001	8"	24,669	111.50	150	4,748.50	3,462,869	6342	7630	2,878,462	11184	5,075,748
2002	8"	9,585	111.50	59	4,748.50	1,348,889	6538	7630	1,155,837	11184	1,977,153
2003	8"	1,791	111.50	11	4,748.50	251,930	6695	7630	221,044	11184	369,270
2004	8"	26,300	111.50	134	4,748.50	3,568,749	7115	7630	3,327,909	11184	5,230,944
		248,492		**1,189**		**$33,352,825**			**$19,047,899**		**$48,887,372**

Exhibit No. 5
East Whiteland Township
Chester County, Pennsylvania
Collection System Assets - Sewers

Developer Built Subtractions

Year Placed in Service	Size	Length	2005 Cost Per Foot	Number of Manholes	2005 Cost Per Manhole	Total 2005 Replacement Cost	Cost Index Original	Cost Index Nov. 2005	Trended Original Cost	Cost Index Current	Trended Current Replacement Cost
1970	8"	9,156	$111.50	32	$4,748.50	$1,175,150	1381	7630	$212,697.50	11184	$1,722,492
1976	8"	20,179	111.50	86	4,748.50	2,657,665	2401	7630	836,311	11184	3,895,509
1978	8"	4,183	111.50	20	4,748.50	559,765	2776	7630	203,658	11184	820,484
1980	8"	4,491	111.50	22	4,748.50	603,612	3237	7630	256,093	11184	884,753
1982	8"	4,854	111.50	26	4,748.50	663,144	3825	7630	332,448	11184	972,012
1985	8"	2,259	111.50	11	4,748.50	303,346	4195	7630	166,771	11184	444,634
1986	8"	2,009	111.50	12	4,748.50	283,025	4295	7630	159,308	11184	414,847
1987	8"	1,515	111.50	6	4,748.50	195,637	4406	7630	112,983	11184	286,758
1988	8"	4,493	111.50	21	4,748.50	601,927	4519	7630	356,535	11184	882,283
1989	8"	8,488	111.50	38	4,748.50	1,125,463	4615	7630	680,687	11184	1,649,664
1993	8"	2,478	111.50	14	4,748.50	343,007	5210	7630	234,235	11184	502,767
1995	8"	955	111.50	4	4,748.50	123,630	5471	7630	88,650	11184	181,212
1996	8"	345	111.50	2	4,748.50	46,122	5622	7630	33,985	11184	67,604
1997	8"	1,425	111.50	7	4,748.50	193,137	5825	7630	147,449	11184	283,093
1998	8"	3,260	111.50	15	4,748.50	433,941	5920	7630	336,712	11184	636,055
1999	8"	2,423	111.50	16	4,748.50	346,372	6060	7630	275,077	11184	507,699
2000	8"	947	111.50	4	4,748.50	126,560	6221	7630	103,191	11184	185,507
2001	8"	9,735	111.50	60	4,748.50	1,371,233	6342	7630	1,139,819	11184	2,009,904
2002	8"	3,783	111.50	24	4,748.50	534,153	6538	7630	457,706	11184	782,943
2003	8"	707	111.50	4	4,748.50	99,762	6695	7630	87,532	11184	146,228
2004	8"	10,379	111.50	54	4,748.50	1,412,520	7115	7630	1,317,195	11184	2,070,422
		98,064		**477**		**$13,199,171**			**$7,539,041**		**$19,346,870**

Exhibit No. 5
East Whiteland Township
Chester County, Pennsylvania
Collection System Assets - Sewers

Capital Projects Completed by the Township Since 2005

Description	Year Placed in Service	Original Cost	Cost Index Original		Cost Index Current	Trended Current Replacement Cost
Mill Lane Gravity Sewer	2014	$641,387.00	9806		11184	$731,517
Sidley Road Sewer Main	2014	1,022,044	9806		11184	1,165,665
Wilburdale FM and Flat Rd. Gravity	2016	533,529	10339		11184	577,135
		$2,196,960				**$2,474,317**

Associated Retirements	Year Placed in Service	Original Cost	Cost Index Original		Cost Index Current	Trended Current Replacement Cost
Wilburdale FM and Flat Rd. Gravity	1970	$(71,266)	1381		11184	$(577,135)
		$(71,266)				**$(577,135)**
	Net Total	**$22,279,348**		**$11,508,858**		**$31,437,685**

Exhibit No. 5
East Whiteland Township
Chester County, Pennsylvania
Collection System Assets - Sewers

Service Connections

Year Placed in Service	Size	Length	2005 Cost Per Foot	Number of Connections	Total 2005 Replacement Cost	Cost Index Original	Cost Index Nov. 2005	Trended Original Cost	Cost Index Current	Trended Current Replacement Cost
1970	4"	6,016	$97.87	201	$588,817	1381	7630	$106,574	11184	$863,068
1976	4"	13,260	$97.87	442	1,297,784	2401	7630	408,385	11184	1,902,245
1978	4"	2,749	$97.87	92	269,029	2776	7630	97,880	11184	394,333
1980	4"	2,951	$97.87	98	288,825	3237	7630	122,539	11184	423,349
1982	4"	3,190	$97.87	106	312,175	3825	7630	156,500	11184	457,575
1985	4"	1,485	$97.87	49	145,301	4195	7630	79,882	11184	212,977
1986	4"	1,320	$97.87	44	129,185	4295	7630	72,715	11184	189,354
1987	4"	996	$97.87	33	97,459	4406	7630	56,284	11184	142,853
1988	4"	2,952	$97.87	98	288,952	4519	7630	171,153	11184	423,536
1989	4"	5,578	$97.87	186	545,874	4615	7630	330,148	11184	800,123
1993	4"	1,629	$97.87	54	159,387	5210	7630	108,843	11184	233,623
1995	4"	628	$97.87	21	61,420	5471	7630	44,042	11184	90,027
1996	4"	227	$97.87	8	22,208	5622	7630	16,364	11184	32,551
1997	4"	936	$97.87	31	91,622	5825	7630	69,948	11184	134,296
1998	4"	2,142	$97.87	71	209,639	5920	7630	162,667	11184	307,282
1999	4"	1,592	$97.87	53	155,834	6060	7630	123,758	11184	228,415
2000	4"	622	$97.87	21	60,912	6221	7630	49,665	11184	89,283
2001	4"	6,397	$97.87	213	626,101	6342	7630	520,438	11184	917,716
2002	4"	2,486	$97.87	83	243,268	6538	7630	208,452	11184	356,573
2003	4"	464	$97.87	15	45,456	6695	7630	39,883	11184	66,627
2004	4"	6,820	97.87	227	667,496	7115	7630	622,449	11184	978,391
		64,440		**2,148**	**$6,306,743**			**$3,568,568**		**$9,244,197**

Pricing Structure

Pipe Diameter (in.)	Easement Installed Cost per LF	Paved Installed Cost per LF	Blended Cost per LF
<4	$ 55.00	$ 100.10	$ 55.00
4 [(4)]	$ 55.00	$ 97.87	$ 78.17
6	$ 55.00	$ 100.10	$ 55.00
8	$ 55.00	$ 100.10	$ 77.00
10	$ 59.00	$ 107.38	$ 76.44
12	$ 90.00	$ 163.80	$ 110.08
15	$ 94.00	$ 171.08	$ 94.00
16	$ 100.00	$ 182.00	$ 117.62
18	$ 114.00	$ 207.48	$ 143.74
21	$ 129.00	$ 234.78	$ 129.00
24	$ 137.00	$ 249.34	$ 137.00
27	$ 164.00	$ 298.48	$ 164.00
30	$ 183.00	$ 333.06	$ 183.00
36	$ 216.00	$ 393.12	$ 216.00
40	$ 239.00	$ 434.98	$ 239.00
42	$ 249.00	$ 453.18	$ 249.00
44	$ 262.00	$ 476.84	$ 262.00
48	$ 282.00	$ 513.24	$ 282.00
52	$ 308.00	$ 560.56	$ 308.00
54	$ 315.00	$ 573.30	$ 315.00
64	$ 392.00	$ 713.44	$ 392.00
72	$ 430.00	$ 782.60	$ 430.00

Notes:

1. Reflects generic unit prices for various components of a sewer system within this region. The schedule was a basis of cost for previous Assessment reports in the region.

2. Prices from 2015 unless otherwise noted, Table ENR CCI (2015) = 10035

3. The "Blended Cost" is a combined cost that accounts for the percentage of the overall system constructed within a completed roadway. Approximate percentages were determined from Township Records.

4. The "Blended Cost" is a combined cost that accounts for the percentage of laterals installed 2005 & later, assumed to be developer installed, and % of laterals installed before 2005, assumed to be Township installed. This number is assumed to be in the year 2012 and is then brought back for all of the other years.

Execution Version

SANITARY SEWER

ASSET PURCHASE AGREEMENT

By and Between

Township of East Whiteland, Chester County

As Seller

and

Aqua Pennsylvania Wastewater, Inc.

As Buyer

Dated as of January 8, 2021

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Schedule 7.03(a) Rates
Schedule 7.12 Required Sewer Projects

SANITARY SEWER ASSET PURCHASE AGREEMENT

THIS SANITARY SEWER ASSET PURCHASE AGREEMENT ("Agreement"), dated as of January 8, 2021 (the "Effective Date"), is made and entered into by and between the Township of East Whiteland, Chester County, a body corporate and politic, organized and existing under the laws of the Commonwealth of Pennsylvania (the "Seller"), and Aqua Pennsylvania Wastewater, Inc. (the "Buyer"), a corporation organized and existing under the laws of the Commonwealth of Pennsylvania.

RECITALS:

WHEREAS, Seller, acting by and through the Board of Supervisors of East Whiteland Township, Chester County (the "Township Board") owns and operates a sanitary wastewater collection and conveyance system (the "System") that provides sanitary wastewater service to various customers in East Whiteland Township, Pennsylvania (the "Service Area") and as set forth on Schedule A; and

WHEREAS, Buyer is a regulated public utility organized and existing under the laws of the Commonwealth of Pennsylvania that furnishes wastewater service to the public in several counties, including Chester County, Pennsylvania; and

WHEREAS, Buyer, in reliance upon the representations, warranties and covenants of Seller herein, desires to purchase and acquire from Seller, and Seller, in reliance upon the representations, warranties and covenants of Buyer herein, desires to sell, transfer and convey to Buyer all of the assets of the System (other than the Excluded Assets), and in connection therewith, Buyer has agreed to assume certain ongoing obligations and liabilities of Seller related to the acquired assets, all on the terms and conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual representations, warranties, covenants, and agreements stated in this Agreement, the receipt and sufficiency of which hereby are acknowledged, intending to be legally bound, the Parties agree as follows:

ARTICLE I.

DEFINITIONS

In addition to the capitalized terms defined elsewhere in this Agreement, the following terms, as used in this Agreement (unless otherwise specified herein), have the meanings set forth in this Article I:

"**Acquired Assets**" has the meaning specified in Section 2.01.

"**Affiliate**" means, when used to indicate a relationship with a specified Person, a Person that, directly or indirectly, through one or more intermediaries, has a 10% or more voting or economic interest in such specified Person or controls, is controlled by or is under common control with (which includes, with respect to a managed fund or trust, the right to direct or cause the direction of the management and policies of such managed fund or trust as manager, advisor, supervisor, sponsor or trustee pursuant to relevant contractual arrangements) such specified

Person, and a Person is deemed to be controlled by another Person if controlled in any manner whatsoever that results in control in fact by that other Person (or that other Person and any Person or Persons with whom that other Person is acting jointly or in concert), whether directly or indirectly and whether through share ownership, a trust, a contract or otherwise (and for purposes of this definition, a managed fund or trust is deemed to be an Affiliate of the Person managing, supervising, sponsoring or advising such fund or trust and a limited partner in a managed fund or trust is deemed to be an Affiliate of such fund or trust and of the Person managing, supervising, sponsoring or advising such fund or trust).

"**Agreement**" has the meaning specified in the Preamble to this Agreement (and includes all Schedules and Exhibits referred to herein), as amended, modified and supplemented from time to time in accordance with the terms hereof.

"**Assigned Contracts**" has the meaning specified in Section 2.01(c).

"**Assignment and Assumption Agreement**" has the meaning specified in Section 13.02(c).

"**Assumed Liabilities**" has the meaning specified in Section 2.04(a).

"**Authorizations and Permits**" mean all licenses, permits, franchises, authorizations, certificates, registrations, consents, orders, adjudications, variances, waivers and approvals currently in effect issued or granted by Governmental Authorities, including without limitation, environmental permits, operating permits and approvals that are held by Seller that primarily relate directly or indirectly to the operation of the System, including those set forth on Schedule 4.12.

"**Business Day**" means any day that is neither a Saturday, Sunday nor a day observed as a holiday by either the Commonwealth of Pennsylvania or the United States government.

"**Buyer**" has the meaning specified in the Preamble of this Agreement.

"**Buyer Fundamental Representations**" has the meaning specified in Section 8.01.

"**Buyer Indemnified Persons**" has the meaning specified in Section 8.02.

"**CERCLA**" means the Comprehensive Environmental Response Compensation and Liability Act of 1980, 42 U.S.C. §9601 et seq., as amended.

"**Closing**" means the consummation of the sale and purchase of the Acquired Assets and assumption of the Assumed Liabilities, the release/waiver of liabilities and the other transactions contemplated by this Agreement, all in accordance with the terms and conditions of this Agreement and as specified in Article XIII.

"**Closing Date**" has the meaning specified in Section 13.01.

"**Closing Effective Time**" has the meaning specified in Section 13.01.

"**Code**" means the Internal Revenue Code of 1986, as amended.

"**Confidential Information**" means any information about Buyer, Seller or the System related to the transactions contemplated by this Agreement, except that such term does not include information which the receiving Party can demonstrate (a) is generally available to or known by the public other than as a result of improper disclosure by the receiving Party, (b) is obtained by the receiving Party from a source other than the disclosing Party, and that source was not bound by a duty of confidentiality to the disclosing Party with respect to such information, or (c) is legally in the public domain.

"**Customer Sewer Laterals**" has the meaning specified in Section 2.02(k).

"**Direct Claim**" has the meaning specified in Section 8.04(c).

"**Easements**" means all easements, rights of way, licenses, use agreements, occupancy agreements, leases and other agreements and appurtenances for and over the real property of third parties that are necessary for or used in connection with the operation of the System or to provide continuous and unimpeded rights of way for the Acquired Assets (including access thereto).

"**EDU**" means equivalent dwelling unit and having a use rate of 275 gallons per day.

"**Effective Date**" has the meaning specified in the Preamble.

"**Environment**" means soil, surface waters, ground waters, land, stream sediments, flora, fauna, surface or subsurface strata and ambient air.

"**Environmental Claims**" means all notices of investigations, warnings, notice letters, notices of violations, Liens, orders, claims, demands, suits or administrative or judicial actions for any injunctive relief, fines, penalties, third party claims, or other claims asserting violations of Environmental Requirements or responsibility for Environmental Liabilities.

"**Environmental Conditions**" means the Release of Hazardous Materials or the presence of Hazardous Materials on, in, under or within any property (including the presence in the Environment), other than the presence of Hazardous Materials in locations and at concentrations that are naturally occurring.

"**Environmental Liabilities**" means any legal obligation or liability arising under Environmental Requirements or related to or arising out of any Environmental Condition, including those consisting of or relating to any (a) duty imposed by, breach of or noncompliance with any Environmental Requirements; (b) environmental, health or safety matters or conditions (including on-site or off-site contamination, occupational safety and health and regulation of Hazardous Materials); (c) Remedial Action undertaken by any Person; (d) bodily injury (including illness, disability and death, and regardless of when any such bodily injury occurred, was incurred or manifested itself), property damage (including trespass, nuisance, wrongful eviction and deprivation of the use of real or personal property), or other losses or damages incurred by any other Person (including any employee or former employee of such Person); (e) any injury to, destruction of, or loss of natural resources, or costs of any natural resource damage assessments; (f) exposure of any Person to any Hazardous Materials; and (g) the presence or Release of any Hazardous Materials.

"**Environmental Requirements**" mean all present Laws (including common law), regulations, legally binding or otherwise enforceable requirements and Authorizations and Permits relating to human health, pollution, or protection of the Environment (including ambient air, surface water, ground water, land surface or surface strata), including (i) those relating to emissions, discharges, Releases, or threatened Releases of Hazardous Materials, and (ii) those relating to the identification, generation, manufacture, processing, distribution, use, treatment, storage, disposal, release, recovery, transport or other handling of Hazardous Materials. Without limiting the previous, the term "**Environmental Requirements**" includes (1) CERCLA; the Superfund Amendments and Reauthorization Act, Public Law 99-499, 100 Stat. 1613; the Emergency Planning and Community Right to Know Act, 42 U.S.C. Sections 11001-11050; the Resource Conservation and Recovery Act, 42 U.S.C. Sections 6901-6992k ("RCRA"); the Safe Drinking Water Act, 42 U.S.C. Sections 300f to 300j-26; the Toxic Substances Control Act, 15 U.S.C. Sections 2601-2692; the Hazardous Materials Transportation Act, 49 U.S.C. Sections 5101-5127; the Federal Water Pollution Control Act, 33 U.S.C. Sections 1251-1387; the Oil Pollution Act of 1990, 33 U.S.C. Sections 2701--2761; the Clean Air Act, 42 U.S.C. Sections 7401-7671q; the Atomic Energy Act of 1954, as amended, 42 U.S.C. Sections 2011 et seq.; the Low Level Radioactive Waste Policy Act, as amended, 42 U.S.C. Section 2021b et seq.; the Occupational Safety and Health Act, 29 U.S.C. Sections 651-678, and the regulations promulgated pursuant to the above-listed federal statutes, and (2) counterpart Laws and regulations promulgated or issued by any state or local Governmental Authority, specifically including the Pennsylvania Storage Tank and Spill Prevention Act of 1989 (35 Pa. C.S.A. § 6021.101 *et. seq.*).

"**EPA**" means the United States Environmental Protection Agency, or a successor Governmental Authority with substantially similar power and authority thereto.

"**Equipment and Machinery**" means (i) all the equipment, tangible personal property, machinery, office furniture and equipment, fixtures, tooling, spare maintenance or replacement parts, environmental testing equipment, and vehicles owned or leased by Seller (including all leases of such property), which are primarily used in the operation of the System, (ii) any rights of Seller to warranties applicable to the foregoing (to the extent assignable), and licenses received from manufacturers and Seller of any such item, and (iii) any related claims, credits, and rights of recovery with respect thereto, as set forth on Schedule 4.10.

"**Excluded Assets**" has the meaning specified in Section 2.02.

"**Excluded Liability**" or "**Excluded Liabilities**" means all liabilities other than Assumed Liabilities.

"**Files and Records**" means all files and records of Seller primarily relating to the System and the Acquired Assets, whether in hard copy, digital, or magnetic or other format including data, geographic information system data, plans, contracts and recorded knowledge relating to the Acquired Assets (including property records, related to the foregoing), customer and supplier records, customer lists (both current and prospective), customer billing records, records of sales calls, manuals, books, files, records, engineering data, procedures, systems, instructions, drawings, blueprints, plans, designs, specifications, equipment lists, parts lists, equipment maintenance records, equipment warranty information, plant plans, specifications and drawings, sales and

advertising material, and computer software, and records relating to the System, whether stored on-site or off-site.

"**Final Order**" means a Governmental Approval by a Governmental Authority as to which (a) no request for stay of the action is pending, no such stay is in effect and if any time period is permitted by statute or regulation for filing any request for such stay, such time period has passed, (b) no petition for rehearing, reargument or reconsideration of the action is pending and the time for filing any such petition has passed, (c) such Governmental Authority does not have action under consideration on its own motion and (d) no appeal to a court or administrative tribunal or a request for stay by a court or administrative tribunal of the Government Authority's action is pending or in effect and the deadline for filing any such appeal or request for stay has passed.

"**Governmental Approval**" means any consent, approval, authorization, notice, filing, registration, submission, reporting, order, adjudication or similar item of, to or with any Governmental Authority.

"**Governmental Authority**" or "**Governmental Authorities**" means any court, department, commission, board, bureau, municipality, municipal authority (established pursuant to the Municipal Authorities Act of the Commonwealth of Pennsylvania), agency or instrumentality of the United States, any state, county, city or political subdivision thereof, or any foreign governmental body, including without limitation, the PaPUC, the EPA, PaDEP and the Township Board.

"**Hazardous Materials**" means any solid, liquid, gas, odor, heat, sound, vibration, radiation or other substance or emission which is a contaminant, pollutant, dangerous substance, toxic substance, hazardous waste, residual waste, solid waste, hazardous material or hazardous substance which is or becomes regulated by applicable Environmental Laws or which is classified as hazardous or toxic under applicable Environmental Laws (including gasoline, diesel fuel or other petroleum hydrocarbons, polychlorinated biphenyls, asbestos and urea formaldehyde foam insulation).

"**Indemnified Party**" means any Buyer Indemnified Persons or Seller Indemnified Persons, as applicable, entitled to indemnification pursuant to Article VIII.

"**Indemnifying Party**" means a Party which is obligated to indemnify the Buyer Indemnified Persons or the Seller Indemnified Persons, as applicable, pursuant to Article VIII.

"**Knowledge**" means either (i) the actual knowledge of a Representative of Buyer and the knowledge that each such person would reasonably be expected to obtain in the course of diligently performing his or her duties for Buyer or (ii) the actual knowledge of a Representative of Seller, the knowledge that each such person would reasonably be expected to obtain in the course of diligently performing his or her duties for Seller, as applicable based on the context in which the term is used.

"**Land Development Agreement / Financial Security Agreement**" means any agreement between Seller and an applicant for subdivision and/or land development approval pursuant to the Pennsylvania Municipalities Planning Code, pursuant to which applicant is required to construct

public improvements and required to post financial security, for the benefit of Seller, to secure applicant's obligations under such agreement.

"**Law**" means any applicable law, statute, regulation, ordinance, rule, order, judicial, administrative and regulatory decree, judgment, adjudication, consent decree, settlement agreement or governmental requirement enacted, promulgated, entered into, agreed or imposed by any Governmental Authority, as may be in effect at the relevant time or times in the context in which the term is used.

"**Liability Cap**" has the meaning specified in Section 8.05(c).

"**Lien**" means any lien in a fixed and ascertainable monetary sum, or any pledge, mortgage, deed of trust or security interest securing a fixed and ascertainable monetary sum, or any charge or claim in a fixed and ascertainable monetary sum. In addition, in connection with Real Property, any item otherwise falling within the definition of a "Lien" must be filed of record by the responsible Party in accordance with the terms of this Agreement.

"**Loss**" means any and all losses, liabilities, obligations, damages, penalties, interest, Taxes, claims, actions, demands, causes of action, judgments, reasonable attorneys', consultants' and other professional fees, and all other reasonable costs and expenses sustained or incurred in investigating, preparing or defending or otherwise incident to any such claim, action, demand, cause of action or judgment or the enforcement of a Party's rights under Article VIII; except that "**Losses**" shall not include punitive, incidental, consequential, special or indirect damages, including loss of future revenue or income, loss of business reputation or opportunity relating to the breach or alleged breach of this Agreement, or diminution of value or any damages based on any type of multiple, except in the case of fraud or to the extent actually awarded to a Governmental Authority or other third party in respect of a Third Party Claim.

"**Material Adverse Effect**" means any result, occurrence, fact, change, event or effect that has a materially adverse effect on the business, financial condition, physical condition or results of operations of the System, except that no effect arising out of or in connection with or resulting from any of the following is deemed, either alone or in combination, to constitute or contribute to a Material Adverse Effect: (i) general economic conditions or changes in those conditions; (ii) financial, banking, currency or capital markets fluctuations or conditions (either in the United States or any international market and including changes in interest rates); (iii) conditions affecting the real estate, financial services, construction, water utility or sewer utility industries generally; (iv) any existing event, circumstance, condition or occurrence of which Buyer has Knowledge as of the Effective Date; (v) any action, omission, change, effect, circumstance or condition contemplated by this Agreement or attributable to the execution, performance or announcement of this Agreement or the transactions contemplated hereby; and (vi) negligence, intentional misconduct or bad faith of Buyer or its Representatives.

"**Missing Easements**" means, as of any particular date, each material Easement that is for or used in connection with the operation of the System or to provide continuous and unimpeded rights of way for the Acquired Assets (including access thereto) that either (a) has not been obtained by Seller as of such date or (b) if such Easement has been obtained by Seller as of such date, and such Easement is not sufficient to operate the System as currently conducted.

"**MS4 System**" or **"Municipal Separate Storm Sewer System**" means the current and any future assets and facilities, built, operated or maintained, or real property ("**MS4 System Real Property**") and Stormwater System Assets owned by Seller and used for the purpose of capturing, conveying and discharging stormwater separate from the System.

"**Outside Date**" means 365 days after the date the application to the PaPUC is accepted as complete by the PaPUC and the statutory 6-month consideration period is initiated.

"**PaDEP**" means the Pennsylvania Department of Environmental Protection, or any successor Governmental Authority with substantially similar powers thereto.

"**PaPUC**" means the Pennsylvania Public Utility Commission, or any successor Governmental Authority with substantially similar powers thereto.

"**Party**" means Buyer or Seller and the term "Parties" means collectively Buyer and Seller.

"**PCB Equipment**" means PCB equipment as defined in 40 C.F.R. Part 761.

"**Pending Development Plan**" means any subdivision or land development plan that has been submitted to Seller for approval pursuant to the Pennsylvania Municipal Planning Code, as updated prior to Closing.

"**Permitted Liens**" means (a) Liens for Taxes not yet due and payable or being contested in good faith by appropriate procedures; (b) easements, rights of way, zoning ordinances and other similar encumbrances affecting Real Property and Easements as set forth on Schedule 4.09; (c) other than with respect to Real Property owned by Seller, Liens arising under original purchase price conditional sales contracts and equipment leases with third parties entered into in the ordinary course of business; and (d) other imperfections of title or Liens, if any, that have not had, and would not have, a Material Adverse Effect.

"**Person**" means any individual (including, the heirs, beneficiaries, executors, legal representatives or administrators thereof), corporation, partnership, joint venture, trust, limited liability company, limited partnership, joint stock company, unincorporated association or other entity or a Governmental Authority.

"**Plan**" has the meaning specified in Section 7.10(a).

"**Purchase Price**" has the meaning specified in Section 3.01.

"**Real Property**" means those certain parcels of land, with the buildings, improvements, and Equipment and Machinery thereon or therein, that are part of the System and fee simple title to which is to be conveyed by Seller to Buyer as part of the Acquired Assets.

"**Regulated Asbestos Containing Material**" means regulated asbestos containing material as defined by 40 C.F.R. § 61.141.

"**Release**" means any actual or threatened spilling, leaking, pumping, pouring, injecting, emptying, discharging, emitting, escaping, leaching, dumping, disposal, or release or migration of

Hazardous Materials into the Environment, including the abandonment or discarding of barrels, containers and other receptacles containing any Hazardous Materials.

"**Remedial Action**" means any and all actions to (a) investigate, clean up, remediate, remove, treat, contain or in any other way address any Hazardous Materials in the Environment, (b) prevent the Release or threat of Release or minimize the further Release of any Hazardous Materials so it does not migrate or endanger public health or welfare or the indoor or outdoor Environment, and (c) perform pre-remedial studies and investigations and post-remedial monitoring, maintenance and care. The term "**Remedial Action**" includes any action which constitutes (i) a "removal", "remedial action" or "response" as defined by Section 101 of CERCLA, 42 U.S.C. §§ 9601(23), (24), and (25); (ii) a "corrective action" as defined in RCRA, 42 U.S.C. § 6901 et seq.; or (iii) a "response" or "interim response" as defined in the Pennsylvania Hazardous Sites Cleanup Act, 35 P.S. §6020.103.

"**Representative**" means, with respect to any Person, any director, officer, employee, official, lender mortgagee, financier, provider of any financial instrument (or any agent or trustee acting on their behalf), partner, member, owner, agent, lawyer, accountant, auditor, professional advisor, consultant, engineer, contractor, other Person for whom such Person is at law responsible or other representative of such Person and any professional advisor, consultant or engineer designated by such Person as its "Representative."

"**Schedules**" means the disclosure schedules delivered by Seller and Buyer, respectively, concurrently with the execution and delivery of this Agreement, and as may be supplemented and updated pursuant to Sections 9.03 and 10.04. Any disclosure set forth on any particular Schedule is deemed disclosure in reference to all Schedules comprising the Schedules to which such disclosure is reasonably apparent.

"**Seller**" has the meaning specified in the Preamble of this Agreement.

"**Seller Fundamental Representations**" has the meaning specified in Section 8.01.

"**Seller Indemnified Persons**" has the meaning specified in Section 8.03.

"**Seller DEP Permits**" means the Water Quality Management Permits set forth on Schedule 4.12, each issued by PaDEP to Seller with respect to the System, including any revisions or amendments thereto. This definition shall not include any permit issued and related to the Stormwater System Assets.

"**Service Area**" has the meaning specified in the recitals to this Agreement.

"**Stormwater System Assets**" means all assets owned by Seller, and used exclusively in the operation or maintenance of the MS4 System, including (i) drains, pipes and collection basins and all other stormwater drainage assets used exclusively for stormwater collection, conveyance and discharge; (ii) catch basins, inlets, pipes and all other stormwater lateral facilities (the "**Stormwater Lateral Facilities**") that connect surface stormwater drains to storm conveyances which discharge to surface waters; (iii) interest in real estate directly associated with (i) and (ii); and (iv) any related permits.

"**Supplies**" means all lubricants, spare parts, fuel, chemicals, raw materials, and other supplies and inventory, and all rights to warranties received from suppliers with respect to the foregoing, and related claims, credits, and rights of recovery with respect thereto that are necessary to operate the System.

"**System**" has the meaning specified in the recitals to this Agreement and shall include the Acquired Assets and exclude the Excluded Assets.

"**Taxes**" means any federal, state, local or foreign income, gross receipts, license, payroll, employment, excise, severance, stamp, occupation, premium, windfall profits, environmental, customs duties, permit fees, capital stock, franchise, profits, withholding, social security, unemployment, disability, real property, personal property, parking, sales, use, transfer, registration, value added, alternative or add-on minimum, estimated or other tax, levy, impost, stamp tax, duty, fee, withholding or similar imposition of any kind payable, levied, collected, withheld or assessed at any time, including any interest, penalty or addition thereto, whether disputed or not.

"**Third Party Claim**" has the meaning specified in Section 8.05(a).

"**Threshold Amount**" has the meaning specified in Section 8.05(a).

"**Title Commitment**" has the meaning specified in Section 6.01.

"**Title Company**" has the meaning specified in Section 6.01.

"**Title Policy**" has the meaning specified in Section 2.03.

"**Township Board**" the meaning specified in the Preamble of this Agreement.

"**Township Senior Staff**" means the Township Manager, Assistant Manager, Superintendent of Public Works and the Township Engineer.

"**UCC Search**" has the meaning specified in Section 6.04.

"**Unscheduled Real Property**" has the meaning specified in Section 6.06.

"**Utility Valuation Expert**" means an expert that was approved by the PaPUC and is currently, at the time of this Agreement, on the list of approved appraisers maintained by the PaPUC.

ARTICLE II.

TERMS OF PURCHASE AND ASSUMPTION OF LIABILITIES

Section 2.01. Purchase and Sale of Acquired Assets.

Subject to the terms and conditions set forth in this Agreement, at Closing, Buyer shall purchase from Seller and Seller shall sell, transfer, assign and deliver to Buyer, free and clear of all Liens except for Permitted Liens, all of Seller's right, title and interest in and to all assets, facilities, business, goodwill, properties and rights of Seller of every kind and description, whether tangible or intangible, real, personal or mixed, wherever situated, in each case used in, held for use in, or acquired or developed for use in, the System, or otherwise related to, or arising out of the operation or conduct of the System (whether or not any such assets have any value for accounting purposes or are carried or reflected on the books or financial records of Seller), including any of the foregoing in which Seller is entitled to acquire rights in the future pursuant to Pending Development Plans (other than the rights of Seller pursuant to Section 2.02(d)) or development plans approved pursuant to this Agreement, but in all cases other than the Excluded Assets (collectively referred to as the "Acquired Assets"), including:

(a) all real property and appurtenant interests, rights of way used in, or necessary for, the operation of the System, including without limitation (i) good and marketable fee simple title to the Real Property set forth on Schedule 4.09, and (ii) all Easements, including without limitation those set forth on Schedule 4.09;

(b) all sanitary wastewater related treatment, collection and conveyance facilities, including all collection system mains (whether gravity or force mains), laterals (from the collection system main to the edge-of-road or curb-line when the main is located within a public right-of-way or the edge of an easement where the main is located within private property), pumping stations, generators, manholes, and other related appurtenances and any billing and collections related assets necessary to own and operate the System;

(c) all contracts, licenses, and leases to which Seller is a party or beneficiary or payee, including without limitation, all construction contracts, surety bonds, operation and maintenance agreements, management agreements, reserved capacity agreements, architect agreements and consultant agreements, and agreements relating to vehicles and other items of personal property as set forth on Schedule 4.13 (the "Assigned Contracts");

(d) all Supplies;

(e) all personal property and fixed assets, including all Equipment and Machinery, auxiliary equipment and plant equipment, including without limitation those items set forth on Schedule 4.10;

(f) all expenses prepaid by Seller and security deposits paid by Seller;

(g) all Files and Records;

(h) all Authorizations and Permits of or held by Seller (to the extent transferrable to Buyer under Law), including all Authorizations and Permits which are environmental permits, Seller DEP Permits other than those NPDES permits that relate to the Stormwater System Assets, other operating permits and those items set forth on Schedule 4.12; and

(i) all goodwill of the System.

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, THE SELLER MAKES NO EXPRESS OR IMPLIED REPRESENTATION OR WARRANTY REGARDING ANY REPRESENTATION REGARDING THE FUTURE PROFITABILITY OR FUTURE EARNINGS PERFORMANCE OF THE ACQUIRED ASSETS OR THE SYSTEM OR ANY FUTURE RATEMAKING THAT MAY BE ALLOWED BY THE PAPUC FOR ANY OF THE ACQUIRED ASSETS. NOTWITHSTANDING THE FOREGOING, ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE VALID UNTIL THE TIME OF CLOSING.

Section 2.02. Excluded Assets.

Notwithstanding anything herein to the contrary, the Acquired Assets shall not include the following (the "Excluded Assets"):

(a) the Stormwater System Assets, including any related NPDES permits;

(b) all contracts, licenses and leases that are not Assigned Contracts;

(c) the seals, organizational documents, minute books, tax returns, books of account or other records having to do with the organization of Seller;

(d) cash and cash equivalents, including (i) accounts receivable and amounts earned by Seller but not yet billed attributable to services rendered by Seller as of or before the Closing Date and (ii) EDU fees owed to Seller at or before the Closing Date for any Pending Development Plan but not yet paid to Seller;

(e) all insurance policies of Seller and all rights to applicable claims and proceeds thereunder;

(f) all rights to any outstanding lien related to non-payment by a System customer existing at or before the Closing Date and all actions, suits or claims of any nature available to or being pursued by Seller, whether arising by way of counterclaim or otherwise;

(g) all assets, properties and rights used by Seller other than those which primarily relate to the operations of the System;

(h) the assets, properties and rights specifically set forth on Schedule 2.02(h);

(i) the MS4 System Real Property;

(j) the rights which accrue or will accrue to Seller under this Agreement and any related agreement, exhibit or schedule; and

(k) all connecting facilities originating from Seller's terminus point of the collection facilities at the edge-of-road or curb-line when the facilities are located with a public right-of-way or the edge of an easement where the collection facilities are located within private property to and throughout the customer's property, including grinder pumps (the "Customer Sewer Laterals").

Section 2.03. Sale Free of Liens.

After Buyer fulfills its obligations pursuant to Section 3.01(a), on the Closing Date, the Acquired Assets will be free and clear of all Liens other than Permitted Liens. Seller shall convey the Acquired Assets by appropriate special warranty or other deed (subject to Section 6.02(c)), bills of sale, endorsements, assignments and other instruments of transfer or conveyance described herein, and if not expressly described herein, then by transfer documents satisfactory in form and substance reasonably acceptable to Buyer and Seller and their counsel in their reasonable, good faith discretion. At Closing, title to the Real Property shall be good and marketable and insured by the Title Company, at the Title Company's filed rates, as a good and marketable title, free and clear of all Liens and exceptions to coverage, except for the Permitted Liens, pursuant to an owner's policy of title insurance on the American Land Title Association's ("ALTA") Owner's Form 2006, subject to the terms of Section 6.02 (the "Title Policy").

Section 2.04. Assumption of Liabilities.

(a) On the terms and conditions set forth in this Agreement and excluding the Excluded Liabilities, Buyer shall assume and pay, perform and discharge when due any and all liabilities and obligations of Seller both (1) arising under Seller DEP Permits (arising from, related to, or based on events or circumstances occurring on or after the Closing Date), and (2) arising out of or relating to the System or the Acquired Assets on or after the Closing, including the following:

(i) all liabilities and obligations under the Assigned Contracts and Authorizations and Permits resulting from events that occur or conditions that arise on or after the Closing;

(ii) any litigation initiated against Seller related to the System or the Acquired Assets resulting from events that occur on or after Closing or conditions that arise on or after the Closing;

(iii) all liabilities and obligations for Taxes relating to the System, its operation, the Acquired Assets and the Assumed Liabilities attributable to the period after the Closing Date; and

(iv) all other liabilities and obligations arising out of or relating to Buyer's ownership or operation of the System and the Acquired Assets on or after the Closing (all of the aforementioned liabilities in this Section 2.04(a) are referred to as the "Assumed Liabilities").

(b) At the Closing, to the extent Seller is not released therefrom, Buyer shall indemnify Seller against any Loss relating to the Assumed Liabilities in accordance with Section 8.03.

(c) Buyer shall not assume or be liable to pay any liabilities or obligations relating to the Excluded Liabilities or any other liabilities or obligations that are not Assumed Liabilities.

Section 2.05. Further Assurances.

At any time and from time to time after the Closing Date, Seller shall, upon the request of Buyer, and Buyer shall, upon the request of Seller, at the cost of requesting Party, promptly execute, acknowledge and deliver, or cause to be executed, acknowledged and delivered, such other instruments of conveyance and transfer and other documents, and perform or cause to be performed such further acts, as may be reasonably required to evidence or effectuate, or more fully evidence or effectuate, (a) the sale, conveyance, transfer, assignment and delivery hereunder of the Acquired Assets to Buyer, (b) the assumption by Buyer of any of the Assumed Liabilities, (c) performance by the Parties of any of their other respective obligations under this Agreement, (d) the vesting in Buyer of all right, title and interest in the Acquired Assets and the System as specified in this Agreement, and (e) any other matters reasonably requested by a Party to carry out the provisions, purposes and intent of this Agreement.

Section 2.06. Certain Transfers; Assignment of Contracts.

(a) Notwithstanding anything to the contrary in this Agreement, and subject to the provisions of this Section 2.06(a) and Section 2.06(a), to the extent that the sale, transfer, assignment, conveyance and delivery, or attempted sale, transfer, assignment, conveyance and delivery, to Buyer of any Assigned Contract or other Acquired Asset would result in a violation of Law, or would require the consent, authorization, approval or waiver of any Person (other than the Parties), including any Governmental Authority, and such consent, authorization, approval or waiver shall not have been obtained before the Closing, this Agreement shall not constitute a sale, transfer, assignment, conveyance and delivery, or an attempted sale, transfer, assignment, conveyance and delivery, thereof (any such Acquired Asset, a "Nonassignable Asset"). Following the Closing, Seller and Buyer shall use its commercially reasonable efforts (at the cost and expense of the Party that is responsible for compliance with such Law or obtaining such consent, authorization, approval or waiver), and shall cooperate with each other, to obtain any such required consent, authorization, approval or waiver, or any release, substitution, novation or amendment required to sell, transfer, assign, convey and deliver any such Nonassignable Asset to Buyer and in no event will Buyer be required to pay any additional consideration therefor. Once such consent, authorization, approval, waiver, release, substitution or amendment is obtained, Seller shall sell, transfer, assign, convey and deliver to Buyer the relevant Acquired Asset to which such consent, authorization, approval, waiver, release, substitution or amendment relates for no additional consideration. Any applicable sales, transfer and other similar Taxes in connection with such sale, transfer, assignment, conveyance and delivery shall be paid one-half (50%) by Buyer and one-half (50%) by Seller.

(b) Until such time as a Nonassignable Asset is transferred to Buyer pursuant to this Article II, Buyer and Seller shall cooperate in any commercially reasonable and economically feasible arrangements (such as subleasing, sublicensing or subcontracting) to provide to the Parties

the economic and, to the extent permitted under Law, operational equivalent of the transfer of such Nonassignable Asset to Buyer at the Closing and the performance by Buyer of its obligations with respect thereto, and so long as Seller transfers and turns over all economic and beneficial rights with respect to each such Nonassignable Asset, Buyer shall, to the extent permitted under Law and the terms of any applicable contract that is a Nonassignable Asset, as agent or subcontractor for Seller, pay, perform and discharge the liabilities and obligations of Seller thereunder from and after the Closing Date, but only to the extent that such liabilities and obligations would be Assumed Liabilities if the applicable consent or approval had been obtained on or before the Closing Date and such Nonassignable Asset had been assigned to Buyer at Closing. To the extent permitted under Law, Seller shall hold in trust for and pay to Buyer promptly upon receipt thereof, such Nonassignable Asset and all income, proceeds and other monies received by Seller with respect to such Nonassignable Asset in connection with the arrangements under this Article II.

(c) If, following the Effective Date and before the Closing, Buyer identifies any contract to which Seller is a party which is not set forth on Schedule 4.13, and Buyer reasonably determines such contract is necessary or useful to the operation of the System, Buyer shall notify Seller of such determination and Seller shall, promptly following receipt of such notice, deliver to Buyer an updated Schedule 4.13 reflecting the addition of such contract, and such contract will be an "Assigned Contract" for all purposes hereunder.

(d) If during the twelve (12) month period following the Closing, Buyer or Seller identifies any contract to which Seller was a party as of the Closing and which (i) was not set forth on Schedule 4.13 (as may be updated pursuant to (c)) and (ii) Buyer reasonably believes is necessary or useful to the operation of the System, Seller shall, promptly following Buyer's written request therefor, execute, acknowledge and deliver, or cause to be executed, acknowledged and delivered, such other instruments of conveyance and transfer and other documents, and perform or cause to be performed such further acts, as may be reasonably required to evidence or effectuate, or more fully evidence or effectuate the assignment of such contract to Buyer for no additional consideration, and upon such assignment, such contract is deemed an Assigned Contract for all purposes hereunder.

ARTICLE III.

PURCHASE PRICE AND ADDITIONAL PURCHASE PRICE

Section 3.01. Purchase Price.

The purchase price for the Acquired Assets is Fifty Four Million Nine Hundred Thirty Thousand Dollars ($54,930,000) (the "Purchase Price") which Buyer shall pay as follows at Closing:

(a) Buyer shall pay, subject to any adjustment pursuant to Section 3.01(b) and any amounts required to be deposited into the escrow fund pursuant to Section 6.05(e), to Seller by wire transfer of immediately available funds the Purchase Price to one or more accounts that Seller designates and provides to Buyer at least three (3) Business Days before the Closing Date; and

(b) Final Billing: The Buyer is entitled to all customer billings with respect to sanitary wastewater customers' services for the period on or after the Closing Effective Time, and Seller is

entitled to all such billings for the period before the Closing Effective Time. The Parties shall cooperate to calculate an agreed upon proration of billing amounts and to the extent that either Party collects billings that are attributable to service provided by the other Party, the Party holding the other Party's billing collections shall pay such amount to the other Party.

(c) In addition to the Purchase Price, Buyer shall pay Seller up to Seventy Thousand Dollars ($70,000) as reimbursement for engineering and legal fees incurred related to this transaction to one or more accounts that Seller designates and provides to Buyer at least three (3) Business Days before the Closing Date. Seller shall provide Buyer with invoices evidencing the amount of transaction-related fees incurred at least five (5) Business Days before the Closing Date.

Section 3.02. Fair Consideration.

The consideration specified in this Article III represents fair consideration and reasonable equivalent value for the sale and transfer of the Acquired Assets and the transactions, covenants and agreements set forth in this Agreement, which consideration was agreed upon as the result of arm's-length good faith negotiations between the Parties and their respective Representatives.

Section 3.03. Transfer Taxes.

Any and all deed stamps or transfer Taxes which may be due the Commonwealth of Pennsylvania or any political subdivision in connection with the sale, transfer, assignment, conveyance and delivery hereunder of the Acquired Assets to Buyer (collectively, "Transfer Taxes"), shall be paid one-half (50%) by Buyer and one-half (50%) by Seller.

ARTICLE IV.

REPRESENTATIONS AND WARRANTIES OF SELLER

Seller makes only the representations and warranties which are set forth in this Article IV.

As a material inducement to Buyer to enter into this Agreement and to consummate the transactions contemplated by this Agreement, Seller represents and warrants, as of the Effective Date and as of the Closing Date (except to the extent any of the following representations and warranties specifically apply to or relate to another date, in which event such representations and warranties shall be true and correct as of such other date), as follows:

Section 4.01. Organization.

Seller is a body corporate and politic, organized and existing under the Second Class Township Code of the Commonwealth of Pennsylvania.

Section 4.02. Power and Authority.

Seller has (i) duly adopted an authorizing ordinance or resolution authorizing the transactions contemplated herein, which remains in full force and effect, (ii) duly authorized and approved the execution and delivery of this Agreement and (iii) duly authorized and approved the performance by Seller of its obligations contained in this Agreement. Seller has all requisite power

and authority to own, lease and operate the Acquired Assets and the System and has the power and authority to enter into this Agreement and to do all acts and things and execute and deliver all other documents as are required hereunder to be done, observed or performed by it in accordance with the terms of this Agreement.

Section 4.03. Enforceability.

This Agreement has been duly authorized, executed and delivered by Seller and is a valid and legally binding obligation of Seller, enforceable against Seller in accordance with the terms hereof, subject only to applicable bankruptcy, insolvency and similar laws affecting the enforceability of the rights of creditors generally and to general principles of equity.

Section 4.04. No Conflict or Violation.

The execution and delivery of this Agreement by Seller, the consummation of the transactions contemplated by this Agreement and the performance by Seller of the terms, conditions and provisions hereof has not and will not contravene or violate or result in a breach of (with or without the giving of notice or lapse of time, or both) or acceleration of any material obligations of Seller under (i) any Law or (ii) any agreement, instrument or document to which Seller is a party or by which it is bound.

Section 4.05. Consents and Approvals.

Schedule 4.05 sets forth a list of each consent, waiver, authorization or approval of any Governmental Authority, or of any other Person, and each declaration to or filing or registration with any Governmental Authority required in connection with the execution and delivery of this Agreement by Seller or the performance by Seller of its obligations hereunder.

Section 4.06. Undisclosed Liabilities

Except as set forth in Schedule 4.06, there are no liabilities or obligations of Seller, either accrued, absolute, contingent or otherwise, relating to the Acquired Assets, other than liabilities incurred in the ordinary course that could not reasonably be expected to have a Material Adverse Effect on Buyer.

Section 4.07. Absence of Certain Changes or Events.

Except as set forth on Schedule 4.07, since December 31, 2016, there has not been any transaction or occurrence that has resulted or is reasonably likely to result in a Material Adverse Effect and Seller has operated and maintained the System since that date in the ordinary course.

Section 4.08. Tax Matters.

Except as set forth in Schedule 4.08 or as would not have a Material Adverse Effect, (i) Seller has timely paid all Taxes that may have been or may be due and payable by Seller on or before the Closing Date, arising from the ownership or operation of the Acquired Assets or the System on or before the Closing Date (ii) no taxing authority has asserted any claim against the Seller for the assessment of any additional tax liability or initiated any action or proceeding which

could result in such an assertion; and (iii) the Seller has made all withholding of Taxes required to be made under all Laws and regulations, including without limitation, withholding with respect to compensation paid to employees, and the amounts withheld have been properly paid over to the appropriate taxing authorities.

Section 4.09. Real Property and Easements.

Schedule 4.09 sets forth all Real Property of Seller and separately identifies all Easements. Seller does not lease (as lessee) any real property that is used in the operation of the System. There are no pending condemnation proceedings relating to any of the Real Property or Easements nor has Seller actually received any written threats of any condemnation proceedings and, to the Knowledge of Seller, no such proceedings are threatened. Seller has not received any written notices of any violations of any Law from any Governmental Authority with respect to the Real Property or the Easements which has not been cured in all material respects and, to Seller's Knowledge, no such violations of Law exist. With respect to the Real Property, (i) there are no leases, options, rights of reversions or other rights of use or rights to acquire the Real Property held by third parties, (ii) Seller is in sole possession of the Real Property, and (iii) to Seller's Knowledge there are no encroachments either way across the boundary of the Real Property, nor any dispute with adjacent real property owners over the location of boundaries or potential claims adverse to title. With respect to each Easement, (i) there are no leases, options, rights of reversions or other rights of use or rights to acquire the Easement held by third parties, and (ii) to Seller's Knowledge there are no disputes with adjacent real property owners of the owners of the real property encumbered by the Easement over the location of boundaries or potential claims adverse to title.

Section 4.10. Equipment and Machinery.

All Equipment and Machinery included in the Acquired Assets is set forth on Schedule 4.10. Except as set forth in Schedule 4.10, Seller has good title, free and clear of all Liens (other than the Permitted Liens and Liens that will be released on or before Closing) to the Equipment and Machinery owned by Seller. Except as set forth on Schedule 4.10, all the Equipment and Machinery is owned by Seller, and none is leased or used under any conditional sales, title-retention, lease, license or similar arrangement.

Section 4.11. Environmental Compliance.

Except as set forth on Schedule 4.11, or that otherwise could not be expected to have a Material Adverse Effect:

(a) The System as currently operated by Seller and all operations and activities conducted by Seller with respect to the System are in compliance in all material respects with all applicable Environmental Requirements.

(b) Seller has generated, used, handled, treated, stored and disposed of all Hazardous Materials in (i) compliance in all material respects with all applicable Environmental Requirements and (ii) a manner that has not given, and could not reasonably be anticipated to give, rise to Environmental Liabilities.

(c) Seller has not received notice of any Environmental Claims related to the System that have not been fully and finally resolved, and to the Knowledge of Seller no claims of Environmental Liabilities have been threatened allegedly arising from or relating to the System that have not been fully and finally resolved.

(d) Hazardous Materials are not present at or on the System or Acquired Assets, there has been no Release of Hazardous Materials at, on or from any part of the System or the Acquired Assets, in each case in a manner that violates any Environmental Requirements or has resulted in, or could reasonably be anticipated to give rise to, Environmental Liabilities.

(e) No Lien or activity use limitation or institutional control has been recorded affecting any Acquired Assets by any Governmental Authority due to either the presence of any Hazardous Material on or off the Acquired Assets or a violation of any Environmental Requirement.

(f) There are no underground storage tanks on or at any of the Acquired Assets. Any underground storage tanks previously located at the Acquired Assets have been removed or otherwise closed, plugged and abandoned in compliance with applicable Environmental Requirements in effect at the time of such closure.

(g) No PCB Equipment is on or at any of the Acquired Assets. Any PCB Equipment that previously existed at the Acquired Assets has been flushed of polychlorinated byphenyls or has been removed and properly disposed of, in compliance with applicable Environmental Requirements, and any remaining PCB Equipment is labeled to the extent required under applicable Environmental Requirements and being managed in compliance with applicable Environmental Requirements.

(h) No Regulated Asbestos Containing Material exists in or on the Acquired Assets in an aggregate amount that would reasonably be expected to result in an Environmental Liability; and any Regulated Asbestos Containing Material is being managed in compliance with all applicable Environmental Requirements.

(i) Seller has delivered to Buyer (1) all material environmental site assessments or reasonable and accurate summaries thereof pertaining to the System, (2) all material compliance audits or compliance assurance reviews prepared within the previous five (5) years or reasonable and accurate summaries thereof relating to compliance with Environmental Requirements by the System, and (3) reasonable and accurate summaries of, or all material documents pertaining to, any known and unresolved Environmental Liabilities incurred in relation to the System, to the extent possessed by or under the reasonable control of Seller.

Section 4.12. Authorizations and Permits.

Schedule 4.12 sets forth the Authorizations and Permits of Seller that are currently in full force and effect; (ii) Seller has made true and complete copies of all Authorizations and Permits available to Buyer; and (iii) except as set forth on Schedule 4.12, Seller is in compliance with all terms, conditions and requirements of all Authorizations and Permits, except in each case where such violation or failure, individually or in the aggregate, would not have a Material Adverse

Effect, and no proceeding is pending or, to the Knowledge of Seller threatened relating to the revocation or limitation of any of the Authorizations or Permits, other than those revocations or limitations which do not individually or in the aggregate have a Material Adverse Effect.

Section 4.13. System Contracts.

(a) Schedule 4.13 sets forth a complete and accurate list of all the Assigned Contracts.

(b) Seller has made available to Buyer true and complete copies of all of the Assigned Contracts.

(c) All of the Assigned Contracts set forth on Schedule 4.13 are in full force and effect. Seller has not, nor to the Knowledge of Seller has any other party thereto, breached any material provision of or defaulted under the material terms of, nor does any condition exist which, with notice or lapse of time, or both, would cause Seller, or to the Knowledge of Seller, any other party, to be in default under any Assigned Contract.

Section 4.14. Compliance with Law; Litigation.

(a) Seller has operated and is operating the System in compliance, in all material respects, with all Laws, Authorizations and Permits and is not in breach of any Law, Authorization or Permit that would have a Material Adverse Effect on the operations of the System or on Buyer. There are no Authorizations or Permits from any Governmental Authority necessary for the operation of the System as currently being operated except for those Authorizations and Permits set forth on Schedule 4.12.

(b) Except at set forth on Schedule 4.14, there are no facts, circumstances, conditions or occurrences regarding the System that could reasonably be expected to give rise to any environmental claims or governmental enforcement actions that could reasonably be expected to have a Material Adverse Effect, and there are no past, pending or threatened environmental claims or governmental enforcement actions against Seller that individually or in the aggregate could reasonably be expected to have a Material Adverse Effect.

(c) Except at set forth on Schedule 4.14, no action, suit or proceeding, at law or in equity, or before or by any Governmental Authority, is pending nor, to the Knowledge of Seller, threatened against Seller before or at the time of Closing that could reasonably be expected to have a Material Adverse Effect on the operations of the System. As of the Effective Date, no action, suit or proceeding, at Law or in equity, or before or by any Governmental Authority, is pending nor, to the Knowledge of Seller, threatened against Seller which could materially affect the validity or enforceability of this Agreement.

Section 4.15. Broker's and Finder's Fees.

No broker, finder, or Person is entitled to any commission or finder's fee by reason of any agreement or action of Seller in connection with this Agreement or the transactions contemplated by this Agreement. Seller shall pay when due the fees and expenses of their financial and technical advisors. Seller has employed Public Financial Management, Inc., as municipal advisor to provide transaction structuring advice and to provide Seller with municipal advice relating to the sale of

the System. Seller shall pay all fees owed to Public Financial Management, Inc. in connection with the transactions contemplated by this Agreement.

Section 4.16. Title to the Acquired Assets; Sufficiency.

(a) Except as set forth on Schedule 4.16(a), Seller has good and marketable title to, all Real Property, and valid leasehold interest in or valid licenses or Easements to use and access, all of the Acquired Assets, free and clear of all Liens, other than Permitted Liens and Liens which will be fully and unconditionally released at or before Closing. The use of the Acquired Assets is not subject to any Liens, other than Permitted Liens, and such use does not encroach on the property or the rights of any Person.

(b) Except as set forth on Schedule 4.16(b), the Acquired Assets are sufficient for, and constitute all the assets, properties, business, goodwill and rights of every kind and description, and services required for, the continued conduct and operation of the System by Buyer in substantially the same manner as currently conducted and operated by Seller. Except for the Excluded Assets and except as set forth on Schedule 4.16(b), (i) the Acquired Assets, taken as a whole, comprise all the assets, properties, business, goodwill and rights of every kind and description used or held for use in, or useful or necessary to the operation of the System as currently operated by Seller, and (ii) there are no assets, properties, business, goodwill, rights or services used in the conduct or operation of the System that are owned by any Person other than Seller that will not be licensed or leased to Buyer under valid, current license arrangements or leases. None of the Excluded Assets are material to the System.

Section 4.17. Pending Development Plans.

Schedule 4.17 sets forth a full and complete list of all Pending Development Plans as of the Effective Date. Each Pending Development Plan, if consummated could result in the expansion of the Service Area. Seller provides no assurances whatsoever that any development or expansion of the Service Area associated with any Pending Development Plan will actually be undertaken or completed. The Parties expect that Schedule 4.17 will change from time to time between the Effective Date and Closing, and the Seller shall provide updates to Schedule 4.17 pursuant to Section 9.03.

Section 4.18. Land Development Agreements/Financial Security Agreements

Schedule 4.18 sets forth a list of all Land Development / Financial Security Agreements existing as of the Effective Date between Seller and any third party.

ARTICLE V. REPRESENTATIONS AND WARRANTIES OF BUYER

Buyer makes only the representations and warranties which are set forth in this Article V.

As a material inducement to Seller to enter into this Agreement and to consummate the transactions contemplated by this Agreement, Buyer represents and warrants to Seller, as of the Effective Date and as of the Closing Date (except to the extent any of the following representations and warranties specifically apply or relate to another date, in which event such representations and warranties shall be true and correct as of such other date), as follows:

Section 5.01. Organization.

Buyer is duly organized, validly existing and in good standing under the laws of the state of its organization.

Section 5.02. Authorization and Validity of Agreement.

Buyer has the power and authority to enter into this Agreement and to do all acts and things and execute and deliver all other documents as are required hereunder to be done, observed or performed by it in accordance with the terms of this Agreement. This Agreement has been duly authorized, executed and delivered by Buyer and is a valid and legally binding obligation of Buyer, enforceable against it in accordance with the terms hereof, subject only to applicable bankruptcy, insolvency and similar laws affecting the enforceability of the rights of creditors generally and to general principles of equity.

Section 5.03. No Conflict or Violation.

The execution and delivery of this Agreement by Buyer, the consummation of the transactions contemplated hereby and the performance by Buyer of the terms, conditions and provisions hereof has not and will not contravene or violate or result in a material breach of (with or without the giving of notice or lapse of time, or both) or acceleration of any material obligations of Buyer under (i) any Law, (ii) any material agreement, instrument or document to which Buyer is a party or by which it is bound or (iii) the articles, bylaws or governing documents of Buyer.

Section 5.04. Consents and Approvals.

Schedule 5.04 sets forth a list of each consent, waiver, authorization or approval of any Governmental Authority, or of any other Person, and each declaration to or filing or registration with any Governmental Authority required in connection with the execution and delivery of this Agreement by Buyer or the performance by Buyer of its obligations hereunder.

Section 5.05. Broker's and Finder's Fees.

No broker, finder or third party is entitled to any commission or finder's fee in connection with this Agreement or the transactions contemplated by this Agreement.

Section 5.06. Financial Wherewithal.

Upon Closing, and after giving effect to the consummation of the transactions contemplated hereby and the incurrence of any indebtedness in connection therewith, Buyer shall have the financial ability and will have sufficient working capital for its needs and anticipated needs to operate the System as a certificated public utility system regulated by the PaPUC, authorized, among things, to provide wastewater utility services to retail residential, commercial and industrial customers in the System.

Section 5.07. Sufficient Funds.

Buyer shall have sufficient funds available at Closing to consummate the transactions contemplated by this Agreement, to pay the Purchase Price in accordance with Article III and expenses related to the transactions contemplated by this Agreement, and on and after Closing, to generally provide ownership, operation and capital for the operations and capital needs of the System following the Closing, and assuring that the customers of the System will receive safe, adequate and reliable wastewater service equal to or better than such customers would have received without the transactions contemplated by this Agreement and at all times consistent with the provisions of the Pennsylvania Public Utility Code, 66 Pa. C. S. § 101 *et seq*, and Law.

Section 5.08. Independent Decision.

Except as expressly set forth in this Agreement, or any of the related agreements, Buyer acknowledges that (a) neither Seller nor any other Person has made any representation or warranty, express or implied, as to the accuracy or completeness of the System or information provided to Buyer, and (b) neither Seller nor any other Person shall have or be subject to any liability to Buyer or any other Person resulting from the distribution to Buyer, or Buyer use of, any information regarding the System or Acquired Assets that has been furnished or made available to Buyer and its Representatives.

Section 5.09. Scheduled Matters.

Buyer acknowledges that: (a) the inclusion of any matter on any Schedule shall not be deemed an admission by Seller that such listed matter is material or that such listed matter has or could have a material adverse effect or constitutes a material liability with respect to the Acquired Assets; (b) matters reflected in the Schedules are not necessarily limited to matters required by this Agreement to be reflected in such Schedules; and (c) such additional matters are set forth for informational purposes only and do not necessarily include other matters of a similar nature.

Section 5.10. Independent Investigation.

Buyer acknowledges that it has conducted an independent investigation of the financial condition, assets, liabilities, properties and projected capital needs and operations of the System in making its determination as to the propriety of the transaction contemplated by this Agreement and, in entering into this Agreement and related agreements, has relied solely on the results of its investigation and on the representations and warranties of Seller expressly contained in Article IV of this Agreement.

Section 5.11. Litigation.

Buyer is not in breach of any Law that could have a material adverse effect on the operations of the System or Buyer. Neither Buyer nor any Affiliate of Buyer is listed on any of the following lists maintained by the Office of Foreign Assets Control of the United States Department of the Treasury, the Bureau of Industry and Security of the United States Department of Commerce or their successors, or on any other list of Persons with which Seller may not do business under Law: the Specially Designated Nationals List, the Denied Persons List, the Unverified List, the

Entity List and the Debarred List. Except as set forth on Schedule 5.11, no action, suit or proceeding, at law or in equity, or before or by any Governmental Authority, is pending nor, to the Knowledge of Buyer, threatened against Buyer before or at the time of Closing, which will have a material adverse effect on (i) the transactions contemplated by this Agreement or (ii) the validity or enforceability of this Agreement.

ARTICLE VI.

TITLE TO REAL PROPERTY; EASEMENTS

Section 6.01. Evidence of Title.

Subject to Section 6.06, with respect to all Real Property, Buyer shall obtain at its sole cost and expense a commitment for a Title Policy (the "Title Commitment"), issued by a title insurance company selected by Buyer and licensed to insure title to real property by the Commonwealth of Pennsylvania (the "Title Company"). Promptly following the Effective Date, Buyer shall order the Title Commitment from the Title Company and shall provide Seller evidence of the order. Notwithstanding anything to the contrary in Section 6.02(a), a purported Objection Notice is void with respect to any parcel of Real Property if, within thirty (30) Business Days after the Effective Date, Buyer has not ordered the Title Commitment from the Title Company for such parcel of Real Property and provided Seller with evidence of the order.

Section 6.02. Objections to Title.

(a) Notice of Objections. Within thirty (30) Business Days of Buyer's receipt of the Title Commitment for any of the parcels of Real Property, Buyer shall deliver to Seller a true, correct and complete copy of the Title Commitment and true, correct, complete and legible copies of all exception documents listed in the Title Commitment, along with Buyer's notice to Seller of any exceptions to title set forth on Schedule B of the Title Commitment to which Buyer objects (the "Objection Notice"). The exceptions listed in the Title Objection Notice are referred to as the "Title Objection Items." None of the following are Title Objection Items: (a) Permitted Liens, (b) items that pertain to Buyer or any requirements, conditions or obligations of Buyer, (c) matters of record that are set forth in the Title Commitment and adversely restrict or prevent the use of the Real Property in the operation of the System and (d) standard Title Company exceptions (such as the "survey" exception). Any Objection Notice which does not include a true, correct and complete copy of the Title Commitment and true, correct, complete and legible copies of any and all exception documents listed in the Title Commitment is void. If Buyer provides Seller with an Objection Notice, Seller shall use its commercially reasonable efforts to have all of the Title Objection Items cured, satisfied or released of record, or bond over, by the Title Company ("Cure" or "Cured") before or as of the Closing. At or before the Closing, Seller shall deliver written evidence to Buyer, in form and substance reasonably satisfactory to Buyer and at Seller's cost and expense, evidencing that Seller has Cured all Title Objection Items.

(b) Liens. Without limiting Seller's obligations pursuant to Section 6.02(a), before or as of the Closing, Seller shall, at its sole cost and expense, Cure any Lien encumbering the Real Property which can be Cured by the payment of money (other than Permitted Liens).

(c) Title Endorsements/Survey. Buyer shall pay for any endorsements required by Buyer or any mortgagee of Buyer to the Title Policy. If any survey is required by Buyer or its mortgagee, either as a condition to any endorsement or otherwise, Buyer shall pay to obtain the survey and all related costs and expenses. If Buyer obtains a survey of any Real Property and wants the deed to contain the legal description based on a survey, if the same is not identical to the legal description contained in Seller's deed of record, Seller is not obligated to include the same in the deed to Buyer unless the survey is certified to Seller and such description is included in the deed on a "quitclaim" basis only and without warranty of title.

(d) License at Closing. Seller shall provide Buyer with a license agreement granting Buyer a license in all of Seller's rights to access Real Property in order to allow Buyer to operate and maintain the System until such time as Buyer is provided title to such Real Property as provided for in this Agreement. For the avoidance of doubt, Seller shall provide such title as soon as reasonably practicable in accordance with Section 6.01.

(e) Insurable Claims. To the extent any Claim for Losses under Article VIII is an Insurable Claim, Buyer shall assert and pursue with reasonable diligence the Insurable Claim against the Title Company (which includes commencing litigation and diligently prosecuting the Insurable Claim to judgment) before pursuing a Claim for Losses under Article VIII. Following a non-favorable judgment that substantially denies the relief sought by Buyer from the Title Company in connection with the Insurable Claim (each a "Non-Favorable Judgment"), Buyer may, following such Non-Favorable Judgment, pursue Seller with a Claim for Losses under Article VIII (any Claim against Seller following an attempted Insurable Claim against the Title Company is a "Residual Title Claim"). Notwithstanding anything to the contrary in Article VIII, Buyer must assert a Claim for Losses based upon a Residual Title Claim within sixty (60) day of the Non-Favorable Judgment. For purposes of this Section 6.02(d), an "Insurable Claim" means a Claim that: (i) arises out of Buyer's discovery of a title defect or encumbrance with respect to any of the Real Property following the Closing Date that materially restricts or prevents the use of such Real Property in the operation of the System; and (ii) is a claim against the Title Company under the Title Policy. Buyer acknowledges that any Claims that it could otherwise bring as a breach of a covenant of title under the special warranty deed to the Real Property is included within the Claim for Losses under Article VIII and is subject to the terms of this Section 6.02(d) of first pursuing the same as an Insurable Claim.

Section 6.03. Title Expenses.

Irrespective of whether Closing occurs, Buyer shall pay all costs and expenses for obtaining the Title Commitment, Title Policy and any survey. Seller shall pay for all expenses to release, satisfy or bond over any Liens, and to effect the Cure of any Title Objection Items that Seller undertakes to Cure, including the cost of any title endorsement to insure Buyer against any adverse effect of such Title Objection Items.

Section 6.04. UCC Search; Releases.

Not later than sixty (60) Business Days after the Effective Date, Buyer shall obtain at its sole cost and expense a Uniform Commercial Code search against Seller covering any of the personal property or fixtures included among the Acquired Assets from the Office of the Secretary

of the Commonwealth of Pennsylvania and the Recorder of Chester County, Pennsylvania (the "UCC Search"). On or before the Closing, Seller shall obtain at its sole cost and expense releases of any and all security interests in any of the Acquired Assets which are not Permitted Liens. Seller shall provide the form of the releases of any security interests to Buyer on or before the Closing Date.

Section 6.05. Easements.

(a) Promptly after the Effective Date and before the Closing, Seller shall, at its sole cost and expense, cause an abstractor selected by Seller and reasonably acceptable to Buyer and the Title Company (the "Abstractor") to perform a search of the public land records of Chester County, based on Seller's records and plans of the System (and such other sources of information as are reasonably related thereto), by means of searching the grantee index in the names of Seller and such other searches as the Abstractor may reasonably make, to (i) identify and provide Buyer with title information on all recorded Easements, and (ii) together with Seller, identify all Missing Easements. During this process, as the Abstractor provides written search results to Seller (including updated versions of the Abstractor search result chart), Seller will promptly provide the same to Buyer for its review, and Seller shall, or shall cause the Abstractor to, provide Buyer with periodic updates (which shall occur no less frequently than bi-weekly) on the status of the activities set forth in the previous sentence. Promptly after the Effective Date, Seller shall engage an engineer to develop a map of all collection pipes, services, pump stations, manholes of the System and identify each parcel within the Service Area that Seller's sanitary wastewater conveyance facilities encroaches upon private property for use in connection with the Abstractor's report to identify the Missing Easements.

(b) Notice of Objections. Within forty five (45) days of Buyer's receipt from the Seller (or the Abstractor or an engineer) of the information described in subsection 6.05(a), Buyer shall deliver to Seller written notice identifying the encumbrances on the Easements that, in Buyer's reasonable opinion, could materially and adversely restrict or prevent the use of the Easements in the operation of the System, (an "Easement Objection Notice"). Buyer shall not be permitted to include in its Easement Objection Notice any encumbrances that: (a) are Permitted Liens, (b) pertain to the Buyer or any requirements, conditions or obligations of the Buyer, or (c) are matters of record and set forth in the Abstractor's search results that do not, in Buyer's reasonable opinion, materially and adversely restrict or prevent the use of the Easements in the operation of the System (specifically including mortgages or other instruments securing indebtedness incurred by the owner of the land burdened by the Easement) (such exceptions objected to in the Objection Notice, the "Easement Objection Items." If Buyer provides the Seller with an Easement Objection Notice, the Seller shall use commercially reasonable efforts to have the Easement Objection Items Cured, prior to or as of the Closing. If Seller is unable to Cure any Easement Objection Item, Seller shall grant Buyer a license pursuant to Section 6.05(d) in all of Seller's rights necessary to access Easements and operate and maintain the System until such time as Buyer is provided title to such Easement as provided for in this Agreement.

(c) If during the process of Abstractor's review and investigation of the Chester County land records, Seller determines that there is a Missing Easement, Seller shall take any and all actions (including the use of its power of condemnation) to obtain any Missing Easements so that the same may be sold, assigned, transferred and conveyed to Buyer at the Closing pursuant to the terms and

conditions of this Agreement. All costs and expenses incurred in connection with obtaining each Missing Easement (including any payment to a landowner in connection with condemnation, in lieu of condemnation or otherwise) shall be paid by Seller and no additional consideration shall be payable by Buyer for any Missing Easement. If Seller has not obtained all Missing Easements by the date that is sixty (60) Business Days after the date that Abstractor has completed its review of the County land records and delivered the last results to Seller (the "Abstract Completion Date"), then, no later than thirty (30) Business Days after the Abstract Completion Date (but in any event no later than thirty (30) days before the Closing), Seller shall commence and file in the Court of Common Pleas, Chester County, a condemnation or eminent domain proceeding to obtain any and all such Missing Easements. For the purposes of clarity, upon obtaining each Missing Easement (including upon the final resolution of a condemnation proceeding), each Missing Easement that has been acquired or obtained by Seller will be considered an Easement.

(d) License at Closing. Seller shall provide Buyer with a license agreement granting Buyer a license in all of Seller's rights to access Easement in order to allow Buyer to operate and maintain the System until such time as Buyer is provided title to such Easement as provided for in this Agreement.

(e) Escrow at Closing for Missing Easements. For all of the Missing Easements listed on attached Schedule 6.05(e) as of the Closing Date, Seller will have additional time following the Closing Date to secure and assign and transfer the Missing Easements to Buyer. Seller shall diligently pursue and deliver the Missing Easements on or before the third (3rd) anniversary of the Closing Date, subject to any extension as permitted by Escrow Agreement, in the form attached as Exhibit C, that will require, among other things, the funding of an escrow account in the amount of Two Thousand Dollars ($2,000) per Missing Easements listed on attached Schedule 6.05(e) as of the Closing Date to secure the Seller's obligations under this Agreement and the Escrow Agreement.

Section 6.06. Unscheduled Property.

The Parties acknowledge that Seller may own interests in or have the legal right to use or occupy the Real Property and Easements that is necessary or essential to the operation of the System and that is not set forth on Schedule 4.09 (the "Unscheduled Real Property"). If the Parties discover before or after the Closing Date, one or more parcels of Unscheduled Real Property, the discovering Party shall notify the non-discovering Party of the discovery. In addition to its obligations in Section 2.03, Seller shall convey, assign or otherwise transfer any rights to each parcel of Unscheduled Real Property, without additional consideration payable by Buyer, in such a manner as to provide Buyer with reasonable assurances that Buyer may use or occupy the Unscheduled Real Property as it was used by Seller as of the Effective Date.

ARTICLE VII.

OTHER AGREEMENTS

Section 7.01. Taxes.

Seller shall pay any and all Taxes, if any, arising out of the ownership of the Acquired Assets and out of the operation of the System before the Closing.

Section 7.02. Cooperation on Tax Matters.

Seller shall furnish or cause to be furnished to Buyer, as promptly as practicable, whether before or after the Closing Date, such information and assistance relating to the System as is reasonably necessary for the preparation and filing by Buyer of any filings relating to any Tax matters.

Section 7.03. Rates.

(a) Rates. Buyer shall implement the Seller's sanitary wastewater base rates then in effect at Closing, as set forth on Schedule 7.03(a) (the "Base Rate") as Buyer's effective sanitary wastewater base rates, provided that the rates set forth on Schedule 7.03(a) (at Closing) shall not be lower than those in effect on the date the Effective Date. Buyer shall not propose to increase Base Rates until after the third anniversary of the Closing Date. Buyer intends to bill customers on a monthly basis instead of annual billing, which Buyer will prorate accordingly. At and after the Closing, Buyer shall charge and collect its then-existing miscellaneous fees and charges and apply its then-existing rules and regulations for wastewater service in the Buyer's tariff (or rules and regulations), as amended from time to time, within the Service Area.

(c) PaPUC Approval. The Buyer shall include the rate provisions of Sections 7.03(a) in its requested PaPUC Governmental Approval.

Section 7.04. Buyer Taxpayer.

From and after the Closing Date, Buyer acknowledges that, upon conveyance of the Acquired Assets to Buyer, Buyer will be subject to, among other Taxes, real estate Taxes, which Buyer shall pay when due.

Section 7.05. PaPUC Approval.

(a) Promptly after the Effective Date, Buyer shall timely initiate and faithfully prosecute the necessary proceedings to obtain from the PaPUC (i) the issuance of certificates of public convenience to Buyer to provide wastewater services in the Service Area and (ii) the approval of the acquisition of the System by Buyer under terms and conditions that are reasonably acceptable to Seller and Buyer. Seller shall cooperate with and assist Buyer in proceedings before the PaPUC.

(b) Buyer and Seller hereby agree that the procedures for determining fair market value of the System and Acquired Assets outlined in subsection (a) of Section 1329 of Title 66 of the

Pennsylvania Consolidated Statutes ("Section 1329") shall be utilized and filed with the PaPUC as contemplated by Section 1329.

(c) The fees and expenses related to engaging the licensed engineer for such Section 1329 determination shall be paid one-half (50%) by Buyer and one-half (50%) by Seller.

(d) Buyer, in Buyer's first base rate proceeding with respect to the System following the Closing, shall propose the use of statutory and regulatory mechanisms available to benefit the Buyer's acquired customers for ratemaking purposes.

Section 7.06. Remedies for Breach of Article VII Agreements.

If Buyer breaches any of the covenants and agreements set forth in this Article VII following Closing, in addition to all other rights and remedies available at law or in equity, including specific performance and/or injunctive relief, Seller may commence proceedings before the PaPUC seeking enforcement of such covenants and agreements.

Section 7.07. Operation and Maintenance of the MS4 System.

Subject to Law, Seller, shall at all times maintain ownership of its MS4 System and Stormwater System Assets. Seller will maintain any NPDES permits related to the Stormwater System Assets.

Section 7.08. Utility Valuation Experts.

Buyer and Seller shall each be responsible for the costs associated with their respective Utility Valuation Expert for the preparation and completion of their respective Utility Valuation Expert's appraisal report and any additional work by their respective Utility Valuation Expert necessary to assist in the processing and prosecution of the application to the PaPUC in regard to this transaction under Section 1329.

Section 7.09. EDU Allocations.

In connection with EDU allocations, Buyer shall at all times act in compliance with Seller's ordinances, including those with respect to zoning and land use, the Seller's Act 537 plan and the Seller's comprehensive plans.

Section 7.10 Act 537 Plan.

(a) Buyer acknowledges that Seller previously drafted and committed to an Act 537 Plan under the Pennsylvania Sewage Facilities Act (the original plan established in 1995, together with all subsequent amendments, the "Plan"), which has been made available to Buyer and which may be amended pursuant to Section 12.08 hereunder. Buyer understands that the Plan contains obligations and commitments, as more fully set forth in the Plan to complete certain improvements and upgrades to the System (the "System Improvements"). Buyer shall accept and complete all of the System Improvements as Seller agreed to complete under the Plan.

(b) Buyer acknowledges the Seller has jurisdiction over sewage facilities planning and sewer service through the Plan and its Act 537 planning program, zoning, subdivision and land development ordinances and comprehensive land use planning policies. Buyer and Seller shall cooperate with respect to current and future sewage facilities planning and sewer service consistent with the provisions of this Section 7.10.

(c) Subject to PaPUC approval of the Service Area as specified in Section 7.10, Buyer shall extend sewer lines and provide sewage collection and treatment services to properties within the Service Area in a manner consistent with the Plan and the Buyer's Tariff. Pursuant to Section 12.08, Seller will confer with Buyer concerning any amendment to the Plan that would affect the provision of sewage collection and treatment services within the Service Area. Seller will not propose or adopt any amendment to the Plan that would reduce the Service Area or divert wastewater flows generated from properties located within the Service Area from being served by the System without the approval of Buyer.

(d) Buyer will not request, pursue, or implement expansions of the System within the Seller's border beyond the current Service Area (that would trigger a Plan amendment) without the prior written approval of Seller and the PaDEP. Seller shall promptly notify and confer with Buyer, and consider Buyer's comments, concerning any proposed Plan amendment (including any sewage facilities planning module) that would involve the provision of sewage collection and treatment services by the System to area or properties outside of the Service Area. With respect to any such potential Plan amendment, Seller and Buyer shall cooperate in evaluating alternatives for provision of sewage services to such areas consistent with the requirements of 25 Pa Code Ch. 71, including consideration of the technical feasibility, economic feasibility and cost effectiveness, consistency with the objectives and policies of plans and requirements of 25 Pa. Code Ch. 71.21(a)(5), consistency with municipal land use plans and ordinances, subdivision ordinances and other ordinances and plans for controlling land use and development, technically and administratively able to be implemented, and other factors required under Act 537 or under Buyer's Tariff.

(e) If Seller and Buyer each determine that the provision of sewage collection and treatment services by the System to certain areas or properties outside of the Service Area is technically feasible, economically feasible and cost effective, and meets all of the requirements set forth in Act 537 and 25 Pa. Code Ch. 71, the Seller shall amend the Plan to include such identified areas and properties in the Service Area. If Seller amends the Plan pursuant to this subsection and such amendment is approved by PaDEP, (i) Buyer shall request that the modified Service Area be approved by PaPUC; and (ii) subject to PaPUC approval of the inclusion of such modified Service Area, Buyer shall extend sewer lines and provide sewage collection services to properties within such Service Area in a manner consistent with the Plan and Buyer's Tariff.

Section 7.11 Compliance and Operational Reports.

After the Effective Date and through the Closing Date, Seller shall provide Buyer with a periodic report to the person designated by Buyer, disclosing any and all material compliance or operational deficiencies that occurred during the previous month.

Section 7.12 Required Sewer Projects / Malvern Hunt System.

(a) Subject to extensions set forth in subsection (b) below, on or prior to the later to occur of: (i) the first anniversary of the Closing Date; or (ii) first anniversary following the date on which Seller secures and assigns to Buyer: all permits required from any Governmental Authority having jurisdiction over the Required Sewer Projects or the completion thereof; and all easements or other property rights required to complete the Required Sewer Projects, Buyer shall complete the sewer projects set forth on Schedule 7.12 (the "Required Sewer Projects") and a map of the expanded Service Area anticipated to result from the Required Sewer Projects as set forth on Schedule 7.12. Each Required Sewer project is deemed complete only upon notice of Seller's reasonable satisfaction of completion. After the Closing Date and through the completion date of each Required Sewer Project, Buyer shall provide Seller with a periodic report to the person designated by Seller, with an update and status report regarding each Required Sewer Project.

(b) The one (1) year deadline set forth in subsection (a) above shall be extended for any delays resulting from the discovery of concealed subsurface conditions, including but not limited to, the presence of rock or infrastructure of other utilities requiring relocation.

(c) Seller shall be responsible for all work to decommission the Excluded Assets specified on Schedule 2.02(h) (the "Malvern Hunt System") and for constructing all gravity and / or force main piping systems required to divert sewage flow into the existing collection system included with the Acquired Assets, all in compliance with applicable Laws. The decommissioning work conducted by Seller shall include upgrade of existing pumping systems if needed. Seller shall be responsible for post-decommissioning water quality sampling of existing groundwater monitoring wells as well as preparation of a final closure report to PA DEP if required by DEP.

Section 7.13 Governance Matters.

Effective on the Closing Date, Seller shall:

(i) provide Buyer with all financial information and other reports or communications received by Seller from the Valley Forge Sewer Authority within two (2) Business Days of receipt of such information by Seller from the Valley Forge Sewer Authority; and

(ii) appoint, as Seller representative, the person identified by Buyer to the joint board pursuant to the Valley Forge Sewage Treatment Plant Agreement and any successor to any subsequent term.

ARTICLE VIII.

INDEMNIFICATION

Section 8.01. Survival.

All representations and warranties contained in this Agreement shall survive until twelve (12) months following the Closing Date, except that (a) the representations and warranties of Seller set forth in Section 4.01 (Organization), Section 4.02 (Power and Authority), Section 4.03 (Enforceability) and Section 4.15 (Brokers' and Finders' Fees) (collectively, the "Seller

Fundamental Representations") shall survive the Closing indefinitely or until the latest date permitted by Law, and (b) the representations and warranties of Buyer set forth in Section 5.01 (Organization), Section 5.02 (Authorization and Validity of Agreement), and Section 5.05 (Brokers' and Finders' Fees) (collectively, the "Buyer Fundamental Representations") shall survive the Closing indefinitely or until the latest date permitted by Law. The covenants and agreements of the Parties contained in this Agreement survive the Closing indefinitely or for the shorter period explicitly specified therein, except that for those covenants and agreements that survive for a shorter period, breaches thereof survive indefinitely or until the latest date permitted by Law. Notwithstanding the preceding sentences, (x) any breach of representation, warranty, covenant or agreement in respect of which indemnity may be sought under this Agreement shall survive the time at which it would otherwise terminate pursuant to the preceding sentences, if notice of the inaccuracy or breach thereof giving rise to such right of indemnity shall have been given to the Party against whom such indemnity may be sought before such time, and (y) nothing contained in this Section 8.01 shall limit in any way any rights a Party may have to bring claims grounded in fraud, intentional misrepresentation or willful misconduct, which rights shall survive the Closing indefinitely.

Section 8.02. Indemnification by Seller.

To the maximum extent permitted by Law and subject to the terms and conditions of this Article VIII, Seller shall indemnify, defend and hold harmless, Buyer and its successors and Affiliates and their respective employees, officers, directors, trustees and agents (the "Buyer Indemnified Persons"), from and against any and all claims for Losses arising from or relating to: (a) any misrepresentation as to, or any material inaccuracy in, any of the representations and warranties of Seller contained in this Agreement or in any exhibit, schedule, certificate or other instrument or document furnished or to be furnished by Seller before the Closing pursuant to this Agreement (without regard to any materiality, Material Adverse Effect or related qualifications in the relevant representation or warranty (except where such provision requires disclosure of lists of items of a material nature or above a specified threshold)); (b) any breach or nonfulfillment of any of the covenants or agreements of Seller contained in this Agreement or in any exhibit, schedule, certificate or other instrument or document furnished or to be furnished by Seller before the Closing pursuant to this Agreement; or (c) any Excluded Liability or Excluded Asset.

Section 8.03. Indemnification by Buyer.

To the maximum extent permitted by Law and subject to the terms and conditions of this Article VIII, Buyer shall defend, indemnify and hold harmless Seller and its successors and Affiliates and each of their respective employees, officers, directors and agents (the "Seller Indemnified Persons") from and against any and all claims for Losses arising from or relating to: (a) any material misrepresentation as to, or any material inaccuracy in, any of the representations and warranties of Buyer contained in this Agreement or in any exhibit, schedule, certificate or other instrument or document furnished or to be furnished by Buyer pursuant to this Agreement; (b) any material breach of any of the covenants or agreements of Buyer contained in this Agreement or in any exhibit, schedule certificate or other instrument or document furnished or to be furnished by Buyer pursuant to this Agreement; (c) any Assumed Liability as and when payment and performance is due, including without limitation any liability related to any claims by any Governmental Authority; (d) Buyer's actions involving Environmental Laws, Hazardous

Materials or environmental claims from and after the Closing Date; or (e) the ownership, operation or control of the Acquired Assets or the System from and after the Closing Date.

Section 8.04. Indemnification Procedure.

(a) Third Party Claims. If any Indemnified Party receives notice of the assertion or commencement of any action, suit, claim or other legal proceeding made or brought by any Person who is not a Party or an Affiliate of a Party or a Representative of a Party (a "Third Party Claim") against such Indemnified Party with respect to which the Indemnifying Party may be obligated to provide indemnification under this Agreement, the Indemnified Party shall promptly notify the Indemnifying Party thereof. The failure to give such prompt notice shall not, however, relieve the Indemnifying Party of its indemnification obligations, except and only to the extent that the Indemnifying Party forfeits material rights or material defenses by reason of such failure. Such notice by the Indemnified Party shall describe the Third Party Claim in reasonable detail and shall indicate the estimated amount, if reasonably practicable, of the Loss that has been or may be sustained by the Indemnified Party. The Indemnifying Party may participate in, or by giving notice to the Indemnified Party (and subject to the other requirements herein) to assume the defense of any Third Party Claim at the Indemnifying Party's expense and by the Indemnifying Party's own counsel (which counsel shall be reasonably acceptable to the Indemnified Party), so long as (i) the Indemnifying Party notifies the Indemnified Party, within ten (10) Business Days after the Indemnified Party has given notice of the Third Party Claim to the Indemnifying Party (or by such earlier date as may be necessary under applicable procedural rules in order to file a timely appearance and response) that the Indemnifying Party is assuming the defense of such Third Party Claim, and if the Indemnifying Party assumes control of such defense it must first agree and acknowledge in such notice that the Indemnifying Party is fully responsible (with no reservation of any rights other than the right to be subrogated to the rights of the Indemnified Party) for all Losses relating to such Third Party Claim, (ii) the Indemnifying Party conducts the defense of the Third Party Claim actively and diligently and at its own cost and expense, and (iii) the Third Party Claim (A) does not involve injunctive relief, specific performance or other similar equitable relief, any claim in respect of Taxes, any Governmental Authority, any criminal allegations, or any potential damage to the goodwill, reputation or overriding commercial interests of Buyer or its Affiliates, (B) is not one in which the Indemnifying Party is also a party and joint representation would be inappropriate or there may be legal defenses available to the Indemnified Party which are different from or additional to those available to the Indemnifying Party, or (C) does not involve a claim which, upon petition by the Indemnified Party, the appropriate court rules that the Indemnifying Party failed or is failing to vigorously prosecute or defend. The Indemnified Party shall reasonably cooperate in good faith in such defense. If the Indemnifying Party assumes the defense of any Third Party Claim, subject to Section 8.04(b), it may take such action as it deems necessary to avoid, dispute, defend, appeal or make counterclaims pertaining to any such Third Party Claim in the name and on behalf of the Indemnified Party. The Indemnified Party may, at its own cost and expense, participate in the defense of any Third Party Claim with counsel selected by it subject to the Indemnifying Party's right to control the defense thereof. If the Indemnifying Party elects not to compromise or defend such Third Party Claim or fails to promptly notify the Indemnified Party in writing of its election to defend as specified in this Agreement, the Indemnified Party may, subject to Section 8.04(b), pay, compromise, and defend such Third Party Claim and seek indemnification for any and all Losses based upon, arising from or relating to such

Third Party Claim. Seller and Buyer shall reasonably and in good faith cooperate with each other in all reasonable respects in connection with the defense of any Third Party Claim, including making available records relating to such Third Party Claim and furnishing, without expense (other than reimbursement of actual out-of-pocket expenses) to the defending party or management employees of the non-defending party as may be reasonably necessary for the preparation of the defense of such Third Party Claim.

(b) Settlement of Third Party Claims. Notwithstanding any other provision of this Agreement, the Indemnifying Party shall not enter into settlement of any Third Party Claim without the prior written consent of the Indemnified Party (which consent shall not be unreasonably withheld or delayed), except as specified in this Section 8.04(b). If a firm offer is made to settle a Third Party Claim without leading to liability or the creation of a financial or other obligation on the part of the Indemnified Party and provides, in customary form, for the unconditional release of each Indemnified Party from all liabilities and obligations in connection with such Third Party Claim and the Indemnifying Party desires to accept and agree to such offer, the Indemnifying Party shall promptly notify the Indemnified Party. If the Indemnified Party fails to consent to such firm offer within fifteen (15) days after its receipt of such notice, the Indemnified Party may continue to contest or defend such Third Party Claim and in such event, the maximum liability of the Indemnifying Party as to such Third Party Claim shall not exceed the amount of such settlement offer. If the Indemnified Party fails to consent to such firm offer and also fails to assume defense of such Third Party Claim, the Indemnifying Party may settle the Third Party Claim upon the terms set forth in such firm offer to settle such Third Party Claim. If the Indemnified Party has assumed the defense pursuant to Section 8.04(a), it shall not agree to any settlement without the written consent of the Indemnifying Party (which consent shall not be unreasonably withheld or delayed).

(c) Direct Claims. Any claim by an Indemnified Party with respect to any Loss which does not arise or result from a Third Party Claim (a "Direct Claim") shall be asserted by the Indemnified Party giving the Indemnifying Party prompt notice thereof. The failure to give such prompt notice shall not, however, relieve the Indemnifying Party of its indemnification obligations, except and only to the extent that the Indemnifying Party forfeits material rights or material defenses by reason of such failure. Such notice by the Indemnified Party shall describe the Direct Claim in reasonable detail and shall indicate the estimated amount, if reasonably practicable, of the Losses that have been or may be sustained by the Indemnified Party. The Indemnifying Party shall have thirty (30) days after its receipt of such notice to respond in writing to such Direct Claim. During such thirty (30) day period, the Indemnified Party shall reasonably cooperate and assist the Indemnifying Party in determining the validity and amount of such Direct Claim. If the Indemnifying Party does not so respond within such thirty (30) day period, by delivery of notice disputing the basis or amount of the Direct Claim, the Indemnifying Party shall be deemed to have rejected such claim, in which case the Indemnified Party shall be free to pursue such remedies as may be available to the Indemnified Party on the terms and subject to the provisions of this Agreement. If the Indemnifying Party has timely disputed its indemnity obligation for any Losses with respect to such Direct Claim, the Parties shall proceed in good faith to negotiate a resolution of such dispute and, if not resolved through negotiations, such dispute may be resolved by litigation in an appropriate court of jurisdiction determined pursuant to this Agreement.

Section 8.05. Limitations on Indemnification Obligations.

(a) Subject to the other limitations contained in this Section 8.05, neither Buyer nor Buyer Indemnified Persons shall seek indemnification pursuant to Section 8.02(a) (other than for an intentional breach of any agreement or covenant contained in this Agreement or for breach of Seller's Fundamental Representations) unless the aggregate amount of Losses incurred by Buyer and Buyer Indemnified Persons under this Agreement exceeds one (1) percent of the Purchase Price in the aggregate (the "Threshold Amount"), in which case Seller will then be liable only for Losses in excess of the Threshold Amount, except that the limitations contained in this Section 8.05(a) shall not apply to any claims for indemnification based on fraud, intentional misrepresentation or willful misconduct.

(b) Subject to the other limitations contained in this Section 8.05 neither Seller nor the Seller Indemnified Persons shall seek indemnification pursuant to Section 8.03(a) (other than for an intentional breach of any agreement or covenant contained in this Agreement) unless the aggregate amount of Losses incurred by Seller and Seller Indemnified Persons under this Agreement exceeds the Threshold Amount, in which case Buyer will then be liable only for Losses in excess of the Threshold Amount, except that the limitations contained in this Section 8.05(a) shall not apply to any claims for indemnification based on fraud, intentional misrepresentation or willful misconduct.

(c) Except in the case of fraud, intentional misrepresentation or willful misconduct (for which all applicable legal and equitable remedies will be available to Buyer), the Buyer Indemnified Parties shall only be entitled to assert claims under Section 8.02(a) (other than claims with respect to breaches of any of the Seller Fundamental Representations, which shall not be limited by this Section 8.05(c)) up to the aggregate amount of 5% of Purchase Price (the "Liability Cap"), which shall represent the sole and exclusive remedy of Buyer and the other Buyer Indemnified Parties for any such claims under Section 8.02(a) (other than claims with respect to breaches of any of the Seller Fundamental Representations or in the case of fraud, intentional misrepresentation or willful misconduct which shall not be subject to the Liability Cap, but shall be capped at the Purchase Price).

(d) Payments by an Indemnifying Party pursuant to Section 8.02 or Section 8.03 in respect of any Loss shall be limited to the amount of any liability or damage that remains after deducting therefrom any insurance proceeds and any indemnity, contribution or other similar payment received or reasonably expected to be received by the Indemnified Party in respect of any such claim. The Indemnified Party shall use its commercially reasonable efforts to recover under insurance policies or indemnity, contribution or other similar agreements for any Losses before seeking indemnification under this Agreement.

(e) Payments by an Indemnifying Party pursuant to Section 8.02 or Section 8.03 in respect of any Loss shall be reduced by an amount equal to any Tax benefit realized or reasonably expected to be realized as a result of such Loss by the Indemnified Party.

(f) Each Indemnified Party shall take, and cause its Affiliates to take, all reasonable steps to mitigate any Loss upon becoming aware of any event or circumstance that would be

reasonably expected to, or does, give rise thereto, including incurring costs only to the minimum extent necessary to remedy the breach that gives rise to such Loss.

(g) Subject to the provisions of Sections 3.01, 7.06, 15.11 and any other provisions for equitable relief and/or specific performance, the Parties' sole and exclusive remedy with respect to any and all claims for any breach of any representation, warranty, covenant, agreement or obligation set forth herein or otherwise relating to the subject matter of this Agreement, shall be pursuant to the indemnification provisions set forth in this Article VIII. Each Party hereby waives, to the fullest extent permitted under Law, any and all rights, claims and causes of action for any breach of any representation, warranty, covenant, agreement or obligation set forth herein or otherwise relating to the subject matter of this Agreement it may have against the other Party and their Affiliates and each of their respective Representatives arising under or based upon any Law, except pursuant to the indemnification provisions set forth in this Article VIII. Nothing in this Section 8.05(g) shall limit any Party's right to seek and obtain any equitable relief and/or specific performance pursuant to this Agreement.

Section 8.06. Knowledge of Breach.

Neither Party shall be liable for any Losses based upon or arising out of any inaccuracy in or breach of any representations or warranties of such Party contained in this Agreement if the Party claiming such Losses had Knowledge of such inaccuracy or breach before the Closing.

ARTICLE IX.

PRE-CLOSING COVENANTS OF SELLER

Section 9.01. Operation of the System.

Except as otherwise expressly permitted by this Agreement, as required by Law or with the prior written consent of Buyer (which consent shall not be unreasonably withheld, delayed or conditioned), from the Effective Date until the Closing, Seller shall (i) operate and manage the System only in the ordinary course of business in accordance with past practices and procedures, (ii) collect accounts receivable and pay accounts payable in the ordinary course and in a manner consistent with its past practices, (iii) comply in all material respects with all Laws and Authorizations and Permits, (iv) use its commercially reasonable efforts to maintain and preserve intact the business and assets of the System and preserve the rights, franchises, goodwill and relationships of Seller and the System and its customers, lenders, suppliers, regulators, and others having business relationships with Seller and the System, (iv) continue to collect EDU Fees, and sewer rents in a manner consistent with past practice, without discounting such EDU Fees, and sewer rents, (v) perform all of its obligations under all Assigned Contracts, and (vi) not take any action, or omit to take any action, that would cause to occur a fact, circumstance, condition or occurrence regarding the System or any of the Acquired Assets that could reasonably be expected to have a Material Adverse Effect.

Section 9.02. Cooperation.

Seller shall reasonably cooperate with Buyer and its employees, attorneys, accountants and other agents and, generally, act in reasonably good faith to timely effectuate the purposes of this Agreement and the consummation of the transactions contemplated by this Agreement.

Section 9.03. Supplements and Updates.

Seller shall promptly deliver to Buyer any supplemental information and reports updating the information set forth in the representations and warranties set forth in Article IV of this Agreement so that such representations and warranties as supplemented by such information will be true and correct as of the Closing Date (or such other date as specified in such representations and warranties) as if then made. Within ten (10) Business Days of having Knowledge of the same, but in no event later than three (3) Business Days before the Closing Date, Seller shall promptly advise Buyer of any facts which would be a breach of a representation or warranty as of the date made or a default in a covenant contained herein.

Section 9.04. Consents and Approvals.

Promptly after the Effective Date, or as required by Law, except as otherwise expressly specified in this Agreement, Seller shall file all applications and reports that are required to be filed by Seller with any Governmental Authority necessary to undertake and consummate the transactions contemplated in this Agreement as set forth on Schedule 4.05. Seller shall also promptly provide all information that any Governmental Authority may require in connection with any such application or report. Seller shall use its commercially reasonable efforts to obtain each consent, waiver, authorization or approval of any kind from any Person in connection with the transactions contemplated by this Agreement. All authorizations of any Governmental Authority necessary to consummate the transactions contemplated by this Agreement will be in form and content reasonably satisfactory to Buyer and Seller before Closing and shall be final and non-appealable. If a party to the PaPUC proceeding appeals PaPUC authorization of the transaction, Buyer and Seller may mutually agree to proceed to consummate the transaction.

Section 9.05. Pending Development Plan Agreements / Future Developments.

Seller shall enforce all of its rights and the counterparties' obligations under any agreements relating to Pending Development Plans in existence as of the Effective Date, which shall not be amended without notice to and the consent of Buyer, which consent shall not be unreasonably withheld and Buyer shall provide such consent to Seller within fifteen (15) days of notice from Seller or this consent requirement is deemed waived by Buyer after such date. After the Effective Date, Seller shall not enter into any new agreements (including Land Development Agreements and Financial Security Agreements) with landowners regarding the construction of any sewer facilities which, upon completion of construction, will be transferred to Buyer pursuant to Section 2.01 without notice to and the consent of Buyer, which consent shall not be unreasonably withheld and Buyer shall provide such consent to Seller within seven (7) days of notice from Seller or this consent requirement is deemed waived by Buyer after such date. For the avoidance of doubt, any attempt by Buyer to withhold consent for entry into any amendment or new agreement by Seller pursuant to this Section 9.05 that is, in the opinion of Seller's solicitor, required pursuant

to the Pennsylvania Municipal Planning Code is deemed unreasonable. Prior to Closing, Seller shall complete the dedication of all Acquired Assets.

ARTICLE X.

PRE-CLOSING COVENANTS OF BUYER

Section 10.01. Actions Before the Closing Date.

Buyer shall not take any action which shall cause it to be in breach of any representation, warranty, covenant or agreement contained in this Agreement or cause it to be unable to perform in any material respect its obligations hereunder, and Buyer shall use its commercially reasonable efforts (subject to any conditions set forth in this Agreement) to perform and satisfy all conditions to Closing to be performed or satisfied by Buyer under this Agreement, including action necessary to obtain all consents and approvals from any Person required to be obtained by Buyer to effect the transactions contemplated by this Agreement.

Section 10.02. Governmental Approvals.

Promptly after the execution of this Agreement, or as required by Law, except as otherwise expressly specified in this Agreement, Buyer shall file all applications and reports that are required to be filed by Buyer with any Governmental Authority as set forth on Schedule 5.04. Buyer shall also promptly provide all information that any Governmental Authority may reasonably require in connection with any such application or report.

Section 10.03. Cooperation.

Buyer shall reasonably cooperate with Seller and their employees, attorneys, accountants and other agents and, generally, do such other acts and things in good faith as may be reasonable to timely effectuate the purposes of this Agreement and the consummation of the transactions contemplated in accordance with the provisions of this Agreement.

Section 10.04. Supplements and Updates.

Buyer shall promptly deliver to Seller any supplemental information updating the information set forth in the representations and warranties set forth in Article V of this Agreement so that such representations and warranties as supplemented by such information will be true and correct as of the Closing Date (or such other date as specified in such representations and warranties) as if then made. At least three (3) Business Days before the Closing Date, Buyer shall advise Seller of any facts which would be a breach of a representation or warranty as of the date made or a default in a covenant contained herein.

ARTICLE XI.

CONDITIONS PRECEDENT TO OBLIGATIONS OF SELLER

The obligation of Seller to consummate the transactions provided for in this Agreement is subject to the satisfaction, at or before the Closing, of the following conditions, any one or more of which may be waived in writing by Seller in its sole discretion:

Section 11.01. Consents and Approvals.

Receipt of all required material, consents, waiver, authorizations or approvals of any Governmental Authority, or of any other Person and any other approvals necessary to consummate the transactions contemplated by this Agreement set forth in Schedule 5.04, including without limitation all required EPA and PaDEP approvals and all such Authorizations and Permits and Governmental Approvals must be final (and not subject to any appeal and any applicable appeal period having expired).

Section 11.02. Representations and Warranties of Buyer.

The representations and warranties made by Buyer in Article V which are (a) not qualified by materiality must be true and correct in all material respects on and as of the Closing Date (except for representations or warranties that speak of a specific date or time other than the Closing Date which must be true and correct in all material respects as of such specified date) and (b) qualified by materiality must be true and correct in all respects on and as of the Closing Date (except for representations or warranties that speak of a specific date or time other than the Closing Date which must be true and correct in all respects as of such specified date), and Seller must have received a certificate to that effect from a duly authorized officer of Buyer dated as of the Closing Date.

Section 11.03. PaPUC Approval.

PaPUC must have issued a Final Order approving the acquisition of the System under terms and conditions that are reasonably acceptable to Seller and Buyer. If a party to the PaPUC proceeding appeals or files a petition for reconsideration of PaPUC authorization of the transaction, Buyer and Seller may mutually agree to proceed to consummate the transaction.

Section 11.04. No Injunctions.

Neither Seller nor Buyer are subject to any injunction, preliminary restraining order or other similar decree of a court of competent jurisdiction prohibiting the consummation of the transactions contemplated by this Agreement.

Section 11.05. Performance of the Obligations of Buyer.

Buyer must have performed in all material respects all obligations required under this Agreement to be performed by Buyer on or before the Closing Date, and Seller must have received a certificate to that effect from Buyer dated the Closing Date.

Section 11.06. Deliveries by Buyer.

Buyer must have made delivery to Seller of the documents and items specified in Section 13.03 herein.

Section 11.07. No Material Adverse Effect.

There must not have occurred any event or condition which gives rise to a Material Adverse Effect with respect to the Acquired Assets or the System.

ARTICLE XII.

CONDITIONS PRECEDENT TO OBLIGATIONS OF BUYER

The obligation of Buyer to consummate the transactions provided for in this Agreement is subject to the satisfaction, at or before the Closing, of the following conditions, any one or more of which may be waived in writing by Buyer in its sole discretion:

Section 12.01. Consents and Approvals.

Receipt of all required material, consents, waivers, authorizations or approvals of any Governmental Authority, or of any other Person and any other approvals necessary to consummate the transactions contemplated by this Agreement set forth in Schedule 4.05, including without limitation all required EPA and PaDEP approvals and all such Authorizations and Permits and Governmental Approvals must be final (and not subject to any appeal and any applicable appeal period having expired).

Section 12.02. Representations and Warranties of Seller.

The representations and warranties made by Seller in Article IV this Agreement (disregarding all "materiality" and "Material Adverse Effect" or similar qualifications contained therein) must be true and correct on and as of the Closing Date (except for representations and warranties expressly stated to relate to a specific date, in which case each such representation and warranty must be true and correct as of such earlier date), with only such exceptions as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, and Buyer must have received a certificate to that effect from Seller dated as of the Closing Date.

Section 12.03. PaPUC Approval.

PaPUC must have issued a Final Order approving the acquisition of the System under terms and conditions that are reasonably acceptable to Seller and Buyer. If a party to the PaPUC proceeding appeals PaPUC authorization of the transaction, Buyer and Seller may mutually agree to proceed to consummate the transaction.

Section 12.04. No Injunctions.

Neither Seller nor Buyer are subject to any injunction, preliminary restraining order or other similar decree of a court of competent jurisdiction prohibiting the consummation of the transactions contemplated by this Agreement.

Section 12.05. No Material Adverse Effect.

There must not have occurred any event or condition which gives rise to a Material Adverse Effect with respect to the Acquired Assets or the System.

Section 12.06. Deliveries by Seller.

Seller must have made delivery to Buyer of the documents and items specified in Section 13.02 herein.

Section 12.07. Performance of the Obligations of Seller.

Seller must have performed in all material respects all obligations required under this Agreement to be performed by Seller on or before the Closing Date, and Buyer must have received a certificate to that effect from Seller dated the Closing Date.

Section 12.08. Act 537 Plan.

The Seller must have obtained PaDEP approval of all Act 537 Plan revisions or updates (i) required by PaDEP in order to allow acquisition of the System by Buyer or (ii) otherwise required to address other outstanding deficiencies with respect to existing Act 537 Plan, upon terms and conditions satisfactory to Buyer in its reasonable discretion. Notwithstanding the previous sentence, Buyer shall be responsible for the costs of preparing and submitting any necessary revisions to the Act 537 Plan required to allow acquisition of the System by Buyer. Seller and Buyer shall cooperate regarding the Act 537 Plan submission and PaDEP approval process.

ARTICLE XIII.

CLOSING

Section 13.01. Closing Date.

The Closing shall take place at the offices of Hamburg, Rubin, Mullin, Maxwell and Lupin, PC (375 Morris Rd, Lansdale, PA 19446) at 10:00 a.m. Eastern Standard Time on the earliest agreed upon date or within twenty (20) Business Days after the date upon which all the conditions precedent to Closing described in this Agreement have been fulfilled or waived and Buyer and Seller receive the last of the required consents, waivers, authorizations and approvals from the Governmental Authorities, in each case, for the transactions contemplated by this Agreement, or at such other place and time, by such other method, or on such other date, as may be mutually agreed to by the Parties (the "Closing Date"). The Closing will be effective at 12:01 a.m., East Whiteland Township, PA time, on the Closing Date (the "Closing Effective Time").

Section 13.02. Deliveries by Seller.

At the Closing, Seller shall deliver or cause to be delivered to Buyer executed copies of the following agreements, documents and other items:

(a) A Bill of Sale transferring all of the Acquired Assets comprising personal property, in the form attached as Exhibit A;

(b) Possession of the Acquired Assets, including without limitation, the Real Property, the Easements and an interest in the Missing Easements, including a license from Seller to Buyer;

(c) A duly executed counterpart to an Assignment and Assumption Agreement with respect to the Assumed Liabilities (the "Assignment and Assumption Agreement"), in the form attached as Exhibit B;

(d) The consents to transfer all of the Assigned Contracts and Authorizations and Permits (including environmental Authorizations and Permits), to the extent required hereunder;

(e) One or more special warranty or other deeds in recordable form reasonably acceptable to Buyer transferring fee simple title of Real Property;

(f) Copies or originals of all Files and Records, materials, documents and records in possession of Seller relating to the Real Property or the Assigned Contracts;

(g) Certificate of Seller pursuant to Section 12.02 of this Agreement;

(h) Certificate of Seller pursuant to Section 12.07 of this Agreement;

(i) Any documents duly executed by Seller required by the Title Company to issue final owner's title policies in accordance with the provisions of Article VI;

(j) A duly executed counterpart to the Escrow Agreement; and

(k) All such other instruments of conveyance or other documents as shall, in the reasonable opinion of Buyer and its counsel, be necessary to transfer to Buyer the Acquired Assets in accordance with this Agreement or to carry out the terms of this Agreement, duly executed and acknowledged by Seller, if necessary, and in a recordable form.

Section 13.03. Deliveries by Buyer.

At the Closing, Buyer shall deliver or caused to be delivered to Seller the following agreements, documents and other items:

(a) Payment in full of the Purchase Price;

(b) A duly executed counterpart to the Assignment and Assumption Agreement;

(c) Certificate of Buyer pursuant to Section 11.02 of this Agreement;

(d) Certificate of Buyer pursuant to Section 11.05 of this Agreement;

(e) Evidence of PaPUC approval as specified in Section 12.03;

(f) A duly executed counterpart to the Escrow Agreement; and

(g) All such other instruments of assumption as shall, in the reasonable opinion of Seller and its counsel, be necessary for Buyer to assume the Assumed Liabilities in accordance with this Agreement.

ARTICLE XIV.

TERMINATION

Section 14.01. Events of Termination.

This Agreement may be terminated and abandoned at any time before the Closing:

(a) By the mutual consent of Seller and Buyer;

(b) By either Seller or Buyer, upon notice, if:

(i) the Closing does not occur on or before the Outside Date, except Buyer has the one-time right, upon notice to Seller, to extend the Outside Date for up to ninety (90) days if, in the Buyer's sole discretion, any such amount of time up to ninety (90) days is necessary to obtain a required Governmental Approval; or

(ii) any Governmental Authority issues an order, decree or ruling or taken any other action, in each case permanently restraining, enjoining or otherwise prohibiting the material transactions contemplated by this Agreement and such order, decree, ruling or other action becomes final and non-appealable;

(c) By Seller (if Seller is not then in material breach of any provision of this Agreement) if a material breach of any covenant or agreement to be performed or complied with by Buyer pursuant to the terms of this Agreement or of any representation or warranty of Buyer contained in this Agreement, which breach (i) has continued without cure for a period of sixty (60) days following notice thereof by Seller to Buyer or if such breach cannot be cured and (ii) would result in a condition to Closing set forth in Article XI of this Agreement not being satisfied (which condition has not been waived by Seller in writing); or

(d) By Buyer (if Buyer is not then in material breach of any provision of this Agreement) if a material breach of any covenant or agreement to be performed or complied with by Seller pursuant to the terms of this Agreement or of any representation or warranty of Seller contained in this Agreement, which breach (i) has continued without cure for a period of sixty (60) days following notice thereof by Buyer to Seller or if such breach cannot be cured and (ii) would result in a condition to Closing set forth in Article XII of this Agreement not being satisfied (which condition has not been waived by Buyer in writing).

This Agreement may not be terminated after the Closing.

Section 14.02. Effect of Termination.

If this Agreement is terminated by Seller or Buyer pursuant to Section 14.01, notice thereof will be given promptly to the other and all further obligations of the Parties terminate without further action by either Party and without liability or other obligation of either Party to the other Party hereunder, except that no Party will be released from liability hereunder if this Agreement is terminated and the transactions abandoned by reason of any willful breach of this Agreement.

Section 14.03. Damages for Willful Breach.

If this Agreement is terminated as a result of willful breach by either Party as described in Section 14.02, the Party who willfully breached the Agreement is liable for Losses incurred by the non-breaching Party as a result of the breach in accordance with Article VIII.

ARTICLE XV.

MISCELLANEOUS

Section 15.01. Confidentiality.

Except as and to the extent required by Law (including but not limited to the Pennsylvania Right-To-Know Act at 65 Pa § 67.101) or pursuant to an order of a court of competent jurisdiction and as required hereunder to obtain any and all required Governmental Approvals, neither Party shall, directly or indirectly, disclose or use (and no Party shall permit its Representatives to disclose or use) any Confidential Information with respect to the other Party furnished, or to be furnished, by such other Party or its Affiliates or Representatives to the other Party or its Affiliates or Representatives in connection herewith at any time or in any manner other than in connection with the completion of the transactions contemplated by this Agreement and related transactions.

Section 15.02. Public Announcements.

Subject to Law or listing rules of an exchange on which Buyer's parent corporation's stock is listed, and except as otherwise set forth herein, the initial public announcement relating to the transactions contemplated herein will be mutually agreed upon and jointly made by the Parties. Subsequent public announcements related to the sale of the System by one Party shall be provided to the other Party as soon as reasonably practicable before issuance.

Section 15.03. Notices.

All notices, other communications and approvals required or permitted by this Agreement shall be in writing, shall state specifically that they are being given pursuant to this Agreement and shall be addressed as follows:

in the case of Seller:

East Whiteland Township

209 Conestoga Road
Frazer, PA 19355
Attention: Manager

with a copy to:

Hamburg, Rubin, Mullin, Maxwell and Lupin, PC
375 Morris Rd
Lansdale, PA 19446
Attention: Joseph J. McGrory, Jr., Solicitor

in the case of Buyer:

Aqua Pennsylvania Wastewater, Inc.
762 W. Lancaster Avenue
Bryn Mawr, PA 19010
Attention: Marc A. Lucca, President
malucca@aquaamerica.com

with a copy to:

Aqua Pennsylvania Wastewater, Inc.
762 W. Lancaster Avenue
Bryn Mawr, PA 19010
Attention: Frances Orth, Esq., Vice President, Senior Managing Counsel
fporth@aquaamerica.com

or such other persons or addresses as a Party may from time to time designate by notice to the other Party. A notice, other communication or approval is deemed to have been sent and received (i) on the day it is delivered, or if such day is not a Business Day or if the notice is received after ordinary office hours (time or place of receipt), the notice, other communication or approval is deemed to have been sent and received on the next Business Day, or (ii) on the fourth Business Day after mailing if sent by United States registered or certified mail.

Section 15.04. Headings.

The article, section and paragraph headings in this Agreement are for reference purposes only and do not affect the meaning or interpretation of this Agreement.

Section 15.05. Severability.

If any term, provision, covenant or restriction contained in this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions contained in this Agreement shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

Section 15.06. Entire Agreement.

This Agreement is the entire agreement between the Parties pertaining to the subject matter hereof and supersedes all prior agreements, negotiations, discussions and understandings, written or oral, between the Parties. There are no representations, warranties, conditions or other agreements, whether direct or collateral, or express or implied, that form part of or affect this Agreement, or that induced any Party to enter into this Agreement or on which reliance is placed by any Party, except as specifically set forth in this Agreement. The Parties acknowledge and agree that (i) each has substantial business experience and is fully acquainted with the provisions of this Agreement, (ii) the provisions and language of this Agreement have been fully negotiated and (iii) no provision of this Agreement shall be construed in favor of any Party or against any Party by reason of such provision of this Agreement having been drafted on behalf of one Party rather than the other Party.

Section 15.07. Amendments; Waivers.

The Parties may amend this Agreement only by the Parties' written agreement that identifies itself as an amendment to this Agreement. Any waiver of, or consent to depart from, the requirements of any provision of this Agreement will be effective only if it is in writing and signed by the Party giving it, and only in the specific instance and for the specific purpose for which it has been given. No failure on the part of any Party to exercise, and no delay in exercising, any right under this Agreement will operate as a waiver of such right. No single or partial exercise of any such right will preclude any other or further exercise of such right or the exercise of any other right.

Section 15.08. Parties in Interest; Third Party Beneficiary.

This Agreement is not intended to and shall not be construed to create upon any Person other than the Parties any rights or remedies hereunder.

Section 15.09. Anti-Assignment; Successors and Assigns.

Neither Party to this Agreement may assign any right or delegate any performance under this Agreement without the prior written consent of the other Party. A purported assignment or purported delegation without prior written consent is void. This agreement is binding upon, and inures to the benefit of, the Parties and their permitted respective successors and assigns.

Section 15.10. Governing Law; Jurisdiction.

The laws of the Commonwealth of Pennsylvania (without giving effect to its conflicts of law principles) govern all matters arising and relating to this Agreement, including torts. The Parties irrevocably agree and consent to the jurisdiction of the United States District Court for the Eastern District of Pennsylvania and the Court of Common Pleas of Chester County, Pennsylvania, for the adjudication of any matters arising under or in connection with this Agreement. Any action initiated in court shall be filed and litigated (including all discovery proceedings) exclusively in the United States District Court for the Eastern District of Pennsylvania and the Court of Common Pleas of Chester County, Pennsylvania, and each Party irrevocably submits to the exclusive

jurisdiction of such courts in any such suit, action or proceeding. Service of process, summons, notice or other document by mail to such Party's address set forth herein shall be effective service of process for any suit, action or other proceeding brought in any such court. EACH PARTY ACKNOWLEDGES AND AGREES THAT ANY CONTROVERSY WHICH MAY ARISE UNDER THIS AGREEMENT OR THE OTHER TRANSACTION DOCUMENTS IS LIKELY TO INVOLVE COMPLICATED AND DIFFICULT ISSUES AND, THEREFORE, EACH SUCH PARTY IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LEGAL ACTION ARISING OUT OF OR RELATING TO THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY. EACH PARTY TO THIS AGREEMENT CERTIFIES AND ACKNOWLEDGES THAT (A) NO REPRESENTATIVE OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT SEEK TO ENFORCE THE FOREGOING WAIVER IN THE EVENT OF A LEGAL ACTION, (B) SUCH PARTY HAS CONSIDERED THE IMPLICATIONS OF THIS WAIVER, (C) SUCH PARTY MAKES THIS WAIVER VOLUNTARILY, AND (D) SUCH PARTY HAS BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION.

Section 15.11. Specific Performance.

Irreparable damage would occur if any provision of this Agreement were not performed in accordance with the terms hereof and that the Parties may seek specific performance of the terms hereof, in addition to any other remedy to which they are entitled at law or in equity if the other Party has performed in accordance with the terms hereof.

Section 15.12. Counterparts; Electronic Mail; Facsimile Execution.

This Agreement may be executed in any number of counterparts which, taken together, is one and the same agreement. This Agreement becomes effective when it has been executed by each Party and delivered to both Parties. To evidence the fact that it has executed this Agreement, a Party may send a copy of its executed counterpart to the other Party by electronic mail or facsimile transmission. Such Party is deemed to have executed and delivered this Agreement on the date it sent such electronic mail or facsimile transmission. In such event, such Party shall forthwith deliver to the other Party an original counterpart of this Agreement executed by such Party.

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SIGNATURES NEXT PAGE]

DocuSign Envelope ID: B42369F8-D4E8-4DB6-91BA-A36B7EF006E4

IN WITNESS WHEREOF, the Parties have executed, or caused to be executed by their duly authorized Representatives, this Agreement as of the Effective Date.

TOWNSHIP OF EAST WHITELAND, CHESTER COUNTY	AQUA PENNSYLVANIA WASTEWATER, INC.
By: _____	By: _____
Printed: John Nagel	Printed: Marc A. Lucca
Its: Manager	Its: President
ATTEST:	ATTEST:
By: Donna Wikert	By: _____
Printed: Donna Wikert	Printed: _____
Title: Assistant to the Township Manager, Board Secretary	Title: _____

IN WITNESS WHEREOF, the Parties have executed, or caused to be executed by their duly authorized Representatives, this Agreement as of the Effective Date.

TOWNSHIP OF EAST WHITELAND, CHESTER COUNTY	AQUA PENNSYLVANIA WASTEWATER, INC.
By: _____	By: Marc A. Lucca
Printed: John Nagel	Printed: Marc A. Lucca
Its: Manager	Its: President
ATTEST:	ATTEST:
By: _____	By: Heidi H. McIntyre
Printed: _____	Printed: HEIDI H. McINTYRE
Title: _____	Title: Ass't Secretary

Execution Version

ASSET PURCHASE AGREEMENT

By and Between

Township of East Whiteland, Chester County,

As Seller

and

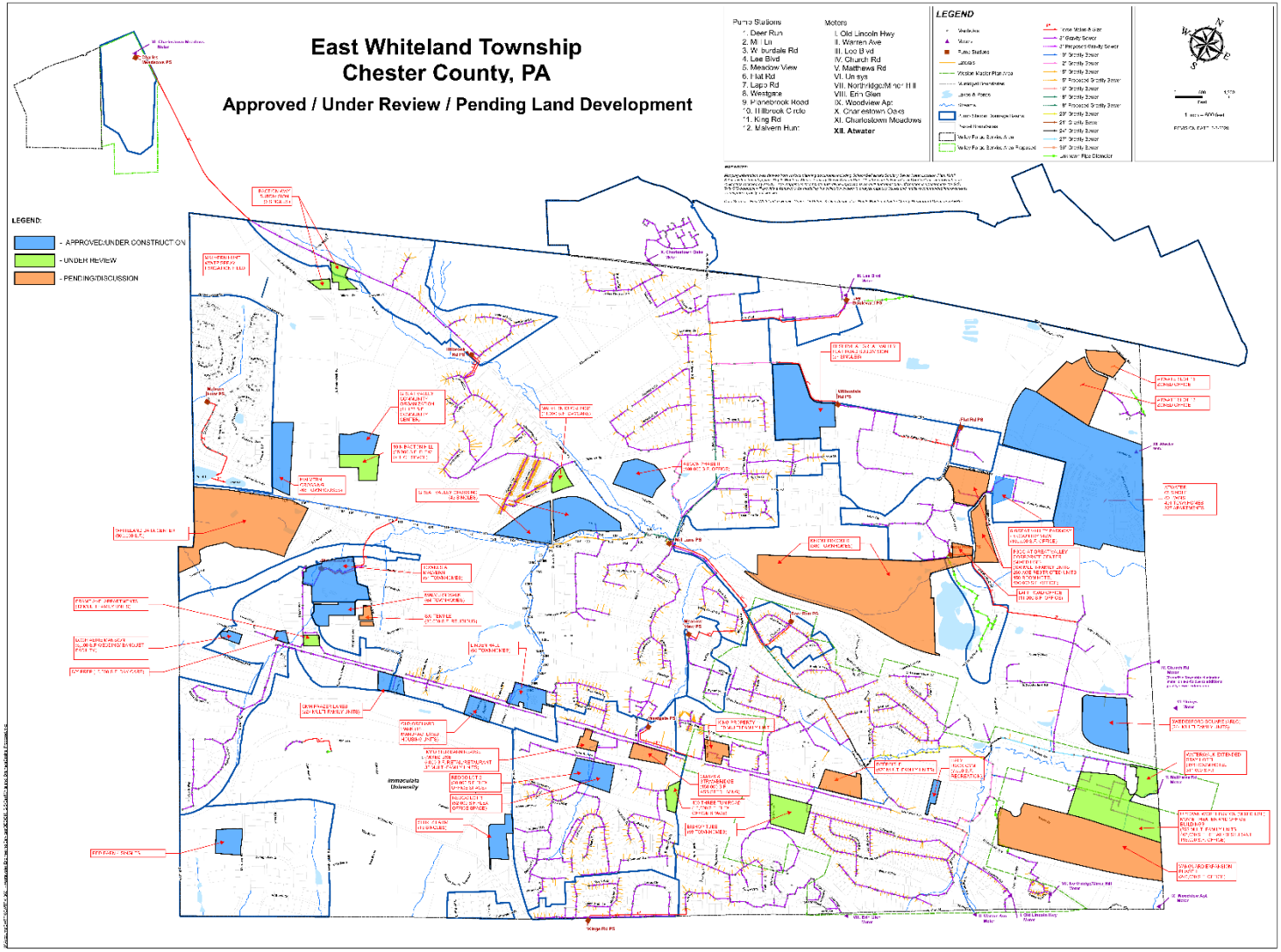
Aqua Pennsylvania Wastewater, Inc. As Buyer

SCHEDULES AND EXHIBITS

Capitalized terms used in the Schedules which are not otherwise defined herein shall have the respective meanings ascribed to such terms in the Agreement. The Schedules are to be read in their entirety. Nothing in the Schedules is intended to broaden the scope of any representation or warranty in the Agreement. The disclosure of any item, explanation, exception or qualification in any Schedule is disclosure of that item for all purposes for which disclosure is required under the Agreement when it is reasonably apparent from the context that such item, explanation, exception or qualification also relates to another Schedule irrespective of whether any cross reference is made or no Schedule is provided with respect to a representation. Other than as expressly set forth herein or when the Schedules reference agreements or other matters not documented in a separate writing, all descriptions of agreements, written materials or other matters appearing herein, are summary in nature and are qualified by reference to the complete documents, which have been supplied to the Buyer or its counsel.

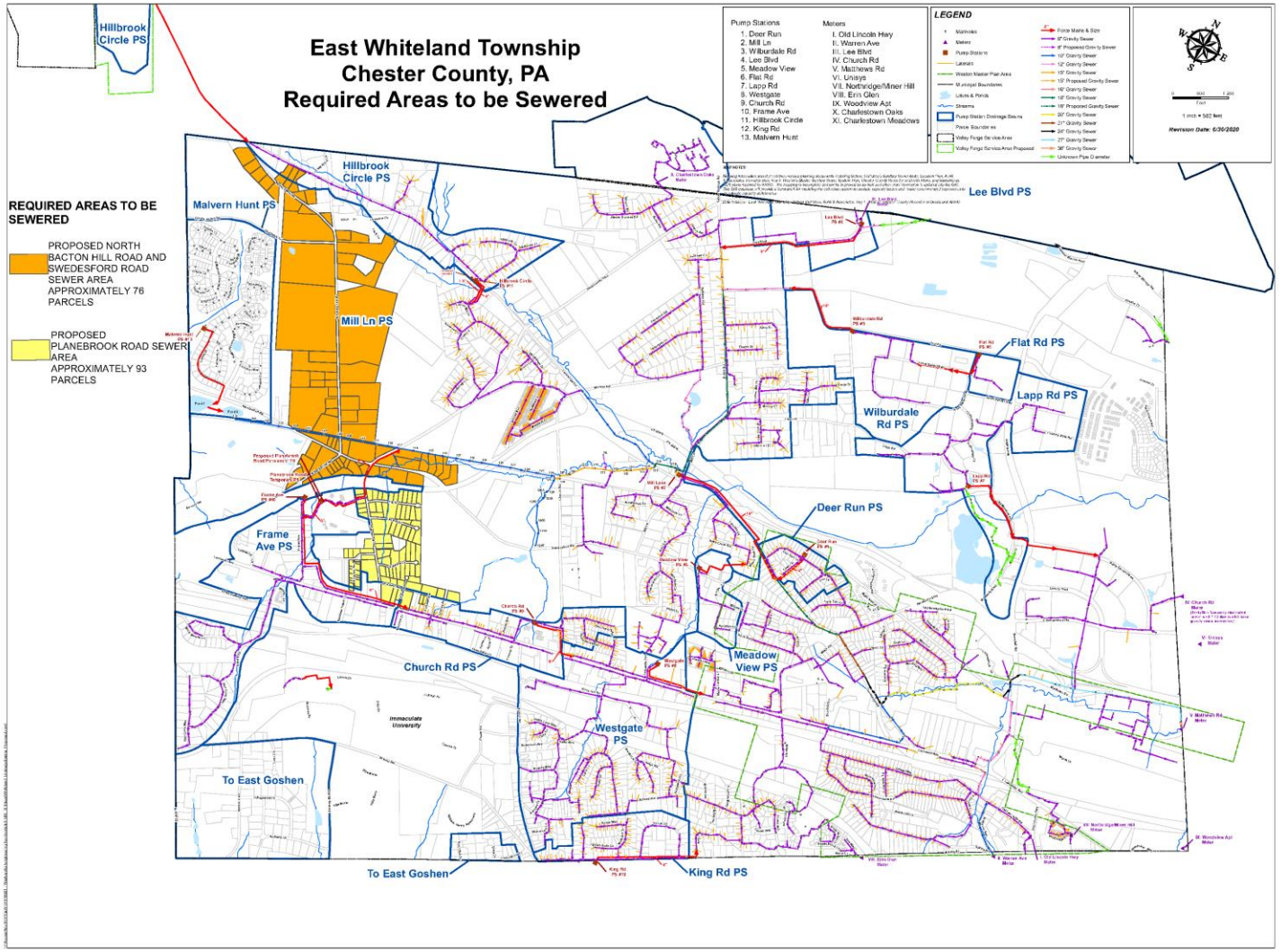
SCHEDULE A

Service Area



SCHEDULE B

Expanded Service Area Map



Schedule 2.02(h)

Excluded Assets

The Malvern Hunt Pumping Station, force main and the gravity sewer collection system within the Malvern Hunt Wastewater Treatment Plant (the "WWTP") will be included in the Acquired Assets. However, it is expected that the spray irrigation system associated with the WWTP, including the treatment ponds and the spray irrigation fields, will be decommissioned[1] and, along with associated parcels 42-3-47 and 42-3-127, will be excluded from the sale.

[1] Pursuant to a plan to be provided by Pennoni.

Schedule 4.05

Consents and Approvals

1. Pennsylvania Public Utility Commission ("PaPUC") Approval of Transaction

2. PaPUC Approval of Consent to Assignment and Amendment to Sewer Service Agreements and Related Amendments

3. Pennsylvania Department of Environmental Protection ("PaDEP") Approval of Sanitary Sewer Collection and Conveyance System Act 537 Plan recognizing transfer of wastewater collection system from Seller to Buyer

4. PaDEP Approval of Transfer of all NPDES[2] and WQM Permits

[2] NPDES permits will not be transferred if the Malvern Hunt WWTP is decommissioned prior to closing, as anticipated.

Schedule 4.06

Undisclosed Liabilities

None.

Schedule 4.07

Events Having a Material Adverse Effect

None.

Schedule 4.08

Tax Matters

None.

Schedule 4.09

Real Property and Easements; Liens[3]

Deed of Dedication of Roads and Sanitary Sewer Easements for Whitewoods Subdivision dated August 8, 2002 by Southdown Properties, Inc. in favor of East Whiteland Township for sewer main located in Ravine Road.

East Whiteland Municipal Authority Railroad Crossings and Rights-of-Way, prepared by Roy F. Weston, Inc. dated September 25, 1975 and updated September 14, 1977.

Easement Agreement between East Whiteland and Malvern Institute dated September 16, 2003 and recorded January 8, 2004 (King Road Pump Station).

Easements: *See spreadsheet below for Easements and use following key in review of spreadsheet:*

EAST WHITELAND TOWNSHIP SEWER SALE SPREADSHEET COLOR KEY

Preliminary guidance on reading spreadsheet:

- The official sewer system map is separated by drainage basin, and therefore the spreadsheet is as well.
- The left-most column labels each sewer line segment by manhole. Often times the same segment of sewer line runs through multiple parcels.
- The owner listed is the most current owner, not the owner of the property at the time the easement/deed of dedication/condemnation/ license was entered into or occurred.
- The right-most column is still incomplete, but will ultimately indicate the type, validity, and issues of each easement/condemnation/deed of dedication/license.

Drainage Basin (heading): **Blue**
Road & Township Owned Property: **Green**
End of Road: **Black**
Same Road, Change of Direction: White
Private Property: **Yellow**
Pump Station / Force Maine: **Red**
Meter: **Purple**
Train Tracks: **Orange**
Private/Unlabeled Sewer Line: **Pink**

[3] Initial list of easements has been provided by solicitor. This will be updated and all easements and real property will be confirmed.

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
		DEER RUN DB			
Deer Run PS1	4-4F-13-E	East Whiteland Township	15 Deer Run La.	8918/1465	Deed of Dedication
PS1:MT0052 (FM)					
	42-4K-62	Mark & Karen Schneider	10 Fawn Cir.	No easement found	
	42-4k-61	Mitchell Murtha Sr.	144 Conestoga Rd.	No easement found	
	42-4K-124	Mark Groves	143 Conestoga Rd.	No easement found	
MT0052: Mill Lane PS2 (FM)					
	42-4K-124	Mark Groves	143 Conestoga Rd.	No easement found	
	42-4K-123	Charles Curran	145 Conestoga Rd.	No easement found	
	42-4K-122	Allan Cappelli	147 Conestoga Rd.	No easement found	
	42-4K-121	Vincent C. Gambale	149 Conestoga Rd.	No easement found	
	42-4K-120	Stuart Levin; Kathleen B	151 Conestoga Rd.	No easement found	
	42-4K-119	David Foreman; Nancy McGann	153 Conestoga Rd.	No easement found	
	42-4-71.3	William & Ellen Jordan	1 Manor View Cl.	No easement found	
	42-4-71.23	Christopher & Susan McKenna	1 Valley Creek Rd.	No easement found	
	42-4-38	Diane & Mala Washington	154 Conestoga Rd.	No easement found	
	42-4-39	Emory Washington	158 Conestoga Rd.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-4-18-E	EW Twp.	170 Conestoga Rd.		
	42-4-2.2-E	EW Twp.	198 Conestoga Rd.		
	42-4-2.4-E	EW Twp.	200 Conestoga Rd.		
	42-4-2.5-E	EW Twp.	202 Conestoga Rd.		
PS1:DR0002V	42-4F-13-E	EW Twp.	15 Deer Run La.	8918/1465	Deed of Dedication
DR0002:DR0003	Township Street	Deer Run La.			
DR0003:DR0004	Township Street	Deer Run La.			
DR0004:DR101	Township Street	Deer Run La.			
DR101:DR102	PennDot Rd.	Conestoga Rd.			
DR102:DR103	PennDot Rd.	Conestoga Rd.			
DR0002V:DR0005	Township Street	Deer Run La.			
DR0005:DR0006	Township Street	Deer Run La.			
DR0006:DR301V	Township Street	Deer Run La.			
DR0002V:DR201	Township Street	Fawn Circle			
DR201:DR202	Township Street	Fawn Circle			
DR202:DR203	42-4K-57	Edward Gill; George Gill	11 Fawn Cir.	197/259	Easement
	42-4K-60	Elizabeth Slatcher	146 Conestoga Rd.	199/67	Easement
DR301V:DR302	Township Street	Doe Lane			
DR302:MT0303	Township Street	Doe Lane			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT0303:DR304	Township Street	Doe Lane			
DR301V:DR305	Township Street	Doe Lane			
DR305:DR306	Township Street	Doe Lane			
DR306:DR307	Township Street	Doe Lane			
		MATTHEWS ROAD DB			
MT0914:MT0913	Township Street	Doe Lane			
MT0913:MT0909V	Township Street	Doe Lane			
MT0909V:MT0910	Township Street	Buck Run Lane			
MT0910:MT0911	Township Street	Buck Run Lane			
MT0911:MT0912	Township Street	Buck Run Lane			
MT0909V:MT0908	Township Street	Buck Run Lane			
MT0908:MT0907	Township Street	Buck Run Lane			
MT0907:MT0904V	Township Street	Buck Run Lane			
MT0904V:MT0905	PennDot Road	Swedesford Road			
MT0905:MT0906	PennDot Road	Swedesford Road			
MT0904V:MT0903	PennDot Road	Swedesford Road			
MT0903:MT0902	PennDot Road	Swedesford Road			
MT0902:MT0901V	PennDot Road	Swedesford Road			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT0901V:MT0045	PennDot Road	Conestoga Road			
MT0045:MT0047	42-4-92-E	Free Presbyterian Church	80 Malin Rd.	No easement found	
	42-4-91	Gregory Blackburn	129 Conestoga Rd.	No easement found	
MT0047:MT0048V	PennDot Road	Swedesford Road			
MT0048V:MT0049	PennDot Road	Conestoga Road			
MT0049:MT0050	42-4K-130	Elizabeth Bolt	131 Conestoga Rd.	No easement found	
	42-4K-129	Cecilia Paulking Trust	133 Conestoga Rd.	No easement found	
MT0050:MT0051	42-4K-129	Cecilia Paulking Trust	133 Conestoga Rd.	No easement found	
	42-4K-128	Kris Kraihanzel	135 Conestoga Rd.	No easement found	
MT0051:MT0052	42-4K-127	Adam Wertz	137 Conestoga Rd.	No easement found	
	42-4K-126	Charmeka Parker	139 Conestoga Rd.	No easement found	
	42-4K-125	Catherine Consalvi	141 Conestoga Rd.	No easement found	
	42-4K-124	Mark Groves	143 Conestoga Rd.	No easement found	
MT0052: Mill Lane PS2 (FM) (see above)					
MT0048V:MT1001	Penndot Road	Swedesford Road			
MT1001:MT1002	42-4K-15	Matt & Miroslava Atlay	274 Swedesford Rd.	No easement found	
	42-4K-14	John Mott; D Renita	276 Swedesford Rd.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT1002:MT1003	42-4K-14	John Mott; D Renita	276 Swedesford Rd.	No easement found	
	42-4K-13	Dorothy Schmidt	278 Swedesford Rd.	No easement found	
MT1003:MT1004	Penndot Road	Swedesford Road			
MT0901V:MT0045(2)	PennDot Road	Conestoga Road			
MT0045(2): MT0044V	PennDot Road	Conestoga Road			
MT0044V:MT1101	Township Street	Beth Circle			
MT1101:MT1102	Township Street	Beth Circle			
MT0044V:MT0043	42-4-151	William Sabatini	83 Conestoga Rd.	No easement found	
	42-4-150	Margaret Reher; Marie Kelly	81 Conestoga Rd.	No easement found	
MT0043:MT0042	42-4-150	Margaret Reher; Marie Kelly	81 Conestoga Rd.	No easement found	
	42-4-149	Barry Evans	79 Conestoga Rd.	No easement found	
	42-4-148	Judith Entner	77 Conestoga Rd.	No easement found	
	42-4-147	Robert Hanning; A. Hunter	75 Conestoga Rd.	No easement found	
MT0042V:MT0041	42-4-147	Robert Hanning; A. Hunter	75 Conestoga Rd.	No easement found	
	42-4-145	Robert Hanning; F. Hunter	73 Conestoga Rd.	No easement found	
MT0041:MT0040	42-4-145	Robert Hanning; F. Hunter	73 Conestoga Rd.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT0040:MT0039	42-4-145	Robert Hanning; F. Hunter	73 Conestoga Rd.	No easement found	
	42-4-144	PECO		No easement found	
MT0039V:MT1501	PennDot Road	Conestoga Road			
MT1501:MT1502	42-4-143	Peoples Light & Theatre Co.	39 Conestoga Rd.	18296/1	Easement shown on subdivision plan
MT1502:MT1503	42-4-143.1	Conestoga Road LP	33 Conestoga Rd.	No easement found	
MT1503:MT1504V	PennDot Road	Conestoga Road			
MT1504V:MT2702	42-4-141	GST MPM-Non tax exempt Marital Trust; Edna Morelli	81 Lancaster Ave	284/249	
MT2702:MT2703	42-4-141	GST MPM-Non tax exempt Marital Trust; Edna Morelli	81 Lancaster Ave	284/249	
MT2703:MT2704	42-4-141	GST MPM-Non tax exempt Marital Trust; Edna Morelli	81 Lancaster Ave	284/249	
	42-4-140	GST MPM-Non tax exempt Marital Trust; Edna Morelli	75 Lancaster Ave	287/9	
	42-4-139	GST MPM-Non tax exempt Marital Trust; Edna Morelli	73 Lancaster Ave	287/1	
MT0039V:MT0038	42-4-143	Peoples Light & Theatre Co.	39 Conestoga Rd.	18296/1	Easement shown on subdivision plan
MT0038:MT0037	42-4-143	Peoples Light & Theatre Co.	39 Conestoga Rd.	18296/1	Easement shown on subdivision plan
MT0037:MT0036V	42-4-143	Peoples Light & Theatre Co.	39 Conestoga Rd.	18296/1	Easement shown on subdivision plan

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT0036V:MT0801	42-4-143	Peoples Light & Theatre Co.	39 Conestoga Rd.	18296/1	Easement shown on subdivision plan
MT0801:MT0802	Township Street	Roberts Road			
MT0802:MT0803V	Township Street	Roberts Road			
MT803V:MT804	Township Street	Winding Way			
MT804:MT805	Township Street	Winding Way			
MT803:MT806	Township Street	Elbow Lane			
MT806:MT807	Township Street	Elbow Lane			
MT807:MT808	Township Street	Elbow Lane			
MT808:MT809	Township Street	Elbow Lane			
MT0036:MT0035	42-4-143	Peoples Light & Theatre Co.	39 Conestoga Rd.	18296/1	Easement shown on subdivision plan
MT0035:MT0034	42-4-143	Peoples Light & Theatre Co.	39 Conestoga Rd.	18296/1	Easement shown on subdivision plan
	42-4-240.3	Bradley Fugok	8 Winding Way	199/51	
	42-4-240.1	Scot Pineno	12 Winding Way	199/48, 51; 202/41	
MT0034:MT0033	42-4-240.1	Scot Pineno	12 Winding Way	199/48, 51; 202/41	
	42-4-142	PECO	40 Morehall Rd.	197/268; 18296/1	Easement; Easement shown on subdivision plan
MT0033:MT0032	42-4-142	PECO	40 Morehall Rd.	197/268; 18296/1	Easement; Easement shown on subdivision plan
	42-4-252	Scot Pineno	12 Winding Way	197/883	
MT0032:MT0031	42-4-252	Scot Pineno	12 Winding Way	197/883	
MT0031:MT0029	42-4-252	Scot Pineno	12 Winding Way	197/883	
MT0029:MT0030	42-4-252	Scot Pineno	12 Winding Way	197/883	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-4-249	Mark Dammeyer	30 Winding Way	345/52	
	42-4-253-E	EW Twp.	36 Winding Way		
MT0030:MT0028	42-4-253-E	EW Twp.	36 Winding Way		
MT0028:MT0027	42-4-253-E	EW Twp.	36 Winding Way		
	42-4-254	50 GVP Properties Co. LLC	50 Morehall Rd.	199/57	
MT0027:MT0026V	42-4-254	50 GVP Properties Co. LLC	50 Morehall Rd.	199/57	
MT0026V:MT0601V	42-4-254	50 GVP Properties Co. LLC	50 Morehall Rd.	199/57	
MT0601V:MT0701V	42-4-254	50 GVP Properties Co. LLC	50 Morehall Rd.	199/57	
MT0701V:MT0714	Township Street	Winding Way			
MT0714:MT0715	Township Street	Winding Way			
MT0715:MT0716	Township Street	Winding Way			
MT0716:MT0717	Township Street	Winding Way			
MT0701V:MT0702	Township Street	Wood Lane			
MT0702:MT0703	Township Street	Wood Lane			
MT0703:MT0704	Township Street	Wood Lane			
MT0704:MT0705	Township Street	Wood Lane			
MT0705:MT0706	Township Street	Wood Lane			
MT0706:MT0707V	Township Street	Wood Lane			
MT0707V:MT0708	Township Street	Wood Lane			
MT0708:MT0709	Township Street	Wood Lane			
MT0709:MT0710	Township Street	Wood Lane			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT0707V:MT0711	Township Street	Beth Lane			
MT0711:MT0712	Township Street	Beth Lane			
MT0712:MT0713	Township Street	Beth Lane			
MT601V:MT602V	42-4-254	50 GVP Properties Co. LLC	50 Morehall Rd.	199/57	
	42-4-257.1	Realty Associates Fund X LP	200 Lindenwood Dr.	No easement found	
MT602V:MT504	42-4-257.1	Realty Associates Fund X LP	200 Lindenwood Dr.	No easement found	
MT504:MT505	42-4-257.1	Realty Associates Fund X LP	200 Lindenwood Dr.	No easement found	
MT602V:MT603	42-4-257.1	Realty Associates Fund X LP	200 Lindenwood Dr.	No easement found	
MT603:MT604	42-4G-14	Paul & Gretchen Disciascio	22 Hillside Dr.	No easement found	
MT604:MT605V	42-4G-14	Paul & Gretchen Disciascio	22 Hillside Dr.	No easement found	
MT605V:MT6013	Township Street	Kane Drive			
MT6013:MT6012	Township Street	Kane Drive			
MT605V:MT606	Township Street	Hillside Drive			
MT606:MT607	Township Street	Hillside Drive			
MT607:MT608	Township Street	Hillside Drive			
MT608:MT609V	Township Street	Hillside Drive			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT609V:MT6011	Township Street	Old Swedesford Road			
MT609V:MT610	42-4G-3	Marina McCarthy	238 Old Swedesford Rd.	No easement found	
	42-4G-2	David Mueller	232 Old Swedesford Rd.	No easement found	
	42-4G-1	Saifuddin Bookbinder	234 Old Swedesford Rd.	No easement found	
MT0026V:MT0025	42-4-254	50 GVP Properties Co. LLC	50 Morehall Rd.	199/57	
MT0025:MT0024	42-4-254	50 GVP Properties Co. LLC	50 Morehall Rd.	199/57	
MT0024:MT0023	42-4-254	50 GVP Properties Co. LLC	50 Morehall Rd.	199/57	
MT0023:MT0022V	42-4-254	50 GVP Properties Co. LLC	50 Morehall Rd.	199/57	
MT0022V:MT0021	42-4-257.2	Realty Associates Fund X LP	Unaddressed Parcel	No easement found	
MT0021:MT0020V	42-4-257.2	Realty Associates Fund X LP	Unaddressed Parcel	No easement found	
MT0020V:MT0501	42-4-257.2	Realty Associates Fund X LP	Unaddressed Parcel	No easement found	
MT0501:MT0502	42-4-257.4	Realty Associates Fund X LP	101 Lindenwood Dr.	No easement found	
MT0502:MT0503	42-4-257.4	Realty Associates Fund X LP	101 Lindenwood Dr.	No easement found	
MT0020V:MT0018	42-4-257.4	Realty Associates Fund X LP	101 Lindenwood Dr.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-4-260.2A	Wawa Inc.	5 Matthews Rd.	554/536	
MT0018:MT0017	42-4-260.2A	Wawa Inc.	5 Matthews Rd.	554/536	
MT0017:MT0015	42-4-260.2A	Wawa Inc.	5 Matthews Rd.	554/536	
	42-4-260.2	Great Valley Holdings LLC	11 Matthews Rd.	554/536	
MT0015:MT0014	42-4-260.2	Great Valley Holdings LLC	11 Matthews Rd.	554/536	
MT0014:MT0013	42-4-260.2	Great Valley Holdings LLC	11 Matthews Rd.	554/536	
	?	PennDot?	202 Corridor?		
MT0013:MT0012V	?	PennDot?	202 Corridor?		
MT0012V:MT0201	?	PennDot?	202 Corridor?		
MT0201:MT0202	42-4-260.6-E	Penn State University	30 E. Swedesford Rd.	554/536	
MT0202:MT0203	42-4-260.6-E	Penn State University	30 E. Swedesford Rd.	554/536	
MT0203:MT0204	42-4-260.6-E	Penn State University	30 E. Swedesford Rd.	554/536	
MT0204:MT0205V	42-4-260.6-E	Penn State University	30 E. Swedesford Rd.	554/536	
MT0205V:MT0401	42-4-53.15	WPT Land 2 LP	40 Liberty Bl.	554/536; 260/325	Deed of Dedication
MT0401:MT0402*	42-4-53.15	WPT Land 2 LP	40 Liberty Bl.	554/536; 260/325	Deed of Dedication
MT0402:MT0403*	42-4-53.15	WPT Land 2 LP	40 Liberty Bl.	554/536; 260/325	Deed of Dedication
MT0403:MT0404*	42-4-53.15	WPT Land 2 LP	40 Liberty Bl.	554/536; 260/325	Deed of Dedication
	42-4-53.14	DP Valley Retail, LLC	20 Liberty Bl.	260/325	Deed of Dedication

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT0404:MT0405	42-4-53.14	DP Valley Retail, LLC	20 Liberty Bl.	260/325	Deed of Dedication
MT0405:MT0406	42-4-53.14	DP Valley Retail, LLC	20 Liberty Bl.	260/325	Deed of Dedication
MT0406:MT0409	42-4-53.14	DP Valley Retail, LLC	20 Liberty Bl.	260/325	Deed of Dedication
MT0409:MT0410	42-4-53.14	DP Valley Retail, LLC	20 Liberty Bl.	260/325	Deed of Dedication
MT0410:MT0411	42-4-53.14	DP Valley Retail, LLC	20 Liberty Bl.	260/325	Deed of Dedication
MT0205V:MT0310	42-4-53.15	WPT Land 2 LP	40 Liberty Bl.	554/536; 260/325	Deed of Dedication
MT0310:MT0309	42-4-53.15	WPT Land 2 LP	40 Liberty Bl.	554/536; 260/325	Deed of Dedication
	42-4-53	IPX Liberty Blvd. Investors LLC	41 Liberty Bl.	Deed of Dedication (11/9/05) (unrecorded)	Deed of Dedication (11/9/05) (unrecorded)
MT0309:MT0301	42-4-53	IPX Liberty Blvd. Investors LLC	41 Liberty Bl.	Deed of Dedication (11/9/05) (unrecorded)	Deed of Dedication (11/9/05) (unrecorded)
	42-4-53.8	Star 70VS Owner LLC	70 Valley Stream Pw.	No easement found	
MT0301:MT0302V	PennDot Road	E Swedesford Road			
MT0302V: MT0308	PennDot Road	E Swedesford Road			
MT0302V:MT0303	42-4-53.11	Malvern Title Holder LLC	75 Valley Stream Pw.	19299/1	Easement shown on subdivision plan
MT0303:MT0304	42-4-53.11	Malvern Title Holder LLC	75 Valley Stream Pw.	19299/1	Easement shown on subdivision plan
	42-4-53.5	WPT Land 2 LP	65 Valley Stream Pw.	No easement found	
MT0304:MT0305	42-4-53.5	WPT Land 2 LP	65 Valley Stream Pw.	No easement found	
MT0305:MT0306	42-4-53.5	WPT Land 2 LP	65 Valley Stream Pw.	No easement found	
MT0306:MT0307	42-4-53.5	WPT Land 2 LP	65 Valley Stream Pw.	No easement found	
Tredyffrin Twp.	Tredyffrin Twp.	Tredyffrin Twp.	Tredyffrin Twp.	Tredyffrin Twp.	
MT0307:Church Rd. Meter (eliminated by Tredyffrin Twp on 8-					

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
3-13 due to additional grav. Sewer extension)					
MT0205V:MT0206	42-4-53.15	WPT Land 2 LP	40 Liberty Bl.	554/536; 260/325	Deed of Dedication
MT0206: MT0207	42-4-53.15	WPT Land 2 LP	40 Liberty Bl.	554/536; 260/325	Deed of Dedication
MT0207:MT0208	42-4-53.15	WPT Land 2 LP	40 Liberty Bl.	554/536; 260/325	Deed of Dedication
	42-4-53.16	IPX Liberty Blvd. Invstors LLC	11 Liberty Bl.	No easement found	
MT0208:MT0209	42-4-53.16	IPX Liberty Blvd. Invstors LLC	11 Liberty Bl.	No easement found	
MT0209:MT0408V	42-4-53.16	IPX Liberty Blvd. Invstors LLC	11 Liberty Bl.	No easement found	
MT0408V:MT0415	42-4-53.16	IPX Liberty Blvd. Invstors LLC	11 Liberty Bl.	No easement found	
	42-4-53.7	Stradley Ronon	30 Valley Stream Pw.	554/536; Deed of Dedication (11/9/05)	Deed of Dedication
MT0415:MT0416	42-4-53.7	Stradley Ronon	30 Valley Stream Pw.	554/536; Deed of Dedication (11/9/05)	Deed of Dedication
	42-4-53.10	WPT Land 2 LP	20 Valley Stream Pw.	No easement found	
MT0416:MT0417	42-4-53.10	WPT Land 2 LP	20 Valley Stream Pw.	No easement found	
MT0408V:MT0412	42-4-53.16	IPX Liberty Blvd. Invstors LLC	11 Liberty Bl.	No easement found	
	42-4-53.12	WPT Land 2 LP	40 Valley Stream Pw.	No easement found	
MT0412:MT0413	42-4-53.12	WPT Land 2 LP	40 Valley Stream Pw.	No easement found	
	42-4-53.13	WPT Land 2 LP	50 Valley Stream Pw.	No easement found	
MT0413:MT0414	42-4-53.13	WPT Land 2 LP	50 Valley Stream Pw.	No easement found	
MT0408V:MT0409	42-4-53.16	IPX Liberty Blvd. Invstors LLC	11 Liberty Bl.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-4-53.12	WPT Land 2 LP	40 Valley Stream Pw.	No easement found	
	42-4-53.7	Stradley Ronon	30 Valley Stream Pw.	554/536; Deed of Dedication (11/9/05)	Deed of Dedication
MT0409:MT0210	42-4-53.7	Stradley Ronon	30 Valley Stream Pw.	554/536; Deed of Dedication (11/9/05)	Deed of Dedication
MT0210:MT0418V	42-4-53.7	Stradley Ronon	30 Valley Stream Pw.	554/536; Deed of Dedication (11/9/05)	Deed of Dedication
MT0418:MT0419	42-4-53.3	Cerner Health Services, Inc.	51 Valley Stream Pw.	Deed of Dedication (9/14/05) (unrecorded)	Deed of Dedication (unrecorded)
MT0419:MT0421	42-4-53.3	Cerner Health Services, Inc.	51 Valley Stream Pw.	Deed of Dedication (9/14/05) (unrecorded)	Deed of Dedication (unrecorded)
MT0421:MT0420	42-4-53.3	Cerner Health Services, Inc.	51 Valley Stream Pw.	Deed of Dedication (9/14/05) (unrecorded)	Deed of Dedication (unrecorded)
MT0420:MT0422	42-4-53.3	Cerner Health Services, Inc.	51 Valley Stream Pw.	Deed of Dedication (9/14/05) (unrecorded)	Deed of Dedication (unrecorded)
MT0418V:FORCE MAINE TO LAPP RD. PS7					
	42-4-53.6	DP 10 Valley LLC	10 Valley Stream Pw.	No easement found	
	42-4-29.1	Quarry Ridge Parcel B Condo Ass'n	280 Morehall Rd.	18373/1	Easement shown on subdivision plan
	42-4-28.2	Daniel Rubino Irrevocable Trust	257 Old Morehall Rd.	Easement (1/15/02) (not recorded)	Easement (not recorded)
	42-4-42	Knickerbocker Lands LLC	367 Old Morehall Rd.	6765/1780	Easement
	42-4-26.2	Sophia Keh	514 Lapp Rd.	Easement (6/1/01) (not recorded)	Easement (not recorded)
MT0012V:MT0011	PennDot Road	202 Corridor			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT0011:MT0010	42-4-266	Uptown Worthington	50 Foundry Wy.	1958/1	Easement shown on subdivision plan
MT0011:MT0009	42-4-266	Uptown Worthington	50 Foundry Wy.	1958/1	Easement shown on subdivision plan
MT0009:MT0008	42-4-266	Uptown Worthington	50 Foundry Wy.	1958/1	Easement shown on subdivision plan
MT0008:MT0007	42-4-266	Uptown Worthington	50 Foundry Wy.	1958/1	Easement shown on subdivision plan
MT0007:N/AV	42-4-266	Uptown Worthington	50 Foundry Wy.	1958/1	Easement shown on subdivision plan
N/AV:MT006	42-4-266	Uptown Worthington	50 Foundry Wy.	1958/1	Easement shown on subdivision plan
	42-5-1.1	Matthews Rd. Associates LP	85 Matthews Rd.	18677/1	Easement shown on subdivision plan
MT006:MT005	42-5-1.1	Matthews Rd. Associates LP	85 Matthews Rd.	18677/1	Easement shown on subdivision plan
MT005:MT004	42-5-1.1	Matthews Rd. Associates LP	85 Matthews Rd.	18677/1	Easement shown on subdivision plan
MT004:MT002	42-5-1.1	Matthews Rd. Associates LP	85 Matthews Rd.	18677/1	Easement shown on subdivision plan
MT002:MT001	42-5-1.1	Matthews Rd. Associates LP	85 Matthews Rd.	18677/1	Easement shown on subdivision plan
MT001:Matthews Rd. Meter					
MT0022V:MT1901	42-4-254	50 GVP Property Co. LLC	50 Morehall Road	199/57	
MT1901:MT1902V	Township Street	Morehall Road			
MT1902V:MT1903	Township Street	Morehall Road			
MT1903:MT1904V	Township Street	Morehall Road			
MT1904V:MT2101	Township Street	Morehall Road			
MT2101:MT2012	Township Street	Morehall Road			
MT2102:MT2103	42-4-268.1	JMP Malvern Associates LP	19 Morehall Rd.	19612/1	Easement shown on subdivision plan

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT2103:MT2104	42-4-268.1	JMP Malvern Associates LP	19 Morehall Rd.	19612/1	Easement shown on subdivision plan
MT2104:MT2015	42-4-268.1	JMP Malvern Associates LP	19 Morehall Rd.	19612/1	Easement shown on subdivision plan
MT2105:MT2106	42-4-268.1	JMP Malvern Associates LP	19 Morehall Rd.	19612/1	Easement shown on subdivision plan
	42-4-269	Horatio Realty Trust	1100 Brannan Bl.	18523/1	Easement shown on subdivision plan
	42-4-268	VIII-HII-Morehall Road LLC	1 Morehall Rd.	3559/1973	
MT2106:MT2107	42-4-269	Horatio Realty Trust	1100 Brannan Bl.	18523/1	Easement shown on subdivision plan
MT2107:MT2108	42-4-269	Horatio Realty Trust	1100 Brannan Bl.	18523/1	Easement shown on subdivision plan
MT2108:MT2109	42-4-269	Horatio Realty Trust	1100 Brannan Bl.	18523/1	Easement shown on subdivision plan
MT2109:MT2110	42-4-269	Horatio Realty Trust	1100 Brannan Bl.	18523/1	Easement shown on subdivision plan
	42-4-270	Pennsylvania Lines LLC	Train Tracks		
MT2110:MT2111	42-4-270	Pennsylvania Lines LLC	Train Tracks		
	42-4-272	Del. Val. Real Estate LLC	49 E. Lancaster Ave	17494/1	Easement shown on subdivision plan
MT2111:MT2112	42-4-272	Del. Val. Real Estate LLC	49 E. Lancaster Ave	17494/1	Easement shown on subdivision plan
MT2112:MT2113	42-4-272	Del. Val. Real Estate LLC	49 E. Lancaster Ave	17494/1	Easement shown on subdivision plan
MT2113:MT2114	42-4-272	Del. Val. Real Estate LLC	49 E. Lancaster Ave	17494/1	Easement shown on subdivision plan
	42-4-273	Gunner Properties LTD	51 E. Lancaster Ave	17494/1	Easement shown on subdivision plan
MT2114:MT2115	42-4-273	Gunner Properties LTD	51 E. Lancaster Ave	17494/1	Easement shown on subdivision plan
MT2115:MT2116	42-4-273	Gunner Properties LTD	51 E. Lancaster Ave	17494/1	Easement shown on subdivision plan

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT2116:MT2117	PennDot Road	Lancaster Ave			
MT2117:MT2118V	42-5-16.1	Northridge Community Ass'n	Unaddressable Parcel	No easement found	
MT2118V:MT2119	42-5-16.1	Northridge Community Ass'n	Unaddressable Parcel	No easement found	
MT2119:MT2120V	42-5-16.1	Northridge Community Ass'n	Unaddressable Parcel	No easement found	
MT2120V:MT2126	42-5-16.1	Northridge Community Ass'n	Unaddressable Parcel	No easement found	
MT2118V:MT2127	42-5-16.1	Northridge Community Ass'n	Unaddressable Parcel	No easement found	
MT2127:MT2128	42-5-16.1	Northridge Community Ass'n	Unaddressable Parcel	No easement found	
MT2128:MT2129	42-5-16.1	Northridge Community Ass'n	Unaddressable Parcel	No easement found	
MT2118V:MT2121	42-5-16.1	Northridge Community Ass'n	Unaddressable Parcel	No easement found	
MT2121:MT2123	42-5-16.1	Northridge Community Ass'n	Unaddressable Parcel	No easement found	
MT2123: Northridge/Miner Hill Meter (5)					
MT2123:MT2122	42-5-16.1	Northridge Community Ass'n	Unaddressable Parcel	No easement found	
MT2122:MT2125	42-5-16.1	Northridge Community Ass'n	Unaddressable Parcel	No easement found	
MT1904V:MT1905	Township Street	Morehall Road			
MT1905:MT1906V	Township Street	Morehall Road			
MT1904V:MT1906V	Township Street	Morehall Road			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT1906V:MT1908	Township Street	Morehall Road			
MT1908:MT1909	42-4-132.2	Great Valley Racquet Club	10 Morehall Rd.	199/73	
MT1909:MT1910	42-4-132.2	Great Valley Racquet Club	10 Morehall Rd.	199/73	
MT1910:MT1912	42-4-132.2	Great Valley Racquet Club	10 Morehall Rd.	199/73	
MT1912:MT1913V	42-4-132.2	Great Valley Racquet Club	10 Morehall Rd.	199/73	
	42-4-132.1	Selvan Inc.	7 Lancaster Ave	No easement found	
MT1913V:MT2201	PennDot Road	Lancaster Ave			
MT2201:MT2202	PennDot Road	Lancaster Ave			
MT2202:MT2205	PennDot Road	Lancaster Ave			
MT2205:MT2204	PennDot Road	Lancaster Ave			
MT1913V:MT1914V	PennDot Road	Lancaster Ave			
MT1914V:MT2206	42-4-332	Hbab Enterprises LLC	32 Lancaster Ave	199/54; 284/241	
MT2206:Null	42-4-332	Hbab Enterprises LLC	32 Lancaster Ave	199/54; 284/241	
	42-4-331	Conlin Brothers II LLP	52 Lancaster Ave	284/237	
Null:MT2207	42-4-331	Conlin Brothers II LLP	52 Lancaster Ave	284/237	
	42-4-330	Abistan LLC	60 Lancaster Ave	284/233	
	42-4-329	70-72 Lancaster Pike Irrevocable Trust; Salamone Lisa S Trust	70 Lancaster Ave	284/229	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT1914V:MT1915	PennDot Road	Lancaster Ave			
MT1915:MT1916	42-4-332	Hbab Enterprises LLC	32 Lancaster Ave	199/54	
	42-4-333.1	70-72 Lancaster Pike Irrevocable Trust; Salamone Lisa S Trust	14 E. Lancaster Ave.	No easement found	
	42-4-333	Ronald & Vera Noll	18 E. Lancaster Ave.	No easement found	
MT1916:1403	42-4-333	Ronald & Vera Noll	18 E. Lancaster Ave.	No easement found	
	42-4-334-E	Pennsylvania Lines LLC	Train Tracks		
1403:MT1917	42-4-334-E	Pennsylvania Lines LLC	Train Tracks		
	42-4-335	9 Village Way LP	9 Village Way	199/30; 206/582	
MT1917:MT1918V	42-4-335	9 Village Way LP	9 Village Way	199/30; 206/582	
MT1918V:MT2401V	Township Street	<-- Village Way			
MT2401V:MT2402	Township Street	<-- Village Way			
MT2402:MT2403	Township Street	<-- Village Way			
MT2403:MT2404	Township Street	<-- Village Way			
MT2404:MT2405	Township Street	<-- Village Way			
MT2405:MT2406	Township Street	<-- Village Way			
MT2401V:MT2407V	Township Street	Lantern Lane			
MT2407V:MT2409(1)	Township Street	Fahnestock Road			
MT2409(1):MT2409(2)	Township Street	Fahnestock Road			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT2409(2):MT2410	Township Street	Fahnestock Road			
MT2410:MT2411	Township Street	Fahnestock Road			
MT2411:MT2412	Township Street	Fahnestock Road			
MT2412:MT2413	Township Street	Fahnestock Road			
MT2413:MT2414	Township Street	Fahnestock Road			
MT2414:MT2415	Township Street	Fahnestock Road			
MT2407V:MT2417	Township Street	Lantern Lane			
MT2417:MT2418	Township Street	Lantern Lane			
MT2418:MT2420	42-4R-19	Michelle Mclain	8 Lantern La.	284/339	
MT2420:1402	42-4R-19	Michelle Mclain	8 Lantern La.	284/339	
	42-4R-26	Richard & Felicia Covatta	15 Spring Rd.	284/347; 345/56	
	42-4R-25	Jaspreet Dillon	127 Watch Hill La.	345/56	
1402:MT2422	42-4R-25	Jaspreet Dillon	127 Watch Hill La.	345/56	
MT2422:MT2423	42-4R-25	Jaspreet Dillon	127 Watch Hill La.	345/56	
	42-4R-34	Thomas Nestor	39 Spring Rd.	285/1; 402/164	
MT2423:1401	42-4R-34	Thomas Nestor	39 Spring Rd.	285/1; 402/164	
1401:MT2424	42-4R-34	Thomas Nestor	39 Spring Rd.	285/1; 402/164	
	42-4R-33	Douglas Caldwell	45 Spring Rd.	No easement found	
	42-4R-32	Diane Frey	57 Spring Rd.	285/5	
MT2424:MT2425V	42-4R-32	Diane Frey	57 Spring Rd.	285/5	
MT2425V:MT2426	42-4R-32	Diane Frey	57 Spring Rd.	285/5	
MT2425V:MT2428	42-4R-32	Diane Frey	57 Spring Rd.	285/5	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT2428:MT2429	Township Street	Spring Lane			
MT2429:MT2430	Township Street	Spring Lane			
MT2430:MT2431	Township Street	Spring Lane			
MT2431:MT2432	Township Street	Spring Lane			
MT2432:MT2433	Township Street	Spring Lane			
MT2433:MT2434	Township Street	Spring Lane			
MT2434:MT2435	Township Street	Spring Lane			
MT1918V:MT1919V	Township Street	Old Lancaster Rd			
MT1919V:MT2301	Township Street	Old Lancaster Rd			
MT2301:MT2302	42-4-338	Old Lancaster Venture LP	5 Old Lancaster Pk.	No easement found	
MT2302:MT2303V	42-4-338	Old Lancaster Venture LP	5 Old Lancaster Pk.	No easement found	
	42-4-350	Old Lancaster Venture LP	54 Old Lancaster Pk.	No easement found	
MT2303V: MT2305	42-4-350	Old Lancaster Venture LP	54 Old Lancaster Pk.	No easement found	
	42-4-351	Michael Dooner	52 Old Lancaster Pk.	No easement found	
MT2305V:OLD LINCOLN HIGHWAY METER (OLHM)					
OLHM:MT2306	42-4-350	Old Lancaster Venture LP	54 Old Lancaster Pk.	No easement found	
	42-4-352	Old Lancaster Venture LP	54 Old Lancaster Pk.	No easement found	
	42-4-352.3	Michael & Beth Ford	103 Daisey La.	No easement found	
	42-4-352.2	Richard Lolla; Paula Pierce	102 Daisey La.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT2306:MT2307	42-4-352.2	Richard Lolla; Paula Pierce	102 Daisey La.	No easement found	
MT2307:MT2309	42-4-352.2	Richard Lolla; Paula Pierce	102 Daisey La.	No easement found	
MT1919V:MT1920	Township Street	N Warren Ave			
MT1920:MT1921	Township Street	N Warren Ave			
MT1921:MT1922	42-4-343	Finbar Bleahen; Elaine Ohara	333 N. Warren Ave.	199/79	
MT1922:MT1923	42-4-343	Finbar Bleahen; Elaine Ohara	333 N. Warren Ave.	199/79	
MT1923:MT1924	Township Street	N Warren Ave			
MT1924:MT1925	Township Street	N Warren Ave			
MT1925:MT1925	Township Street	N Warren Ave			
MT1926: Warren Ave Meter					
MT1504V:MT1505	PennDot Road	Conestoga Road			
MT1505:MT1506	42-4-130	Commerce Bank/PA	101 Lancaster Ave.	285/9	
MT1506:MT1507	42-4-130	Commerce Bank/PA	101 Lancaster Ave.	285/9	
	42-4-127	Lawrence Dunn	115 Lancaster Ave.	No easement found	
	42-4-129	Deerfield Road Associates II LLP	155 Lancaster Ave.	No easement found	
MT1507:MT1508	42-4-129	Deerfield Road Associates II LLP	155 Lancaster Ave.	No easement found	
	42-4-125.2	Deerfield Road Associates II LLP	157 Lancaster Ave	No easement found	
	42-4-125.3	Deerfield Road Associates II LLP	161 Lancaster Ave.	199/45	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT1508:MT1509	42-4-125.3	Deerfield Road Associates II LLP	161 Lancaster Ave.	199/45	
	42-4-125.3A	Deerfield Road Associates II LLP	167 Lancaster Ave.	No easement found	
	42-4-125.8	Deerfield Road Associates II LLP	No Address	No easement found	
MT1509:MT1510V	42-4-125.8	Deerfield Road Associates II LLP	No Address	No easement found	
	42-4-125	Main Line I Associates LP	Unadressable Parcel	284/273	
MT1510V:MT1511	42-4-125	Main Line I Associates LP	Unadressable Parcel	284/273	
	42-4-102.2	Forge Millwork & Lumber Co.	181 Lancaster Ave.	284/277; 401/378	
	42-4-102.4	Mary Ann Pilotti	183 Lancaster Ave.	284/277; 401/378	
	42-4-103	Sylvester Cavalati	189 Lancaster Ave.	284/281	
MT1511:MT1512	42-4-103	Sylvester Cavalati	189 Lancaster Ave.	284/281	
	42-4-104	Domenick Mancini	195 Lancaster Ave.	284/285; 399/399	
	42-4-106.1	Constance & Garabet Karkakelian	197 Lancaster Ave.	284/253	
	42-4-106	Sunoco Partners Marketing & Terminals LP	41 Malin Rd.	284/253	
MT1510V:MT1513V	42-4-125	Main Line I Associates LP	Unadressable Parcel	284/273; 17487/1	Easement shown on subdivision plan
	42-4-322.5	154 Inc.	154 Lancaster Ave.	199/42; 284/193; 390/33	
MT1513V:MT1514	42-4-322.5	154 Inc.	154 Lancaster Ave.	199/42; 284/193; 390/33	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-4-322.6	Danai Kuranuruk	152 Lancaster Ave.	287/13	
	42-4-322.7	National Bank of Malvern	140 Lancaster Ave.	284/197	
MT1514:2000	42-4-322.7	National Bank of Malvern	140 Lancaster Ave.	284/197	
	42-4-322.8	122-134 Lancaster LLC	126 Lancaster Ave.	284/201	
2000:MT1515	42-4-322.8	122-134 Lancaster LLC	126 Lancaster Ave.	284/201	
	42-4-322.9	Frazer Property Acquisition Inc.	120 Lancaster Ave.	284/205	
	42-4-322	Gerhard S Inc.	116 Lancaster Ave	284/209	
	42-4-323	Gerhard S Inc.	114 Lancaster Ave.	284/209	
MT1515:MT1516	42-4-323	Gerhard S Inc.	114 Lancaster Ave.	284/209	
	42-4-324	Craig & Megan Suhoskey	112 Lancaster Ave.	284/213	
	42-4-325	Philip Smith	108 Lancaster Ave.	284/217	
	42-4-326	Ronald Buckwalter Jr.	106 Lancaster Ave	284/221	
	42-4-327	J & N Walsh LLC	102 Lancaster Ave.	284/225	
MT1516:MT1517	42-4-327	J & N Walsh LLC	102 Lancaster Ave.	284/225	
	42-4-328	McDonald's Corp.	84 Lancaster Ave.	287/5	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT1513V:MT1601	42-4-322.5	154 Inc.	154 Lancaster Ave.	199/42; 284/193; 390/33	
	42-4-322.4	John & Carole Lyster	160 Lancaster Ave.	284/189	
	42-4-334-E	Pennsylvania Lines LLC	Train Tracks		
MT1601:MT1602	42-4-334-E	Pennsylvania Lines LLC	Train Tracks		
MT1602:MT1603	42-4-334-E	Pennsylvania Lines LLC	Train Tracks		
	42-4-321.2	Constitution Dr. Partners LP	1 S. Malin Rd.	197/888	
MT1603:MT1604V	42-4-321.2	Constitution Dr. Partners LP	1 S. Malin Rd.	197/888	
MT1604V:MT1611	Township Street	Fahnestock Road			
MT1611:MT1612	Township Street	Fahnestock Road			
MT1612:MT1613	Township Street	Fahnestock Road			
MT1613:MT1614	Township Street	Fahnestock Road			
MT1614:MT1515	Township Street	Fahnestock Road			
MT1615:MT1616	Township Street	Fahnestock Road			
MT1616:MT1617	Township Street	Fahnestock Road			
MT1617:MT1618	Township Street	Fahnestock Road			
MT1618:MT1619	Township Street	Fahnestock Road			
MT1604V:MT1606V	Township Street	Village Way			
MT1606V:MT1620	Township Street	Woodview Rd			
MT1620:MT1621	Township Street	Woodview Rd			
MT1621:MT1622	Township Street	Woodview Rd			
MT1622:MT1623	Township Street	Woodview Rd			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT1623:MT1624	Township Street	Woodview Rd			
MT1624:MT1625	Township Street	Woodview Rd			
MT1625:MT1626	Township Street	Woodview Rd			
MT1626:MT1627	Township Street	Woodview Rd			
MT1627:MT1628	Township Street	Woodview Rd			
MT1628:MT1629	Township Street	Woodview Rd			
MT1629:MT1630	Township Street	Woodview Rd			
MT1606V:MT1605	Township Street	Village Way			
MT1605:MT1607	Township Street	Village Way			
MT1607:MT1608V	Township Street	Village Way			
MT1608V:MT1631	Township Street	Longview Road			
MT1631:MT1632	Township Street	Longview Road			
MT1632:MT1633	Township Street	Longview Road			
MT1608V:MT1609	Township Street	Village Way			
MT1609:MT1610	Township Street	Village Way			
MT1513V:MT1518	42-4-322.5	154 Inc.	154 Lancaster Ave	199/42; 284/193; 390/33	
	42-4-322.4	John & Carole Lyster; Rhinda Funk	160 Lancaster Ave.	284/189	
	42-4-322.2	Jarle & Myrna Rokke	172 Lancaster Ave.	184/185	
MT1518:MT1519	42-4-322.2	Jarle & Myrna Rokke	172 Lancaster Ave.	184/185	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-4-322.1	J Edwards Co. LLC	188 Lancaster Ave.	No easement found	
MT1519:MT1520V	42-4-322.1	J Edwards Co. LLC	188 Lancaster Ave.	No easement found	
MT1520V:MT1701	Township Street	S. Malin Road			
MT1701:MT1702					
MT1702:MT1703	42-4-321.2	Constitution Drive Partners LP	1 Malin Rd.	No easement found	
	42-4-321.1	10 Malin Rd. Associates	10 S. Malin Rd.	286/340	
MT1703:MT1704	42-4-321.1	10 Malin Rd. Associates	10 S. Malin Rd.	286/340	
	42-4-321.2	Constitution Drive Partners LP	1 Malin Rd.	No easement found	
MT1704:MT1705	42-4-321.2	Constitution Drive Partners LP	1 Malin Rd.	No easement found	
	42-4-321.1	10 Malin Rd. Associates	10 S. Malin Rd.	286/340	
MT1705:MT1706V	42-4-321.1	10 Malin Rd. Associates	10 S. Malin Rd.	286/340	
MT1706V:MT1801	42-4-321.1	10 Malin Rd. Associates	10 S. Malin Rd.	286/340	
MT1801:MT1802	42-4-321.1	10 Malin Rd. Associates	10 S. Malin Rd.	286/340	
	42-4-321	10 Malin Rd. Associates	9 S. Malin Rd.	286/340	
MT1802:MT1803	42-4-321	10 Malin Rd. Associates	9 S. Malin Rd.	286/340	
MT1803:MT1804	42-4-321	10 Malin Rd. Associates	9 S. Malin Rd.	286/340	
MT1804:MT1805	42-4-321	10 Malin Rd. Associates	9 S. Malin Rd.	286/340	
	42-4-294-E	National Railroad Passenger Corp.	Train Tracks	Valid license through 7/14/2024; Assignment issues	
	42-4-281	Sugartown Ridge Condo Assoc. Inc.	Unaddressable Parcel	6267/2378	Easement

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT1805:MT1806	42-4-281	Sugartown Ridge Condo Assoc. Inc.	Unaddressable Parcel	6267/2378	Easement
MT1806:MT1835	42-4-281	Sugartown Ridge Condo Assoc. Inc.	Unaddressable Parcel	6267/2378	Easement
MT1835:N/AV	42-4-281	Sugartown Ridge Condo Assoc. Inc.	Unaddressable Parcel	6267/2378	Easement
N/AV:MT1841	42-4-281	Sugartown Ridge Condo Assoc. Inc.	Unaddressable Parcel	6267/2378	Easement
MT1841:MT1842	42-4-281	Sugartown Ridge Condo Assoc. Inc.	Unaddressable Parcel	6267/2378	Easement
	42-4-281.30	Joanne Thurber	12 Broad Leaf Tr.	6267/2378	Easement (Condo Association)
MT1842:MT1843	42-4-281.30	Joanne Thurber	12 Broad Leaf Tr.	6267/2378	Easement (Condo Association)
	42-4-281.31	Andrew & Kathleen Reid	14 Broad Leaf Tr.	6267/2378	Easement (Condo Association)
	42-4-281.28	Jayalal Janaka; Karunamuni Silva	8 Broad Leaf Tr.	6267/2378	Easement (Condo Association)
N/AV:MT1836	42-4-281	Sugartown Ridge Condo Assoc. Inc.	Unaddressable Parcel	6267/2378	Easement
MT1836:MT1837	Private Road	Sugartown Ridge Condo Assoc. Inc.	Broad Leaf Trail	6267/2378	Easement
MT1837:MT1838	Private Road	Sugartown Ridge Condo Assoc. Inc.	Broad Leaf Trail	6267/2378	Easement
MT1838:MT1839	Private Road	Sugartown Ridge Condo Assoc. Inc.	Broad Leaf Trail	6267/2378	Easement
MT1706V:MT1707	42-4-321.1	10 Malin Rd. Associates	10 S. Malin Rd.	286/340	
	42-4-295.1	Buckeye Terminals LLC	8 S. Malin Rd.	284/327	
MT1707:MT1708	42-4-295.1	Buckeye Terminals LLC	8 S. Malin Rd.	284/327	
MT1708:MT1709	42-4-295.1	Buckeye Terminals LLC	8 S. Malin Rd.	284/327	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-4-294-E	National Railroad Passenger Corp.	Train Tracks	License valid through 7/14/2024; Assignment issues	
MT1709:MT1710	42-4-294-E	National Railroad Passenger Corp.	Train Tracks	License valid through 7/14/2024; Assignment issues	
MT1710:MT1711	42-4-294-E	National Railroad Passenger Corp.	Train Tracks	License valid through 7/14/2024; Assignment issues	
	42-4P-28-E	East Whiteland Township	49 Summit Rd.		
	42-4Q-157	Nathan & Jen Miller	41 Oak Hill Cir.	427/203	
MT1711:MT1712	42-4Q-157	Nathan & Jen Miller	41 Oak Hill Cir.	427/203	
MT1712:MT1713V	42-4Q-157	Nathan & Jen Miller	41 Oak Hill Cir.	427/203	
	42-4Q-156	Anthony & Donna Dimonte	43 Oak Hill Cir.	284/343	
MT1713V:MT1736	42-4Q-173	Eric & Roxanne Alessandroni	28 Oak Hill Cir.	No easement found	
	42-4Q-174	Joseph & Kim Samuel	26 Oak Hill Cir.	No easement found	
MT1736:MT1737	Township Street	Oak Hill Circle			
MT1737:MT1738	Township Street	Oak Hill Circle			
MT1738:MT1739	Township Street	Oak Hill Circle			
MT1739:MT1740	Township Street	Oak Hill Circle			
MT1713V:MT1714V	Township Street	Oak Hill Circle			
MT1714V:NULL	42-4Q-172	Andrew & Mary Lawson	30 Oak Hill Cir.	No easement found	
	42-4Q-171	Dennis Dunbar	32 Oak Hill Cir.	No easement found	
NULL:MT1734	42-4Q-171	Dennis Dunbar	32 Oak Hill Cir.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-4Q-180	Joan Turner	7 Forest Way	No easement found	
	42-4Q-179	Jay Anderson	5 Forest Way	No easement found	
MT1734:MT1735	42-4Q-179	Jay Anderson	5 Forest Way	No easement found	
MT1714V:MT1715	Township Street	Oak Hill Circle			
MT1715:MT1716V	Township Street	Oak Hill Circle			
MT1716V:MT1728	Township Street	Summit Rd (west)			
MT1728:MT1729	Township Street	Summit Rd (west)			
MT1729:MT1730	Township Street	Summit Rd (west)			
MT1730:MT1731	Township Street	Summit Rd (west)			
MT1731:MT1732	Township Street	Summit Rd (west)			
MT1716V:MT1718	Township Street	Summit Road (south)			
MT1718:MT1719V	Township Street	Summit Road (south)			
MT1719V:MT1720	42-7-64.5	Trevor Sawyer	14 Summit Rd.	No easement found	
	42-7-64.4	Kevin Crowly	16 Summit Rd.	960/194	
MT1720:MT1721	42-7B-138.11	Paul & Margurite Deignan	21 Amy La.	No easement found	
MT1721:MT1722	42-7B-138.11	Paul & Margurite Deignan	21 Amy La.	No easement found	
MT1722:NULL	Township Street	Amy Lane			
NULL:MT1723	Township Street	Amy Lane			
MT1723:MT1724	Township Street	Amy Lane			
MT1724: FORCE MAINE TO KING RD. PS12					

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-7-53	Harold & Josephine Herkins	909 King Rd.	No easement found	
	42-7B-101	Robert Barone	911 King Rd.	No easement found	
	42-7B-102	Walter Jara; Silvia Castro	1 King Cir.	No easement found	
	42-7B-133	Daniel Gianforte; Kelly Edwards	923 King Rd.	No easement found	
	42-7B-132	Judy Achlott-Asousa; Theodore Asousa	927 King Rd.	No easement found	
	42-7B-119	Daniel Maguire	937 King Rd.	No easement found	
	72-7B-120	Catherine Summers	36 King Cir.	No easement found	
	42-7B-118	Richard & Joy Mullin	35 King Cir.	No easement found	
	42-7B-85	Maureen Loncar	957 King Rd.	No easement found	
	42-7B-86	Andrew Vacante	1 Madeline Dr.	No easement found	
	42-7B-84	Stephen & Pamela Converse	961 King Rd.	No easement found	
	72-7B-83	Mary Lou Chappel	965 King Rd.	No easement found	
	42-7B-82	Adam & Laura Shames	6 Queen Anne La.	No easement found	
	42-7B-81	Joseph O'Neil	8 Queen Anne La.	No easement found	
	42-7B-80	James Hood Jr.	10 Queen Anne La.	No easement found	
MT1719V:MT1726	Township Street	Summit Road (south)			
MT1726:MT1727	Township Street	Oak Hill Circle			
MT1727:MT1832	Township Street	Oak Hill Circle			
MT1832:MT1831	Township Street	Oak Hill Circle			
MT1831:MT1830	Township Street	Oak Hill Circle			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT1830:MT1829	Township Street	Oak Hill Circle			
MT1829:MT1828	42-7C-5	Gregory Fair	15 Oak Hill Cir.	5648/615	Easement
	42-4Q-169	Regina Kessler Lewis	17 Oak Hill Cir.	5648/607	Easement
MT1828:MT1827V	42-4Q-169	Regina Kessler Lewis	17 Oak Hill Cir.	5648/607	Easement
	42-4-281	Sugartown Road Condo Ass'n	Unaddressable Parcel	6267/2378	Easement
MT1827V:MT1833	42-4-281	Sugartown Road Condo Ass'n	Unaddressable Parcel	6267/2378	Easement
MT1827V:MT1826	42-4-281	Sugartown Road Condo Ass'n	Unaddressable Parcel	6267/2378	Easement
MT1826:MT1825	42-4-281	Sugartown Road Condo Ass'n	Unaddressable Parcel	6267/2378	Easement
MT1825:MT1824	42-4-281	Sugartown Road Condo Ass'n	Unaddressable Parcel	6267/2378	Easement
MT1824:MT1809	42-4-281	Sugartown Road Condo Ass'n	Unaddressable Parcel	6267/2378	Easement
MT1809:MT1810	42-4-281	Sugartown Road Condo Ass'n	Unaddressable Parcel	6267/2378	Easement
MT1810:MT1812	42-4-281	Sugartown Road Condo Ass'n	Unaddressable Parcel	6267/2378	Easement
MT1812:MT1813	42-4-281	Sugartown Road Condo Ass'n	Unaddressable Parcel	6267/2378	Easement
MT1813:MT1814	42-4-281	Sugartown Road Condo Ass'n	Unaddressable Parcel	6267/2378	Easement
MT1814:MT1815	42-4-281	Sugartown Road Condo Ass'n	Unaddressable Parcel	6267/2378	Easement
MT1815:MT1816	42-4-281	Sugartown Road Condo Ass'n	Unaddressable Parcel	6267/2378	Easement
MT1816:MT1817	42-4-281	Sugartown Road Condo Ass'n	Unaddressable Parcel	6267/2378	Easement

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT1817:MT1818	42-4-281.47	Sugartown Road Condo Ass'n	Sugar Ridge Lane	No easement found	
MT1818:MT1819	42-4-281.47	Sugartown Road Condo Ass'n	Sugar Ridge Lane	No easement found	
MT1819:MT1820	42-4-281.47	Sugartown Road Condo Ass'n	Sugar Ridge Lane	No easement found	
MT1820:MT1821	42-4-281.47	Sugartown Road Condo Ass'n	Sugar Ridge Lane	No easement found	
MT1821:MT1822	42-4-281.47	Sugartown Road Condo Ass'n	Shady Brook Lane	No easement found	
MT1822:MT1823	42-4-281.47	Sugartown Road Condo Ass'n	Shady Brook Lane	No easement found	
EG0004:EG0002V	42-4-278.20	Eric Gelen Homeowners Assoc. Inc.	Inis Way		
EG0002V:EG0003	42-4-278.20	Eric Gelen Homeowners Assoc. Inc.	Kerry Lane		
EG0003:EG0001	42-4-278.20	Eric Gelen Homeowners Assoc. Inc.	Kerry Lane		
EG0001:ERIN GLENN METER	42-4-278.20	Eric Gelen Homeowners Assoc. Inc.			
MT1520V:MT1521	42-4-318	Provco Frazer LLC	200 Lancaster Ave.	284/177	
	42-4-317.2	Robert Protesto V Jr. Trust	218 Lancaster Ave.	284/169; 287/17	
MT1521:MT1522	42-4-317.2	Robert Protesto V Jr. Trust	218 Lancaster Ave.	284/169; 287/17	
	42-4-317.1	Robert Protesto V Jr. Trust	228 Lancaster Ave.	284/173	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT1522:MT1523	42-4-317.1	Robert Protesto V Jr. Trust	228 Lancaster Ave.	284/173	
	42-4-317	Leslie & Ernest Eadeh Revocable Trust	228 Lancaster Ave.	284/169; 287/17	
	42-4-316	Edward & Gerard Leaf	230 Lancaster Ave.	284/165	
	42-4-315	William Mangan	240 Lancaster Ave.	284/161	
MT1523:MT1524	42-4-315	William Mangan	240 Lancaster Ave.	284/161	
MT1524:MT1525	42-4-315	William Mangan	240 Lancaster Ave.	284/161	
	42-4-313	Sam & Sal Associates	270 Lancaster Ave.	284/153	
MT0042V:MT1201	42-4-125	Main Line I Associates LP	Unaddressable Parcel (back on Conestoga Rd)	284/273	
MT1201:MT1202	42-4-125	Main Line I Associates LP	Unaddressable Parcel	284/273	
MT1202:MT1203	42-4-125	Main Line I Associates LP	Unaddressable Parcel	284/273	
MT1203:MT1204	42-4-125	Main Line I Associates LP	Unaddressable Parcel	284/273	
	42-4-113	Ourania Illia	75 Malin Rd.	No easement found	
	42-4-112	Dam & Michele Coll	73 Malin Rd.	No easement found	
MT1204:MT1205	42-4-112	Dam & Michele Coll	73 Malin Rd.	No easement found	
	42-4-111	Robert & Karen Stalker	71 Malin Rd.	No easement found	
	42-4-110	Richard & Rebecca Priest	69 Malin Rd.	No easement found	
MT1205:MT1206V	42-4-110	Richard & Rebecca Priest	69 Malin Rd.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT1206V:MT1208	42-4-110	Richard & Rebecca Priest	69 Malin Rd.	No easement found	
	42-4-109	Robert & Beverly Reinhardt	67 Malin Rd.	No easement found	
	42-4-108	Dunh Vu & Lan Nguyen	65 Malin Rd.	No easement found	
MT1206V:MT2603	42-4-110	Richard & Rebecca Priest	69 Malin Rd.	345/134	
	42-4-125	Main Line I Associates LP	Unaddressable Parcel	284/273	
MT2603:MT2604	42-4-125	Main Line I Associates LP	Unaddressable Parcel	284/273	
MT2604:MT2605	42-4-125	Main Line I Associates LP	Unaddressable Parcel	284/273	
MT1206V:MT1209	42-4-110	Richard & Rebecca Priest	69 Malin Rd.	345/134	
	42-4-109	Robert & Beverly Reinhardt	67 Malin Rd.	377/134	
MT1209:MT1210V	Township Street	Mailin Road			
MT1210V:MT1301	Township Street	Birch Road			
MT1301:MT1302V	Township Street	Birch Road			
MT1302V:MT1303	Township Street	Birch Road			
MT1303:MT1304	Township Street	Birch Road			
MT1304:MT1305	Township Street	Birch Road			
MT1302V:MT1306	Township Street	Locust Drive			
MT1306:MT1307	Township Street	Locust Drive			
MT1307:MT1308	42-4K-30	Deborah Flad & Brian Weber	7 Locust Dr.	197-262, 265,268	
	42-4K-17	Martin & Dorothy Costello	12 Locust Dr.	196/999	Easement

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT1308:MT1309V	42-4K-17	Martin & Dorothy Costello	12 Locust Dr.	196/999	Easement
	42-4K-27	William Marella & Jeffrey Graver	8 Pine Rd.	196/993, 996	
	42-4K-28	William & Evelyn Miller	6 Pine Rd.	197/271	Easement
MT1309V:MT1316	Township Street	Pine Road (south)			
MT1309V:MT1314	Township Street	Pine Road (north)			
MT1314:MT1315	Township Street	Pine Road (north)			
MT1309V:MT1310	42-4K-7	James & Michele Hanlon	7 Pine Rd.	196/1002	Easement
MT1310:MT1311	42-4K-7	James & Michele Hanlon	7 Pine Rd.	196/1002	Easement
	42-4K-142	Harry & Vivian Allison	30 Birch Rd.	No easement found	
MT1311:MT1312	42-4K-142	Harry & Vivian Allison	30 Birch Rd.	No easement found	
	42-4K-143	Frank Potere	28 Birch Rd.	No easement found	
MT1312:MT1313V	42-4K-143	Frank Potere	28 Birch Rd.	No easement found	
MT1313V:MT1317	Township Street	Birch Road (south)			
MT1313V:MT1318	Township Street	Birch Road (north)			
MT1318:MT1319	Township Street	Birch Road (north)			
MT1210V:MT1211	Township Street	Malin Rd. (south)			
MT1211:MT1212	Township Street	Malin Rd. (south)			
MT1212:MT1213	Township Street	Malin Rd. (south)			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT1213:MT1214V	Township Street	Malin Rd. (south)			
MT1214V:MT1409	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	
MT1409:MT1401	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	
MT1401V:MT1408	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	
MT1408:MT1410	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	
MT1410:MT1411	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	
MT1411:MT1412	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	
MT1401V:MT1402	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	
MT1402:MT1403	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	
MT1403:MT1405	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	
MT1405:MT1404	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	
MT1404:MT1406	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	
MT1406:MT1407	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	
MT1214V:MT1215	Township Street	Malin Road			
MT1215:MT1216	Township Street	Malin Road			
MT1216:MT1217	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT1217:MT1218	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	
MT1218:MT1219	42-4-97.1	Lincoln Investors LP	237 Lancaster Ave.	284/293	
	42-4-98.1	Lizelton Inc.	245 Lancaster Ave.	284/298	
MT1219:MT1220	42-4-98.1	Lizelton Inc.	245 Lancaster Ave.	284/298	
MT1220:MT1221	42-4-98.1	Lizelton Inc.	245 Lancaster Ave.	284/298	
	42-4-98.4	MGD LLC	249 Lancaster Ave.	284/302	
MT1221:MT1222	42-4-98.4	MGD LLC	249 Lancaster Ave.	284/302	
MT1222:MT1223V	42-4-98.4	MGD LLC	249 Lancaster Ave.	284/302	
	42-4-98	MGD LLC	255 Lancaster Ave.	284/302	
	42-4-100	271 LP	271 Lancaster Ave.	284/306	
MT1223V:MT2501	42-4-100	271 LP	271 Lancaster Ave.	284/306	
	42-4-89.1B	One Park Place Residents Association	Unaddressable Parcel	No easement found	
MT2501:MT2502	42-4-89.1B	One Park Place Residents Association	Unaddressable Parcel	No easement found	
MT2502:MT2503V	42-4-89.1B	One Park Place Residents Association	Unaddressable Parcel	No easement found	
MT2503V:MT2504	42-4-89.1B	One Park Place Residents Association	Unaddressable Parcel	No easement found	
MT2504:MT2505	42-4-89.1B	One Park Place Residents Association	Unaddressable Parcel	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MT2505:MT0014	42-4-89.1B	One Park Place Residents Association	Unaddressable Parcel	No easement found	
MT0014:MT0013	42-4-89.1B	One Park Place Residents Association	Unaddressable Parcel	No easement found	
	42-4-89.1A	Frazer Mennonite Church	58 Maple Linden La.	No easement found	
MT2503V:MT2506V	42-4-89.1B	One Park Place Residents Association	Unaddressable Parcel	No easement found	
MT2506V:MT0016	42-4-89.1B	One Park Place Residents Association	Unaddressable Parcel	No easement found	
MT0016:MV0015	42-4-89.1B	One Park Place Residents Association	Unaddressable Parcel	No easement found	
MT2506V:MT2507	42-4-89.1B	One Park Place Residents Association	Unaddressable Parcel	No easement found	
MT2506V:MT2511V	42-4-89.1B	One Park Place Residents Association	Unaddressable Parcel	No easement found	
MT2511V:MV0018	42-4-89.1B	One Park Place Residents Association	Unaddressable Parcel	No easement found	
MT2511V:MT2512	42-4-89.1B	One Park Place Residents Association	Unaddressable Parcel	No easement found	
MT1223V:MT1224	42-4-100	271 LP	271 Lancaster Ave.	284/306	
MT1224:MT1225	42-4-100	271 LP	271 Lancaster Ave.	284/306	
MT1225: FORCE MAIN TO WEST GATE PS8					
	42-4-100	271 LP	271 Lancaster Ave.	284/306	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-4-101.1	Jason Nardone LLC	289 Lancaster Ave.	983/337	
	42-4-87.2	Windon Twentieth Real Estate LP	309 Lancaster Ave.	983/349,353,401; Case No. 87-08872	Easement; Condemnation
		KING ROAD DB			
KING ROAD PS12	East Goshen Twp. (53-2-18) (54-2-127)	Malvern Institute for Psychiatric & Alcoholic Studies	940 West King Rd.	6033/577	Easement
PS12: KR0004V (FM)	PennDot Road	King Road			
KR0004V:KR0002V	PennDot Road	King Road			
KR0002V:KR0001	PennDot Road	King Road			
KR0001:KR0101V	PennDot Road	King Road			
KR0101V:KR0301	Township Street	King's Circle			
KR0301:KR0302	Township Street	King's Circle			
KR0302:KR0303	Township Street	King's Circle			
KR0303:KR0304	Township Street	King's Circle			
KR0304:KR0305	Township Street	King's Circle			
KR0305:KR0306	Township Street	King's Circle			
KR0101V:KR0102	PennDot Road	King Road	King Road DB		
KR0102:KR0103	47-7B-119	Daniel Maguire	937 King Rd.	No easement found	
KR0103:KR0104V	47-7B-119	Daniel Maguire	937 King Rd.	No easement found	
	42-7B-132	Judy Schlott-Asousa;	927 King Rd.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
		Theodore Asousa			
	42-7B-133	Daniel Gianforte; Kelly Edwards	923 King Rd.	No easement found	
KR0104V:KR0105	42-7B-102	Walter Jara; Silbia Castro	1 Kings Cir.	No easement found	
	42-7B-101	Robert Barone	911 King Rd.	No easement found	
KR0104V:KR0401	Township Street	King's Circle			
KR0401:KR0402	Township Street	King's Circle			
KR0402:KR0403	Township Street	King's Circle			
KR0002V:KR0201V	Township Street	Madeline Dr			
KR0201V:KR0202	Township Street	Queen Anne Ln			
KR0202:KR0203	Township Street	Queen Anne Ln			
KR0201:KR0204	Township Street	Madeline Dr			
KR0204:KR0205	Township Street	Madeline Dr			
KR0205:KR0206V	Township Street	Madeline Dr			
KR206V:KR0207	Township Street	Madeline Dr			
KR0206V:KR0208	Township Street	Kevin Way			
KR0208:KR0209	Township Street	Kevin Way			
KR0209:KR0210	Township Street	Kevin Way			
KR0004V:KR0005V	PennDot Road	King Road			
KR0005V:KR0211	Township Street	Carol Lane			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
KR0211:KR0212	Township Street	Carol Lane			
KR0212KR0213	Township Street	Carol Lane			
KR0005V:KR0007V	PennDot Road	King Road			
KR0007V:KR0008	42-7-52.3	Charles & Robin Haines	1013 King Rd.	5648/601	Easement
	42-7-52	Joanne Ozmond	1009 King Rd.	5686/920	Easement
KR0007:KR0009	42-7-52.2	Brita Vanrossum; Fred Stluka	1011 King Rd.	No easement found	
	42-7-52.1A	Daniel & Alyssa Mazzenga	1015 King Rd.	No easement found	
KR0009:KR0010	42-7-52.1A	Daniel & Alyssa Mazzenga	1015 King Rd.	No easement found	
	42-7-50.1	Michael & Kristy Stevens	1017 King Rd.	No easement found	
	42-7-50	Frank & Sheil Caldwell	1021 King Rd.	No easement found* (but see subdivision plan at 17279/1)	
	42-7-49	Giurastante Family Revocable Trust	1027 King Rd.	No easement found	
KR0010:KR0011	42-7-48	Giurastante Family Revocable Trust	1029 King Rd.	5648/595	Easement
	42-7-47	Colleen Brogan-McTieran	1031 King Rd.	No easement found	
		WEST GATE DB			
PS8:WG0001	42-4-87.2	Windon Twentieth; 422 Realty LP	309 Lancaster Ave.	983/349,353,401; Case No. 87-08872	Easement; Condemnation

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
WG0001:WG0002	42-4-87.2	Windon Twentieth; 422 Realty LP	309 Lancaster Ave.	983/349,353,401; Case No. 87-08872	Easement; Condemnation
WG0002:WG0003	42-4-87.2	Windon Twentieth; 422 Realty LP	309 Lancaster Ave.	983/349,353,401; Case No. 87-08872	Easement; Condemnation
WG0003:FR0004V	42-4-87.2	Windon Twentieth; 422 Realty LP	309 Lancaster Ave.	983/349,353,401; Case No. 87-08872	Easement; Condemnation
FR0004V:WG0201	42-4-87.2	Windon Twentieth; 422 Realty LP	309 Lancaster Ave.	983/349,353,401; Case No. 87-08872	Easement; Condemnation
WG0201:WG0202	42-4-87.2	Windon Twentieth; 422 Realty LP	309 Lancaster Ave.	983/349,353,401; Case No. 87-08872	Easement; Condemnation
WG0202:WG0203	42-4-87.2	Windon Twentieth; 422 Realty LP	309 Lancaster Ave.	983/349,353,401; Case No. 87-08872	Easement; Condemnation
FR0004V:WG0005	42-4-87.2	Windon Twentieth; 422 Realty LP	309 Lancaster Ave.	983/349,353,401; Case No. 87-08872	Easement; Condemnation
	42-4-87.1	Piroeff Family Limited Partnership	337 Lancaster Ave.	983/341	
WG0005:WG0006	42-4-87.1	Piroeff Family Limited Partnership	337 Lancaster Ave.	983/341	
	42-4N-22	Battlehawn Properties LLC	345 Lancaster Ave.	983/405	
WG0006:WG0007	42-4N-22	Battlehawn Properties LLC	345 Lancaster Ave.	983/405	
	42-4N-21	Ernest George III	351 Lancaster Ave.	983/357	
WG0007:WG0008V	42-4N-21	Ernest George III	351 Lancaster Ave.	983/357	
	42-4N-20.1	Winifred Mclean	353 Lancaster Ave.	983/361	
WG0008V:WG0101	Township Street	Beechwood Ave			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
WG0101:WG0102V:	Township Street	Beechwood Ave			
WG0102V:WG0104	Township Street	Beechwood Ave			
WG0102V:WG0103	Township Street	Buttonwood Ave	Westgate DB	Township Street	
WG0008V:WG0009	42-4N-39	Brookside Investments LP	365 Lancaster Ave	983/365	
WG0009:WG0010	42-4N-39	Brookside Investments LP	365 Lancaster Ave	983/365	
	42-4N-40	Michael Brogan	375 Lancaster Ave	983/369	
	42-4N-41	SCF RC Funding IV LLC	383 Lancaster Ave	No easement found	
WG0010:WG0011	42-4N-41	SCF RC Funding IV LLC	383 Lancaster Ave	No easement found	
	42-4N-42	SCF RC Funding IV LLC	385 Lancaster Ave	983/409	
	42-4N-43	Eadeh Family Limited Partnership	393 Lancaster Ave	983/413	
WG0011: FORCE MAINE TO CHURCH RD. PS9					
	42-4N-43	Eadeh Family Limited Partnership	393 Lancaster Ave	983/413	
	42-4N-44	SHS1 LLC	397 Lancaster Ave	1357/504	
	42-4-80	Stoney Creek Industrial Park	403 Lancaster Ave	1357/500	
	42-4-80.1	Steven Blatman; Maria Hurley	14 Church Road	1357/496	
	42-4-75.1	Plute Homes of PA LP	Unaddressable Parcel	Easement (unrecorded)	
	42-4-79	Chris & Penny Strauss	16 Church Road	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-4-78	Microorigin Ventures Inc.	18 Church Road	No easement found* (but see subdivision plan at 15555/1)	
	42-4-77	Rubino Holdings LP	22 Church Road	1357/492	
	42-4-75.1	Plute Homes of PA LP	Unaddressable Parcel	Easement (unrecorded)	
FR0004V:WG301V	42-4-87.2	Windon Twentieth; 422 Realty LP	309 Lancaster Ave.	983/349,353,401; Case No. 87-08872	Easement; Condemnation
	42-4-309	Main Line Watercraft Realty LP	310 Lancaster Ave.	983/421	
WG301V:WG0309	42-4-309	Main Line Watercraft Realty LP	310 Lancaster Ave.	983/421	
	42-4-310.2	Main Line Watercraft Realty LP	310 Lancaster Ave.	No easement found	
WG0309:WG0310	42-4-310.2	Main Line Watercraft Realty LP	310 Lancaster Ave.	No easement found	
	42-4-310	Main Line Watercraft Realty LP	310 Lancaster Ave.	983/385	
	42-4-311	Eadeh Family Limited Partnership	288 Lancaster Ave.	983/381	
WG0310:WG0311	42-4-311	Eadeh Family Limited Partnership	288 Lancaster Ave.	983/381	
WG0311:WG0312	42-4-311	Eadeh Family Limited Partnership	288 Lancaster Ave.	983/381	
	42-4-312.1	Eadeh Family Limited Partnership	286 Lancaster Ave.	983/377	
	42-4-312	Leslie Eadeh Revocable Trust	284 Lancaster Ave.	983/373	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
WG0301V:WG0302	42-4-309	Main Line Watercraft Realty LP	310 Lancaster Ave.	983/421	
	42-4-309.1	330 Lancaster Avenue LP	330 Lancaster Ave.	983/425	
WG0302:WG0303V	42-4-309.1	330 Lancaster Avenue LP	330 Lancaster Ave.	983/425	
	42-4-308.2	DFKS Management LLC	340 Lancaster Ave.	983/429	
WG0303V:WG0304	42-4-308.2	DFKS Management LLC	340 Lancaster Ave.	983/429	
	42-4-308.1	Carol Burke	352 Lancaster Ave.	983/389	
	42-4-308	Helen Depaul LP	362 Lancaster Ave.	983/393	
WG0304:WG0305	42-4-308	Helen Depaul LP	362 Lancaster Ave.	983/393	
	42-4-307	Rubino Holdings LP	360 Lancaster Ave.	983/397	
WG0305:WG0306	42-4-307	Rubino Holdings LP	360 Lancaster Ave.	983/397	
	42-4-306	Penn Crest Properties LLC	370 Lancaster Ave.	983/433	
WG0306:WG0307	42-4-306	Penn Crest Properties LLC	370 Lancaster Ave.	983/433	
	42-4-304.2	Tri State Technical Sales Corp.	382 Lancaster Ave.	983/437,441,445,449	
WG0307:WG0308	42-4-304.2	Tri State Technical Sales Corp.	382 Lancaster Ave.	983/437,441,445,449	
	42-4-304-E	Covenant United Presbyterian Church	384 Lancaster Ave.	983/453	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
WG0308:CH0110	42-4-304-E	Covenant United Presbyterian Church	384 Lancaster Ave.	983/453	
	42-4-303	Frazer Realty Holdings	392 Lancaster Ave.	1358/34	
WG0303V:WG0401	42-4-308.2	DFKS Management LLC	340 Lancaster Ave.	983/429	
WG0401:WG0402	42-4-308.2	DFKS Management LLC	340 Lancaster Ave.	983/429	
	42-4-308	Helen Depaul LP	362 Lancaster Ave.	983/393	
WG0402:WG0403	42-4-308	Helen Depaul LP	362 Lancaster Ave.	983/393	
WG0403:WG0404V	42-4-308	Helen Depaul LP	362 Lancaster Ave.	983/393	
	42-4-319-E	Pennsylvania Lines LLC	Train Tracks		
WG404V:WG0801	42-4-319-E	Pennsylvania Lines LLC	Train Tracks		
WG0801:WG0802	42-4-296.16	Terra Minor LLC	155 Three Tun Rd.	No easement found* (but see subdivision plan at 18412/1)	
WG0802:WG0805	42-4-296.16	Terra Minor LLC	155 Three Tun Rd.	No easement found* (but see subdivision plan at 18412/1)	
MG0805:WG0806	42-4-296.16	Terra Minor LLC	155 Three Tun Rd.	No easement found* (but see subdivision plan at 18412/1)	
	42-4-296.15	Terra Minor LLC	215 Three Tun Rd.	No easement found* (but see	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
				subdivision plan at 18412/1)	
WG0806:WG0807	42-4-296.15	Terra Minor LLC	215 Three Tun Rd.	No easement found* (but see subdivision plan at 18412/1)	
	42-4-296.14	What a Good Dog LLC	225 Three Tun Rd.	No easement found* (but see subdivision plan at 18412/1)	
WG0807:WG0808	42-4-296.14	What a Good Dog LLC	225 Three Tun Rd.	No easement found* (but see subdivision plan at 18412/1)	
WG0808:WG0809	42-4-296.14	What a Good Dog LLC	225 Three Tun Rd.	No easement found* (but see subdivision plan at 18412/1)	
WG0809:WG0810	Township Road	Three Tun Rd.			
WG0810:WG0813V	Township Road	Three Tun Rd.			
WG0813V:WG0814	42-4-296.7	TKO Ventures	380 Three Tun Rd.	5752/93	Easement
WG0813V:WG0811	42-4-296.6	Edison Properties LP	340 Three Tun Rd.	No easement found* (but see subdivision plan at 18219/1)	
WG0811:WG0812	42-4-296.6	Edison Properties LP	340 Three Tun Rd.	No easement found* (but see subdivision plan at 18219/1)	
WG0812:WG0901V	42-4-296.6	Edison Properties LP	340 Three Tun Rd.	No easement found* (but	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
				see subdivision plan at 18219/1)	
	42-4-294-E	National Railroad Passenger Group	Train Tracks		
	42-4P-19	Michaele Vaughn	13 Ridge Rd.	No easement found	
WG0901V:WG0913	42-4P-19	Michaele Vaughn	13 Ridge Rd.	No easement found	
WG0913:WG0914	42-4P-19	Michaele Vaughn	13 Ridge Rd.	No easement found	
WG0914:WG0915	42-4P-19	Michaele Vaughn	13 Ridge Rd.	No easement found	
	42-4P-18	Jennifer Donovan	11 Ridge Rd.	No easement found	
	42-4P-22	Theodore & Dagmar Graybill	8 Ridgewood Dr.	No easement found	
	42-4P-23	Marcel Frey	6 Ridgewood Dr.	No easement found	
	42-4P-17	Patricia Paul	9 Ridge Rd.	No easement found	
WG0915:WG0916V	42-4P-17	Patricia Paul	9 Ridge Rd.	No easement found	
	42-4P-16	Karen Boyd	7 Ridge Rd.	No easement found	
WG0916V:WG0925	42-4P-16	Karen Boyd	7 Ridge Rd.	No easement found	
	42-4P-23	Marcel Frey	6 Ridgewood Dr.	No easement found	
	42-4P-24	Thomas Juenger	4 Ridgewood Dr.	No easement found	
WG0925:WG0926	42-4P-24	Thomas Juenger	4 Ridgewood Dr.	No easement found	
WG0926:WG0927	42-4P-25	Kenneth & Lorraine Lawless	87 Summitn Rd.	No easement found	
	42-4P-26	John Walsh	85 Summit Rd.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
WG0916V:WG0917	42-4P-16	Karen Boyd	7 Ridge Rd.	No easement found	
	42-4P-15	Howard & Colleen Marano	5 Ridge Rd.	No easement found	
	42-7B-136	Thomas Hemler	93 Summit Rd.	5648/705	Easement
WG0917:WG0918	42-7B-136	Thomas Hemler	93 Summit Rd.	5648/705	Easement
WG0918:WG0919	42-7B-136	Thomas Hemler	93 Summit Rd.	5648/705	Easement
WG0919:WG0920	42-7B-136	Thomas Hemler	93 Summit Rd.	5648/705	Easement
WG0920:WG0921V	42-7B-136	Thomas Hemler	93 Summit Rd.	5648/705	Easement
	42-7B-134	Jeffrey & Kimberly Payne	1 Ridge Rd.	Case No. 00684	Condemnation
WG0921V:WG0923	Township Street	Summit Rd (east)			
WG0923:WG0924	42-7B-99	Michael & Denise Ryan	96 Summit Rd.	No easement found	
	42-7B-100.2	Thomas & Meredith Mitchell; Priscilla Colan	90 Summit Rd.	5648/717	Easement
	42-7B-100	Thomas & Rebecca Burke	92 Summit Rd.	5648/711	Easement
WG0921V:WG0922	Township Street	Summit Rd (west)			
WG0901V:WG0902	42-4P-19	Michaele Vaughn	13 Ridge Rd.	No easement found	
	42-4P-20	John Hee	15 Ridge Rd.	No easement found	
WG0902:WG0903	42-4P-20	John Hee	15 Ridge Rd.	No easement found	
	42-4P-29	Christopher & Elise Deegan	17 Ridge Rd.	No easement found	
	42-4P-30	John Gleason	19 Ridge Rd.	No easement found	
	42-4P-31	Donna Sargent	21 Ridge Rd.	No easement found	
	42-4P-32	Joseph Weckerle	23 Ridge Rd.	No easement found	
	42-4P-33	David Iacobucci	3 Sleighride Dr.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
WG0903:WG0904	42-4P-33	David Iacobucci	3 Sleighride Dr.	No easement found	
WG0904:WG0905V	Private Rd.	Sleighride Drive			
WG0905V:WG0909	Private Rd.	Sleighride Drive			
WG0909:WG0910	42-7B-151	John & Alice Presley	14 Ridge Rd.	No easement found	
	42-4P-36	Steven Boyd	12 Ridge Rd.	No easement found	
	42-4P-37	John & Mary Ferrara	10 Ridge Rd.	No easement found	
WG0910:WG0911	42-4P-37	John & Mary Ferrara	10 Ridge Rd.	No easement found	
	42-7B-142	Scott & Sherri Lewis	8 Ridge Rd.	No easement found	
	42-7B-143	Howard & Araclis Polesky	6 Ridge Rd.	No easement found	
WG0911:WG0912	42-7B-143	Howard & Araclis Polesky	6 Ridge Rd.	No easement found	
	42-7B-144	Scott & Rebecca Gamble	4 Ridge Rd.	No easement found	
	42-7B-145	Douglas & Barbara Mccarson	2 Ridge Rd.	No easement found	
WG0905V:WG0906	Township Street	Ridge Road			
WG0906:WG0907	Township Street	Ridge Road			
WG0907:WG0908	Township Street	Ridge Road			
WG404V:WG0405V	42-4-319-E	Pennsylvania Lines LLC	Train Tracks		
WG0405V: PRIVATE SEWER LINE TO THE LEFT (running from 40 Three Tun Rd.					
WG0405V:WG0406	42-4-297.3	Chester County Fund Inc.	70 Three Tun Rd.	20467/1	Easement shown on land development plan
WG0406:WG0407	42-4-297.3	Chester County Fund Inc.	70 Three Tun Rd.	20467/1	Easement shown on land development plan
	42-4-297.2	60 Three Tun LLC	60 Three Tun Rd.	20467/1	Easement shown on land development plan

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
WG0407WG0408	42-4-297.2	60 Three Tun LLC	60 Three Tun Rd.	20467/1	Easement shown on land development plan
WG0408:WG0409	42-4-297.2	60 Three Tun LLC	60 Three Tun Rd.	20467/1	Easement shown on land development plan
WG0409:WG0410V	42-4-297.2	60 Three Tun LLC	60 Three Tun Rd.	20467/1	Easement shown on land development plan
	42-4-294-E	National Railroad Passenger Group	Train Tracks	Expired License on 10/31/2018; Assignment Issues	
WG0410V:WG0601	42-4-294-E	National Railroad Passenger Group	Train Tracks	Expired License on 10/31/2018; Assignment Issues	
WG0601:WG0602	42-4-294-E	National Railroad Passenger Group	Train Tracks	Expired License on 10/31/2018; Assignment Issues	
WG0602:WG0603	42-4-294-E	National Railroad Passenger Group	Train Tracks	Expired License on 10/31/2018; Assignment Issues	
WG0603:WG0604	42-4-294-E	National Railroad Passenger Group	Train Tracks	Expired License on 10/31/2018; Assignment Issues	
WG0604:WG0605	42-4-294-E	National Railroad Passenger Group	Train Tracks	Expired License on 10/31/2018; Assignment Issues	
	42-7A-27	William & Carol Howard	54 Carol La.	No easement found	
WG0605:WG0606V	42-7A-27	William & Carol Howard	54 Carol La.	No easement found	
WG0606V:WG0607	Township Street	Carol Lane			
WG0607:WG0608	Township Street	Carol Lane			
WG0608:WG0609V	Township Street	Carol Lane			
WG0609V:WG0619	Township Street	Diane Dr.			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
WG0619:WG0620	Township Street	Diane Dr.			
WG0620:WG0622	Township Street	Diane Dr.			
WG0622:WG0621	Township Street	Diane Dr.			
WG0621:WG0623	Township Street	Diane Dr.			
WG0623:WG0624	Township Street	Diane Dr.			
WG0609V:WG0610	Township Street	Carol Lane			
WG0610:WG0611	Township Street	Carol Lane			
WG0611:WG0612	Township Street	Carol Lane			
WG0612:WG0613V	Township Street	Carol Lane			
WG0613V:WG0616	Township Street	Summit Road (east)			
WG0616:WG0617	Township Street	Summit Road (east)			
WG0617:WG0618	Township Street	Summit Road (east)			
WG0613V:WG0614	Township Street	Summit Road(west)			
WG0614:WG0615	Township Street	Summit Road(west)			
WG0606V:WG0625	Township Street	Carol Lane			
WG0625:WG0626	Township Street	Carol Lane			
WG0626:WG0627V	Township Street	Carol Lane			
WG0627V:WG0628	Township Street	Carol Lane			
WG0628:WG0629	Township Street	Carol Lane			
WG0627V:WG0630	42-7A-31	Kathy Sheridan	46 Carol La.	5676/1103	Easement

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
WG0630:WG0631	42-7A-32	Joseph & Mary McGeehan	44 Carol La.	5676/1151	Easement
	42-7A-33	Thomas & Nancy Jarrett	42 Carol La.	5676/1133	Easement
WG0631:WG0632	42-7A-34	Patricia Morris	40 Carol La.	5676/1096	Easement
	42-7A-35	Matthew Pesot	38 Carol La.	5676/1139	Easement
WG0632:WG0633	42-7A-35	Matthew Pesot	38 Carol La.	5676/1139	Easement
	42-7A-36	Karen Farrelly	36 Carol La.	5676/1145; Case No. 03-00678	Easement; Condemnation
	42-7A-37	James Beam	34 Carol La.	5676/1121	Easement
WG0633:WG0634	42-7A-37	James Beam	34 Carol La.	5676/1121	Easement
WG0634:WG0635	42-7A-37	James Beam	34 Carol La.	5676/1121	Easement
	42-7A-38	Robert & Barbara Perrin	32 Carol La.	5648/588	Easement
WG0635:WG0636	42-7A-38	Robert & Barbara Perrin	32 Carol La.	5648/588	Easement
	42-7A-39	Robert Carver	30 Carol La.	5686/926; Case No. 03-00685	Easement; Condemnation
	42-7A-71	Lorne Munroe	9 Barbara Dr.	5608/2114; Case No. 03-2143	
WG0410V:WG0411	42-4-294-E	National Railroad Passenger Group	Train Tracks		
	42-7A-25.2	Robert Caccese; Deb Wolbach	1 Dawn Way	No easement found	
WG0411:WG0412	42-7A-25.2	Robert Caccese; Deb Wolbach	1 Dawn Way	No easement found	
	42-7A-25.3	Michael & Kim Buchanan	3 Dawn Way	No easement found	
WG0412:WG0413	42-7A-25.3	Michael & Kim Buchanan	3 Dawn Way	No easement found	
WG0413:WG0414	42-7A-25.3	Michael & Kim Buchanan	3 Dawn Way	No easement found	
	42-7A-25.4	Mia Haiching	4 Dawn Way	No easement found	
WG0414:WG0501V	42-7A-25.4	Mia Haiching	4 Dawn Way	No easement found	
WG0501V:WG0502	Township Street	Judith Way			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
WG0502:WG0503V	Township Street	Judith Way			
WG0503V:WG0504	Township Street	Judith Way			
WG0504:WG0505	Township Street	Judith Way			
WG0503V:WG0517	Township Street	Carla Terrace			
WG0517:WG0518	Township Street	Carla Terrace			
WG0501V:WG0506	Township Street	Judith Way			
WG0506:WG0507	42-7A-11.10	Alan & Melissa Neves	29 Judith Way	No easement found	
	42-7A-92.6	Narayanan Radhakrishnan	17 Rogers Way	No easement found	
WG0507:WG0508	42-7A-92.6	Narayanan Radhakrishnan	17 Rogers Way	No easement found	
	42-7A-92.5	Wang Yang; Zeng Wenyu	15 Rogers Way	No easement found	
WG0508:WG0509V	42-7A-92.5	Wang Yang; Zeng Wenyu	15 Rogers Way	No easement found	
WG0509V:WG0510	Township Street	Rogers Way			
WG0510:WG0511	Township Street	Rogers Way			
WG0511:WG0512	Township Street	Rogers Way			
WG0509V:WG0513	42-7A-92.12	Francis & Andrea Golden	16 Rogers Way	No easement found	
WG0513:WG0514	Township Street	Rogers Way			
WG0514:WG0515	42-7A-92.10	Raymond & Susan Cori	20 Rogers Way	No easement found	
WG0515:WG0516	42-7A-92.10	Raymond & Susan Cori	20 Rogers Way	No easement found	
	42-7A-92.14	Hao Sun; Jiangyue Zhang	11 Barbara Dr.	No easement found	
WG0516:WG0705	42-7A-92.15	Russell & Cynthia Lighton	10 Barbara Dr.	No easement found	
WG0705:WG0704V	Township Street	Barbara Dr.			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
WG0704V:WG0706V	42-7A-68	Thomas & Patricia Jolly	4 Barbara Dr.	5648/577	Easement
	42-7A-69	Kathy Simmonds	6 Barbara Dr.***	5686/942	Easement
	42-7A-79	Jeremy & Dana Harrison	137 Sproul Rd.	5686/912	Easement
WG0706V:WG0707	42-7A-79	Jeremy & Dana Harrison	137 Sproul Rd.	5686/912	Easement
	42-7A-65	Jonathan Godley	219 Summit Rd.	5676/1115	
WG0706V:WG0708	42-7A-79	Jeremy & Dana Harrison	137 Sproul Rd.	5686/912	Easement
	42-7A-80.1	Walter Haly; Richard Haly	135 Sproul Rd.	No easement found	
	42-7A-80	Walter Haly; Richard Haly	133 Sproul Rd.	Case No. 03-00679	Condemnation
	42-7A-81	Dwight & Catherine Lasure	131 Sproul Rd.	5648/724	Easement
WG07089:WG0709	42-7A-81	Dwight & Catherine Lasure	131 Sproul Rd.	5648/724	Easement
	42-7A-82	John Lovasz	129 Sproul Rd.	5676/1109	Easement
	42-7A-84	Rebecca Shirk; Neal Gliksman	125 Sproul Rd.	5676/1127	Easement
	42-7A-83	Minika & James Chapman	127 Sproul Rd.	5648/730	Easement
WG0704V:WG0703V	Township Street	Barbara Dr.		Township Street	
WG0703V:WG0702	42-7A-74	Janet Obrien; Peter Spengeman	3 Barbara Dr.	5648/583	Easement
	42-7A-73	Stephanie McNichol	5 Barbara Dr.	5648/570	Easement
WG0702:WG0701	42-7A-73	Stephanie McNichol	5 Barbara Dr.	5648/570	Easement
	42-7A-74	Janet Obrien; Peter Spengeman	3 Barbara Dr.	5684/583	Easement
WG0701:WG0637	42-7A-74	Janet Obrien; Peter Spengeman	3 Barbara Dr.	5684/583	Easement

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-7A-71	Lorne Munroe	9 Barbara Dr.	5608/2114; Case No. 03-2143	
WG0637:WG0638	42-7A-71	Lorne Munroe	9 Barbara Dr.	5608/2114; Case No. 03-2143	
	42-7A-88	Amy Mellinger	197 Summit Rd.	5648/699	Easement
WG0638:WG0639V	42-7A-88	Amy Mellinger	197 Summit Rd.	5648/699	Easement
	42-7A-41	Kenneth & Yvonne Miller	26 Carol La.	5648/564	Easement
WG0639V:WG0641	Township Street	Carol Lane (Sorth)			
WG0639V:WG0640	Township Street	Carol Lane (South)			
WG0703V:WG0710	Township Street	Barbara Dr.			
WG0710:WG0711	42-7A-67	William Dierkes	2 Barbara Dr.	No easement found	
	42-7A-66	Kathleen Michaels	217 Summit Rd.	No easement found	
WG0711:WG0712V	42-7A-66	Kathleen Michaels	217 Summit Rd.	No easement found	
WG0712V:WG0713	42-7A-55	Charles & Denney Magee	218 Summt Rd.	5648/693	Easement
	42-7A-56	Christopher & Wendy Corkran	216 Summit Rd.	No easement found	
WG0713:WG0714	42-7A-56	Christopher & Wendy Corkran	216 Summit Rd.	No easement found	
	42-7-40	Robert & Betty Whitaker	159 Sproul Rd.	Case No. 03-00680	Condemnation
	42-7-41	Miguel Jara	163 Sproul Rd.	Case No. 03-00681	Condemnation
	42-7A-59	Daniel & Kelly Farrell	4 Woodcrest Lane	5648/589	Easement
WG0712V:WG0715V	Township Street	Summit Road			
WG0715V:WG0719	Township Street	Summit Road			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
WG0719:WG0720	42-7-51	Marjorie Cockerham	200 Summit Rd.	No easement found	
	42-7B-40	Alan Donatone	18 Carol La.	No easement found	
WG0715V:WG0716	Township Street	Woodcrest Lane			
	72-7A-58	Porter & Harriet Carlson	6 Woodcrest La.	Case No. 03-00683	Condemnation
WG0716:WG0717	42-7A-61	Romayne Howard-McKellar	5 Woodcrest La.	No easement found	
	42-7A-60	Irina Shevertalova	3 Woodcrest La.	5608/2126	Condemnation
WG0717:WG0718	42-7A-60	Irina Shevertalova	3 Woodcrest La.	5608/2126	Condemnation
	42-7-43	Benjamin Poehand	179 Sproul Rd.	5686/932	Easement
	42-7-44	Joseph & Kelly Dantoni	181 Sproul Rd.	5686/936; Case No. 03-2147	Easement; Condemnation
		CHURCH RD. DB			
Church Road PS9	42-4-75.1	Plute Homes of PA Limited Partnership	Unaddressable Parcel	Easement (unrecorded)	
PS9:CH0001	42-4-75.1	Plute Homes of PA Limited Partnership	Unaddressable Parcel	Easement (unrecorded)	
CH0001:CH0301	42-4-75.1	Plute Homes of PA Limited Partnership	Unaddressable Parcel	Easement (unrecorded)	
CH0301:CH0302	42-4-75.1	Plute Homes of PA Limited Partnership	Unaddressable Parcel	Easement (unrecorded)	
	42-4-77	Rubino Holdings LP	22 Church Rd.	1357/492	
CH0302:CH0303	42-4-77	Rubino Holdings LP	22 Church Rd.	1357/492	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
CH0303:CH0304V	42-4-77	Rubino Holdings LP	22 Church Rd.	1357/492	
CH0304V:CH305	42-3-199	Chester Valley Golf Club	430 Swedesford Rd.	7819/2124	Easement
CH305:CH306	Township Street	Church Road			
CH304V:CH0401	42-3-199	Chester Valley Golf Club	430 Swedesford Rd.	7819/2124	Easement
CH0401:CH0402	Township Street	Church Road			
CH0402:CH0403	Township Street	Church Road			
CH04903:CH0404	Township Street	Beachwood Ave			
CH0404:CH0405	Township Street	Beachwood Ave			
CH0405:CH0406V	Township Street	Beachwood Ave			
CH0406V:CH0411	Township Street	Beachwood Ave			
CH0411:CH0412	42-4N-12	James & Seanna Meehan	21 Beechwood Ave	No easement found	
CH0406V:CH0407	Township Street	Buttonwood Ave			
CH0407:CH0408	Township Street	Buttonwood Ave			
CH0408:CH0409	Township Street	Buttonwood Ave			
CH0409:CH0410	Township Street	Buttonwood Ave			
CH0001:CH0002	42-4-75.1	Plute Homes of PA Limited Partnership	Unaddressable Parcel	Easement (unrecorded)	
CH0002:CH0003	42-4-75.1	Plute Homes of PA Limited Partnership	Unaddressable Parcel	Easement (unrecorded)	
CH0003:CH0004	42-4-75.1	Plute Homes of PA Limited Partnership	Unaddressable Parcel	Easement (unrecorded)	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
CH0004:CH0005V	42-4-75.1	Plute Homes of PA Limited Partnership	Unaddressable Parcel	Easement (unrecorded)	
CH0005V:CH0101V	42-4-75.1	Plute Homes of PA Limited Partnership	Unaddressable Parcel	Easement (unrecorded)	
	42-4-275	Eadeh Leslie Revocable Trust	446 Lancaster Ave.	1357/426; 1379/271	
CH0101V:CH0106	42-4-275	Eadeh Leslie Revocable Trust	446 Lancaster Ave.	1357/426; 1379/271	
CH0106:CH0107	42-4-275	Eadeh Leslie Revocable Trust	446 Lancaster Ave.	1357/426; 1379/271	
	42-4-298	Carol Sexton	430 Lancaster Ave.	1357/418	
CH0107:CH0108	42-4-298	Carol Sexton	430 Lancaster Ave.	1357/418	
	42-4-299	Glenn & Helen Cockerham	422 Lancaster Ave.	1358/50	
	42-4-300	Glenn & Helen Cockerham	420 Lancaster Ave.	1358/46	
CH0108:CH0109	42-4-300	Glenn & Helen Cockerham	420 Lancaster Ave.	1358/46	
	42-4-302.1-E	Covenant United Presbyterian Church	410 Lancaster Ave.	1358/42	
	42-4-302-E	Covenant United Presbyterian Church	400 Lancaster Ave.	1358/38	
CH0101V:CH0102	42-4-275	Eadeh Leslie Revocable Trust	446 Lancaster Ave.	1357/426; 1379/271	
CH0102:CH0103	42-4-275	Eadeh Leslie Revocable Trust	446 Lancaster Ave.	1357/426; 1379/271	
	42-3-239	Eadeh Family Limited Partnership	211 Apple La.	1357/430	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
CH0103:CH0104	42-3-239	Eadeh Family Limited Partnership	211 Apple La.	1357/430	
CH0104:CH0105	42-3-239	Eadeh Family Limited Partnership	211 Apple La.	1357/430	
	42-3-238	Eadeh Family Limited Partnership	474 Lancaster Ave.	1357/434	
	42-3-237.2	Arch-Frazer LLC	480 Lancaster Ave.	1357/438	
	.				
CH0005V:CH0006	42-4-75.1	Plute Homes of PA Limited Partnership	Unaddressable Parcel	Easement (unrecorded)	
	42-3-227	Hill Laboratories Co.	445 Lancaster Ave.	1357/479	
	42-3-226.1	Thomas & Wayne Keyes	447 Lancaster Ave.	1357/475	
	42-3-226	Thomas & Wayne Keyes	449 Lancaster Ave.	1357/467	
CH0006:CH0007	42-3-223	Thomas & Wayne Keyes	457 Lancaster Ave.	1357/471	
	42-3-222	Michael Rizzo	459 Lancaster Ave.	1357/508	
	42-3-222.1	H&B Associates LLC	471 Lancaster Ave.	1357/512	
CH0007:CH0008	42-3-222.1	H&B Associates LLC	471 Lancaster Ave.	1357/512	
	42-3-221	Cohab Realty LLC; Forest Dr. LLC	477 Lancaster Ave.	1357/520	
CH0008:CH0009	42-3-221	Cohab Realty LLC; Forest Dr. LLC	477 Lancaster Ave.	1357/520	
	42-3-220	Jeffrey Dambrosio	483 Lancaster Ave.	1357/516; 1367/531	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
CH0009:CH0010	42-3-220	Jeffrey Dambrosio	483 Lancaster Ave.	1357/516; 1367/531	
	42-3-218	Rudy & Nancy Ricca	497 Lancaster Ave.	1357/524	
CH0010:CH0011	42-3-218	Rudy & Nancy Ricca	497 Lancaster Ave.	1357/524	
	42-3-217	Minh Hang; Nguyen Tam	503 Lancaster Ave.	1357/528	
	42-3R-5	Francis & Julie Boromeo	1 Charles St.	1357/532; 1678/210	
CH0011:CH0012V	42-3R-2	Leticia Casillas	2 Charles St.	1357/536; 1678/200	
	42-3R-16	Coffman Commons Condominium Association	Unaddressable Parcel	1357/540	
CH0012V:CH0201V	42-3R-16	Coffman Commons Condominium Association	Unaddressable Parcel	1357/540	
	42-3R-38	Thunderbird Trading Co. LLC	530 Lancaster Ave.	1357/462	
CH0201VCH0205	42-3R-38	Thunderbird Trading Co. LLC	530 Lancaster Ave.	1357/462	
	42-3-233.1	Malvern Realty Holdings, Inc.	520 Lancaster Ave	1357/458	
	42-3-234	David Goldstein	510 Lancaster Ave	1357/450,454	
	42-3-236	Frederick Callaghan Jr; Paul Callahan	500 Lancaster Ave	1357/446	
CH0205:CH0206	42-3-236	Frederick Callaghan Jr; Paul Callahan	500 Lancaster Ave	1357/446	
	42-3-237.1	Arch-Frazer LLC	490 Lancaster Ave.	1357/442	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
CH0201V:CH0204	42-3R-38	Thunderbird Trading Co. LLC	530 Lancaster Ave.	1357/462	
	42-3R-40	VJM Realty Partners, LLC	522 Lancaster Ave.	1358/62	
	42-3R-39	James & Diana Genn	526 Lancaster Ave.	1358/66	
CH0201V:CH0203	42-3R-38	Thunderbird Trading Co. LLC	530 Lancaster Ave.	1357/462	
	42-3R-37	Canakis Real Estate LLC	524 Lancaster Ave.	1358/58	
	42-3-232	Wolfe Investment Properties LLC	536 Lancaster Ave.	1358/70	
CH0203:CH0202	42-3-232	Wolfe Investment Properties LLC	536 Lancaster Ave.	1358/70	
	42-3-231	Wolfe Investment Properties LLC	544 Lancaster Ave.	1367/535	
	42-3-230	??	20 Norbros Cir.	1358/74	
CH0202:FR0410	42-3-230	??	20 Norbros Cir.	1358/74	
FR0410:FR0411	42-3-230	??	20 Norbros Cir.	1358/74	
CH0012:CH0013	42-3R-16	Coffman Commons Condominium Association	Unaddressable Parcel		
	42-3R-6	Touchstone Properties	519 Lancaster Ave.	1357/544	
CH0013:CH0014	42-3R-7	F L W Realty Co.	527 Lancaster Ave.	1357/549	
	42-3R-8	Emac Installers Co.	531 Lancaster Ave.	1357/552	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
CH0014:CH0015	42-3R-8	Emac Installers Co.	531 Lancaster Ave.	1357/552	
	42-3R-9	Franklin Auto Spa LP	535 Lancaster Ave.	1357/556	
	42-3R-10	Roanoke Properties LLC	537 Lancaster Ave.	1357/560	
CH0015:FORCE MAINE TO FRAME AVE PS 10					
	42-3R-10	Roanoke Properties LLC	537 Lancaster Ave.	1357/560	
	42-3R-11.1	John & Christine Vagnozzi	549 Lancaster Ave.	1357/564	
	42-3R-12	Jack Azat	555 Lancaster Ave	1357/568	
	42-3R-13	Whiteland Plaza	565 Lanaster Ave.	1357/572	
	42-3-179	Wawa, Inc.	567Lancaster Ave	1357/576	
	42-3-180	Jack Azat	577 Lancaster Ave	1357/580; 1678/190	
	42-3Q-19	Jack Azat	581 Lancaster Ave	1357/584	
	42-3Q-18	Jack Azat	585 Lancaster Ave	1357/588	
	42-3Q-9	Luludoli LLC	587 Lancaster Ave	1357/596; 1678/205	
	42-3-181	Jack Azat	591 Lancaster Ave	1357/592	
	42-3-182	Jack Azat	589 Lancaster Ave	1358/1	
	42-3-183	Spruce EW Realty LP	593 Lancaster Ave	1358/5	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-3-184	Spruce EW Realty LP	593 Lancaster Ave	1358/9	
	42-3-185.1	Spruce EW Realty LP	593 Lancaster Ave	1358/13	
	42-3-149.1	Anthony Celia	5 Frame Ave.	No easement found	
	42-3-150.1	Townes at Malvern Community Association	114 Mulberry Dr.	No easement found	
	42-3-149	Daniel Giegel	7 Frame Ave.	1358/21; 20126/1	Easement; Easement shown on subdivision plan
	42-3-149.2	Construction Technology Services, Inc.	11 Frame Ave	20565/1	Easement shown on subdivision plan
	42-3-150	Rehana Syed; Amit Godambe	15 Frame Ave.	20126/1	Easement shown on subdivision plan
	12-3-151	Marie Stotler	23 Frame Ave.	No easement found	
	42-3-151.1	Amit Godambe; Rehana Syed	25 Frame Ave.	No easement found	
	42-3-152	Ryan & Maura Klembecki	27 Frame Ave	No easement found	
	42-3-153.3	Townes at Malvern Community Association	150 Planebrook Rd.	9950/1608; 19840/1	Easement;Easement shown on subdivision plan
		FRAME AVE. DB			
Frame Ave PS10	PennDot Road	202			
N/A:FR0002	PennDot Road	202			
FR0002:FR0003	Township Street	Frame Ave			
FR0003:N/AV	Township Street	Frame Ave			
N/AV: FORCE MAIN TO PLAINBROOK PS					

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-3-153.3	Townes at Malvern Community Association	150 Planebrook Rd.	9950/1608; 19840/1	Easement;Easement shown on subdivision plan
PLAINBROOK PS: CHESTER VALLEY TRAIL (private line)					
	42-3-153.3	Townes at Malvern Community Association	150 Planebrook Rd.	9950/1608; 19840/1	Easement;Easement shown on subdivision plan
	42-3-153	Barry & Linda Cockerham	148 Planebrook Rd.	19840; 1	Easement shown on subdivision plan
	42-3-165	Daniel & Ginger McGuire	60 Planebrook Rd.	9579/478	Easement
	42-3-111.2	Eadeh Family Limited Partnership	105 Phoenixville Pk.	16114/1	Easement shown on subdivision plan
	42-3-111.8	John & Deborah Abel	111 Phoenixville Pk.	No easement found	
N/AV:FR0004	Township Street	Frame Ave			
FR0004:FR0005	Township Street	Frame Ave			
FR0005:FR0006	Township Street	Frame Ave			
FR0006:FR0007	Township Street	Frame Ave			
FR0007:FR0008V	Township Street	Frame Ave			
FR008V:FR0202	42-3-149.1	Anthony Celia	5 Frame Ave	No easement found	
FR0202:FR0101	42-3-149.1	Anthony Celia	5 Frame Ave	No easement found	
	42-3-147	Anthony & Josaphine Celia	5 Frame Ave Ste 102	No easement found	
	42-3-185.1	Spruce EW Realty LP	593 Lancaster Ave.	1358/13	
FR0101:FR0102	42-3-185.1	Spruce EW Realty LP	593 Lancaster Ave.	1358/13	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-3-185	Richard Haly; Walter Haly	609 Lancaster Ave	1358/17	
FR0102:FR0103	42-3-185.1	Spruce EW Realty LP	593 Lancaster Ave.	1358/13	
FR0103:FR0104	42-3-185.1	Spruce EW Realty LP	593 Lancaster Ave.	1358/13	
	42-3-184	Spruce EW Realty LP	593 Lancaster Ave.	1358/9	
	42-3-183	Spruce EW Realty LP	593 Lancaster Ave.	1358/5	
FR0104:FR0105	42-3-183	Spruce EW Realty LP	593 Lancaster Ave.	1358/5	
	42-3-182	Jack Azat	589 Lancaster Ave	1358/1	
	42-3-181	Jack Azat	591 Lancaster Ave	1357/592	
	42-3Q-9	Luludoli LLC	587 Lancaster Ave	1357/596; 1678/205	
FR0105:FR0106	42-3Q-18	Jack Azat	585 Lancaster Ave	1357/588	
	42-3Q-19	Jack Azat	581 Lancaster Ave	1357/584	
	42-3-180	Jack Azat	577 Lancaster Ave	1357/580; 1678/190	
FR0106:FR0107	42-3-180	Jack Azat	577 Lancaster Ave	1357/580; 1678/190	
	42-3-179	Wawa, Inc.	567Lancaster Ave	1357/576	
FR0107:FR0108	42-3-179	Wawa, Inc.	567Lancaster Ave	1357/576	
	42-3R-13	Whiteland Plaza	565 Lanaster Ave.	1357/572	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
FR0108:FR0109	42-3R-13	Whiteland Plaza	565 Lanaster Ave.	1357/572	
	42-3R-12	Jack Azat	555 Lancaster Ave	1357/568	
	42-3R-11.1	John & Christine Vagnozzi	549 Lancaster Ave.	1357/564	
FR0008V:FR0009	Township Street	Frame Ave			
FR0009:FR0010	Township Street	Frame Ave			
FR0010:FR0011	42-3-145	Anthony Celia	619 Lancaster Ave.	1358/126	
FR0011:FR0012	42-3-145	Anthony Celia	619 Lancaster Ave.	1358/126	
FR0012:FR0013V	42-3-145	Anthony Celia	619 Lancaster Ave.	1358/126	
	42-6-10.1	Robert & Arlene Stevens	627 Lancaster Ave.	1358/26	
FR0013V:FR0301	42-6-10.1	Robert & Arlene Stevens	627 Lancaster Ave.	1358/26	
	42-6-10	Moody National Lancaster Frazer Holding LLC	635 Lancaster Ave.	1358/30	
FR0301:FR0302	42-6-10	Moody National Lancaster Frazer Holding LLC	635 Lancaster Ave.	1358/30	
FR0302:FR0303	42-6-10	Moody National Lancaster Frazer Holding LLC	635 Lancaster Ave.	1358/30	
	42-3-137.1	MHC 36 Frazer PA LLC	641 Lancaster Ave.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-6-8	675 Lancaster LLC	675 Lancaster Ave.	No easement found	
FR0013V:FR0014V	42-6-10.1	Robert & Arlene Stevens	627 Lancaster Ave.	1358/26	
	42-6-21	Chester Co. Commons Owners Assoc. Inc.	Unaddressable Parcel	1358/114	
FR0014V:FR0401	42-6-21	Chester Co. Commons Owners Assoc. Inc.	Unaddressable Parcel	1358/114	
	42-6-24.2	Pennsylvania Lines LLC	9 Ravine Road	1358/54	
FR0401:FR0402	42-6-24.2	Pennsylvania Lines LLC	9 Ravine Road	1358/54	
	42-6-23.2A	Frazer 642 Inc.	642 Lancaster Ave.	1358/118	
FR0402:FR0403	42-6-23.2A	Frazer 642 Inc.	642 Lancaster Ave.	1358/118	
	42-6-23.2B	638 Partners	640 Lancaster Ave.	1358/110	
FR0403:FR0404	42-6-23.2B	638 Partners	640 Lancaster Ave.	1358/110	
	42-6-23.2C	638 Partners	638 Lancaster Ave.	1358/106	
	42-6-23.2	Ward 642 Partners LLC	634 Lancaster Ave.	1358/122	
	42-6-23.2D	Christopher Hashem	630 Lancaster Ave.	1358/102	
	42-6-23.3	DKM Associates	600 Lancaster Ave.	1358/98	
FR0404:FR0405	42-6-23.3	DKM Associates	600 Lancaster Ave.	1358/98	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-6-23	DKM Associates	600 Lancaster Ave.	1358/90; 1379/275	
FR0405:FR0406	42-6-23	DKM Associates	600 Lancaster Ave.	1358/90; 1379/275	
	42-6-23.4A	Fon Kozani LP	596 Lancaster Ave.	No easement found	
FR0406:FR0407	42-6-23.4	580 Lancaster Associates LP	590 Lancaster Ave.	1358/94	
FR0407:FR0408	42-6-23.4	580 Lancaster Associates LP	590 Lancaster Ave.	1358/94	
	42-6-23.1	Arec 5 LLC	564 Lancaster Ave.	1358/86	
FR0408:FR0409	42-6-23.1	Arec 5 LLC	564 Lancaster Ave.	1358/86	
	42-3-228	J&P Spingh Management LLP	562 Lancaster Ave.	1358/82	
	42-3-229	GMH East Whiteland Holdings LLC	554 Lancaster Ave.	1358/78; 1678/195	
FR0014V:FR0015V	42-6-21	Chester Co. Commons Owners Assoc. Inc.	Unaddressable Parcel	1358/114	
FR0015V:FR0501	42-6-14.2	Home Depot USA Inc.	690 Lancaster Ave.	No easement found	
FR0015V:FR0016	Penndot Road	Phoenixville Pike			
FR0016:FR0017	42-6-21	Chester Co. Commons Owners Assoc. Inc.	Unaddressable Parcel	1358/114	
FR0017:FR0018	42-6-21	Chester Co. Commons Owners Assoc. Inc.	Unaddressable Parcel	1358/114	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
FR0018:FR0019	42-6-21	Chester Co. Commons Owners Assoc. Inc.	Unaddressable Parcel	1358/114	
FR0019:FR0020	Township Street	Ravine Road			
FR0020:FR0021	Township Street	Ravine Road			
FR0021:FR0022	42-6-245	Kyle & Kerri Turner	16 Ravine Rd.	No easement found	
FR0022:FR0023V	42-6-246	Whitewoods Community Association, Inc.	Unaddressable Parcel	No easement found	
FR0023V:FR0024	42-6-246	Whitewoods Community Association, Inc.	Unaddressable Parcel	No easement found	
FR0024:FR0601	42-6-246	Whitewoods Community Association, Inc.	Unaddressable Parcel	No easement found	
	42-6-233	Page & Robert Hinkle	26 Whitewoods La.	No easement found	
FR0601:FR0602	42-6-233	Page & Robert Hinkle	26 Whitewoods La.	No easement found	
FR0602:FR0603	42-6-230	Michael Carroll; Carolyn Cross	19 Whitewoods La.	No easement found	
	42-6-229	Thomas & Lisa Nackers	17 Whitewoods La.	No easement found	
FR0603:FR0604	42-6-229	Thomas & Lisa Nackers	17 Whitewoods La.	No easement found	
FR0604:FR0605	42-6-229	Thomas & Lisa Nackers	17 Whitewoods La.	No easement found	
	42-6-228	Nirav Mehta	15 Whitewoods La.	5406/689; 4349/12	Deed of Dedication (from developer for entire Whitewoods subdivision)
	42-6-227	Patrick & Laura Sullivan	13 Whitewoods La.	5406/689; 4349/12	Deed of Dedication (from developer for entire Whitewoods subdivision)

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-6-226	Ming Hang; Tammy Nguyen	11 Whitewoods La.	5406/689; 4349/12	Deed of Dedication (from developer for entire Whitewoods subdivision)
FR0605:FR0606	42-6-226	Ming Hang; Tammy Nguyen	11 Whitewoods La.	5406/689; 4349/12	Deed of Dedication (from developer for entire Whitewoods subdivision)
	42-6-225	Douglas & Cynthia Claffey	9 Whitewoods La.	5406/689; 4349/12	Deed of Dedication (from developer for entire Whitewoods subdivision)
	42-6-224	Victor & Lioudmila Tchistiak	7 Whitewoods La.	5406/689; 4349/12	Deed of Dedication (from developer for entire Whitewoods subdivision)
FR0606:FR0607	42-6-224	Victor & Lioudmila Tchistiak	7 Whitewoods La.	5406/689; 4349/12	Deed of Dedication (from developer for entire Whitewoods subdivision)
	42-6-223	Francis & Kimberly Simon	5 Whitewoods La.	5406/689; 4349/12	Deed of Dedication (from developer for entire Whitewoods subdivision)
	42-6-222	Arthur Jones	3 Whitewoods La.	5406/689; 4349/12	Deed of Dedication (from developer for entire Whitewoods subdivision)
FR0607:FR0608	42-6-222	Arthur Jones	3 Whitewoods La.	5406/689; 4349/12	Deed of Dedication (from developer for entire Whitewoods subdivision)
FR0608:FR0609	Private Road	White Woods Ln.			
FR0609:FR0610	Private Road	White Woods Ln.			
FR0023V:FR0025	42-6-246	Whitewoods Community Assoc. Inc.	Unaddressable Parcel	No easement found	
FR0025:FR0026	42-6-246	Whitewoods Community Assoc. Inc.	Unaddressable Parcel	No easement found	
FR0026:FR0027	42-6-246	Whitewoods Community Assoc. Inc.	Unaddressable Parcel	No easement found	
FR0027:FR0028	42-6G-16-E	East Whiteland Township	Unaddressable Parcel		
FR0028:FR0701	42-6G-16-E	East Whiteland Township	Unaddressable Parcel		
FR0701:FR0702V	42-6G-16-E	East Whiteland Township	Unaddressable Parcel		
	42-6G-17	Eric & Maureen Johnson	32 Glenloch Way	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
FR0702V:FR0703	Township Street	Glenloch Way			
FR0703:FR0704	Township Street	Glenloch Way			
FR0702V:FR0709	Township Street	Glenloch Way			
FR0709:FR0710	Township Street	Glenloch Way			
FR0710:FR0711	Township Street	Glenloch Way			
FR0711:FR0712	Township Street	Glenloch Way			
FR0712:FR0713	Township Street	Glenloch Way			
FR0713:FR0714	Township Street	Glenloch Way			
FR0714:FR0715V	Township Street	Glenloch Way			
FR0715V:FR0717	Township Street	Glenloch Way			
FR0717:FR0718	Township Street	Glenloch Way			
FR0718:FR0719	42-6-36	Ruth Brown; Janice Senn	1320 King Rd.	No easement found	
FR0715V:FR0716	Township Street	Glenloch Way			
FR07156:FR0708	Township Street	Glenloch Way			
FR0708:FR0707	Township Street	Glenloch Way			
FR0707:FR0706	Township Street	Glenloch Way			
FR0706:FR0705	Township Street	Glenloch Way			
		MEADOW VIEW DB			
Meadow View PS5	42-4-71.2A	Richard Schoeninger	313 Swedesford Rd.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
PS5:MV0001V	42-4-71.2A	Richard Schoeninger	313 Swedesford Rd.	No easement found	
MV0001:MV0101	42-4-71.2A	Richard Schoeninger	313 Swedesford Rd.	No easement found	
	42-4-71.2	Brian Bretz; Siobhan Haney	309 Swedesford Rd.	No easement found	
MV0001:MV0002	42-4-89.2	Dante & Christine Bradley	310 Swedesford Rd.	No easement found	
MV0002:MV0003	42-4-89.2	Dante & Christine Bradley	310 Swedesford Rd.	No easement found	
MV0003:MV0004	42-4-89.2	Dante & Christine Bradley	310 Swedesford Rd.	No easement found	
MV0004:MV0005	42-4-89.2	Dante & Christine Bradley	310 Swedesford Rd.	No easement found	
MV0005:MV0006	42-4-89.2	Dante & Christine Bradley	310 Swedesford Rd.	No easement found	
	42-4-89	William & Robin Smith	304 Swedesford Rd.	No easement found	
MV0006:MV0007V	42-4-89	William & Robin Smith	304 Swedesford Rd.	No easement found	
	42-4-89.5	Barry & Elizabeth Conway	9 Willow Dr.	No easement found	
MV0007V:MV0008	Township Street	Willow Dr.			
MV0007V:MV0009	42-4-89.5	Barry & Elizabeth Conway	9 Willow Dr.	No easement found	
	42-4-88	Philip Malin	11 Sycamore Dr.	No easement found	
MV0009:MV0010	42-4-88	Philip Malin	11 Sycamore Dr.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MV0010:MV0011	42-4-88	Philip Malin	11 Sycamore Dr.	No easement found	
	Township Street	Sycamore Dr.			
		MILL LANE DB			
Mill Lane PS2	42-4-2.4-E	EW Twp.	200 Conestoga Rd.	8918/1465	Deed of Dedication
PS2:ML0001	42-4-2.4-E	EW Twp.	200 Conestoga Rd.	8918/1465	Deed of Dedication
	42-4-2.5-E	EW Twp.	202 Conestoga Rd.	8918/1465	Deed of Dedication
ML0001:ML0801V	42-4-2.5-E	EW Twp.	202 Conestoga Rd.		
ML0801V:ML0002	42-4-2.5-E	EW Twp.	202 Conestoga Rd.		
	42-4-2.4-E	EW Twp.	200 Conestoga Rd.		
ML0002:ML0003V	42-4-2.4-E	EW Twp.	200 Conestoga Rd.		
ML0003:1405V	42-4-2.4-E	EW Twp.	200 Conestoga Rd.		
1405V:N/A(1)	42-4-18-E	EW Twp.	170 Conestoga Rd.		
N/A(1):N/A(2)	42-4-18-E	EW Twp.	170 Conestoga Rd.		
N/A(2):ML1205	42-4-18-E	EW Twp.	170 Conestoga Rd.		

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML1205:ML1207	42-4-70	Rubino Holdings LP	161 Conestoga Rd.	No easement found	
	42-4-71.19	Michael Matkovic	9 Limekiln Dr.	No easement found	
ML1207:ML1208V	42-4-71.19	Michael Matkovic	9 Limekiln Dr.	No easement found	
ML1208V:ML1210	42-4-71.19	Michael Matkovic	9 Limekiln Dr.	No easement found	
	42-4-71.18	Robert & Audrey Duffy	11 Limekiln Dr.	No easement found	
	42-4-71.26	Colleen & Joe Johnson	8 Limekiln Dr.	No easement found	
	42-4-71.27	Jeffrey & Mary Focht	11 Valley Creek Rd.	No easement found	
ML1208V:ML1211	42-4-71.19	Michael Matkovic	9 Limekiln Dr.	No easement found	
ML1211:ML1212	Township Street	Limekiln Drive			
ML1212:ML1213	42-4-71.25	Steven Aquilani	7 Valley Creek Rd.	No easement found	
ML1213:ML1214	42-4-71.9	Christopher & Wendy Nawn	4 Manor View Cir.	No easement found	
ML1214:ML1215	Township Street	Manor View Cir.			
ML1215:FORCE MAIN TO MEADOW VIEW PS5					
ML1215: MV0103	42-4-71.7	Ryan & Colleen Blackburn	8 Manor View Cir.	No easement found	
	42-4-71.8	Gregory & Margaret Ricker	6 Manor View Cir.	No easement found	
	42-4-71.13	Aaron & Jennifer Govatos	303 Swedesford Rd.	No easement found	
	42-4-71.2	Brian Bretz; Siobhan Haney	309 Swedesford Rd.	No easement found	
MV0103:MV0102	42-4-71.2	Brian Bretz; Siobhan Haney	309 Swedesford Rd.	No easement found	
MV0102:PS5	42-4-71.2	Brian Bretz; Siobhan Haney	309 Swedesford Rd.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-4-71.2A	Richard Schoeninger	313 Swedesford Rd.	No easement found	
1405V:ML1301	42-4-2.4-E	EW Twp.	200 Conestoga Rd.		
	42-4-59-E	EW Twp.	205 Conestoga Rd.		
ML1301:ML1302	Township Street	Mill Lane			
ML1302:ML1303	Township Street	Mill Lane			
ML1303:ML1304V	Township Street	Mill Lane			
ML1304V:ML1306	42-4-65.1	Dirk & Jennifer Heerding	1 Mill Creek Lane	No easement found	
	42-4-65.2	Kenneth & Rosemary Bigelow	3 Mill Creek Lane	No easement found	
	42-4-65.3	Robert & Connie Dailey	5 Mill Creek Lane	No easement found	
ML1306:N/A	42-4-65.3	Robert & Connie Dailey	5 Mill Creek Lane	No easement found	
	42-4-65.4	Peter & Jane Austin	7 Mill Creek Lane	No easement found	
	42-4-65.5	Eric Brodfuehrer; Holly Humphrey	9 Mill Creek Lane	No easement found	
	42-4-65.6	Benjamin & Lauren Weiner	11 Mill Creek Lane	No easement found	
N/A:N/A	42-4-65.6	Benjamin & Lauren Weiner	11 Mill Creek Lane	No easement found	
	42-4-65.7	Joyce Vanschoonevel d	10 Mill Creek Lane	No easement found	
N/A:ML1309	42-4-65.7	Joyce Vanschoonevel d	10 Mill Creek Lane	No easement found	
	42-4J-31	Robert & Rosheen McCutcheon	8 Brett Lane	No easement found	
ML1309:ML1310	42-4J-31	Robert & Rosheen McCutcheon	8 Brett Lane	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML1210:ML1311	Township Street	Brett Lane			
ML1311:ML1312	Township Street	Brett Lane			
ML1312:ML1313V	Township Street	Brett Lane			
ML1313V:ML1314	Township Street	Westgate Cir.			
ML1314:ML1315V	Township Street	Westgate Cir.			
ML1315V:ML1316	Township Street	Westgate Cir.			
ML1315V:ML1317	42-4J-9	William & Heather Riley	17 Westgate Cir.	No easement found	
ML1317:ML1318	42-4J-9	William & Heather Riley	17 Westgate Cir.	No easement found	
	42-4J-10	Donna Sweeney	19 Westgate Cir.	No easement found	
	42-4J-11	Bryan & Julia Keely	21 Westgate Cir.	No easement found	
	42-4J-12	Robert & Karen Toal	5 Stuart Dr.	No easement found	
ML1318:ML1319	42-4J-15	Eugene & Elizabeth Twardowski	2 Stuart Dr.	No easement found	
ML1319:Private system	42-4J-15	Eugene & Elizabeth Twardowski	2 Stuart Dr.	No easement found	
	42-4J-16	Frederick & Sheila Heins	4 Stuart Dr.	No easement found	
	42-4J-17	Roberto & Mary Jane Bartilomo	6 Stuart Dr.	No easement found	
	42-4J-18	Herbert & Eulalia Walton	8 Stuart Dr.	No easement found	
	42-4-87.3	Westgate Village Associates LP	333 Lancaster Ave.	18117/1	Easement shown on subdivision plan
Private System - Westgate Village					
ML1313V:ML1320	Township Street	Devonshire Lane			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML1320:ML1321	Township Street	Devonshire Lane			
ML1321:ML1322	Township Street	Devonshire Lane			
ML1322:ML1323	Township Street	Devonshire Lane			
ML1323:ML1324	Township Street	Devonshire Lane			
ML1324:ML1325	Township Street	Devonshire Lane			
ML1325:ML1326	Township Street	Devonshire Lane			
ML1304V:ML1305	Township Street	Mill Lane			
ML1305:ML1501V	Township Street	Mill Lane			
ML1501V:ML1502	42-4-65.10	Anthony Black; Helen Cockerham	4 Mill Creek Lane	No easement found	
ML1501V:ML1503	Township Street	Knollbrook Cir.			
ML1503:ML1504	42-4-60.3	Terrance & Kendra Walsh	3 Knollbrook Cir.	No easement found	
ML1504:ML1505V	42-4-60.3	Terrance & Kendra Walsh	3 Knollbrook Cir.	No easement found	
	42-4-60.4	Gale Sevi	5 Knollbrook Cir.	No easement found	
ML1505V:ML1506	42-4-60.4	Gale Sevi	5 Knollbrook Cir.	No easement found	
	42-4-60.5	Peter & Susan Gilmore	7 Knollbrook Cir.	No easement found	
ML1505V:ML1507	42-4-60.4	Gale Sevi	5 Knollbrook Cir.	No easement found	
	42-4-60.5	Peter & Susan Gilmore	7 Knollbrook Cir.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-4-60.6	Harry Eckerson	9 Knollbrook Cir.	No easement found	
	42-4-60.7	Wayne & Knollbrook Tougher	11 Knollbrook Cir.	No easement found	
ML1507:ML1508	42-4-60.7	Wayne & Knollbrook Tougher	11 Knollbrook Cir.	No easement found	
ML1508:ML1509	42-4-60.9	Ricardo & Jennifer Navarro	12 Knollbrook Cir.	No easement found	
ML1509:ML1510	42-4-60.9	Ricardo & Jennifer Navarro	12 Knollbrook Cir.	No easement found	
	42-4-61.4	Eugene Dooley	28 Mill Lane	No easement found	
ML1510:ML1511	42-4-61.4	Eugene Dooley	28 Mill Lane	No easement found	
ML1511:ML1512	42-4-61.4	Eugene Dooley	28 Mill Lane	No easement found	
	42-4-61.3	Bruce & Margaret Crowly	24 Mill Lane	No easement found	
ML1512:ML1513	42-4-61.3	Bruce & Margaret Crowly	24 Mill Lane	No easement found	
	42-4-61.2	Robert Kirkby; Nicole Roy	22 Mill Lane	No easement found	
	42-4-61.1	Nathan Hornburg; Christina Batchelor	20 Mill Lane	No easement found	
ML0801:ML0802	42-4-2.5-E	EW Twp.	202 Conestoga Rd.		
ML802:N/A(1)V	42-4-2.5-E	EW Twp.	202 Conestoga Rd.		
	42-4-2.1-E	East Whiteland Township	206 Conestoga Rd.		
	42-4-365-E	East Whiteland Township	208 Conestoga Rd.		

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
N/A(1)V:N/A(2)	42-4-365-E	East Whiteland Township	208 Conestoga Rd.		
	42-4-58-E	East Whiteland Township	207 Conestoga Rd.		
N/A(2):N/A(3)V	42-4-58-E	East Whiteland Township	207 Conestoga Rd.		
	42-4-58.1-E	East Whiteland Township	209 Conestoga Rd.		
N/A(3)V:ML0902	42-4-58.1-E	EW Township Building	209 Conestoga Rd.		
ML0902:ML0903	42-4-58.1-E	EW Township Building	209 Conestoga Rd.		
N/A(3)V:N/A(4)	42-4-58.1-E	EW Township Building	209 Conestoga Rd.		
N/A(4):N/A(5)	42-4-58.1-E	EW Township Building	209 Conestoga Rd.		
N/A(5)N/A(6)	42-4-58.1-E	EW Township Building	209 Conestoga Rd.		
N/A(6):N/A(7)V	42-4-58.1-E	EW Township Building	209 Conestoga Rd.		
N/A(7)V:ML0907	42-4-58.1-E	EW Township Building	209 Conestoga Rd.		
ML0907:ML0908	42-4-58.1-E	EW Township Building	209 Conestoga Rd.		
	42-3-124-E	County of Chester	Chester Valley Trail	No easement found (chester county)	
ML0908:ML0909	42-3-124-E	County of Chester	Chester Valley Trail	No easement found (chester county)	
	42-4-55-E	Great Valley School District	361 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML0909:ML0910	42-4-55-E	Great Valley School District	361 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
ML0910:ML0911	42-4-55-E	Great Valley School District	361 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
ML0911:ML0912	42-4-55-E	Great Valley School District	361 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
ML0912:ML0913	42-4-55-E	Great Valley School District	361 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
ML0913:ML0914	42-4-55-E	Great Valley School District	361 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
	42-3-125.7	Anthony & Cynthia Falcone	69 Church Rd.	5151/2258	Condemnation
	42-3-125.5	Eric & Margaret Wolfamott	63 Church Rd.	No easement found	
ML0914:ML0915	42-3-125.5	Eric & Margaret Wolfamott	63 Church Rd.	No easement found	
	42-4-55-E	Great Valley School District	361 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
ML0915:ML0916	42-4-55-E	Great Valley School District	361 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
ML0916:ML0917	42-4-55-E	Great Valley School District	361 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
ML0917:ML0918V	42-4-55-E	Great Valley School District	361 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
	42-3-125.3	George & Alyssa Minnick	369 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
	42-3-125.2	Alicia & Niall Donnelly	371 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
ML0918V:ML0926	42-4-55-E	Great Valley School District	361 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
ML0926:ML0927	42-4-55-E	Great Valley School District	361 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML0927:ML0928	42-4-55-E	Great Valley School District	361 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
	42-4-62	Great Valley School District	357 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
ML0928:ML0929	42-4-62.2	Erlene & Darrell Pearson	355 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
	42-4-62.1	Jesse & Naro Rhonda	353 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
ML0918V:ML0919V	42-4-83.1-E	East Whiteland School District	354 Swedesford Rd.	No easement found (school)	
ML0919V:ML0920	42-4-83.1-E	East Whiteland School District	354 Swedesford Rd.	No easement found (school)	
	42-4-82.2	Robert & Patricia Geiss	372 Swedesford Rd.	Easement (not recorded)	Easement (not recorded)
	42-4-82	Thomas & Ann Curran	51 Church Rd.	Easement (not recorded)	Easement (not recorded)
ML0919V:ML0924	42-4-83.1-E	East Whiteland School District	354 Swedesford Rd.	No easement found (school)	
ML0924:ML0925	42-4-83.1-E	East Whiteland School District	354 Swedesford Rd.	No easement found (school)	
	42-4-83-E	East Whiteland School District	354 Swedesford Rd.	No easement found (school)	
N/A(7)V: Private system running south through Chester Velley Golf Club to PS9					
N/A(7):Private system running west along Chester Valley trail					
N/A(1)V:ML0804	42-4-365-E	East Whiteland Township	208 Conestoga Rd.		

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML0804:ML0805	42-4-365-E	East Whiteland Township	208 Conestoga Rd.		
ML0805:ML0806	42-4-365-E	East Whiteland Township	208 Conestoga Rd.		
ML0806:ML0807	42-4-365-E	East Whiteland Township	208 Conestoga Rd.		
ML0807:ML0808	42-4-365-E	East Whiteland Township	208 Conestoga Rd.		
ML0808:ML0809	42-4-365-E	East Whiteland Township	208 Conestoga Rd.		
ML0809:ML0810	PennDot Road	Conestoga Road			
ML0810:ML0811	PennDot Road	Conestoga Road			
ML0811:ML0812	42-3-244-E	East Whiteland Township	210 Conestoga		
ML0812:ML0813	42-3-244-E	East Whiteland Township	210 Conestoga		
ML0813:ML0814	PennDot Road	Conestoga Road			
ML0814:ML0815V	Township Street	Moores Road			
ML0815V:ML1001	Township Street	Church Road			
ML1001:ML1002	Township Street	Church Road			
ML1002:ML1003	Township Street	Church Road			
ML1003:ML1004	Township Street	Markel Road			
ML1004:ML1005	Township Street	Markel Road			
ML1005:ML006	Township Street	Markel Road			
ML1006:ML1007	42-3M-144	Bradley Emery	80 Markel Rd.	No easement found	
ML1007:ML1008	42-3M-144	Bradley Emery	80 Markel Rd.	No easement found	
	42-3M-145	David & Kathleen Duquette	82 Markel Rd.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML1008:ML1009V	42-3M-145	David & Kathleen Duquette	82 Markel Rd.	No easement found	
	42-3M-146	Clint Coons Trust	84 Markel Rd.	No easement found	
	42-3M-147	Thomas & Lisa Diorio	86 Markel Rd.	No easement found	
	42-3M-148	Jason Shindledecker; Melissa Welsh	88 Markel Rd.	No easement found	
	42-3M-149	Raymond Keefe	90 Markel Rd.	No easement found	
	42-3M-150	James Sanderell; Michelle Root	92 Markel Rd.	No easement found	
	42-3M-151	Xiaoli Qin	94 Markel Rd.	No easement found	
ML0815:ML0816	Township Street	Moores Road			
ML0816:ML0817	Township Street	Moores Road			
ML0817:ML0818V	Township Street	Moores Road			
ML0818V:ML1011	Township Street	Rickmar Lane			
ML1011:ML1012	Township Street	Rickmar Lane			
ML1012:ML1013	Township Street	Rickmar Lane			
ML0818V:ML0819V	Township Street	Moores Road			
ML0819V:ML1606	42-3-109.11	Chin Ho; Lilian Tan	13 Weightman Dr.	PP	
ML1606:ML1605	Township Street	Weitman Dr.			
ML1605:ML1603V	Township Street	Weitman Dr.			
ML1603V:ML1604	Township Street	Morris Lane			
ML1603V:ML1602	Township Street	Weitman Dr.			
ML1602:ML1601	Township Street	Weitman Dr.			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML0819:ML0820V	Township Street	Moores Road			
ML0820V:ML1014	Township Street	Kelmar Ave			
ML1014:ML1015	Township Street	Kelmar Ave			
ML1015:ML1016	Township Street	Kelmar Ave			
ML1016:ML1009	Township Street	Kelmar Ave			
ML1009:ML1010	Township Street	Kelmar Ave			
ML0820:ML0821	Township Street	Moores Road			
ML0821:ML0822	Township Street	Moores Road			
ML0822:ML0823	Township Street	Moores Road			
ML0823:ML0824	Township Street	Moores Road			
ML0824:ML0825	Township Street	Moores Road			
ML0825:ML1101V	Township Street	Moores Road			
ML1101V:ML1102	PennDot Road	Phoenixville Pike			
ML1102:ML1103	42-3-297	Wyckfield Homeowners Association	Unaddressable Parcel	No easement found	
ML1103:ML1104	42-3-297	Wyckfield Homeowners Association	Unaddressable Parcel	No easement found	
	42-3-251	Roland Laplante	11 Tunbridge Lane	No easement found	
ML1104:ML1105	42-3-251	Roland Laplante	11 Tunbridge Lane	No easement found	
ML1105:ML1106	Township Street	Turnbridge Lane			
ML1106:ML1107	Township Street	Turnbridge Lane			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML1101V:ML1108V	42-3-297	Wyckfield Homeowners Association	Unaddressable Parcel	No easement found	
ML1108V:ML1109	Township Street	Craig Lane			
ML1109:ML1109	Township Street	Craig Lane			
ML1109:ML1110	Township Street	Craig Lane			
ML1108V:ML1112	42-3-245	Patel Prashant	1 Craig Lane	No easement found	
	42-3-296	Gregory Howson	5 Craig Lane	No easement found	
ML1112:ML1114	42-3-296	Gregory Howson	5 Craig Lane	No easement found	
	42-3-295	Benjamin & Rebecca Tengwall	7 Craig Lane	No easement found	
	42-3-298	Wyckfield Homeowners Association	Unaddressable Parcel	No easement found	
	42-3-298.1-E	East Whiteland Township	165 Phoenixville Pike		
ML1114:ML1115	42-3-298.1-E	East Whiteland Township	165 Phoenixville Pike		
	42-3-281	Pak Koon Living Trust	41 Craig Lane	No easement found	
ML1115:ML1116	Township Street	Craig Lane			
ML1116:ML1117	Township Street	Craig Lane			
ML1117:ML1118	Township Street	Craig Lane			
ML1118:ML1119	Township Street	Craig Lane			
ML1119:ML1123	Township Street	Craig Lane			
ML1123V:ML1124	Township Street	Kenwood Court			
ML1123V:ML1126	Township Street	Craig Lane			
ML1126:ML1127	Township Street	Craig Lane			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML1119V:ML1120V	Township Street	Clover Mill Lane			
ML1120:ML1121	Township Street	Clover Mill Lane			
ML1121:ML1122	Township Street	Clover Mill Lane			
ML1120V:FORCE MAINE TO HILLBROOK CIR. PS11					
	43-3-107.3N	David & Virginia Pohlman	10 Clover Mill La.	Easement (not recorded)	Easement (not recorded) - written consent of owners needed to assign.
	42-3-107.3P	Wesley & Meredith Moore	8 Clover Mill La.	No easement found	
ML0801V:ML0002	42-4-2.5-E	EW Twp.	202 Conestoga Rd.		
	42-4-2.4-E	EW Twp.	200 Conestoga Rd.		
ML0002:ML0003V	42-4-2.4-E	EW Twp.	200 Conestoga Rd.		
ML0003V:N/A(1)	42-4-2.4-E	EW Twp.	200 Conestoga Rd.		
	42-4-2.1-E	EW Twp.	206 Conestoga Rd.		
N/A(1):ML0004	42-4-2.1-E	EW Twp.	206 Conestoga Rd.		
ML0004:N/A(2)	42-4-2.1-E	EW Twp.	206 Conestoga Rd.		
	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan
N/A(2):ML0005V	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan
ML0005V:ML0006	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML0006:ML0007	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan
ML0007:ML0008	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan
ML0008:ML0009	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan
ML0009:ML0011	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan
ML0011:ML0012	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan
ML0012:ML0010	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan
ML0010:ML0013	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan
ML0013:ML0014	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan
ML0014:ML0015	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan
ML0015:ML0016V	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan
ML0016:ML0416	Township Street	Moores Road			
ML0416:ML0417	Township Street	Moores Road			
ML0417:ML0419	42-3-45.6R	Lester & Barbara Craig	17 Moores Rd.	No easement found	
	42-3-45.6Q	Sujan & Harris Shekhawat	19 Moores Rd.	No easement found	
ML0419:ML0420	42-3-45.6Q	Sujan & Harris Shekhawat	19 Moores Rd.	No easement found	
	42-3-334	CLF Westerbrook Walvern	21 Moores Rd.	No easement found	
	42-3-45.6K	Robert & Mary Clark	26 Atterbury Dr.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML0420:ML0421V	42-3-45.6K	Robert & Mary Clark	26 Atterbury Dr.	No easement found	
ML0421V:ML0415	Township Street	Atturbury Dr.			
ML0421V:ML0422	Township Street	Flintshire Road			
ML0422:ML0423	Township Street	Flintshire Road			
ML0423:ML0424	Township Street	Flintshire Road			
ML0424:ML0425	Township Street	Flintshire Road			
ML0016V:ML0017	Township Street	Moores Road			
ML0017:ML0401	Township Street	Ashlawn Road			
ML0401:ML0402	Township Street	Ashlawn Road			
ML0402:ML0403V	Township Street	Ashlawn Road			
ML0403V:ML0411	Township Street	Atternury Drive			
ML0411:ML0412	Township Street	Atternury Drive			
ML0412:ML0413	Township Street	Atternury Drive			
ML0413:ML0414	Township Street	Atternury Drive			
ML0403V:ML0404	Township Street	Ashlawn Road			
ML0404:ML0405	Township Street	Ashlawn Road			
ML0405:ML0406	Township Street	Flintshire Rd			
ML0406:ML0407	Township Street	Flintshire Rd			
ML0407:ML0408	Township Street	Flintshire Rd			
ML0408:ML0409	Township Street	Flintshire Rd			
ML0409:ML0410	Township Street	Flintshire Rd			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML0005V:ML0101	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan
ML0101:1404	42-4-2.3	Mountain Laurel Funding Co. LLC	20 Moores Rd.	19563/1	Easement shown on subdivision plan
1404:??	Township Street	Sidley Road			
??:ML0103	Township Street	Sidley Road			
ML0103:ML0104V	Township Street	Sidley Road			
ML0104V:ML0105	Township Street	Lapp Rd.			
ML0105:ML0106	Township Street	Lapp Rd.			
ML0106:ML0107	Township Street	Lapp Rd.			
ML0107:ML0108V	Township Street	Oak Glen Dr.			
ML0108V:ML0109	42-4-20.2S	John Gray	1 Oak Glen Dr.	No easement found	
	42-4-20.2T	Bryan & Nicole Brook	140 Lapp Rd.	No easement found	
	42-4-20.2Q	Kim & James Banks	5 Oak Glen Dr.	1945/343	
ML0109:ML0110	42-4-20.2Q	Kim & James Banks	5 Oak Glen Dr.	1945/343	
	42-4-20.2P	Adrion & Betty Knight	7 Oak Glen Dr.	1945/343	
ML0112V:ML0113	Township Street	Oak Glen Dr.			
ML0112V:ML0111	Township Street	Oak Glen Dr.			
ML0108V:ML0114	Township Street	Oak Glen Dr.			
ML0114:ML0115	Township Street	Oak Glen Dr.			
ML0115:ML0116	42-4-20.2E	Salaman Arshad	10 Oak Glen Dr.	No easement found	
ML0104V:ML0201	42-4-4	Brough & Beth Richey	1 Lapp Rd.	No easement found	
ML0201:ML0202	42-4-4	Brough & Beth Richey	1 Lapp Rd.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML0202:ML0203	42-4-4	Brough & Beth Richey	1 Lapp Rd.	No easement found	
	42-4-5.2C	Fetters Mill Community Association	Unaddressable Parcel	No easement found	
ML0203:ML0204	42-4-5.2C	Fetters Mill Community Association	Unaddressable Parcel	No easement found	
ML0204:ML0205V	42-4-5.2C	Fetters Mill Community Association	Unaddressable Parcel	No easement found	
	42-4-527	Najdat & Melissa Haydar	4 Fetters Mill Dr.	No easement found	
ML0205V:ML0208	Township Street	Fetters Mill Dr. (south)		Township Street	
ML0205V:ML0206	42-4-513	Michael & Kelly Cortese	1 McCoy Ct.	No easement found	
ML0206:ML0207	Township Street	McCoy Ct		Township Street	
ML205V:ML208	Township Street	Fetters Mill Dr. (south)			
ML0205V:ML0209V	Township Street	Fetters Mill Dr. (north)			
ML0209V:ML0210	Township Street	Fetters Mill Dr. (north)			
ML0210:ML0211	Township Street	Fetters Mill Dr. (north)			
ML0211:ML0212	Township Street	Fetters Mill Dr. (north)			
ML0212:ML0213	Township Street	Fetters Mill Dr. (north)			
ML0213:ML0214	Township Street	Fetters Mill Dr. (north)			
ML0209V:ML0215	42-4-5.2B	Fetters Mill Community Association	Unaddressable Parcel	No easement found	
ML0215:ML0216	42-4-5.2B	Fetters Mill Community Association	Unaddressable Parcel	No easement found	
	42-4-6.10	Brian Jami Peters	8 Dale Lane	No easement found	
ML0216:ML0217	42-4-6.10	Brian Jami Peters	8 Dale Lane	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML0217:ML0218	42-4-6.10	Brian Jami Peters	8 Dale Lane	No easement found	
ML0218:ML0219V	42-4-6.10	Brian Jami Peters	8 Dale Lane	No easement found	
ML0219V:ML0220	Township Street	Dale Lane (south)			
ML0220:ML0221	Township Street	Dale Lane (south)			
ML0219V:ML0222	Township Street	Dale Lane (north)			
ML0222:ML0223	Township Street	Dale Lane (north)			
ML0219V:ML0224	42-4-6.14	Lauren & Eric Naylor	10 Forge Dr.	9494/1783	Easement
ML0224:ML0225	Township Street	Forge Dr.			
ML0005V:Private Line (n. on Sidley Rd.)					
ML0301:ML0020	42-4-5.44	Christopher Almy	291 Sidley Rd.	No easement found	
	42-4-5.24-E	East Whiteland Township	2 Thayer Dr.		
ML0020:ML0514V	42-4-5.24-E	East Whiteland Township	2 Thayer Dr.		
ML0514V:ML0513	Township Street	Thayer Dr.			
ML0513:ML0512	Township Street	Thayer Dr.			
ML0512:ML0511	Township Street	Thayer Dr.			
ML0514V:ML0504	Township Street	Sidley Road			
ML0504:ML0503V	Township Street	Sidley Road			
ML0503V:ML0505	Township Street	Amy Dr.			
ML05045:ML0506	Township Street	Amy Dr.			
ML0506:ML0507	Township Street	Amy Dr.			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML0507:ML0508	Township Street	Amy Dr.			
ML0508:ML0509	Township Street	Amy Dr.			
ML0509:ML0510	Township Street	Amy Dr.			
ML0503V:ML0502	Township Street	Sidley Road			
ML0502:ML0501	Township Street	Sidley Road			
Wilburdale Rd. PS3:ML1705	42-4-15.9	WPT Land 2 LP	77 Great Valley PW	9392/1527	Easement
PS3: ML1705 (FM)	Township Street	Flat Road			
ML1705:ML1704	Township Street	Flat Road			
ML1704:ML1703	Township Street	Flat Road			
ML1703:ML1701	Township Street	Flat Road			
ML1701:ML1702	Township Street	Flat Road			
ML1702:N/A(15)	Township Street	Flat Road			
N/A(15):N/A(16)	Township Street	Sidley Road			
N/A(16):N/A(17)V	Township Street	Sidley Road			
N/A(17)V:N/A(18)V	42-3-242.10	Ryan & Eileen Dougherty	34 Ashlawn Cir.	No easement found	
N/A(18)V:ML0027	42-3-242.10	Ryan & Eileen Dougherty	34 Ashlawn Cir.	No easement found	
N/A(18)V:ML0601	42-3-242.10	Ryan & Eileen Dougherty	34 Ashlawn Cir.	No easement found	
ML0601:ML0602V	42-3-242.14	Douglas & Jennifer Schultz	21 Ashlawn Rd.	No easement found	
ML0602V:ML0603	Township Street	Ashlawn Cir.			
ML0602V:ML0604	Township Street	Ashlawn Cir.			
ML0604:ML0605	Township Street	Ashlawn Cir.			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
N/A(17)V:N/A(19)V	Township Street	Sidley Road			
N/A(19)V:FORCE MAINE TO LEE BLVD. PS4					
	Township Street	Lee Blvd.			
	42-2-10.7A	Mustang II Reh LLC	9 Lee Blvd.	No easement found	
	42-4-10.1	Triple M. Partners LP	11 Lee Blvd.	No easement found	
	42-2-10.5A	Vai Real Estates LP	15 Lee Blvd.	No easement found	
	42-2-10.4	17 Lee Bouldevard Associates LLC	17 Lee Blvd.	No easement found	
N/A(19)V:ML0029V	Township Street	Sidley Road			
ML0029V:ML0028	Township Street	Sidley Road			
ML0029V:ML0030V	42-3D-36	Timothy & Shannon Carey	8 Hayes Rd.	No easement found	
	42-3D-37	Donald & Katherine Price	5 Hayes Rd.	No easement found	
ML0030V:ML0031	42-3D-37	Donald & Katherine Price	5 Hayes Rd.	No easement found	
ML0031:ML0032	42-2-10.2D	WPT Land 2 LP	301 Pheonixville Pk	No easement found	
ML0032:ML0033	42-2-10.2D	WPT Land 2 LP	301 Pheonixville Pk	No easement found	
ML0030V:N/A(20)	42-3D-37	Donald & Katherine Price	5 Hayes Rd.	No easement found	
N/A(21):ML0702V	42-3D-37	Donald & Katherine Price	5 Hayes Rd.	No easement found	
ML0702:ML0703	42-3D-38	James & Voula Sioutis	3 Hayes Rd.	No easement found	
	42-1R-6	Rachel Radwan	285 Phoenixville Pk.	No easement found	
ML0703:N/A(22)	42-1R-6	Rachel Radwan	285 Phoenixville Pk.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-3D-37	Donald & Katherine Price	5 Hayes Rd.	No easement found	
ML0702V:ML0705	Township Street	Hayes Road			
ML0705:2003	Township Street	Hayes Road			
2003:ML0706V	Township Street	Hayes Road			
ML0706V:ML0707	42-3D-34	Zachary & Sheila Donahue	4 Hayes Rd.	No easement found	
	42-3D-33	James & Maria Driscoll	2 Hayes Rd.	No easement found	
	42-3D-32	Ryan & Samantha King	275 Phoenixville Pk.	No easement found	
ML0707:ML0708	42-3D-32	Ryan & Samantha King	275 Phoenixville Pk.	No easement found	
	42-3D-31	John & Shirley Mateyk	273 Phoenixville Pk.	No easement found	
	42-3D-30	Christopher Derby	271 Phoenixville Pk.	No easement found	
ML0706V:ML0709V	Township Street	Hayes Road		Township Street	
ML0709V:ML0710	Township Street	Phoenixville Pike		Township Street	
ML0710:ML0711	Township Street	Phoenixville Pike		Township Street	
ML0709V:ML0712	42-3D-24	Gregory & Kathleen Biles	280 Phoenixville Pk.	No easement found	
	42-3D-25	Matthew Banister	278 Phoenixville Pk.	No easement found	
ML0712:ML0713	42-3D-25	Matthew Banister	278 Phoenixville Pk.	No easement found	
	42-3D-26	Michael Risch; Julie Amador-Risch	1 Aston Rd.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
ML0713:ML0714	Township Street	Aston Road		Township Street	
ML0714:ML0715V	Township Street	Aston Road		Township Street	
ML0715V:ML0718	Township Street	James Thomas Road		Township Street	
ML0718:ML0719V	Township Street	James Thomas Road		Township Street	
ML0719V:ML0720	Township Street	Spruce Road		Township Street	
ML0719V:ML0721	Township Street	James Thomas Road		Township Street	
ML0721:ML0722	Township Street	James Thomas Road		Township Street	
ML0722:ML0723	Township Street	James Thomas Road		Township Street	
ML0723:ML0724	Township Street	James Thomas Road		Township Street	
ML0715V:ML0716	Township Street	James Thomas Road		Township Street	
ML0716:ML0717	Township Street	James Thomas Road		Township Street	
ML0717:N/A(21)	35-3-102	Charlestown Oaks Homeowners Association	Unaddressable Parcel		
N/A(21):N/A(22)	35-3-102	Charlestown Oaks Homeowners Association	Unaddressable Parcel		
N/A(22): Charlestown Oaks Meter					
		HILLBROOK CIRCLE DB			
Charlestown Meadows PS:HB0025		Conestoga Road (Outide of Township)			
HB0026:HBOO25	PennDot Road	Conestoga Road			
HB0025:HB0024	PennDot Road	Conestoga Road			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
HB0024:HB0023	PennDot Road	Conestoga Road			
HB0023:HB0022	PennDot Road	Conestoga Road			
HB0022:HB0021	PennDot Road	Conestoga Road			
HB0021:HB0020	PennDot Road	Conestoga Road			
HB0020:HB0018	42-3-98.4	Bacton Investment Partners LP	Unknown	17694/1	Easement shown on subdivision plan
HB0018:N/A	42-3-98.4	Bacton Investment Partners LP	Unknown	17694/1	Easement shown on subdivision plan
	42-3-98.5	Bacton Investment Partners LP	Unknown	17694/1	Easement shown on subdivision plan
N/A:HB0017	42-3-98.5	Bacton Investment Partners LP	Unknown	17694/1	Easement shown on subdivision plan
HB0017:HB0016	PennDot Road	Conestoga Road			
HB0016:HB0015	PennDot Road	Conestoga Road			
HB0015:HB0014	PennDot Road	Conestoga Road			
HB0014:HB0013V	PennDot Road	Conestoga Road			
HB0013:S-101	Township Street	Willing Way			
S-101:S-102	Township Street	Willing Way			
S-102:S-103	42-3-14.10	Bharat Patel	4 Willing Way	8407/1516	Easement shown on declaration of covenants, conditions, easements and restrictions for Willinghouse Preserve
	42-3-14.9	Justin & Aimee Sherrock	8 Willing Way	8407/1516	Easement shown on declaration of covenants, conditions, easements and restrictions for Willinghouse Preserve
	42-3-14.8	Blaise Coleman; Lisa Hurchik	12 Willing Way	8407/1516	Easement shown on declaration of covenants, conditions, easements and restrictions for Willinghouse Preserve

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
S-103:S-104	42-3-14.8	Blaise Coleman; Lisa Hurchik	12 Willing Way	8407/1516	Easement shown on declaration of covenants, conditions, easements and restrictions for Willinghouse Preserve
	42-3-14.7	Amit Gangoli	16 Willing Way	8407/1516	Easement shown on declaration of covenants, conditions, easements and restrictions for Willinghouse Preserve
HB0013V:HB0012	PennDot Road	Conestoga Road			
HB0012:N/A	PennDot Road	Conestoga Road			
N/A:HB0011	PennDot Road	Conestoga Road			
HB0011:HB0010	PennDot Road	Conestoga Road			
HB0010:HB0009	PennDot Road	Conestoga Road			
HB0009:HB0008	PennDot Road	Conestoga Road			
HB0008:HB0007	PennDot Road	Conestoga Road			
HB0007:HB0006	PennDot Road	Conestoga Road			
HB0006:HB0005V	PennDot Road	Conestoga Road			
HB0005V:HB0115	Township Street	Hillbrook Cir.			
HB0115:HB0114	Township Street	Hillbrook Cir.			
HB0114:HB0113	Township Street	Hillbrook Cir.			
HB0005V:HB0004	42-3-32.2	Justin Lopez; Charlotte Smith-Widdis	38 Hillbrook Cir.	Easement (not recorded)	Easement (not recorded)
	42-3-32.1	Abdelouahed Nachani	388 Conestoga Rd.	Easement (not recorded)	Easement (not recorded)
HB0004:HB0003	42-3-32.1	Abdelouahed Nachani	388 Conestoga Rd.	Easement (not recorded)	Easement (not recorded)

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-3-32	Kim Hye Ran	386 Conestoga Rd.	Easement (not recorded)	Easement (not recorded)
HB0003:HB0002V	42-3-32	Kim Hye Ran	386 Conestoga Rd.	Easement (not recorded)	Easement (not recorded)
	42-3-33	Robert & Eleanora Sybesma	384 Conestoga Rd.	Easement (not recorded)	Easement (not recorded)
	42-3-33.1	Philip & Gladys Wells Revocable Living Trust	2 Hillbrook Cir.	Easement (not recorded)	Easement (not recorded)
HB0002V:HB101	42-3-33.1	Philip & Gladys Wells Revocable Living Trust	2 Hillbrook Cir.	Easement (not recorded)	Easement (not recorded)
HB0101:HB0102	Township Street	Hillbrook Cir.			
HB0102:HB0103	Township Street	Hillbrook Cir.			
HB0103:HB0104	Township Street	Hillbrook Cir.			
HB0104:HB0105	Township Street	Hillbrook Cir.			
HB0105:HB0106	Township Street	Hillbrook Cir.			
HB0106:HB0107V	Township Street	Hillbrook Cir.			
HB0107V:HB0201	Township Street	Hillbrook Cir.			
HB0201:HB0202	Township Street	Hillbrook Cir.			
HB0107V:HB0108	Township Street	Hillbrook Cir.			
HB0108:HB0109	Township Street	Hillbrook Cir.			
HB0109:HB0110	Township Street	Hillbrook Cir.			
HB0110:HB0111	Township Street	Hillbrook Cir.			
HB0111:HB0112	Township Street	Hillbrook Cir.			
HB0002:HB0001	42-3-33.1	Philip & Gladys Wells	2 Hillbrook Cir.	Easement (not recorded)	Easement (not recorded)

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
		Revocable Living Trust			
	42-3-107.3N	David & Virginia Pohlman	10 Clover Mill La.	Easement (not recorded)	Easement (not recorded)
HB0001:Hillbrook PS11	42-3-107.3N	David & Virginia Pohlman	10 Clover Mill La.	Easement (not recorded)	Easement (not recorded)
		LEE BLVD. DB			
Lee Blvd PS4	42-2-10.4	17 Lee Boulevard Associates LLC	17 Lee Blvd.	No easement found	
LB PS4:LB0002V	42-2-10.4	17 Lee Boulevard Associates LLC	17 Lee Blvd.	No easement found	
LB0002V:LB0003V	42-2-10.4	17 Lee Boulevard Associates LLC	17 Lee Blvd.	No easement found	
LB0002V:LB001	42-2-10.4	17 Lee Boulevard Associates LLC	17 Lee Blvd.	No easement found	
LB001:LB0201	42-2-10.3A	Exeter 14 Lee LLC	14 Lee Blvd.	No easement found	
LB0201:LB0202	42-2-10.3A	Exeter 14 Lee LLC	14 Lee Blvd.	No easement found	
LB0202:LB0203	Township Street	Lee Blvd			
PS4:LB003V	42-2-10.4	17 Lee Boulevard Associates LLC	17 Lee Blvd.	No easement found	
LB0003V:LB0005	42-2-10.4	17 Lee Boulevard Associates LLC	17 Lee Blvd.	No easement found	
LN0005:LB0006	42-2-10.4	17 Lee Boulevard Associates LLC	17 Lee Blvd.	No easement found	
	42-2-10.5A	Vai Real Estates LP	15 Lee Blvd.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-2-10.1	Triple M Partners LP	11 Lee Blvd.	No easement found	
LNB0006:LB0007	42-2-10.1	Triple M Partners LP	11 Lee Blvd.	No easement found	
LB0007:LB0008	42-2-10.1	Triple M Partners LP	11 Lee Blvd.	No easement found	
LB0008:LB0011	42-2-10.1	Triple M Partners LP	11 Lee Blvd.	No easement found	
LB0011:LB0010	42-2-10.1	Triple M Partners LP	11 Lee Blvd.	No easement found	
LB0010:LB0009	Township Street	Lee Blvd			
LB0009:LB0012	42-2-10.3	Dawson Logistics Assets LLC	8 Lee Blvd.	19921/1	Easement shown on land dev. plan
LB0012:LB0013	42-2-10.3	Dawson Logistics Assets LLC	8 Lee Blvd.	19921/1	Easement shown on land dev. plan
LB0013:LB0014	42-2-10.3	Dawson Logistics Assets LLC	8 Lee Blvd.	19921/1	Easement shown on land dev. plan
LB0014:LB0015	42-2-10.3	Dawson Logistics Assets LLC	8 Lee Blvd.	19921/1	Easement shown on land dev. plan
	42-2-10.2B	M&B Properties 6 Lee Bouldevard PA LLP	6 Lee Blvd.	17687/1	Easement shown on land dev. plan
LB0003V:LB0102	42-2-10.4	17 Lee Boulevard Associates LLC	17 Lee Blvd.	No easement found	
LB0102:LB0103	42-2-10.4	17 Lee Boulevard Associates LLC	17 Lee Blvd.	No easement found	
	42-2-3.1C	17 Lee Boulevard Associates LLC	17 Lee Blvd.	No easement found	
LB0103:N/A	42-2-3.1C	17 Lee Boulevard Associates LLC	17 Lee Blvd.	No easement found	
		FLATT RD. DB			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
Flat Rd. PS6	42-2-14.1	Exeter 9-25 Great Valley LLC	25 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
PS6:FL0001	42-2-14.1	Exeter 9-25 Great Valley LLC	25 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
	42-4-15.10A	WPT Land 2 LP	31 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
FL0001:FL0002	42-4-15.10A	WPT Land 2 LP	31 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
	42-4-15.10	WPT Land 2 LP	29 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
FL0002:FL0003	42-4-15.10	WPT Land 2 LP	29 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
FL0003:FL0004	42-4-15.10	WPT Land 2 LP	29 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
	42-2-14.1	Exeter 9-25 Great Valley LLC	25 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
	42-2-14	Shields Family Partnership	11 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
FL0004:FL0005	42-2-14	Shields Family Partnership	11 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
FL0005:FL0006	42-2-14	Shields Family Partnership	11 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
	42-2-14.1	Exeter 9-25 Great Valley LLC	25 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
FL0006:FL0007	42-2-14.1	Exeter 9-25 Great Valley LLC	25 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
		WILBURDALE DB			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
FL PS6:WD0012	42-4-15.10A	WPT Land 2 LP	31 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
	42-4-15.10	WPT Land 2 LP	29 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
WD0012:WD0011	42-4-15.10	WPT Land 2 LP	29 Great Valley Parkway	574/402	Deed of Dedication (w/ Mortgage Joinder)
	42-4-15.2	WPT Land 2 LP	30 Great Valley Parkway	574/402; 6773/273	Deed of Dedication (w/ Mortgage Joinder)
WD0011:WD0010	42-4-15.2	WPT Land 2 LP	36 Great Valley Parkway	574/402; 6773/273	Deed of Dedication (w/ Mortgage Joinder)
WD0010:WD0009	42-4-15.2	WPT Land 2 LP	36 Great Valley Parkway	574/402; 6773/273	Deed of Dedication (w/ Mortgage Joinder)
	42-4-15.4	Centocor Property Management Corp. II	40 Great Valley Parkway	No easement found (no parcel found)	
	42-4-15.6	Centocor Property Management Corp. II	84 Great Valley Parkway	No easement found (no parcel found)	
WD0009:WD0008	42-4-15.6	Centocor Property Management Corp. II	84 Great Valley Parkway	No easement found (no parcel found)	
WD0008:WD0007	42-4-15.1	WPT Land 2 LP	67 Great Valley Parkway	18198/1	Easement shown on subdivision plan
WD0007:WD0006	42-4-15.1	WPT Land 2 LP	67 Great Valley Parkway	18198/1	Easement shown on subdivision plan
WD0006:WD0004V	42-4-15.1	WPT Land 2 LP	67 Great Valley Parkway	18198/1	Easement shown on subdivision plan
	42-4-15.5	WPT Land 2 LP	75 Great Valley Parkway	No easement found	
	42-4-15.9	WPT Land 2 LP	103 Great Valley Parkway	9392/1527	Easement

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
WD0004V:WD0003	42-4-15.9	WPT Land 2 LP	103 Great Valley Parkway	9392/1527	Easement
WD0003:WD0002	42-4-15.9	WPT Land 2 LP	103 Great Valley Parkway	9392/1527	Easement
WD0002:WD0001	42-4-15.9	WPT Land 2 LP	103 Great Valley Parkway	9392/1527	Easement
WD0001:Wilburdale Rd. PS3	42-4-15.9	WPT Land 2 LP	103 Great Valley Parkway	9392/1527	Easement
WD0004V:WD0101	42-4-15.9	WPT Land 2 LP	103 Great Valley Parkway	9392/1527	Easement
WD0101:WD0102	42-4-15.13	Centocor Property Management Corp. II	90 Great Valley Parkway	No easement found (no parcel found)	
WD0102:WD0103	Township Street	Great Valley Parkway			
WD0103:WD0104	Township Street	Great Valley Parkway			
WD0104:WD0105	42-4-15.8	Bell Telephone Co. of PA	125 Great Valley Parkway	No easement found	
	42-4-15.22	WPT Land 2 LP	155 Great Valley Parkway	No easement found	
WD0105:WD0106	42-4-15.22	WPT Land 2 LP	155 Great Valley Parkway	No easement found	
WD0106:WD0107	42-4-15.22	WPT Land 2 LP	155 Great Valley Parkway	No easement found	
WD0107:WD0108	Township Street	Great Valley Parkway	Wildburdale DB		
WD0108:WD0109	Township Street	Great Valley Parkway	Wildburdale DB		
WD0109:WD0110	42-4-15.21	Centocor Property Management Corp. II	244 Great Valley Parkway	No easement found	
	42-4-15.14	Centocor Property Management Corp. II	260 Great Valley Parkway	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
		LAPP RD. DB			
Lapp Rd. PS 7	42-4-26.1	WPT Land 2 LP	510 Lapp Rd.	6773/273	Deed of Dedication
PS7:LR0001V	42-4-26.1	WPT Land 2 LP	510 Lapp Rd.	6773/273	Deed of Dedication
LR0001V:LR0501V	42-4-26.1	WPT Land 2 LP	510 Lapp Rd.	6773/273	Deed of Dedication
LR0501V:LR0701	42-4-26.1	WPT Land 2 LP	510 Lapp Rd.	6773/273	Deed of Dedication
	42-4-42	Knickerbocker Lands LLC	367 Old Morehall Rd.	6765/1780	Easement
LR0701:LR0702	42-4-42	Knickerbocker Lands LLC	367 Old Morehall Rd.	6765/1780	Easement
	42-4-29	425 GVP Property Co. LLC	201 Old Morehall Rd.	7037/1110	Easement (corrective easement needed)
LR0702:LR0703	42-4-29	425 GVP Property Co. LLC	201 Old Morehall Rd.	7037/1110	Easement (corrective easement needed)
LR0703:LR0704	42-4-29	425 GVP Property Co. LLC	201 Old Morehall Rd.	7037/1110	Easement (corrective easement needed)
LR0704:LR0705	42-4-29	425 GVP Property Co. LLC	201 Old Morehall Rd.	7037/1110	Easement (corrective easement needed)
LR0705:LR0706	42-4-29	425 GVP Property Co. LLC	201 Old Morehall Rd.	7037/1110	Easement (corrective easement needed)
LR0706:LR0707	42-4-29	425 GVP Property Co. LLC	201 Old Morehall Rd.	7037/1110	Easement (corrective easement needed)
LR0707:LR0708	42-4-29	425 GVP Property Co. LLC	201 Old Morehall Rd.	7037/1110	Easement (corrective easement needed)
LR0708:LR0709	42-4-29	425 GVP Property Co. LLC	201 Old Morehall Rd.	7037/1110	Easement (corrective easement needed)

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
LR0709:LR0710	42-4-29	425 GVP Property Co. LLC	201 Old Morehall Rd.	7037/1110	Easement (corrective easement needed)
LR0710:LR0711	42-4-29	425 GVP Property Co. LLC	201 Old Morehall Rd.	7037/1110	Easement (corrective easement needed)
LR0711:LR0712V	42-4-29	425 GVP Property Co. LLC	201 Old Morehall Rd.	7037/1110	Easement (corrective easement needed)
LR0712V:LR0713	Township Street	Old Morehall Road			
LR0713:N/A	Township Street	Old Morehall Road			
N/A:LR0714	42-4-29.2	WPT Land 2 LP	2 W. Liberty Blvd.	No easement found	
LR0712V:Private System	42-4-29.1B	Apple Nine Malvern PA Business Trust	280 Old Morehall Rd.		
LR0501V:LR0502V	42-4-26.1	WPT Land 2 LP	510 Lapp Rd.	6773/273	Deed of Dedication
	42-4-25.3	WPT Land 2 LP	508 Lapp Rd.	6773/273	Deed of Dedication
LR0502V:LR0503	42-4-25.3	WPT Land 2 LP	508 Lapp Rd.	6773/273	Deed of Dedication
LR0502V:LR0504	42-4-25.3	WPT Land 2 LP	508 Lapp Rd.	6773/273	Deed of Dedication
LR0504:LR0502(2)	42-4-25.3	WPT Land 2 LP	508 Lapp Rd.	6773/273	Deed of Dedication
	42-4-25	WPT Land 2 LP	460 Lapp Rd.	6773/273	Deed of Dedication
LR0502V:LR0601	42-4-25.3	WPT Land 2 LP	508 Lapp Rd.	6773/273	Deed of Dedication
	42-4-42	Knickerbocker Lands LLC	367 Morehall Rd.	6765/1780	Easement
LR0601:LR0602	42-4-42	Knickerbocker Lands LLC	367 Morehall Rd.	6765/1780	Easement
LR0001V:LR0002	42-4-26.1	WPT Land 2 LP	510 Lapp Rd.	6773/273	Deed of Dedication

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
LR0002:LR0003V	42-4-26.1	WPT Land 2 LP	510 Lapp Rd.	6773/273	Deed of Dedication
LR0003V:LR0101	Township Street	Lapp Rd.			
LR0003V:LR0005	42-4-15.18	WPT Land 2 LP	425 Technology Dr.	6773/273	Deed of Dedication
LR0005:LR0006	42-4-15.18	WPT Land 2 LP	425 Technology Dr.	6773/273	Deed of Dedication
LR0006:LR0007V	42-4-15.18	WPT Land 2 LP	425 Technology Dr.	6773/273	Deed of Dedication
LR0007V:LR0801	Township Street	Lapp Rd.			
LR0801:LR0802	Township Street	Lapp Rd.			
LR0802:LR0803	Township Street	Lapp Rd.			
LR0803:LR0804	Township Street	Lapp Rd.			
LR0804:LR0805	Township Street	Lapp Rd.			
LR0805:LR0806	42-4-25	WPT Land 2 LP	460 Lapp Rd.	6773/273	Deed of Dedication
LR0806:LR0807	42-4-25	WPT Land 2 LP	460 Lapp Rd.	6773/273	Deed of Dedication
	42-4-24	KRUS IV LLC	400 Lapp Rd.	No easement found	
LR0807:LR0808	42-4-24	KRUS IV LLC	400 Lapp Rd.	No easement found	
LR0808:LR0809	42-4-24	KRUS IV LLC	400 Lapp Rd.	No easement found	
LR0809:LR0810	42-4-24	KRUS IV LLC	400 Lapp Rd.	No easement found	
LR0007:LR0008	Township Street	Technology Dr.			
LR0008:LR0009	Township Street	Technology Dr.			
LR0009:LR0010V	42-4-16	PBP Realty Partnership LP	358 Technology Dr.	Deed of Dedication (11/4/05)	Deed of Dedication (not recorded)
LR0010V:LR0201	42-4-16	PBP Realty Partnership LP	358 Technology Dr.	Deed of Dedication (11/4/05)	Deed of Dedication (not recorded)

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
	42-4-16.1	WPT Land 2 LP	287 Great Valley Pw.	6773/273	Deed of Dedication
LR0201:LR0202	42-4-16.1	WPT Land 2 LP	287 Great Valley Pw.	6773/273	Deed of Dedication
	42-4-15.27	WPT Land 2 LP	271 Great Valley Pw.	6773/273	Deed of Dedication
LR0010V:LR0011	42-4-16	PBP Realty Partnership LP	358 Technology Dr.	Deed of Dedication (11/4/05)	Deed of Dedication (not recorded)
	42-4-15.20	WPT Land 2 LP	300 Technology Dr.	No easement found	
LR0011:LR0013	42-4-15.18A	375 Technology Dr LLC	375 Technology Dr.	6773/273	Deed of Dedication
	42-4-17	MLR Technology Drive LLC	333 Technology Dr.	6773/273	Deed of Dedication
LR0013:LR0302	42-4-17	MLR Technology Drive LLC	333 Technology Dr.	6773/273	Deed of Dedication
	42-4-15.17	AJV Real Partners LP	325 Technology Dr.	6773/273	Deed of Dedication
LR0302:LR0301	42-4-15.17	AJV Real Partners LP	325 Technology Dr.	6773/273	Deed of Dedication
LR0301:LR0016	42-4-15.17	AJV Real Partners LP	325 Technology Dr.	6773/273	Deed of Dedication
	42-4-15.17A	PSDC / Malvern 1 LLC	311 Technology Dr.	6773/273	Deed of Dedication
LR0016:LR0017V	42-4-15.17A	PSDC / Malvern 1 LLC	311 Technology Dr.	6773/273	Deed of Dedication
LR0017V:Private System (left)		Schoor Depalma Plan			
LR0017V:LR0018	42-4-15.17A	PSDC / Malvern 1 LLC	311 Technology Dr.	6773/273	Deed of Dedication
	42-4-15.15	PSDC / Malvern 1 LLC	10 Great Valley Pw.	6773/273	Deed of Dedication
LR0018:LR0019	PennDot road	Morehall Road			

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
LR0019:LR0020	42-4-52.6	PSDC / Malvern 1 LLC	5 Country View Rd.	19880/1	Easement shown on subdivision plan
LR0020:LR0021	42-4-52.6	PSDC / Malvern 1 LLC	5 Country View Rd.	19880/1	Easement shown on subdivision plan
LR0021:LR0022	42-2-12	WPT Land 2 LP	7 Great Valley Pw.	16670/1	Easement shown on subdivision plan
LR0022:LR0023	42-2-12	WPT Land 2 LP	7 Great Valley Pw.	16670/1	Easement shown on subdivision plan
LR0023:LR0024V	42-2-12	WPT Land 2 LP	7 Great Valley Pw.	16670/1	Easement shown on subdivision plan
	42-2-12.3	WPT Land 2 LP	5 Great Valley Pw.	16670/1	Easement shown on subdivision plan
LR0024V:LR0401	42-2-12.3	WPT Land 2 LP	5 Great Valley Pw.	16670/1	Easement shown on subdivision plan
	42-4-52.5	Sophia Purchaser Co LP	4 Country View Rd.	No easement found	
LR0401:LR0402	42-4-52.5	Sophia Purchaser Co LP	4 Country View Rd.	No easement found	
LR0402:LR0403	42-4-52.5	Sophia Purchaser Co LP	4 Country View Rd.	No easement found	
	42-4-52	WPT Land 2 LP	3 Country View Rd.	No easement found	
LR0403:LR0404	42-4-52	WPT Land 2 LP	3 Country View Rd.	No easement found	
LR0024V:LR0025	42-2-12.3	WPT Land 2 LP	5 Great Valley Pw.	No easement found	
	42-2-12.1	Three Great Valley Parkway Associates LP	3 Great Valley Pw.	No easement found	
LR0025:LR0026	42-2-12.1	Three Great Valley Parkway Associates LP	3 Great Valley Pw.	No easement found	
	42-2-12.2	WPT Land 2 LP	1 Great Valley Pw.	No easement found	

Facility	Parcel	Owner/Street	Address	Deed Book/Page; Date or Case # if Unrecorded	Type & Validity
MH1407:MH1406	42-2-8.1	IPXI 1200 Atwater Investors LLC	1400 Atwater Dr.	No easement found	
MH1406:MH1405	42-2-8.1	IPXI 1200 Atwater Investors LLC	1400 Atwater Dr.	No easement found	
MH1405:MH1404	42-2-8.1	IPXI 1200 Atwater Investors LLC	1400 Atwater Dr.	No easement found	
MH1404:MH1403V	42-2-8.1	IPXI 1200 Atwater Investors LLC	1400 Atwater Dr.	No easement found	
MH1403V:MH1408	42-2-8.1	IPXI 1200 Atwater Investors LLC	1400 Atwater Dr.	No easement found	
MH1408:MH1409	42-2-8.1	IPXI 1200 Atwater Investors LLC	1400 Atwater Dr.	No easement found	
MH1403V:MH1410	42-2-8.1	IPXI 1200 Atwater Investors LLC	1400 Atwater Dr.	No easement found	
MH1410:N/A	42-2-8.1	IPXI 1200 Atwater Investors LLC	1400 Atwater Dr.	No easement found	
MH1403V:MH1401	42-2-8.1	IPXI 1200 Atwater Investors LLC	1400 Atwater Dr.	No easement found	
MH1401:MH109	42-2-8.1	IPXI 1200 Atwater Investors LLC	1400 Atwater Dr.	No easement found	
MH109:MH110	Private Road	Atwater Dr.			
MH110:N/A	Private Road	Atwater Dr.			

Schedule 4.10

Equipment and Machinery

Equipment
Pipe Tech Software and Durabook Laptop
50KW MMD Power Portable Generator
Sewer Jet (Diesel) – Trailer Mounted
Deer Run Pump Station Generator

Vehicles

Vehicle Type	VIN
2001 Ford E350 Truck	
2003 GMC Pickup Truck	
2010 Ford F550 Truck	
2011 GMC Pickup Truck	
2011 GMC Pickup Truck	
2018 Carmate 20' Custom Cargo Trailer	
2019 Ford F-150 Unit	

Schedule 4.11

Environmental Compliance

Sanitary System Overflow (SSO) Reporting for Operating Years 2016 through 2019:

- Pursuant to the Chapter 94 Municipal Wasteload Management Annual Report for Operating Year 2016, there was no reported SSO within the East Whiteland Township wastewater collection and conveyance system.

- Pursuant to the Chapter 94 Municipal Wasteload Management Annual Report for Operating Year 2017, there was no reported SSO within the East Whiteland Township wastewater collection and conveyance system.

- Pursuant to the Chapter 94 Municipal Wasteload Management Annual Report for Operating Year 2018, there were three (3) SSOs:

    - On June 11, 2018 and August 13, 2018 SSOs occurred at manhole 6-9, located at 249 Lancaster Avenue. These 2 SSOs were caused by rain events exceeding 3" per hour. On November 30, 2018, the Township diverted the flow from the Frame Avenue Pump Station to the Planebrook Pump Station, which reduced the flow by 80,000 GPD on Lancaster Avenue at the location of the overflows. Also, the Church Road Sewer Extension, referenced on Schedule 4.12, which was completed in March 2020, will redirect the flow associated with the Church Road Pump Station from the Lancaster Avenue area where these SSOs occurred.
    - On August 23, 2018 an SSO occurred at manholes 18A-1 to 18 A-2, located on Warren Avenue, which was caused by a clogged pipe. The pipe was cleared and flow resumed.

- Pursuant to the Chapter 94 Municipal Wasteload Management Annual Report for Operating Year 2019, there was no reported sanitary system overflow within the East Whiteland Township wastewater collection and conveyance system.

Corrective Action Plan (CAP) and Connection Management Plan (CMP):

- From 2013 to 2014 the Township was under a CAP. Phases 1 and 2 of the CAP required improvements to the Mill Lane and Sidley Collection System. Phase 3 of the CAP required improvements to the Lee Boulevard Pump Station. Upgrade improvements were also made to the sanitary sewer within Conestoga Road. Approximately 3,780 L.F. of new 18", 20" and 24" pipe were installed to replace existing deteriorating sewer. The CAP was lifted by the DEP in 2015 after the Township completed the gravity sewer main replacement from the Mill Lane Pump Station to Lee Boulevard.

- The conditions of the CMP currently on file with the PADEP are still in effect for the contributory drainage areas from Charlestown that flow through the Mill Lane and Sidley Road sewer systems.

Schedule 4.12

Authorizations and Permits

537 Plan:

- East Whiteland Township Act 537 Sewage Facilities Plan, dated May 2, 1995
- East Whiteland Township Act 537 Sewage Facilities Plan Special Study for the Mill Lane Pump Station Replacement Project (Route 401 Area (Area 1), Bacton Hill and Swedesford Road Areas (Area 2), Planebrook Area (Area 3), Church Road Extension – to Eliminate Church Road Pump Station (Area 4), and Immaculata University Area (Area 5)), as prepared by Advanced GeoServices and revised September 2011.
- East Whiteland Township/Charlestown Township (Southside) Act 537 Sewage Facilities Plan Special Study for the North-Central portion of East Whiteland Township and the South-Central portion of Charlestown Township (to accommodate future flow needs for Charlestown Township and East Whiteland Township), as prepared by Arro Consulting, Inc. dated February 2013.
- East Whiteland Township/Great Valley Corporate Center Act 537 Sewage Facilities Plan Special Study for upgrades of the Willburdale Pump Station and Flat Road Pump Station (for wastewater needs of the Great Valley Corporate Campus), as prepared by Arro Consulting, Inc. dated April 2015 and revised September 2015.
- East Whiteland Township Act 537 Sewage Facilities Plan Special Study for Frame Avenue/Planebrook Road Sewer Extension, as prepared by Arro Consulting, Inc. dated August 2016, with a last revision date of October 30, 2018.
- East Whiteland Township Sewage Facilities Planning Module (Component 3m) Planebrook Road Area Sewer Extension, as prepared by Arro Consulting, Inc. dated March 2020. This module is for the extension of public sanitary sewer service from the existing manhole located on Planebrook Road to properties currently served by on-lot disposal systems along Planebrook Road, Elk Drive, Fairview Drive, Prospect Avenue, Golf Circle, Bracken Avenue, and Davis Avenue.

NPDES Permits:

- **Permit No. 1501419**[4]
- **Permit No. 1502418** for sewer extension completed in 2004 for approximately 250 homes located in the King Road, Carol Lane and Summit Road areas.

[4] To confirm purpose of permit

- **Permit No. 1599418** for the Malvern Hunt sewage treatment plant.[5]

WQM Permits

Pump Station	**WQM Permit Number[6]**
Deer Run	
Mill Lane	
Wilburdale	
Lee Boulevard	
Meadowview	
Flat Road	
Lapp Road	
Westgate	
Church Road	
Frame Ave	
Hillbrook	
King Road	
Malvern Hunt	
Planebrook	

Those required Permits set forth on Schedule 4.17.

[5] Will not be transferred if the Malvern Hunt WWTP is decommissioned prior to closing, as anticipated.
[6] WQM permit numbers to be provided

Schedule 4.13

Assigned Contracts

Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Sewage Treatment Agreement	East Goshen Township East Goshen Municipal Authority East Whiteland Township East Whiteland Municipal Authority	November 17, 1987	Transmission of sewage from 23 lots located in East Whiteland (the "EW Lots") Township within the Lockwood Chase Development from East Whiteland through East Goshen Township's sewage collection system to the Lockwood Chase Plant (leased and operated by East Goshen Township) for treatment.
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Sewage Treatment Agreement	East Goshen Township East Whiteland Township	October 17, 2000	Transmission of sewage from 4 lots located in East Whiteland

	East Whiteland Municipal Authority		Township within the Mill Valley subdivision from East Whiteland through East Goshen's sewage collection system, to the West Goshen Treatment Plant for treatment. East Goshen reserves its capacity in the West Goshen Treatment Plant for East Whiteland.
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Agreement	Malvern Borough East Whiteland Township East Whiteland Municipal Authority	July 10, 1995	Transmission of sewage from 19 lots located in East Whiteland Township within the Erin Glenn subdivision from East Whiteland through the Erin Glen Meter into Malvern Borough's collection system, then

			back to East Whiteland through the Warren Avenue Meter (which will then go through the East Whiteland Trunkline to Valley Forge Sewage Treatment Plant).
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Agreement	Willistown Township East Whiteland Township East Whiteland Municipal Authority	September 14, 1993	Transmission of sewage from 114 apartments in East Whiteland Township within the Woodview Apartments from East Whiteland to the collection system in Willistown (which will then go through the Valley Creek Trunkline to the Valley Forge Sewage Treatment Plant).

Name of Contract	Parties to Contract	Date of Contract	Subject
Sewage Capacity/Service Agreement	East Whiteland Township East Whiteland Municipal Authority Tredyffrin Township Tredyffrin Township Municipal Authority Trammell Crow Northeast Metro Development, Inc.	November 1, 2000	Transmission of sewage from the portion of the Great Valley Corporate Campus (developed by Trammel Crow) located in East Whiteland Township (the "EW Portion") that is required to be served by the Valley Forge Sewage Treatment Plant ("VFSTP") under East Whiteland's 537 Plan. Tredyffrin sold its reserve capacity in the VFSTP to Trammel Crow for use by the EW Portion. Tredyffrin bills East Whiteland for its flow into Tredyffrin's system. Sewage is transmitted

			from the EW Portion through the Valley Creek Trunkline (in Tredyffrin) to the VFSTP for treatment.
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Addendum to Sewage Capacity/Service Agreement dated November 1, 2000	East Whiteland Township Tredyffrin Township RLD Water JV, LLC The Haven at Atwater Village, LLC	November 19, 2015	Modifies the Agreement dated November 1, 2000 to address additional flow from the Havens Apartment Complex, located in East Whiteland (the "Atwater Capacity"). The addendum adds RLD Atwater and The Haven at Atwater Village as parties. Tredyffrin will bill East Whiteland a sewer rental charge for the first 46,393 GPD of flows from the Atwater Capacity. For

			the average daily flows over 46,393 GPD, Tredyffrin will be entitled to collect a conveyance fee (but not a treatment fee) – as of March 2020, the conveyance fee has not yet been established or charged.
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Professional[7] Services Agreement	ARRO Consulting East Whiteland Township	July 26, 2011	ARRO's services in connection with the operation and maintenance of the Malvern Hunt Wastewater Treatment Plant.
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
East Whiteland Trunk Line Agreement	East Whiteland Township East Whiteland Municipal Authority	February 1, 1971	Transmission of sewage from the municipalities through the East

[7] Professional Services Agreement will not be transferred if the Malvern Hunt WWTP is decommissioned prior to closing, as anticipated.

	Malvern Municipal Authority Borough of Malvern Valley Forge Sewer Authority		Whiteland Trunkline (the "Trunkline") to the Valley Forge Sewage Treatment Plant ("VFSTP"), including charges for maintenance and repairs to the Trunkline.
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Amendment to East Whiteland Trunk Line Agreement	East Whiteland Township East Whiteland Municipal Authority Malvern Municipal Authority Borough of Malvern Valley Forge Sewer Authority ("VFSA")	December 12, 1979	Addendum to the Agreement dated February 1, 1971 to address the reservation by EW for the VFSA of reserved capacity in the Trunkline and the Mill Lane Pump Station and the transmission of sewage from Charlestown Township through the Trunkline to the VFSTP. The addendum also adds VFSA as a municipality under the

			agreement, as it owns and operates the Charlestown Sewer System.
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Amendment to East Whiteland Trunk Line Agreement	East Whiteland Township East Whiteland Municipal Authority Valley Forge Sewer Authority	April 18, 2014	Addendum to the Agreement dated February 1, 1971 establishing an increased reserve capacity for the VFSA within the East Whiteland sewer system and establishing the related cost sharing between East Whiteland and VFSA.
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Valley Forge Sewer Treatment Plant Agreement	Schuylkill Township East Pikeland Township Charlestown Township	November 1, 1970	Transmission and treatment of sewage from the municipalities to the Valley Forge Sewage Treatment Plant ("VFSTP"),

	East Whiteland Township East Whiteland Municipal Authority Tredyffrin Township Tredyffrin Municipal Authority Willistown Township Easttown Township Easttown Municipal Authority Malvern Borough Malvern Municipal Authority Valley Forge Sewer Authority ("VFSA")		including charges for maintenance and repairs to the VFSTP.
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Composite Amendment No. 1	Schuylkill Township East Pikeland Township Charlestown Township	December 18, 1974	This amendment amends portions of (and specifically Section 2.03 and certain Exhibits) of

	East Whiteland Township Tredyffrin Township Willistown Township Easttown Township Malvern Borough East Whiteland Municipal Authority Tredyffrin Municipal Authority Easttown Municipal Authority Malvern Municipal Authority Valley Forge Sewer Authority ("VFSA")		the Valley Creek Trunk line Agreement, the East Whiteland Trunk line Agreement and the Valley Forge Sewer Treatment Plant Agreement to address the construction by and reimbursement of Tredyffrin Authority by the other municipalities for its construction of the portion of the Valley Creek Trunk Sewer located in Valley Forge State Park. Also addresses the award of and credit for certain grants from the EPA to each of the authorities for the respective collection systems.

Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Agreement	East Whiteland Municipal Authority Valley Forge Sewer Authority	December 27, 1978	East Whiteland Municipal Authority and VFSA agreed to share costs for the Sidley Road Trunk line repairs. Schedule A (detailing the repairs and referenced in the agreement) is not included.

Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Amendment to Valley Forge Sewage Treatment Agreement	Schuylkill Township East Pikeland Township Charlestown Township East Whiteland Township East Whiteland Municipal Authority Tredyffrin Township Tredyffrin Municipal Authority Willistown Township Easttown Township Easttown Municipal Authority Malvern Borough Malvern Municipal Authority Valley Forge Sewer Authority ("VFSA")	January 1, 1983	This amendment changed the interest rates for late payments.

Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Supplement to Valley Forge Sewage Treatment Agreement for the Purpose of Complying with the United States Environmental Protection Agency Regulations	Schuylkill Township East Pikeland Township Charlestown Township East Whiteland Township East Whiteland Municipal Authority Tredyffrin Township Tredyffrin Municipal Authority Willistown Township Easttown Township	December 2, 1985	This supplement includes requirements that the municipalities, in order to comply with EPA regulations, enact ordinances to include monitoring, reporting and other requirements for industrial users and it gives VFSA authority to inspect, charge, fine, etc. industrial users and act on behalf of each municipality if necessary.

	Easttown Municipal Authority Malvern Borough Malvern Municipal Authority Valley Forge Sewer Authority ("VFSA")		
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Addendum to Valley Forge Sewage Treatment Agreement for the Purpose of Permitting and administering the Sale of Reserved Capacity among the Parties	Schuylkill Township East Pikeland Township Charlestown Township East Whiteland Township East Whiteland Municipal Authority Tredyffrin Township Tredyffrin Municipal Authority Willistown Township	October 1994	This addendum addresses disparities between the reserved capacities of the various municipalities by allowing for the permanent sale of unused reserved capacity between the municipalities, with the consent of VFSA and pursuant to certain offer and sale procedures.

	Easttown Township Easttown Municipal Authority Malvern Borough Malvern Municipal Authority Valley Forge Sewer Authority ("VFSA")		
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Wastewater Conveyance Agreement	Aqua Resources, Inc. Schuylkill Township East Pikeland Township Charlestown Township East Whiteland Township Tredyffrin Township Willistown Township Easton Township Easton Municipal Authority	November 2018	The transmission of sewage from the municipalities through the Valley Creek Trunkline (owned by Aqua) to be treated at Valley Forge Sewer Treatment Plant ("VFSTP"). The VFSA agrees to accept, treat and dispose of such sewage pursuant to this Agreement

	Malvern Borough Valley Forge Sewer Authority ("VFSA")		and the Valley Forge Sewage Treatment Plant Agreement.
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Sewer Treatment Agreement	East Whiteland Township East Goshen Township Malvern Institute for Psychiatric and Alcoholic Studies	March 2, 2004	Transmission of flow from the Malvern Institute property located in East Goshen, through East Whiteland Township's system to the Valley Forge Sewage Treatment Plant. The agreement also addresses the permanent sewer easement that Malvern Institute conveyed and granted across its property to allow East Whiteland to construct a sanitary sewer line and the King Road Pump Station.

Name of Contract	Parties to Contract	Date of Contract	Subject
National Railroad Passenger Corporation License Agreement	National Railroad Passenger Corporation (NRPC) East Whiteland Township Municipal Authority	November 18, 1993	NRPC granted an exclusive license to East Whiteland to construct, maintain, repair, alter, renew, relocate and remove an iron sewer pipe, encased in a steel casing pipe, for a distance of approximately 250 feet under NRPC's right-of-way. The pipe conveys sanitary sewage from the Southridge Subdivision to East Whiteland's collection system.
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
National Railroad Passenger Corporation Amendment to License Agreement	National Railroad Passenger Corporation East Whiteland Township Municipal Authority	May 6, 2002	Amends November 18, 1993 License Agreement. Changes description and location of pipe to be

			installed and adds additional lump sum rent payment of $16,315 for May 6, 2002 (date of Amendment) through October 31, 2018 and $250 fee for expenses and preparation of Amendment. Previous lump sum payment of $13,120 was made upon execution of original agreement (as well as $500 for expenses and license preparation).
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
National Railroad Passenger Corporation License Agreement	National Railroad Passenger Corporation East Whiteland Township	September 10, 1999	NRPC granted an exclusive license to East Whiteland to construct, maintain, repair, alter, renew, relocate and

			remove an iron sewer pipe, encased in a steel casing pipe, for a distance of approximately 267 feet near Sugartown Road. The pipe conveys sanitary sewage from the Sugartown Ridge Subdivision to East Whiteland's collection system.
Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
Agreement with Public Utility or Municipality for Crossing under Railroad Private Property	Reading Company East Whiteland Municipal Authority	March 21, 1972 (no set term)	Reading Company (RC) granted a license across and under its tracks, right of way and property to East Whiteland Municipal Authority (EW) to lay, maintain, and use two steel pipes in steel casing pipes 1,600 feet west and 511 feet west of Valley Store Station in East Whiteland

			Township (the "Facilities"). EW is responsible for all costs of construction, relocation and removal and for all taxes assessed against the Facilities. There is an annual $40 charge for the license, to be adjusted by RC every fifth year commencing on January 1, 1977. In the event that RC deems it necessary that the Facilities be altered or changed, EW must do so within 30 days of notice of such from RC. Upon termination of the agreement (by RC if there is a breach by EW), EW is required to remove the Facilities and restore the premises to good condition.

Name of Contract	**Parties to Contract**	**Date of Contract**	**Subject**
License Agreement for Wire, Pipe and Cable Transverse Crossings and Longitudinal Occupations	Penn Central Transportation Company East Whiteland Municipal Authority	July 11, 1975 (no set term)	Penn Transportation Company (PTC) granted a license across and under its tracks, right of way and property to East Whiteland Municipal Authority (EW) to construct, maintain, alter renew, relocate and ultimately remove a sewage main under Railroad Bridge No. 2.73 and 2 manholes at valuation station 2284+49, located 1399 feet west of mile post 3 (west of Knickerbocker station) (the "Facilities"). EW is responsible for all costs of construction, relocation and removal and

			for any taxes assessed against the Facilities. In addition to reimbursement to PTC for the cost of preparing the agreement, there was a $1,100 licensing fee paid to PTC. PTC must consent to any alterations to the planned Facilities required by EW. In the event that PTC deems it necessary that the location of the Facilities be altered, EW must do so at EW's sole cost and expense. Upon termination of the agreement, EW is required to remove the Facilities and restore the premises to good condition, at EW's sole cost and expense.

Schedule 4.14

Seller Litigation

None.

Schedule 4.16(a)

Exception to Title to Acquired Assets

None.

Schedule 4.16(b)

Sufficiency

To be provided upon further review of due diligence.

Schedule 4.17

Pending Development Plans

1. Phase 1 – Conestoga Road (Rt. 401) (TO BE COMPLETED BY SELLER)

Scope of work is to connect 22 properties (one has been connected) to the existing 8" sanitary main within the right-of-way of Conestoga Road.

- This phase requires receipt of a Highway Occupancy Permit (HOP) from PennDOT, the application for which has been submitted.
- Design drawings and bid specs are completed, other than revisions for bid dates.
- A field view with PennDOT was scheduled for June 2, 2020.
- In the event that PennDOT will require sections of lanes to be repaved, an alternate bid item has been added to obtain a unit price for milling and overlay based on a selected quantity.
- Remaining Work: Address and respond to PennDOT comments, and resubmit.
- Remaining Work: Finalize alternate bid item for road paving.
- Phase is 99% complete as of May 29, 2020.

Also see Required Sewer Projects to be completed by Buyer on Schedule 7.12.

Schedule 4.18

Land Development/Financial Security Agreements[8]

[8] Further information to be provided

Schedule 5.04

Buyer Consents and Approvals

1. Pennsylvania Public Utility Commission (the "PaPUC") Approval of Transaction

2. PaPUC Approval of Consent to Assignment and Amendment to Sewage Treatment Agreements and Related Amendments

3. Pennsylvania Department of Environmental Protection (the "PaDEP") Approval of Sanitary Sewer Collection and Conveyance System Act 537 Plan recognizing transfer of wastewater collection system from Seller to Buyer

4. PaDEP transfer of all NPDES[9] and WQM Permits

[9] NPDES permits will not be transferred if the Malvern Hunt WWTP is decommissioned prior to closing, as anticipated.

Schedule 5.11

Buyer Litigation

To be addressed by Buyer.

Schedule 7.03(a)

Rates

Sewer District	**Rate**
Sewer District A	$400/EDU/Year or $33.33/EDU/Month
Sewer District B	$400/EDU/Year or $33.33/EDU/Month
Sewer District C	$542/EDU/Year or $45.17/EDU/Month
Sewer District D	$600/EDU/Year or $50.00/EDU/Month
Sewer District E	$480/EDU/Year or $40.00/EDU/Month

Commercial and Industrial users whose quarterly sewer discharge or water consumption is in excess of 100,000 gallons shall pay a quarterly charge of $6.20 per 1,000 gallons.

Schedule 7.12

Required Sewer Projects

A. North Bacton Hill Road and Swedesford Road:

   a. Generally consisting of those parcels abutting the following roads:

      i. North Bacton Hill Road from Swedesford Road to Spring Valley Road.

      ii. Spring Valley Road from North Bacton Hill Road to the Conestoga Road.

      iii. South Bacton Hill Road from Swedesford Road to the cul-de-sac.

      iv. Swedesford Road from Bacton Hill Road to a point approximately 620-feet west of the intersection.

B. Planebrook Road:

   a. Generally consisting of those parcels abutting the following roads and/or unopened streets:

      i. Planebroook Road form Bracken Avenue to the Route 202 overpass.

      ii. Elk Drive from Planebrook Road to the cul-de-sac.

      iii. Fairway Drive from Planebrook Road to the cul-de-sac.

      iv. Golf View Lane from Planebrook Road to the cul-de-sac.

      v. Prospect Avenue from Planebrook Road to UPI #42-30-8 (2 Prospect Avenue), including a spur to service UPI #42-3-174.

      vi. Bracken Avenue form Planebrook Road to Coffman Street including the following spurs:

         1. East of Coffman Street to service UPI #42-3-216.1, UPI #42-3-216.2 and UPI #42-3-216.3

         2. North of Bracken Avenue within "Davis Avenue" to service UPI #42-3R-28

The installations in A and B above shall be in general conformance with the following design plans completed by ARRO Consulting Inc.:

- Plans Entitled "*North Bacton Hill & Swedesford Road Areas Sanitary Sewer Phase 2",* 24-sheets, dated January 23, 2020

- Plans Entitled *"Planebrook Road Areas Sanitary Sewers Phase 4",* 19 sheets, dated January 23, 2020.

Gravity and Low Pressure System Service Connections for A and B above:

- The Required Sewer Projects described in sections A and B above will provide service connections to the curb, ROW line, or property line as shown on the plans.
- The respective property owners will be responsible, at their own expense, for connecting to the service connection provided as noted above. Buyer will have no responsibility for infrastructure located within the boundaries of the property owners' properties.
- Notwithstanding references to "E-One Grinder Pumps" on the plans, Buyer will have no responsibility for grinder pumps which will remain the responsibility of the property owners served by such grinder pumps.

Permitting - The Township is in the process of obtaining all required permits for the above projects in A and B above.

Easements - Various easements will be required for portions of the proposed sewer within Prospect Avenue, Bracken Avenue and Davis Avenue in the Planebrook Road project. The Township will retain responsibility for securing all necessary easements per Section 7.12(a) of the Asset Purchase Agreement.

aus consultants

JEROME C. WEINERT
Principal & Director

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Greenfield, WI 53228
414-529-5755 ▪ Tel
414-698-8371 ▪ Cell
weinertj@auswest.net

May 27, 2021

Mr. John Nagel
Township Manager
East Whiteland Township
209 Conestoga Road
Frazer, PA 19355

Re: East Whiteland Township Wastewater Collection System Fair Market Value Appraisal

Dear Mr. Nagel:

AUS Consultants is please to respond to Scott Shearer's (PFM Financial Advisors, LLC) request for a proposal for a valuation of East Whiteland Township's wastewater collection system. We understand the nature and purpose of the request is to determine the fair market value of the Township's wastewater collection property and its operation for compliance with Title 66 (Public Utilities) of the Pennsylvania Consolidated Statues Section 1329 of the "Valuation of Acquired water and wastewater systems" collectively referred to as Act 12 of the Commonwealth of Pennsylvania's 2016 legislative session. AUS Consultants is a Utility Valuation Expert (UVE) as designated by the Pennsylvania Public Utility Commission (PUC) Docket No. A-2016-2566251 Entity Code 9919181 renewed January 13, 2020. Our appraisal assumes an investor-owned utility as the purchaser and that the purchaser would be successful in establishing the purchase price, assumed to be the appraised value, as rate-base for regulatory purposes under Section 1329 of the Public Utility Code of Pennsylvania.

Our response to this request will include the scope of our services, a list of AUS Consultants staff and their qualifications, an initial listing of data required to perform the appraisal and a range of project costs through the completion of the appraisal report; activities subsequent to the delivery of our final report will be billed at our hourly per diems defined below. The appraisal will be prepared under the 2020-2021 edition of the Uniform System of Professional Appraisal Practices (USPAP) which has been extended through 2022.

Before addressing the proposal requirements, it is important to understand the valuation concepts and parameters as they would apply to this project which will be subject to consideration of issues regarding to recent Commission decisions and settlements entered into between the Pennsylvania Office of Consumer Advocate (OCA) and the participants (Aqua Pennsylvania and Pennsylvania American) in other recent Act 12 cases.

Valuation Study

AUS Consultants understands the purpose of the valuation study is to determine the fair market of the Township's wastewater collection system assets and their operation. Fair market value is defined as:

> "The most probable price, as of a specified date, in cash, or in terms equivalent to cash, or in other precisely revealed terms, for which the specified property rights should sell after reasonable exposure in a competitive market under conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress." The Appraisal of Real Estate, 13th Edition, page 23

Our conclusion will represent the fair market value as a going concern, in this case an operating wastewater collection system and not an amount that would be realized from a liquidation of those assets.

Valuation Methodologies

The valuation of the Township's wastewater collection assets, as part of a going concern, will the three (3) generally accepted valuation methodologies: the cost, income and market approaches.

The primary valuation method that will be utilized is the **cost approach.** In preparing the cost approach we will rely on the "Engineer's Assessment" inventory prepared for the Township and the Purchaser per the Pennsylvania PUC's (Act 12) Final Implementation Order M-2016-2543993. In order for the Engineer's Assessment to be of maximum use to the UVEs it should detail the property by account, type and size of property and or equipment, its date of

installation and its original cost. It should be noted that Section 1329 does not restrict the property to be appraised in any fashion so all property of the Township subject to the sale whether Township constructed and/or developer contributed is subject to the appraisal. The cost approach will give consideration to the Township's wastewater collection plant and equipment's replacement cost adjusted for appraisal depreciation. The replacement cost new will be developed using either trending the property's investment by account and installation year or by application of appraisal date unit costs to property's inventory by account and installation year. Next, appraisal depreciation, physical, function and economic, will be assessed and deducted from the replacement cost new. The physical and functional depreciation will be determined based on the age-life depreciation methods using aging from the Engineer's Assessment, the service lives applicable to wastewater industry depreciation lives and a physical inspections of the property.

The property subsequent to its acquisition, will be regulated by the Pennsylvania PUC utilizing a rate base/rate of return regulation. This form regulation allows for the fair return on and of the Company's capital invested for the provision of wastewater services. The last step in the Cost Approach's we will consider the property's economic returns under PUC regulation in order to determine if economic obsolescence exits in the preliminary Cost Approach conclusion discussed above. We will use the results of Income and Market Approaches (discussed below) in making this determination.

The **income approach** provides an indication of value by evaluation the future returns of the operation of the property as wastewater collection system. There are two commonly used methods of the income approach: the discounted cash flow (DCF) approach and the capitalized income approach. Both procedures discount the future returns of the property using a recognized cost of capital for the wastewater industry.

In the DCF, the expected or future cash flows of the operation of the property are discounted to the appraisal date (present value) using a recognized cost of capital for the wastewater industry. Future cash flows are based on historical results from operation in terms of revenues and expenses as the basis forecast of future operations. The projected cash flow levels must provide for additional cash investment and working capital additions, as well as reflect the specific growth potential of the system being valued.

In the capitalize income approach the property's future returns are consolidated into a single estimate for all future periods. The capitalized income approach to value is determined by the direct capitalization of the estimated income using an adjusted cost of capital removing future growth from the cost of capital rate.

The discount rate used in the income approaches will be developed from a market analysis of debt and equity reflecting the risks associated with a rate regulated water and wastewater companies regulated by the Pennsylvania PUC.

The **market approach** looks to market sales of similar water and wastewater utility properties (companies). There are two methods which are commonly utilized to estimate the market approach: actual market sales and market multiples based on wastewater industry comparables based on financial performance as reported in Value Line Investment Surveys for the water/wastewater industry.

The **final appraised value** will consider each of the three approaches to value both individually and collectively.

AUS Consultants Professional Staff

AUS Consultants' professional staff has extensive nationwide experience in preparing business enterprise valuations for water and wastewater systems.

Jerome C. Weinert, Professional Engineer (PE), Accredited Senior Appraiser (ASA), Certified Depreciation Professional (CDP)

- 49 years in Appraisal and Depreciation Consulting
- BS in Mechanical Engineering – Milwaukee School of Engineering (1972)
- Master's in Business Administration – Marquette University (1988)
- Testimony Experience:
  - Regulatory (Depreciation and Rate Base)
  - Courtroom (Valuations – ad valorem taxation and eminent domain and rate of return)

Michael J. Diedrich, PE, ASA, CDP, Certified General Appraiser

- 38 years in Appraisal and Depreciation Consulting
- BS in Architectural Engineering Technology – Milwaukee School of Engineering (1981)
- Master's in Business Administration – Marquette University (1991)
- Testimony Experience:

Courtroom (Valuations ad valorem taxation and eminent domain)

David Weiler

- 36 years in Valuations of Business Enterprises, Closely-held common Stock, Cost of Capital Studies and Valuations of Intangible Property
- Bachelor of Science in Finance-Drexel University (1978)

David A. Sheffer

- 39 years in Regulatory Consulting (Depreciation, Rate Base, Cost of Service, Valuations and Original Cost Studies)

Elizabeth A Weinert

- 19 years in Appraisal and Depreciation Consulting
- B Bachelor of Science in Mechanical Engineering – Milwaukee School of Engineering (2001)
- Master's in Aeronautical Engineering – University of Alabama (2015)

First Request for Data

In order to expedite the project upon the East Whiteland Township's acceptance of our proposal, AUS Consultants needs the following data:

Inventory of property plant and equipment. Ultimately this inventory needs to be provided by the firm preparing the "Engineer's Assessment" for both the Township and the Purchaser. As stated above:

> "In order for the Engineer's Assessment to be of maximum value use it should detail the property by account, type and size of equipment, its date of installation and its original cost. It should be noted that Section 1329 does not restrict the property to be appraised in any fashion so all property whether municipally constructed and/or developer contributed is subject to the appraisal."

Township's financial information related to the operation of the wastewater collection system over each of the last four to six years.

Customer information for the last four years

This data request is not intended to be all inclusive of the information required. There will be follow-up questions and additional requests for data.

AUS Consultants would like to perform a physical inspection of the Township's wastewater system and schedule interviews, as appropriate, with township personnel familiar with the wastewater collection system's operation.

Fee Estimate

AUS Consultants would offer a professional fee range of $25,000 to $27,000 plus expenses to complete a valuation study. Expenses billed at our cost will include travel and living, report preparation, and Fed X as necessary.

For activities subsequent to our final report the following table of hourly per diems plus expenses:

Consultant	Hourly Per Diems ($s/hr.)
Jerome C. Weinert	275
Michael J Diedrich	250
Earl Robinson	200
David A. Sheffer	200
David Weiler	170
Elizabeth A. Weinert	150
Susan Macchia	70

These activities typically include responding to interrogatories (Commission staff, OCA, Small Business Advocate, and/or other possible intervenors), reviewing the testimony of participating parties, preparing testimony (direct, cross, and possibly sur-rebuttal), attending Commission hearings. If expert testimony is required, Jerome C. Weinert will be the witness and attend any hearings which is required.

Closure

AUS Consultants appreciates the opportunity to respond to East Whiteland Township's request for our services. Should you have any questions regarding our response, please contact the undersigned.

Respectfully submitted,
Jerome C. Weinert
AUS Consultants
Principal & Director

Jerome C Weinert

Date: May 27, 2021

Accepted by:

East Whiteland Township, PA
Date: 5/27/2021

VIA E-MAIL

May 28, 2021

Thomas S. Wyatt
Obermayer Rebmann Maxwell & Hippel LLP
1500 Market Street
Suite 3400
Philadelphia, PA 19102-2101

RE: Aqua Pennsylvania Wastewater, Inc. – East Whiteland Township, Section 1329 Fair Market Value Application

Dear Mr. Wyatt:

Enclosed please find a list of items concerning utility valuation expert ("UVE") appraisals for applications to the Pennsylvania Public Utility Commission under Section 1329, 66 Pa. C.S. § 1329, that should be reviewed by the UVEs in the development of their Fair Market Value appraisals.

Please provide the enclosed list to your client, East Whiteland Township ("Township"), and to the UVE that your client engages. In accordance with Aqua Pennsylvania Wastewater, Inc.'s ("Aqua") prior settlement agreements under Section 1329, Aqua will not be able to support, in whole or in part, UVE appraisals that do not comply with the enclosed list.

If you have any questions concerning the enclosed list, please contact me at 610-645-1130.

Sincerely,

Alexander R. Stahl
Regulatory Counsel

Enclosure

Aqua – East Whiteland 1329 FMV Application

Requirements from Prior Commission Orders for Utility Valuation Experts:

1. Market Approach

    a. If "comparable acquisitions" are used as a factor in determining market value, the purchase price for each "comparable acquisition" shall be based on the actual amount paid for the assets at the time of purchase and future capital improvements shall not be included;

    b. If the number of customers is used as a factor in determining market value, the actual, unadjusted number of customers shall be used rather than projected future number of customers. This applies to the number of customers for both the system being acquired and any "comparable acquisitions" being used in the determination.

    c. Speculative growth adjustments will not be used, consistent with *New Garden* (Order pp. 52-53). U.S. Census Data and relevant and applicable regional planning commission reports may be used as a basis to determine growth in a subject area. OCA reserves the right to challenge the specific use of the data in each case.

    d. The proxy group used for calculating market value should not be limited to only companies which engage in Pennsylvania fair market value acquisitions. Aqua agrees that it will provide the terms of this agreement to any UVE prior to engaging the UVE.

    e. Comparable sales used to establish the valuation should not be limited to those that the UVE previously appraised. Aqua agrees that it will provide the terms of this agreement to any UVE prior to engaging the UVE.

2. Income Approach

    a. The rate base/rate of return methodology is not an appropriate methodology for calculating fair market value.

    b. Calculations done under the Income Approach will clearly describe the basis for discount rate(s) in the report rather than only in the exhibits. The following information should be provided about the discount rate(s) used:

        i. The capital structure used in the analysis with an explanation as to why the capital structure was selected. If Company's actual capital structure was not used, explain why not.

        ii. The cost of equity used in the analysis, and the basis for the cost of equity.

iii. The cost of debt used in the analysis. If Company's actual cost of debt was not used, explain why not.

c. Additionally, if a capitalization rate is used, the calculation of the capitalization rate and the basis for the growth rate will be disclosed and fully explained.

3. Cost Approach

a. If the reproduction cost methodology is used, valuation of the collection mains will not be treated differently or as a special circumstance unless reasonably justified;

b. Future capital projects shall not be considered in determining the cost approach result;

c. The cost of land, if included, shall not be adjusted by the ENR index.

d. Aqua and the OCA reserve the right to present adjustments and oppose other methodologies, inputs and assumptions in appraisals in future cases and proceedings, including methodologies, inputs and assumptions that were present in this case but not challenged by the OCA or that were accepted by the Commission.

4. Other Appraisal Considerations:

a. The "going value," "provision for erosion on return," and "overhead cost" add-ons will not be adopted or included in the appraisals.

***

Current cost of Easements

Activity	Engineer	Legal	Fees	Total
Determine the facilities for which a Easment is need	1	0	0	
Locate the Land owner for the property needing a easement	1	1	0	
Develop a diagram o the Property, the facilities, and the easement	2	0	0	
Develop the easement document	1	1	0	
Visit the property owner to obtain permission for the easement and sign the easment documentation	4	0	0	
Register the easement with the Municipal Clerk	0	1	250	
Total	9	3	250	
Labor Costs per Hour	54	100		
Total Cost	486	300	250	1,036