

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

In re: Application and related filings of Pennsylvania-American :  
Water Company under Sections 507, 1102(a), and 1329 of the :  
Pennsylvania Public Utility Code, 66 Pa. C.S. §§ 507, 1102(a), :  
1329, for approval of its acquisition of wastewater system assets : Docket No. A-2018-\_\_\_\_\_ *et al.*  
of Sadsbury Township's Wastewater System, related wastewater :  
service rights, fair market valuation ratemaking treatment, :  
deferral of the post-acquisition improvement costs, and certain :  
contracts with municipal corporations :

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**DIRECT TESTIMONY OF JEROME C. WEINERT, ASA, PE, CDP  
UTILITY VALUATION EXPERT SELECTED BY  
PENNSYLVANIA-AMERICAN WATER COMPANY**

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Date: June 1, 2018

PAWC Statement No. 4

1 **INTRODUCTION**

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

3 A. Jerome C. Weinert, ASA, PE, CDP, with business addresses at 2405 Park Drive Suite 203,  
4 Harrisburg, PA and 8555 West Forest Home Avenue Suite 201, Greenfield, Wisconsin  
5 53228.

6  
7 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

8 A. I am employed by Associated Utility Services, Inc. (“AUS”) as a Principal and Director in  
9 AUS’s consulting operation (“AUS Consultants”), a position I have held since 1987. AUS  
10 was founded in 1967 as a financial consulting firm specializing in utility rate-making and  
11 regulatory matters. AUS Consultants is based in Mount Laurel, New Jersey, with various  
12 subsidiary offices located in Harrisburg, Pennsylvania; Greenfield (Milwaukee),  
13 Wisconsin; and Albuquerque, New Mexico. AUS Consultants comprises several  
14 subsidiary groups, including Utility Services Group, C.A. Turner Utility Reports,  
15 Valuation and Depreciation Services Group.

16  
17 **Q. WHAT ARE YOUR RESPONSIBILITIES AS PRINCIPAL AND DIRECTOR OF  
18 AUS CONSULTANTS?**

19 A. As a Principal of AUS Consultants, I am responsible for appraisals and depreciation studies  
20 which AUS Consultants performs for its clients. As Director of AUS Consultants, I am  
21 responsible for the daily administration and operations of AUS Consultants’ staff and  
22 offices in Harrisburg, PA; Greenfield, WI; and Albuquerque, NM.

1 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND BUSINESS**  
2 **EXPERIENCE.**

3 A. I received a Bachelor of Science Degree in Mechanical Engineering from the Milwaukee  
4 School of Engineering in Milwaukee, WI, in 1972 and a Master of Business Administration  
5 Degree from Marquette University in 1988.

6 I am registered as a Professional Engineer (E-15552) in the State of Wisconsin. I  
7 have held a Professional Engineer's License continuously since 1976, when I completed  
8 the State of Wisconsin's engineering certification requirements. Those requirements  
9 include successfully completing two 8-hour written examinations along with four years of  
10 qualifying engineering experience. Wisconsin also requires that licensed engineers  
11 complete continuing education requirements of 15 professional development hours on a  
12 semi-annual basis for renewal of a Professional Engineers license. I most recently renewed  
13 my Wisconsin Professional Engineers' license on July 31, 2016.

14 Since 1982, I also have been an Accredited Senior Appraiser ("ASA") in the  
15 American Society of Appraisers, which is a technical society whose charter is to ensure the  
16 integrity and continuation of the appraisal profession. My accreditation is in the specialty  
17 of Technical Specialties, which includes public utility valuation. I recertify in this specialty  
18 every five years, and I am currently in the process of recertifying. I also hold Senior  
19 Membership in Public Utility Valuation. To become a senior member, a candidate must  
20 have five years of qualifying experience in the designated field and pass a written  
21 examination that covers general appraisal principles and issues specific to the candidate's  
22 field. Finally, the candidate's work is reviewed for a selected number of valuation  
23 problems, which, for Public Utility Valuation, requires the applicant to demonstrate

1 understanding of values, both tangible and intangible, for utility property. These valuations  
2 may be in connection with rate case studies, sale or acquisition, eminent domain  
3 (condemnation), ad valorem property tax appraisals, and insurance risk management  
4 appraisals. These valuations require special knowledge in order to take into account the  
5 unique economic and value characteristics of public utility properties and properly  
6 recognize regulatory factors which influence value conclusions. Senior membership in  
7 Public Utility Valuation also requires an understanding of the principles and practices  
8 necessary in developing appropriate capital recovery (depreciation) accrual rates for public  
9 utilities.

10 I am also a founding member of the Society of Depreciation Professionals. Formed  
11 in 1987, the Society of Depreciation Professionals is an international society whose  
12 purpose is to recognize the professional field of depreciation engineering and those  
13 individuals contributing to that field; to promote the development and professional ethics  
14 of the profession; and collect and exchange information concerning depreciation  
15 engineering and analysis. Its membership, of which there are approximately 200 individual  
16 and corporate members, is comprised of professionals from regulated industries (telephone,  
17 electric, gas, and water), regulatory agencies, consulting firms, and educational institutions.  
18 I have held various offices with the Society including serving as treasurer in 1993, vice  
19 president in 1994, and president in 1995.

20 I gained the status of a Certified Depreciation Professional from the Society of  
21 Depreciation Professionals in 1997. To obtain this status, a candidate must have five years  
22 of qualifying experience in the field of depreciation, pass a written examination that covers  
23 depreciation engineering principles and practices, and provide references to his or her work

1 and qualifications as a depreciation professional. I have re-certified every five years since  
2 1997 with the most recent re-certification effective January 1, 2013.

3  
4 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PENNSYLVANIA**  
5 **PUBLIC UTILITY COMMISSION (“COMMISSION”)?**

6 A. Yes. In valuation matters related to utility rate base, I most recently testified before the  
7 Commission in the matter of the applications of Pennsylvania American Water Company  
8 and Aqua Pennsylvania Wastewater, Inc., pursuant to Sections 1102 and 1329 of the  
9 Pennsylvania Public Utility Code (“Code”), 66 Pa. C.S. §§ 1102 and 1329, for approval of  
10 their respective applications for acquisitions of the wastewater systems assets of New  
11 Garden Township, Docket No. A-2016-2580061, on behalf of Aqua Pennsylvania, Inc. and  
12 The McKeesport Municipal Wastewater System, on behalf of Pennsylvania American  
13 Water Company. I have also presented testimony on the subject of depreciation to the  
14 public service commission’s in the states of Alaska, Arkansas, Illinois, Indiana, Iowa,  
15 Nebraska, Nevada, North Carolina, Ohio, and Oregon. I have testified on depreciation  
16 matters before the Federal Energy Regulatory Commission (“FERC”) and the CRTTC. In  
17 addition, I have testified on valuation matters before the Massachusetts Superior Court; the  
18 Court of Common Pleas, Fayette County, Ohio; the Twentieth Judicial Circuit Court in  
19 Charlotte County, Florida; the Nineteenth Judicial Circuit Court in St. Lucie County,  
20 Florida; the New Hampshire Public Service Commission; the California Board of  
21 Equalization and Assessment; and the Valuation Adjustment Boards in the Florida counties  
22 of Duval, Hillsborough, Okeechobee, and Palm Beach. Attached to this direct testimony

1 as JCW-1 is a copy of my current curriculum vitae which includes a listing of cases in  
2 which I have testified.

3 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

4 A. The purpose of my testimony is to describe the fair market value appraisal of the  
5 wastewater system and related plant, property, equipment and assets (collectively the  
6 “System”) of Sadsbury Township that I and my staff performed on behalf of Pennsylvania-  
7 American Water Company (“PAWC”), the buyer of the System. Our report dated  
8 November 20, 2017, is entitled “Sadsbury Township, Pennsylvania Wastewater System  
9 Fair Market Value Appraisal as of November 20, 2017.” The appraisal and its report was  
10 developed to meet the criteria established in paragraph Section 1329 of the Pennsylvania  
11 Public Utility Code (“Code”), 66 Pa. C.S. § 1329 (“Determination of the fair market value  
12 of water and wastewater assets”).

13 In its 2015-2016 legislative session, the Pennsylvania Legislature passed Act 12 of  
14 2016 that session and Governor Wolf signed into law Section 1329 of the Code establishing  
15 the legislative guidelines facilitating the acquisition of municipal and regional water and  
16 wastewater systems by private investor-owned utilities and other entities which are rate-  
17 regulated by the Pennsylvania Public Utility Commission (“PUC”). This legislation was  
18 intended to facilitate the acquisition of water and wastewater system in order to facilitate  
19 capital improvements to the water and or wastewater properties.

20 **QUALIFICATION AS UTILITY VALUATION EXPERT**

21 **Q. IS AUS CONSULTANTS ON THE COMMISSION’S REGISTRY OF UTILITY**  
22 **VALUATION EXPERTS?**

1 A. Yes. AUS Consultants is a Utility Valuation Expert (“UVE”) in the Commonwealth of  
2 Pennsylvania approved by the PUC (Utility Code 9919181).

3

4 **Q. PLEASE DESCRIBE THE PROCESS BY WHICH AUS CONSULTANTS WAS**  
5 **PLACED ON THE COMMISSION’S REGISTRY OF UTILITY VALUATION**  
6 **EXPERTS.**

7 A. After passage of Section 1329 of the Code, the Commission established an application  
8 process by which the Commission would approve and designate firms to be placed on the  
9 Commission’s “Registry of Utility Valuation Experts.” AUS Consultants submitted its  
10 application and the required proof of experience in July of 2016 and received confirmation  
11 and approval from the Commission of AUS Consultants’ placement on the Commission’s  
12 UVE Registry in August 2016. AUS Consultants applied with the Commission to renew  
13 its registrations as a UVE with the Commission for 2018 and received notification on  
14 February 12, 2018, as a qualified UVE by the Commission.

15

16 **Q. PLEASE EXPLAIN YOUR QUALIFICATIONS TO ACT AS A UVE IN THIS**  
17 **PROCEEDING.**

18 A. I have been involved in utility consulting in the valuation and depreciation area for my  
19 entire 46-year career. I have been a Registered Professional Engineer since 1978, an  
20 Accredited Senior Appraiser (“ASA”) since 1982 in the American Society of Appraiser in  
21 their Technical Valuation specialty which includes utilities such as water and wastewater  
22 utilities, and I am a Certified Depreciation Professional (“CDP”) since 2000 in the Society  
23 of Depreciation Professionals.

1 I have prepared fair market value appraisal for numerous clients during my career  
2 as well as numerous depreciations studies in support of utilities depreciation rates for rate  
3 making. In my capacity as Principal and Director for AUS, I have performed numerous  
4 appraisals of water, wastewater, gas, electric and telecommunication companies and their  
5 property. Similarly, in the area of depreciation studies, I have performed depreciations  
6 studies for water, gas, electric and telecommunications companies. Prior to my  
7 employment with AUS, I worked for 14 years in the Regulated Industries Group at  
8 American Appraisal Associates, a national appraisal firm, with emphasis on performing  
9 public utility appraisals and depreciation studies.

10  
11 **Q. HAVE YOU EVER HAD YOUR PROFESSIONAL CREDENTIALS REVOKED**  
12 **OR SUSPENDED?**

13 A. I am currently in the process of recertifying my ASA status in the American Society of  
14 Appraisers. My status as a Wisconsin PE and a CDP in the Society of Depreciation  
15 Professionals are current.

16  
17 **Q. DO YOU HAVE SPECIFIC EXPERIENCE WITH THE VALUATION AND**  
18 **APPRAISAL OF UTILITY ASSETS?**

19 A. Yes. I annually prepare several fair market valuation appraisals for clients for various  
20 purposes. In recent years, AUS Consultants has been quite active in the consulting in the  
21 water and wastewater industry, particularly in Pennsylvania. This consulting included  
22 original cost studies, depreciated original cost studies, and fair market value appraisals for  
23 municipalities and investor-owned utilities. During my career, I have participated in or

1 have been responsible for more than 208 valuation studies and 128 depreciation studies.  
2 These appraisals and depreciation studies are identified in my curriculum vitae attached  
3 hereto as **JCW-1**. Over the course of my career, I have submitted depreciation study results  
4 to the public service commission's in the states of Alabama, Alaska, Arkansas, Colorado,  
5 Florida, Georgia, Illinois, Indiana, Idaho, Iowa, Kentucky, Michigan, Minnesota,  
6 Mississippi, Missouri, Montana, Nebraska, North Carolina, Ohio, Oregon, Pennsylvania,  
7 Washington, and Wisconsin. I also have submitted depreciation study results to the Federal  
8 Communications Commission; the Canadian Radio, Television, and Telephone  
9 Commission ("CRTTC"); and the State of New York's Board of Equalization and  
10 Assessment.

11  
12 **Q. HAVE YOU OR AUS CONSULTANTS OR ANY OF ITS STAFF DERIVED ANY**  
13 **MATERIAL FINANCIAL BENEFIT FROM THE SALE OF THE SADBURY**  
14 **ASSETS OTHER THAN FEES FOR YOUR SERVICES RENDERED?**

15 A. No.

16  
17 **Q. ARE YOU OR AUS CONSULTANTS OR ANY OF ITS STAFF AN IMMEDIATE**  
18 **FAMILY MEMBER OF A DIRECTOR, OFFICER, OR EMPLOYEE OF EITHER**  
19 **PAWC OR SADBURY?**

20 A. No.

21  
22 **Q. IS AUS CONSULTANTS IN COMPLIANCE WITH APPLICABLE**  
23 **PENNSYLVANIA LAWS?**

1 A. Yes.

2

3 **Q. DOES AUS CONSULTANTS HAVE THE FINANCIAL AND TECHNICAL**  
4 **FITNESS, INCLUDING PROFESSIONAL LICENSES AND TECHNICAL**  
5 **CERTIFICATIONS, TO PERFORM A FAIR MARKET VALUATION OF THE**  
6 **ASSETS OF SADBURY?**

7 A. Yes. As described earlier I am a accredited Senior Appraiser (ASA designation) in the  
8 American Society of Appraisers, a registered Professional Engineer in the State of  
9 Wisconsin (WI license E-15552) and a Certified Depreciation Professional (CDP  
10 designation) in the Society of Depreciation Professionals all societies and state licensing  
11 agencies involved in various aspects of the valuation and depreciation profession. These  
12 designations coupled with my 45 years of appraisal and depreciation experience  
13 demonstrate my and AUS Consultants' financial and technical capabilities to perform  
14 utility appraisals.

15

16 **Q. ARE YOU AWARE OF ANY FACT, INCLUDING BUT NOT LIMITED TO ANY**  
17 **POTENTIAL CONFLICT OF INTEREST, THAT WOULD CAST DOUBT UPON**  
18 **YOUR ABILITY TO PROVIDE A THOROUGH, OBJECTIVE, UNBIASED, AND**  
19 **FAIR VALUATION IN THIS PROCEEDING?**

20 A. No.

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23

1 **FEES PAID FOR UTILITY VALUATION EXPERT SERVICES**

2 **Q. HOW IS AUS CONSULTANTS BEING COMPENSATED FOR ITS SERVICES IN**  
3 **THIS MATTER?**

4 A. AUS Consultants is being compensated on a fee-and-expenses basis for the initial appraisal  
5 and a per-diem rate plus fee-and-expenses basis for activities beyond the issuance of a final  
6 appraisal report. True, correct, and complete copies of AUS Consultants' invoices to  
7 PAWC for this matter, as of the date of Application filing, are attached to PAWC's  
8 Application as **Appendix A-8** and I incorporate those invoices in my direct testimony as if  
9 set forth in their entirety.

10  
11 **Q. WHAT IS THE ESTIMATED TOTAL COMPENSATION THAT AUS**  
12 **CONSULTANTS WILL RECEIVE FOR ITS SERVICES IN THIS MATTER?**

13 A. The fee for our initial appraisal is \$32,000 plus expenses and our per-diem rate for activities  
14 subsequent to the initial appraisal range from \$150 to \$250 per hour depending on the  
15 consultant involved. My per-diem rate is \$250 per hour. Expenses include travel, lodging,  
16 and report production and shipping expenses, all of which are billed at cost.

17  
18 **Q. PLEASE DESCRIBE THE PROCESS BY WHICH THIS COMPENSATION WAS**  
19 **NEGOTIATED?**

20 A. AUS Consultants met with PAWC personnel to describe the corporate appraisal and  
21 depreciation capabilities of AUS Consultants and for AUS Consultants to understand  
22 PAWC's requested scope of work. After that meeting, AUS Consultants provided a fee  
23 estimate for the appraisal of the System including a schedule of per-diem rates for activities

1 subsequent to the appraisal report. Next, the parties drafted a contract, including a non-  
2 disclosure agreement, which were both signed. The contract and non-disclosure agreement  
3 form the basis of the relationship between AUS Consultants and PAWC. True, correct,  
4 and complete copies of the contract and non-disclosure agreement are attached as  
5 **Appendix A-8** of PAWC's Application and I incorporate them in my direct testimony as  
6 if set forth in their entirety.

7  
8 **Q. ARE THESE FEES CONSISTENT WITH COMPENSATION RECEIVED FOR**  
9 **SIMILAR SERVICES PROVIDED TO OTHER CLIENTS?**

10 A. Yes.

11  
12 **FAIR MARKET VALUATION OF SADBURY TOWNSHIP'S ASSETS**

13 **Q. PLEASE IDENTIFY APPENDIX A-5 TO THE APPLICATION IN THIS**  
14 **PROCEEDING?**

15 A. **Appendix A-5** of PAWC's Application contains my full appraisal report dated November  
16 20, 2017, which I prepared for PAWC to be filed with its Application. A copy of the report  
17 is also included as Schedule 2.2 of the APA, **Appendix A-24-a**.

18  
19 **Q. HOW DO YOU RECOGNIZE IT?**

20 A. I personally prepared and supervised AUS Consultants personnel in preparing the report,  
21 and recognize it as AUS Consultants' work product.

1 **Q. IS THE AUS REPORT CONTAINED IN APPENDIX A-4 A TRUE, COMPLETE,**  
2 **AND ACCURATE COPY OF YOUR VALUATION REPORT?**

3 A. Yes, and I incorporate it into my direct testimony as if set forth in its entirety.

4

5 **Q. PLEASE DESCRIBE THE PROCESS BY WHICH YOU PREPARED THE**  
6 **VALUATION REPORT.**

7 A. In accordance with Section 1329 of the Code, PAWC and Sadsbury engaged Herbert E.  
8 MacCombie, Jr. PE, Consulting Engineers & surveyors, Inc. (HEM) as the licensed  
9 engineer to conduct an assessment of the tangible assets of Sadsbury Township's  
10 wastewater system, included with my report at **Appendix A-5** and Schedule 1.1 of the  
11 APA. PAWC engaged AUS to prepare the fair market valuation report for the System.  
12 PAWC provided financial statements from Sadsbury regarding the System and a copy of  
13 the Engineering Assessment development by HRM as required by Section 1329(a)(4).  
14 AUS Consultants received financial and system data information relative to the System.  
15 After reviewing that information, AUS Consultants inspected the System on September 24,  
16 2017, with Sadsbury personnel conducting the on-site tour. After those activities and data  
17 gathering, we developed the appraisal.

18 The appraisal contains a letter of transmittal; a table of contents detailing all the  
19 sections of the report and work papers; certification describing that the appraisal was  
20 prepared in conjunction with the Uniform Standards of Professional Appraisal Practices  
21 ("USPAP"); a narrative report containing an Executive Summary; a Purpose and Scope of  
22 the Work; a description of the water and wastewater industry – nationally and in the state  
23 of Pennsylvania; a description of the System including the assets, property, plant, and

1 equipment; the appraisal procedures and supporting data and analysis; HEM Engineer's  
2 Engineer Assessment; and miscellaneous public documents describing Section 1329 of the  
3 Code.

4 The intent of the valuation report is to provide the appraisal results, as well as the  
5 entire appraisal work file, in sufficient detail to satisfy the parties' and Commission's  
6 review requirements of Section 1329 and the Commission's Final Implementation Order,  
7 *In re: Implementation of Section 1329 of the Public Utility Code*, Docket No. M-2016-  
8 2543193 (Order Entered October 27, 2016). In addition to a copy of my appraisal report,  
9 I have provided supporting work papers for the appraisal report in **Appendix A-4** to  
10 PAWC's Application. The relevant work papers have also been submitted to the  
11 Commission and provided to the public advocates in live electronic format.

12  
13 **Q. IS THERE ANYTHING THAT YOU WOULD CHANGE IN THE VALUATION**  
14 **REPORT SINCE ITS PREPARATION?**

15 A. No.

16  
17 **Q. WAS THE FAIR MARKET VALUATION OF THE SADBURY ASSETS**  
18 **DETERMINED IN COMPLIANCE WITH THE UNIFORM STANDARDS OF**  
19 **PROFESSIONAL APPRAISAL PRACTICE ("USPAP")?**

20 A. Yes. Included in my appraisal report is a document entitled "Compliance with Uniform  
21 Standard of Professional Appraisal Practice (USPAP) 2016-2017" which described our  
22 reports compliance with USPAP.

1 **Q. DID YOU EMPLOY THE COST, MARKET AND INCOME APPROACHES IN**  
2 **PREPARING YOUR VALUATION?**

3 A. Yes. We developed our appraisal utilizing the cost, income, and market approaches as  
4 required by USPAP and Section 1329 of the Code. These approaches are summarized  
5 below.

6 *Cost Approach.* The cost approach has as its basis the principle of substitution in  
7 that the maximum value of the property is the cost to construct a replacement property of  
8 similar capacity, quality, and condition. In this appraisal, we utilized the trend cost method  
9 to determine the cost new, evaluated the condition of the property using age-life  
10 depreciation, and evaluated external obsolescence based on the income and market  
11 approaches.

12 *Income Approach.* Under the income approach, the valuation basis is the value of  
13 an income producing property as defined by its economic returns. There are several income  
14 approach valuation methods, primarily the direct capitalization (of income from operation)  
15 and the discounted cash flow methods. In the direct capitalization method, the economic  
16 returns of the property, as defined by its operating income, are directly capitalized into  
17 value by dividing a single estimate of the near-term income with a capitalization rate. In  
18 the discounted cash flow, the result of future periods operations are determined with each  
19 periods' cash flow being forecast and then discounted to appraisal date values using a  
20 discount rate. The two procedures are similar in nature in that they both estimate the value  
21 of the property based on capitalizing or discounting future economic returns of the  
22 property's operation. The capitalization of income approach attempts to incorporate all  
23 future periods' changes in revenues, operating expenses, and working capital into a single

1 operating income estimate while the discounted cash flow method allows the appraiser to  
2 forecast each future periods' operating results considering changes to customer growth,  
3 changing revenues and operating expenses in the analysis. Considering that Sadsbury's  
4 operations will be undergoing a change from municipal operation to an investor-owned,  
5 rate-regulated operation, the flexibility of the discounted cash flow to adjust the operating  
6 inputs and criteria make it superior to the capitalized income approach.

7 *Market Approach.* The market or comparable sales approach to value looks to  
8 market sales of comparable properties in order to arrive at value. In this appraisal, the  
9 market approach was addressed from a comparable sales approach (Pennsylvania  
10 wastewater systems) and market value to book value ratios based on investor-owned water  
11 utilities reported in Value Line Investment Survey.

12  
13 **Q. DID YOU RELY UPON A LICENSED ENGINEER'S ASSESSMENT OF THE**  
14 **TANGIBLE ASSETS OF MACM IN PERFORMING YOUR VALUATION?**

15 A. Yes. PAWC and Sadsbury Township engaged HEM Engineers as the licensed engineer to  
16 conduct an assessment of the tangible assets of Sadsbury. PAWC provided a copy of the  
17 Engineering Assessment development by HEM Engineers as required by Section  
18 1329(a)(4). A copy of the Engineering Assessment is attached to the appraisal.

19  
20 **Q. DID THE LICENSED ENGINEER'S ASSESSMENT INCLUDE AN INVENTORY**  
21 **OF THE USED AND USEFUL UTILITY PLANT ASSETS TO BE TRANSFERRED**  
22 **COMPILED BY YEAR AND ACCOUNT?**

23 A. Yes.

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**Q. DID THE LICENSED ENGINEER’S ASSESSMENT IDENTIFY SEPARATELY ANY UTILITY PLANT THAT IS BEING HELD FOR FUTURE USE?**

A. Yes.

**Q. DID THE LICENSED ENGINEER’S ASSESSMENT LIST ALL NON-DEPRECIABLE PROPERTY SUCH AS LAND AND RIGHTS-OF-WAY?**

A. Yes.

**Q. TO THE BEST OF YOUR KNOWLEDGE, WAS THE LICENSED ENGINEER’S INVENTORY DEVELOPED FROM AVAILABLE RECORDS, MAPS, WORK ORDERS, DEBT ISSUE CLOSING DOCUMENTS FUNDING CONSTRUCTION PROJECTS, AND OTHER SOURCES TO ENSURE AN ACCURATE LISTING OF UTILITY PLANT INVENTORY BY UTILITY ACCOUNT?**

A. Yes.

**Q. DO YOU HAVE ANY REASON TO DOUBT THE ACCURACY OF THE LICENSED ENGINEER’S INVENTORY OF THE ASSETS?**

A. No.

**Q. DID YOU INCORPORATE THE LICENSED ENGINEER’S ASSESSMENT INTO YOUR COST APPROACH IN DEVELOPING YOUR VALUATION?**

A. Yes.

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**Q. DID YOU HAVE TO EXERCISE PROFESSIONAL DISCRETION IN DEVELOPING ANY ASPECT OF YOUR VALUATION?**

A. Yes. In the Cost Approach, the selection of costing factors such as the cost trends to be utilized in developing the cost new and the depreciation factors such as service lives and survival and retirement patterns were inputs to the depreciation portion of the cost approach; all of these inputs were based on my expertise in appraising similar utility property and an understanding of the significance of these inputs. In the Income Approach, the analysis of historical financial and how that analysis is used in forecasting future expectation of the property's return(s), along with the selection of cost of capital inputs in developing the present value of future returns which quantifies the income approach conclusion, are significant inputs which this appraiser exercises appraisal discretion. In the Market Approach, the selection of comparable sales required appraisal discretion. Finally, the consideration of each of the individual value indicators, cost, income, and market, in developing the final appraisal conclusion required appraisal discretion.

**Q. WHAT, IF ANY, FACTORS DID YOU TAKE INTO CONSIDERATION WHEN HAVING TO MAKE DISCRETIONARY DECISIONS?**

A. I considered the interrelation of the inputs and how those inputs relate to the value of wastewater property plant and equipment, its operations and resultant value.

**CONCLUSION**

**Q. WHAT IS YOUR CONCLUSION REGARDING THE FAIR MARKET VALUE OF THE SADBURY TOWNSHIP ASSETS TO BE PURCHASED BY PAWC?**

A. The fair market value of the System to be purchased by PAWC is \$8,910,000, as of January 1, 2017. As described above, we utilized the cost, income, and market approaches to utility valuation for purposes of appraising the System. The results of those appraisal analyses and our conclusions as of January 1, 2017 are summarized in the following table:

<b>Pennsylvania American Water Company</b>			
<b>Sadsbury Township Wastewater Utility</b>			
<b>Wastewater</b>			
<b>Potential Purchaser: Investor-Owned Utility</b>			
<b>As of January 1, 2017</b>			
<b>Fair Market Value Appraisal</b>			
<b>Revised: 6-21-2017</b>			
	<b>Investor-owned Utility</b>	<b>Weight</b>	<b>Wtd Value Indicator</b>
<b>Cost Approach</b>			
Depreciated Replacement Cost New	\$ 8,517,587	50%	4,258,794
Depreciated Original Cost	6,128,876		
Net Book Financials	6,916,575		
<b>Income Approach</b>			
Investor-Owned Utility	8,783,602	40%	3,513,441
<b>Market Approach</b>			
Investor-Owned Utility	11,374,184	10%	1,137,418
<b>Appraisal Conclusion</b>			<b>8,909,653</b>
<b>Appraisal Conclusion</b>			<b>8,910,000</b>

The fair market value determination of the tangible assets was based primarily on the cost approach with the income and market approaches being supportive of the cost approach

1 conclusion. The System's original cost was determined to be \$6,916,575 and its  
2 reproduction cost new as of January 1, 2017 is \$10,652,193. Because the System has aged  
3 and experienced depreciation, physical depreciation, and possibly function and external  
4 obsolescence, the condition of the property was determined using age life depreciation.  
5 The cost new less depreciation under this methodology resulted in our preliminary cost  
6 approach conclusion of \$8,517,587. AUS Consultants utilized the income and market  
7 approaches to evaluate for external obsolescence. Under that analysis, the income  
8 \$8,783,602 and market \$11,374,184 conclusions indicate that no external obsolescence  
9 exists in the System at the preliminary cost approach conclusion of \$8,517,587. The cost  
10 approach therefore yields a fair market value of the System tangible assets as \$8,517,587.  
11 Based on all the factors that AUS Consultants evaluated in accordance with valuation  
12 standards and statutory requirements, the cost approach is the most reliable and useful  
13 indicator of the value of the Sadsbury assets, property, plant, and equipment of Sadsbury  
14 Township's wastewater system to be acquired by PAWC.

15  
16 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

17 A. Yes. However, I reserve the right to supplement my testimony as additional issues and  
18 facts arise during the course of the proceeding.

**EXHIBIT JCW-1 (CV)**

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-six (2018-1972) 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 Masters 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. 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 regards 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 and the New York City Tax Commission.

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

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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 &amp; Capital Recovery Activities Client List

<u>Company</u>	<u>Property</u>	<u>Study Year</u>	<u>Year Performed</u>	<u>Activity</u>
<b>2018</b>				
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
Pennsylvania American Water Company	Sadsbury Wastewater	2017	2018	Fair Market Value Appraisal
Pennsylvania American Water Company Appraisal	Kane Wastewater	2017	2018	Fair Market Value
<b>2017</b>				
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 Norritian 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
<b>2016</b>				
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
<b>2015</b>				
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

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## Appraisal &amp; Capital Recovery Activities Client List

<u>Company</u>	<u>Property</u>	<u>Study Year</u>	<u>Year Performed</u>	<u>Activity</u>
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
<b>2014</b>				
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
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
<b>2013</b>				
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,	2012	2013	Ad Valorem Tax Appraisal
	California			
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
<b>2012</b>				
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,	2011	2012	Ad Valorem Tax Appraisal
	California			
Sprint Nextel Corporation	North America	2011	2012	Ad Valorem Tax Appraisal

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## Appraisal &amp; Capital Recovery Activities Client List

<u>Company</u>	<u>Property</u>	<u>Study Year</u>	<u>Year Performed</u>	<u>Activity</u>
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
<b>2011</b>				
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
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 Depreciatio
				Study
<b>2010</b>				
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
<b>2009</b>				
AT&T Communications	North America	2008	2009	Ad Valorem Tax Appraisal
AT&T Communications	California	2008	2009	Ad Valorem Tax Appraisal

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## Appraisal &amp; Capital Recovery Activities Client List

<u>Company</u>	<u>Property</u>	<u>Study Year</u>	<u>Year Performed</u>	<u>Activity</u>
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
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
<b>2008</b>				
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
<b>2007</b>				
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

## Appraisal &amp; Capital Recovery Activities Client List

<u>Company</u>	<u>Property</u>	<u>Study Year</u>	<u>Year Performed</u>	<u>Activity</u>
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
Qwest Communications Corporation	North America	2006	2007	Ad Valorem Tax Appraisal
	California			
Level 3 Communications	North America,	2006	2007	Ad Valorem Tax Appraisal
	California, Michigan, & Arizona			
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	2006	2007	Depreciation Studies
	ACS of Anchorage			
	ACS of Fairbanks			
	ACS of the Northland			
	ACS Holdings			
Intermountain Gas Company	Idaho	2006	2007	Depreciation Study
<b>2006</b>				
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
<b>2005</b>				
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

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## Appraisal &amp; Capital Recovery Activities Client List

<u>Company</u>	<u>Property</u>	<u>Study Year</u>	<u>Year Performed</u>	<u>Activity</u>
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
<b>2004</b>				
Sprint Florida, Inc.	Florida	2003	2004	Ad Valorem Tax Appraisal
Verizon Communications	California	2003	2004	Ad Valorem Tax Appraisal
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
<b>2003</b>				
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
<b>2002</b>				
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
<b>2001</b>				
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

## Appraisal &amp; Capital Recovery Activities Client List

<u>Company</u>	<u>Property</u>	<u>Study Year</u>	<u>Year Performed</u>	<u>Activity</u>
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	2000	2001	Depreciation Study
	ACS of Anchorage			
	ACS of Fairbanks			
	ACS of the Northland			
	ACS Holdings			
<b>2000</b>				
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
<b>1999</b>				
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
<b>1998</b>				
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
<b>1997</b>				
Sprint Corporation	Centel - Nevada	1997	1997	Unbundling/ Inter-connection Depreciation Study
Pacific Telecom, Inc.	Telephone Utilities of Oregon	1996	1997	Depreciation Study

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## Appraisal &amp; Capital Recovery Activities Client List

<u>Company</u>	<u>Property</u>	<u>Study Year</u>	<u>Year Performed</u>	<u>Activity</u>
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
Verizon Communications	Florida	1996	1997	Ad Valorem Tax Appraisal
Pacific Telecom, Inc.	Eagle Telephone (Colorado)	1996	1997	Depreciation Study
<b>1996</b>				
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

## Appraisal &amp; Capital Recovery Activities Client List

<u>Company</u>	<u>Property</u>	<u>Study Year</u>	<u>Year Performed</u>	<u>Activity</u>
	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
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

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## Appraisal &amp; Capital Recovery Activities Client List

<u>Company</u>	<u>Property</u>	<u>Year</u>	<u>Study Performed</u>	<u>Year</u>	<u>Activity</u>
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
	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 Company	United of Ohio Telephone Company	1988 1988	1989 1989		ELG Support 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

## Appraisal &amp; Capital Recovery Activities Client List

<u>Company</u>	<u>Property</u>	<u>Year</u>	<u>Study Performed</u>	<u>Year</u>	<u>Activity</u>
	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
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

## Appraisal &amp; Capital Recovery Activities Client List

<u>Company</u>	<u>Property</u>	<u>Study Year</u>	<u>Year Performed</u>	<u>Activity</u>
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
	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 25<sup>th</sup> 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 20<sup>th</sup> 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  
Charleston, South Carolina **September 23-25, 1991**
- 2014 Society of Depreciation Professionals  
Annual Training  
Charleston, South Carolina **September 23-25, 1991**
- 2013 Society of Depreciation Professionals  
Annual Training  
Charleston, South Carolina **September 23-25, 1991**
- 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