(1) @pa_oca
(f)/pennoca

FAX (717) 783-7152

November 18, 2020
Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Re: Pennsylvania Public Utility Commission | V. |
| :---: |
| Pennsylvania-American Water Company |
| Docket Nos. R-2020-3019369 (Water) |
| C-2020-3019751 |
| R-2020-3019371 (Wastewater) |
| C-2020-3019754 |

Dear Secretary Chiavetta:
On November 10, 2020, the Office of Consumer Advocate filed its Main Brief in the above-referenced proceedings. On November 16, 2020, the Presiding Officer directed the OCA to submit an abridged brief that is fewer than 75 pages or, in the alternative, that he would restrict his consideration to the first 75 pages of the original brief. Because the Presiding Officer also required the parties to follow a common briefing outline, the OCA was not able to reorganize the brief for purposes of presenting the most important issues in the first 75 pages. The situation is further complicated by timing - the parties' Reply Briefs are due tomorrow and, to this point, the parties have developed their responsive arguments and citations utilizing the brief the OCA submitted on November 10, 2020.

The OCA requested a waiver of the 75 pages identified by the ALJ, based on the unique circumstances of the case. The OCA noted that there are eight separate revenue requirements making up PAWC's requested water and wastewater increases, two projected rate years, and multiple revenue impact scenarios presented by the Company and the OCA resulting from and compounded by several matters of first impression - the first litigated multi-year rate plan, proposed subsidies related to Section 1329 acquisitions and the effect of the pandemic on the Company's pre-pandemic projections. The OCA also informed the ALJ that we do not object to the Company's request for permission to submit a Reply Brief longer than 40 pages. The OCA anticipates that it will be able to make its responsive case in 40 pages - largely because we fully developed our positions in our original Main Brief. On November 17, 2020, the ALJ determined that the OCA could file a Main Brief that does not exceed 120 pages, excluding Appendices, by November 18, 2020.

Consistent with the foregoing, for electronic filing please find the Office of Consumer Advocate's Abridged Main Brief in the above-referenced proceedings. Please note that the CONFIDENTIAL version of OCA's Abridged Main Brief will only be sent to the parties that have executed the non-disclosure agreement as indicated on the Certificate of Service.

Copies have been served per the attached Certificate of Service.
Respectfully submitted,
/s/ Christine Maloni Hoover
Christine Maloni Hoover
Senior Assistant Consumer Advocate
PA Attorney I.D. \# 50026
E-Mail: CHoover@paoca.org

Enclosures:
cc: The Honorable Conrad A. Johnson (email only)
Office of Special Assistants (email only: ra-OSA@pa.gov)
Certificate of Service
*299114

## CERTIFICATE OF SERVICE

| Re: Pennsylvania Public Utility Commission | $:$ | Docket Nos. R-2020-3019369 (Water) |
| :---: | :--- | :--- |
| v. | $:$ | C-2020-3019751 (Wastewater) |
| Pennsylvania-American Water Company | $:$ | R-2020-3019371 (W) |
|  | $:$ | C-2020-3019754 |

I hereby certify that I have this day served a true copy of the following documents, the Office of Consumer Advocate's Abridged Main Brief, upon parties of record in this proceeding in accordance with the requirements of 52 Pa . Code $\S 1.54$ (relating to service by a participant), in the manner and upon the persons listed below:

Dated this $18^{\text {th }}$ day of November 2020.

## *Receiving the CONFIDENTIAL Version of OCA's ABRIDGED Main Brief

## SERVICE BY E-MAIL ONLY

Carrie B. Wright, Esquire* Bureau of Investigation \& Enforcement
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, $2^{\text {nd }}$ Floor
Harrisburg, PA 17120
Anthony C. DeCusatis, Esquire*
Kenneth M. Kulak, Esquire*
Brooke. E. McGlinn, Esquire*
Mark A. Lazaroff, Esquire*
Morgan, Lewis \& Bockius LLP
1701 Market Street
Philadelphia, PA 19103-2921

Susan Simms Marsh, Esquire*
Elizabeth Rose Triscari, Esquire*
Pennsylvania-American Water Company
852 Wesley Drive
Mechanicsburg, PA 17055
Michael L. Kurtz, Esquire
Kurt J. Boehm, Esquire
Jody Kyler Cohn, Esquire
Boehm, Kurtz, \& Lowry
36 East Seventh Street, Suite 1510
Cincinnati, OH 45202
Joseph L. Vullo, Esquire
Commission on Economic Opportunity
1460 Wyoming Avenue
Forty Fort, PA 18704

Erin K. Fure, Esquire*
Office of Small Business Advocate
555 Walnut Street
$1^{\text {st }}$ Floor, Forum Place
Harrisburg, PA 17101-1923

Adeolu A. Bakare, Esquire*
Jo-Anne S. Thompson, Esquire*
McNees Wallace \& Nurick LLC
100 Pine Street
P.O. Box 1166

Harrisburg, PA 17108-1166

David P. Zambito, Esquire*
Cozen O’Connor
17 North Second Street
Suite 1410
Harrisburg, PA 17101
Elizabeth R. Marx, Esquire*
Ria M. Pereira, Esquire*
John W. Sweet, Esquire*
Pennsylvania Utility Law Project
118 Locust Street
Harrisburg, PA 17101
Jan K. Vroman
623 Eastman Street
West Mifflin, PA 15122
jan.vroman@yahoo.com

Jessica and Jeffrey LaBarge
123 Fairmount Avenue
Reading, PA 19606
jessi@russolawllc.com
Brian Kalcic*
Excel Consulting
225 S. Meramec Avenue
Suite 720 T
St. Louis, MO 63105
/s/ Christine Maloni Hoover
Christine Maloni Hoover
Senior Assistant Consumer Advocate
PA Attorney I.D. \# 50026
E-Mail: CHoover@paoca.org
Erin L. Gannon
Senior Assistant Consumer Advocate
PA Attorney I.D. \# 83487
E-Mail: EGannon@paoca.org
Lauren E. Guerra
Assistant Consumer Advocate
PA Attorney I.D. \# 323192
E-Mail: LGuerra@paoca.org

Charles and Jennifer Spryn
899 Bullcreek Road
Butler, PA 16002
sprynhouse@live.com

Harrison W. Breitman
Assistant Consumer Advocate
PA Attorney I.D. \# 320580
E-Mail: HBreitman@paoca.org
Christy M. Appleby
Assistant Consumer Advocate
PA Attorney I.D. \# 85824
E-Mail: CAppleby@paoca.org
Counsel for:
Office of Consumer Advocate
555 Walnut Street
$5^{\text {th }}$ Floor, Forum Place
Harrisburg, PA 17101-1923
Phone: (717) 783-5048
Fax: (717) 783-7152
Dated: November 18, 2020
*299657

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

| Pennsylvania Public Utility Commission | $:$ | Docket Nos. R-2020-3019369 (Water) |
| :---: | :--- | :---: |
| v. | $:$ | C-2020-3019751 |
| Pennsylvania-American Water Company | $:$ | R-2020-3019371 (Wastewater) |
|  | $:$ | C-2020-3019754 |

## ABRIDGED MAIN BRIEF <br> OF THE <br> OFFICE OF CONSUMER ADVOCATE

Christine Maloni Hoover
Senior Assistant Consumer Advocate
PA Attorney I.D. \# 50026
E-Mail: CHoover@paoca.org
Erin L. Gannon
Senior Assistant Consumer Advocate
PA Attorney I.D. \# 83487
E-Mail: EGannon@paoca.org

Office of Consumer Advocate
555 Walnut Street
$5^{\text {th }}$ Floor, Forum Place
Harrisburg, PA 17101-1923
Phone: (717) 783-5048
Fax: (717) 783-7152

Dated: November 18, 2020

Christy M. Appleby
Assistant Consumer Advocate
PA Attorney I.D. \# 85824
E-Mail: CAppleby@paoca.org
Harrison W. Breitman
Assistant Consumer Advocate
PA Attorney I.D. \# 320580
E-Mail: HBreitman@paoca.org
Lauren E. Guerra
Assistant Consumer Advocate
PA Attorney I.D. \# 323192
E-Mail: LGuerra@paoca.org

Counsel for
Tanya J. McCloskey
Acting Consumer Advocate

## TABLE OF CONTENTS

I. INTRODUCTION AND OVERVIEW ..... 1
A. Description of Company ..... 1
B. Procedural History ..... 1
C. Overview of PAWC's Filing ..... 1
D. Overview of the Non-Unanimous Settlement ..... 1
E. Burden of Proof. ..... 1
II. SUMMARY OF ARGUMENT ..... 3
III. OVERALL POSITION ON RATE INCREASE ..... 4
A. Introduction ..... 4
B. The Economic Hardships of PAWC's Ratepayers During and After This Pandemic Should
Play a Prevalent Role in the Commission's Decision on Increasing Rates ..... 6
C. Rejecting PAWC's Rate Increase Requests During an Unprecedented and Economically Devastating Pandemic Would Result in Just and Reasonable Rates ..... 10

1. PAWC Does Not Need to Increase Rates Right Now ..... 11
2. Case Law From Similar Economic Circumstances Provides Precedent For the Commission to Deny A Rate Increase Due to Extreme Customer Hardships ..... 12
3. The Principles of Public Utility Regulation Lend Support to the OCA's Claim That Increasing Rates During This Financially Challenging Time For Ratepayers Would Not Lead to Just and Reasonable Rates ..... 15
4. The Projections in PAWC's Early Pandemic Filing Cannot Be Given Any Credence in Determining Future Rates in a Vastly Different Economic Environment ..... 18
D. Conclusion ..... 20
IV. PAWC'S PROPOSED MULTI-YEAR RATE PLAN ..... 20
V. RATE BASE ..... 23
A. Utility Plant in Service ..... 23
B. Average Versus Year-End Rate Base ..... 23
C. Rate Base Adjustment Relating to Amortization of EADIT ..... 25
D. Cash Working Capita. ..... 26
VI. REVENUES ..... 26
VII. OPERATING AND MAINTENANCE EXPENSES ..... 27
A. Payroll Costs - Prorating Wage Increases ..... 27
B. Performance Based Compensation (PAWC and Service Co.) ..... 27
5. Annual Performance Plan ..... 27
6. Stock-Based Compensation Expense/LTPP ..... 29
C. Capitalization Rate. ..... 30
D. Annual Depreciation ..... 31
VIII. TAXES ..... 31
A. Taxes Other Than Income Taxes ..... 31
B. Income Taxes - Excess ADIT ..... 31
IX. RATE OF RETURN ..... 35
A. Capital Structure ..... 36
B. Cost of Long-Term Debt ..... 37
C. Common Equity Cost Rate ..... 37
7. The Legal Framework for Determining What Rate of Return is Fair to PAWC Consumers and the Company's Investors ..... 38
8. Cost of Equity Calculation ..... 41
a. Proxy Group ..... 41
b. Application of Constant Growth DCF Model ..... 42
c. Application of Non-Constant Growth DCF Model ..... 43
d. CAPM ..... 45
i. Risk Free Rates. ..... 45
ii. Betas ..... 46
iii. Stock Options ..... 47
iv. Equity Risk Premium ..... 47
9. Analysis of PAWC's Cost of Equity ..... 47
10. PAWC's Proposed Multi-Year Rate Plan ..... 50
11. Fair Market Value Legislation's Impact on Cost of Equity: Section 1329 Reduces PAWC's Cost of Equity ..... 51
D. Business Risks and Management Performance ..... 52
E. Other Parties' Equity Cost Rate Recommendations and Principal Areas of Dispute ..... 53
X. REGIONALIZATION AND CONSOLIDATION SURCHARGE ..... 53
A. Introduction ..... 53
B. PAWC's Surcharge Imposes Additional Burdens on Existing Customers Solely Due to Increased Costs Related to Section 1329 Acquisitions. ..... 53
C. PAWC's Proposed Surcharge Is Contrary to Section 1329 and Sound Regulatory Policy. ..... 54
12. Section 1329 ..... 54
13. PAWC Has Not Established That It Is Reasonable and Necessary to Have an Automatic Rate Adjustment For the 1329 "Revenue Deficiency" ..... 55
XI. PENSION/OPEB TRACKER ..... 59
XII. RATE STRUCTURE AND RATE DESIGN ..... 60
A. Introduction ..... 60
B. Cost of Service Study. ..... 60
C. Rate Design Proposals ..... 61
14. Residential Rate Design-Water ..... 61
a. PAWC Proposed Changes to the Structure of Residential Rates ..... 61
b. OCA Proposed Changes to the Structure of Residential Rates. ..... 62
15. Residential Rate Design - Wastewater ..... 63
a. Zone 3 (Scranton Area) Rates ..... 64
b. Zone 4 (Koppel) Rates ..... 65
c. Zone 6 (McKeesport) Rates ..... 65
16. OCA's Scale Back Proposal ..... 66
D. Allocation of Wastewater Revenue Requirement to Water Operations ..... 67
17. Introduction ..... 67
18. The Impact on Water Customers of PAWC's Proposed Subsidies ..... 68
19. A Framework for Determining Whether PAWC's Proposed Subsidies Are in the Public Interest ..... 71
20. Section 1311(c) Must Be Applied Cautiously When There Is a Significant Acquisition Adjustment ..... 74
E. Allocation of Steelton Revenue Requirement to Other Water Operations ..... 76
F. Separate Stormwater Rate ..... 76
21. The Differences between Stormwater and Sanitary Sewer Services ..... 77
22. The Recognized Way to Charge for Stormwater Service ..... 79
23. PAWC Collects Stormwater Costs From Water and Wastewater Customers ..... 80
XIII. RECOMMENDATIONS FOR ACTIONS RELATED TO THE COVID-19EMERGENCY83
XIV. LOW-INCOME CUSTOMER ASSISTANCE ..... 83
A. H2O Discount Program Design ..... 85
B. Hardship Fund ..... 88
C. Low-Income Customer Outreach, Data Collection and Reporting ..... 88
D. Comprehensive Universal Service Plan ..... 89
E. Winter Shut-Off Moratorium ..... 90
XV. SERVICE QUALITY AND CUSTOMER SERVICE ISSUES ..... 90
A. Customer Performance Service Standards ..... 91
24. Average Answer Time and Call Abandonment Rate. ..... 94
25. Response Time to Leaks and Outage Restoration, Keeping Customer Appointments ..... 94
26. Customer Billing Accuracy and Resolution of Inquiries ..... 96
B. Call Centers. ..... 96
27. Average Answer Time and Call Abandonment Rate ..... 96
28. Pennsylvania-Specific Audits of Third-Party Call Centers ..... 98
C. Customer Complaints. ..... 99
29. Reporting on PAWC's Analysis of Root Causes of Disputes and Complaints and Response to Identified Trends ..... 99
30. Complaint Logs ..... 100
D. Customer Satisfaction Surveys ..... 101
E. Training on Termination of Service ..... 102
F. Pressure Surveys and Pressures ..... 103
G. Main Extensions. ..... 103
31. Introduction ..... 103
32. PAWC Should Extend a Main to Serve Area 1 ..... 104
33. The Company Should Extend a Main to Serve Area 2 ..... 106
H. Sewage Backups ..... 108
I. Tenant Issues and Protections ..... 109
J. Language Access ..... 109
K. Protection for Victims of Domestic Violence ..... 109
XVI. TARIFF CHANGES ..... 109
A. Limitation of Liability ..... 109
B. Chapter 56 Customer Protections to Be Included in Tariff ..... 111
C. Align Tariff Language on Low-Income Customers with Actual Practice ..... 112
XVII. CONCLUSION ..... 113

| LIST OF APPENDICES TO OCA ABRIDGED MAIN BRIEF |  |
| :--- | :--- |
| Appendix A | A.1: OCA Rate Case Tables, Zero Increase <br> A.2: OCA Rate Case Tables, End of Rate Year 2021 <br> A.3: OCA Rate Case Tables, Average Rate Year 2022 |
| Appendix B | Proposed Findings of Fact - PUBLIC |
| Appendix C | Proposed Conclusions of Law and Ordering paragraphs |
| Appendix D | List of OCA-Sponsored Testimony and Exhibits admitted into the record |
| Appendix E | Summary of Public Input Hearing Testimony |
| Appendix F | Supplement to OCA Main Brief <br> I. Introduction and Overview <br> I.B. Procedural History |

## TABLE OF AUTHORITIES

Page(s)
Cases
Atlantic Refining Co. v. Public Serv. Comm'n, 360 U.S. 378 (1959) ..... 40
Behrend v. Bell,
242 Pa. Super. Ct. 47, 363 A.2d 1752 (1976) ..... 109, 110
Berner v. Pa. P.U.C.,382 Pa. 622, 116 A.2d 738 (1955) ............................................................................................. 2
Burleson v. Pa. P.U.C.,461 A.2d 1234 (Pa. 1983) .......................................................................................................... 2
Bluefield Water Works \& Improvement Co. v. Public Serv. Comm'n, 262 U.S. 679 (1923) ..... 12-13, 39-40
Brockway Glass v. Pa. P.U.C.,
63 Pa. Commw. 238, 437 A.2d 1067 (1981) ..... 2
City of Pittsburgh v. Pa. P.U.C.,
126 A.2d 777, 785 (Pa. Super. 1956) ..... 38-39
DeFrancesco v. West Penn Water Co, 329 Pa. Sup. Ct. 508, 478 A.2d 1295 (1984) ..... 109, 110
Donham v. Public Serv. Comm'n, 232 Mass. 309, 122 N.E. 397 (1919) ..... 13-14
Duquesne Light Co. v. Barasch, 488 U.S. 299 (1989) ..... 13, 40
Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944) ..... $13,15,40$
Federal Power Comm'n v. Natural Gas Pipeline Co., 315 U.S. 575, 585 (1942) ..... 12
Federal Power Comm'n v. Texaco, Inc., 417 U.S. 380 (1974) ..... 12
Lansberry v. Pa. P.U.C., 578 A.2d 600 (Pa. Commw. 1990) ..... 2
Lower Frederick Twp. Water Co. v. Pa. P.U.C., 48 Pa. Commw. 222, 409 A.2d 505 (Pa. Cmwlth. 1980) ..... 2, 15
Market St. R. Co. v. Railroad Comm'n of Ca., 324 U.S. 548 (1945) ..... 13
Missouri, Kansas \& Topeka Railway Co. v. Interstate Commerce Comm'n, 164 Fed. 645 (1908) ..... 13
National Fuel Gas Dist. Corp. v. Pa. P.U.C., 76 Pa. Commw. 102, 464 A.2d 546 (1983) ..... 56, 59
Pennsylvania Indus. Energy Coalition v. Pa. P.U.C., 653 A.2d 1336 (Pa. Commw. 1995) ..... 56, 59
Permian Basin Area Rate Cases, 390 U.S. 747 (1968) ..... 40
Philadelphia Elec. Co. v. Pa. P.U.C.,
93 Pa. Commw. 410, 502 A.2d 722 (1985) ..... 56, 59
Pittsburgh v. Pa. P.U.C.,
165 Pa. Super. 519, 69 A.2d 844 (1949) ..... 39
Popowsky v. Pa. P.U.C.,
683 A.2d 958 (Pa. Cmwlth. 1996) ..... passim
University of Pennsylvania v. Pa. P.U.C.,
86 Pa. Commw. 410, 485 A.2d 1217 (1984) ..... 2
Riverton Consol. Water Co. v. Pa. P.U.C., 140 A.2d 114 (Pa. Super. 1958) ..... 36-37
Administrative Cases
Application of Aqua Pennsylvania Wastewater, Inc.,
Docket No. A-2017-2605434, Order (Nov. 8, 2017) ..... 51
Application of Aqua America, Inc., et al.,
Docket Nos. A-2018-3006061, Order (Jan. 24, 2020) ..... 93
Application of California-American Water Co.,
2018 Cal. PUC LEXIS 628 (Dec. 20, 2018) ..... $28,30,34$
Blue Bird Coach Lines, Inc.,
72 Pa. PUC 262 (1990) ..... 107
Implementation of Act 11 of 2012, Docket No. M-2012-2293611, Order (Sept. 21, 2016) ..... 25
In re: Tennessee American Water Co.'s Response to the Commission's Investigation on the Impact of Federal Tax Reform on the Public Utility Revenue Requirements, 2020 Tenn. PUC LEXIS 101 (Aug. 3, 2020) ..... 34
In the Matter of the Petition of New Jersey-American Water Co., Inc., Docket Nos. AX18010001, et al., Order (N.J. Bd. Pub. Util., Oct. 28, 2020) ..... 34
Joint Application of Pennsylvania-American Water Co. and the Sewer Authority of the City of Scranton, Docket No. A-2016-2537209, Order (Oct. 19, 2016) ..... 64
Joint Application of T.W. Phillips Gas and Oil Co., Docket No. A-2010-2210326, Order (May 23, 2011) ..... 93
Kentucky Public Serv. Comm'n, Electronic Application of Kentucky-American Water Co. for an Adjustment of Rates, 2019 Ky. PUC LEXIS 663 (June 27, 2019) ..... 28, 29
Pa. P.U.C. v. Aqua Pa, Inc., 99 Pa. PUC 204 (2004) ..... 48
Pa. P.U.C. v. City of Bethlehem, 2011 Pa. PUC LEXIS 190 (2011) ..... 3
Pa. P.U.C. v. City of Dubois, Docket No. R-2016-2554150, Order (Mar. 28, 2017) ..... 48
Pa. P.U.C. v. City of Lancaster - Bureau of Water, 2011 Pa. PUC LEXIS 1685 (2011) ..... 48
Pa. P.U.C. v. Duquesne Light Co., 59 Pa. PUC 67, 91 (1985) ..... 17-18
Pa. P.U.C. v. Equitable Gas Co., 57 Pa. PUC 423 (1983) ..... 2
Pa. P.U.C. v. Emporium Water Co., 2008 Pa. PUC LEXIS 2076 (2006) ..... 48
Pa. P.U.C. v. Emporium Water Co., 95 Pa. PUC 191, 208 PUR4th 502 (2001) ..... 39, 48
Pa. P.U.C. v. National Fuel Gas Dist. Corp., 67 Pa. PUC 264 (1988) ..... 48
Pa. P.U.C. v. National Fuel Gas Dist. Corp., 73 Pa. PUC 552 (1990) ..... 40
Pa. P.U.C. v. Pennsylvania-American Water Co., 2017 Pa. PUC LEXIS 249 (Dec. 7, 2017) ..... 105
Pa. P.U.C. v. Pennsylvania-American Water Co., 71 Pa. PUC 210 (1989) ..... 48
Pa. P.U.C. v. Pennsylvania-American Water Co., 99 Pa. PUC 38 (2004) ..... 48
Pa. P.U.C. v. Pennsylvania-American Water Co., Docket No. R-2013-2355276, Order (Dec. 19, 2013) ..... 68, 105
Pa. P.U.C. v. Pennsylvania-American Water Co., Docket No. R-2017-2595853 (Dec. 7, 2017) ..... 68
Pa. P.U.C. v. Pennsylvania Gas \& Water Co., 61 Pa. PUC 409, 74 PUR4th 238 (1986) ..... 93
Pa. P.U.C. v. Pennsylvania Power Co., 55 Pa. PUC 552 (1982) ..... 40, 48
Pa. P.U.C. v. The Peoples Natural Gas Co., 69 Pa. PUC 1 (1989) ..... 48
Pa. P.U.C. v. Philadelphia Gas Works, Docket No. R-00005654, Order (Nov. 22, 2000) ..... 93
Pa. P.U.C. v. Philadelphia Suburban Water Co., 1991 Pa. PUC LEXIS 206 (Oct. 18, 1991) ..... 41-42
Pa. P.U.C. v. Philadelphia Suburban Water Co., 71 Pa. PUC 593, 623 (1989) ..... 39, 48
Pa. P.U.C. v. PPL Electric Util. Corp., 237 P.U.R.4th 419 (PaPUC 2004) ..... 2
Pa. P.U.C. v. PPL Electric Util. Corp., Docket No. R-2012-2290597, Order (Dec. 28, 2012) ..... 49
Pa. P.U.C. v. Roaring Creek Water Co., 87 Pa. PUC 826, 844 (1997) ..... 39
Pa. P.U.C. v. UGI Utilities - Elec. Div., Docket No. R-2017-2640058, Order (Oct. 25, 2018) ..... 48
Pa. P.U.C. v. York Water Co., 75 Pa. PUC 134 (1991) ..... 48
Proceeding on Motion of the Commission on Changes in Law that May Affect Rates, 2018 N.Y. PUC LEXIS 393 (Aug. 9, 2018) ..... 34
Re Utility Rates During Economic Emergency, 3 P.U.R. NS 123 (Pa. PSC 1934) ..... 14
Re V.I.P. Travel Servs., Inc., 56 Pa. PUC 625 (1982) ..... 107
Tariff Provisions that Limit the Liability of Utilities for Injury or Damage as a Result of Negligence or Intentional Torts, Policy Statement, 29 Pa. Bull. 2147- 2149 (Nov. 19, 1998) ..... 109
Statutes
66 Pa. C.S. § 102 ..... passim
66 Pa. C.S. § 315(a) ..... 1,15
66 Pa. C.S. § 315(e) ..... 18-19
66 Pa. C.S. § 523(a) ..... 92
66 Pa. C.S. § 1102(a) ..... 106-107
66 Pa. C.S. § 1103(a) ..... 106-107
66 Pa. C.S. § 1311(c) ..... passim
66 Pa. C.S. § 1329 passim
66 Pa. C.S. § 1329(c) ..... 54
66 Pa. C.S. § 1329(d)(1)(v) ..... 55
66 Pa. C.S. § 1329(d)(4) ..... 55
66 Pa. C.S. § 1329(d)(5) ..... 54-55
66 Pa. C.S. § 1330 ..... 23, 25
66 Pa. C.S. § 1357(a)(1) ..... 25
66 Pa. C.S. § 1358(b)(2) ..... 25
66 Pa. C.S. § 1358(b)(3) ..... 25
66 Pa. C.S. § 1501 ..... 93
66 Pa. C.S. § 1504 ..... 92
Regulations
52 Pa . Code § 65.3 ..... 100, 101
52 Pa . Code § 65.20 ..... 94
52 Pa . Code § 69.87 ..... 110
52 Pa . Code § 69.3301 ..... 21
52 Pa . Code § 69.3302 ..... 21
52 Pa . Code § 69.3302(a)(4) ..... 21
Other Authorities
C. Warren Campbell,
Western Kentucky University Stormwater Utility Survey 2019 ..... 79
Manual of Practice No. 27, Financing and Charges for Wastewater Systems, Water Environment Federation ..... 80
Public Utility Economics, Garfield and Lovejoy (1964) ..... 39

## I. INTRODUCTION AND OVERVIEW

The OCA is providing this 120-page version of its Main Brief in compliance with the directive contained in Administrative Law Judge Johnson's November 17, 2020 email. For brevity, the OCA's introduction (Section I) and discussion of procedural history (Section I.B.) are provided in Appendix F to this brief. The OCA will not address the remaining subheadings under Section I, but reserves the right to respond in its Reply Brief, as necessary, to the statements and arguments made by other parties.

The OCA will provide its response to the non-unanimous settlement petition by November 20, 2020, as directed by Administrative Law Judge Conrad A. Johnson. ${ }^{1}$ Tr. at 533-34.
A. Description of Company
B. Procedural History
C. Overview of PAWC's Filing
D. Overview of the Non-Unanimous Settlement

## E. Burden of Proof

PAWC bears the burden of proof to establish the justness and reasonableness of every element of its requested rate increase. As set forth in Section 315(a) of the Public Utility Code:

Reasonableness of rates - In any proceeding upon the motion of the Commission, involving any proposed or existing rate of any public utility, or in any proceedings upon the complaint involving any proposed increase in rates, the burden of proof to show that the rate involved is just and reasonable shall be upon the public utility. ${ }^{2}$

The Commonwealth Court interprets this principle as follows:
Section 315(a) of the Public Utility Code, 66 Pa. C.S. § 315(a), places the burden of proving the justness and reasonableness of a proposed rate hike squarely on the

[^0]utility. It is well-established that the evidence adduced by a utility to meet this burden must be substantial. ${ }^{3}$

The Pennsylvania Supreme Court has stated that the party with the burden of proof has a formidable task to show that the Commission may lawfully adopt its position. Even where a party has established a prima facie case, the party with the burden must establish that "the elements of that cause of action are proven with substantial evidence which enables the party asserting the cause of action to prevail, precluding all reasonable inferences to the contrary." ${ }^{4}$ Furthermore, it is wellestablished that the "degree of proof before administrative tribunals as well as before most civil proceedings is satisfied by establishing a preponderance of the evidence."5 Additionally, the evidence must be substantial and legally credible, and cannot be mere "suspicion" or a "scintilla" of evidence. ${ }^{6}$ Thus, a utility has an affirmative burden to establish the justness and reasonableness of every component of its rate request.

Pennsylvania law is clear that there is no similar burden for a party proposing an adjustment to a utility base rate filing. ${ }^{7}$ In Berner, the Pennsylvania Supreme Court stated:
[T]he appellants did not have the burden of proving that the plant additions were improper, unnecessary or too costly; on the contrary, that burden is, by statute, on the utility to demonstrate the reasonable necessity and cost of the installations and that is the burden which the utility patently failed to carry. ${ }^{8}$

The Commission recognizes this standard in its rate determinations. ${ }^{9}$ Thus, the burden is not on the OCA, or any challenger, to prove that PAWC's proposed rates are unjust, unreasonable, or not in the public interest. Instead, Pennsylvania law requires only that the OCA show how PAWC failed

[^1]to meet its burden of proof. While subtle, this critical distinction shows that parties opposing a utility in a rate proceeding need only to shift the burden of going forward to prevail. The burden of proof will not shift to an intervener that is challenging the requested rate increase. ${ }^{10}$

In sum, PAWC must affirmatively demonstrate the reasonableness of every element of its claims and demonstrate that its proposed rates are just, reasonable, and in the public interest. The OCA will show that PAWC has failed to satisfy its statutory burden in the manner set forth below.

## II. SUMMARY OF ARGUMENT

This Commission should not approve any rate increase for PAWC at this time. PAWC's customers, and indeed the entire Commonwealth, remain firmly in the grip of the COVID-19 pandemic. Due to the extreme economic and personal hardships being endured by PAWC's customers, and the public in general, any rate increase at this time would not result in just and reasonable rates. If the Commission should decide, however, that it wants to proceed with a "business as usual approach, the OCA has presented testimony on water and wastewater revenue requirements, including cost of capital, that establish that there is no need for rates to increase at this time. The OCA has also presented testimony opposing the multiyear rate plan and trackers proposed by PAWC that serve only to increase rates between rate cases and for years into the future without any safeguards or evidence that its projections are reasonable. In particular, the OCA strongly recommends that the Commission deny the Company's novel Regionalization and Consolidation Surcharge as it is unreasonable to require ratepayers to pay a surcharge for the Company's expansion efforts. The OCA also has identified the large subsidies that water customers are being asked to bear and has recommended reasonable ratemaking alternatives. In addition, the

[^2]OCA has identified numerous issues related to the low-income programs, customer service, and quality of service that need to be addressed.

The financial impacts of the pandemic will affect every aspect of the proposed two-year multiyear rate plan, including revenues, operating expenses, capital expenditures, and the cost of debt yet PAWC has not modified its proposals. Many of the customers who testified at the public input hearings expressed concerns about their ability to pay their current water and wastewater bills due to the impact of the pandemic and expressed concern about the large proposed increases. Based on the evidence presented here and the compelling testimony presented at the public input hearings, PAWC cannot meet its burden of proof to show that its multitude of requests will result in just and reasonable rates.

## III. OVERALL POSITION ON RATE INCREASE

## A. Introduction

The OCA strongly urges that the Commission, at a minimum, deny PAWC's rate increase requests to protect the ratepayers in PAWC's service territory who are, and will be, experiencing unemployment and income loss due to the unprecedented and continuing COVID-19 pandemic. The OCA is not recommending that PAWC should have rates that are inadequate to ensure the provision of safe and reliable service to its customers. OCA St. 1 at 28. As described in this Main Brief, PAWC could continue operations, recover all of its expenses, and earn a profit with no revenue increase. Id. In these extraordinary times, denying PAWC's rate increase is a reasonableand temporary-outcome until fewer customers are suffering financially and the future is more ascertainable for ratemaking.

While perhaps not as much profit as PAWC would like ${ }^{11}$, but more than the OCA's accounting and financial experts recommend, the overall rate of return of $7.70 \%$ for water and $2.84 \%$ for wastewater without any change in rates is more than adequate. See OCA App. A.1, Table I (Total Water), Table I (Total Wastewater). As OCA Witness Rubin stated: "Most Pennsylvania businesses would be absolutely thrilled if they could pay all their bills (including various increases in expenses that may or may not occur next year), make all of their debt payments, and still have enough left over to earn a profit on their equity investment." OCA St. 1 at 28-29.

Further, the OCA submits that the Commission should not rely on PAWC's FPFTY projections and related assumptions which were developed before the pandemic emerged. Mr. Rubin noted that this applied to "essentially every aspect of the Company's projections." Id. at 29. He explained that interest rates have dropped to near zero, oil prices have plunged and consumer prices have barely changed. OCA St. 1 at 29. If PAWC is concerned about operating revenues during this uncertain time and moving forward, PAWC could defer new construction projects that are not necessary to ensure the current provision of safe and reliable service to existing customers. Id. at 30. Mr. Rubin explained that some utilities are refinancing and issuing debt at historically low levels. Id. Additionally, PAWC could file rate cases after the pandemic once the "dust settles" and reliable and complete evidence of the full effect of the pandemic will be available to determine just and reasonable rates.

There is precedent supporting the Commission's authority to determine that raising rates would not be just and reasonable during this time of extreme economic hardship for ratepayers.

[^3]OCA St. 1 SR at 21-22. In addition, the reasonable rate of return that a Company is awarded within the constitutional parameters is within the Commission's discretion and must reflect current economic circumstances. The OCA therefore submits that increasing PAWC's water and wastewater rates during the COVID-19 pandemic is not only unnecessary at this time, but would not lead to just and reasonable rates given PAWC ratepayers' reduced incomes and ability to pay and the economic uncertainties of PAWC's FPFTY projections in its rate increase filings.
B. The Economic Hardships of PAWC's Ratepayers During and After This Pandemic Should Play a Prevalent Role in the Commission's Decision on Increasing Rates.

The economic repercussions of the COVID-19 pandemic-to the extent yet known-are real and significant in PAWC's service territory and the OCA submits that the Commission must give great weight to the circumstances of consumers during these extraordinary times. As of midJuly, the unemployment rates in the counties served in whole or in part by PAWC ranged from $8.8 \%$ in Centre County to $17.4 \%$ in Monroe County. OCA St. 1 at 14-15, Fig. 4, Sch. SJR-1. In mid-August, the picture was not substantially better, with unemployment rates in the counties served in whole or in part by PAWC ranging from $6 \%$ to $13.1 \%$. Figure 4 updated at Sch. SJR-10SR at 2.

As a consequence of the massive job losses across Pennsylvania, there were 30 times as many initial unemployment claims during the week ending March 21, 2020 and 33 times as many during the next week ending March 28, 2020 than the amount during the week ending March 7, 2020 as shown in shown in OCA St. 1 SR, Sch. SJR-10-SR at 1, Figure 3 (Updated). As shown on the updated Figure 3, at the end of September, initial unemployment claims have declined since peaking in March at 400,000 claims in one week, but the level of initial unemployment claims in September were still about $50 \%$ higher than it was in February 2020. OCA St. 1 SR at 3. During September, between 22,000 and 23,000 Pennsylvania workers filed initial unemployment claims
each week. Id. Mr. Rubin explained that in the space of 6.5 months (mi-March to the end of September), "more than 39 percent of Pennsylvania's workforce filed an unemployment claim."

According to a survey conducted by the U.S. Census Bureau, roughly 50\% of Pennsylvania households experienced wage loss from March 13, 2020 through July 21, 2020 and, while down a bit at the end of September, the number of households experiencing wage loss was still approximately 45\%. OCA St. 1 SR at 3; Sch. SJR-10-SR at 3, Figure 5 (Updated).

Given the substantial reductions in employment and wages, there is an unusually large pool of ratepayers unable to afford utility bills. To address the prospect of Pennsylvanians experiencing job and wage loss to afford bill payments, Mr. Rubin cites the U.S. Census Bureau's Household Pulse Survey, testifying:

Only $60 \%$ of Pennsylvanians who lost income said they used their normal source of income to pay bills in the previous week. About $26 \%$ cited unemployment benefits and $27 \%$ referred to the CARES Act stimulus payments. More people, however, relied on credit card debt or loans (including loans from family or friends) $(40 \%)$ or money from savings or asset sales (35\%) than relied on short-term government benefits.

OCA St. 1 at 18. For utility bills specifically, Mr. Rubin testified:
A recent survey conducted by the Electric Power Research Institute ("EPRI") found that about two-thirds of people who lost their jobs during the pandemic are concerned about being able to pay their energy bills. Moreover, more than $20 \%$ of survey respondents reported that their energy bills were higher because of the pandemic. Interestingly, the survey also found that more than $25 \%$ of people who lost their jobs are planning to skip at least one utility bill payment, but a much lower percentage were planning to contact their utilities for assistance.

Id. at pp. 18-19 (footnote omitted); Sch. SJR-5, pp. 3, 7, 12. The OCA submits that PAWC's customers, a significant portion of whom it is reasonable to assume are experiencing a situation that aligns with the pandemic-related job and wage loss mentioned in Mr. Rubin's testimony, cannot reasonably withstand a rate increase at this time. Many of the customers who testified at the Public Input Hearings were concerned about being able to pay their bills including higher water and/or
wastewater bills, especially when many have lost their jobs, or are suffering from the financial effects of COVID-19, that the increase was large, that the company should forego any rate increase during this time of economic difficulties for individuals and businesses. State Senator Schwank testified that she was very disturbed that significant rate increases were being discussed in the middle of an economic catastrophe caused by COVID-19. Tr. 82-83. The OCA has provided a summary of the public input hearing testimony as Appendix E, attached to this Main Brief.

It should be further recognized that the economic repercussions of the pandemic are affecting minorities and individuals of lower income the most. In highlighting this disparity, Mr. Rubin testified:
...the lower a household's income, the greater the impact of the pandemic on income loss. Similarly, households headed by a person who the Census Bureau categorizes as being Black or Hispanic are much more likely to have experienced an income loss -- and to expect additional income loss into mid-August -- than are households headed by a White, Non-Hispanic.

OCA St. 1 at 17-18. The OCA submits that water and wastewater rate increases in the PAWC service territory will not only increase the financial burden faced by customers experiencing job and wage loss due to the pandemic, but will likely increase that burden particularly on those individuals belonging to low-income and Black or Hispanic households.

In rebuttal, Company witness Cawley claimed that Mr. Rubin's testimony "ignored substantial state and federal aid provided in response to the COVID-19 pandemic." PAWC St. 14R at 5. Mr. Rubin explained that this statement was incorrect. OCA St. 1 SR at 20. Mr. Rubin provided a discussion in his direct (OCA St. 1 at 18) and an accompanying schedule (SJR-4). In surrebuttal, Mr. Rubin updated SJR-4 as page 8 of SJR-10-SR. He explained that the update shows:
[A]s of September 28 only $50 \%$ of Pennsylvania households were able to use their regular source of income to pay their bills. About $21 \%$ cited unemployment benefits and $28 \%$ referred to the CARES Act stimulus payments. Indeed, more people had to rely on credit card debt or loans (including loans from family or friends) (39\%) or money from savings or asset sales ( $27 \%$ ) than relied on short-term government
benefits. Thus, I reject the implication that government benefits have been sufficient to compensate most people for the loss of income during the pandemic.

OCA St. 1 SR at 20. In addition to residential customers, businesses in PAWC's service territory
have also been impacted substantially from the pandemic. Mr. Rubin testified:
The outlook for small business is slightly better than it was when I prepared my initial testimony, but still dire. On pages 19-20 of OCA Statement 1, I summarized the results of the Census Bureau's Small Business Pulse Survey for Pennsylvania. At the end of August, that survey reported that $46 \%$ of Pennsylvania's small businesses expected it to take six months or more to return to a normal level of operations, with another $11 \%$ saying their business would never fully recover. In the week ending October 3, $44 \%$ of Pennsylvania's small businesses said they would take at least six months to recover.

OCA St. 1 SR at 3; see also OCA St. 1 at 19-20.
From the above information, drawn from surveys and reports on the economic well-being of households and businesses both in PAWC's service territory and in Pennsylvania from the start of the pandemic, Mr. Rubin recommends that at a minimum, rates in PAWC's service territories not be raised at this time. OCA St. 1 at 4-5. This data, collectively, demonstrates why the economic hardships faced by customers in PAWC's service territories should not be added to by any increase in PAWC's rates at this time. ${ }^{12}$

Raising rates on PAWC's customers while many are experiencing job and wage loss would only serve to further diminish their currently-reduced incomes and financial resources. The OCA

[^4]submits that the unprecedented situation at hand provides ample basis for the Commission to deny such an increase during this time.

## C. Rejecting PAWC's Rate Increase Requests During an Unprecedented and Economically Devastating Pandemic Would Result in Just and Reasonable Rates.

Mr. Rubin recommends that the Commission not focus, in this proceeding, on PAWC's historic costs, or on cost projections prepared before the pandemic, under a business as usual approach. Rather, the Commission "must focus on what rates are reasonable for consumers to pay under these extraordinary conditions." OCA St. 1 at 22 . While this is not the Commission's standard approach to ratemaking, these ratemaking conditions are not standard by any means. Based on the reasons discussed below, it is both legal and practical for the Commission to consider the unprecedented public health and economic crisis and the grave economic environment and financial hardships faced by PAWC's customers in denying PAWC any rate increases at this time. Such consideration will still result in just and reasonable rates and indeed, is necessary to determining just and reasonable rates at this time. ${ }^{13}$

[^5]
## 1. PAWC Does Not Need to Increase Rates Right Now.

OCA witness Rubin found that, not only are PAWC's continued pursuit of its proposed rate increases suspect due to the drastic change in the economic environment, but PAWC would have enough revenue to continue safe and reliable operations if its rates were to remain unchanged. On the topic of PAWC's alleged need to increase rates, Mr. Rubin testifies:

In the historic test year (twelve months ending December 31, 2019), under its existing rates, PAWC had per books net income of $\$ 173.9$ million for water operations (excluding Steelton). This provided the Company with a return on common equity of approximately $8.69 \%$.

OCA St. 1 at 28 citing PAWC Exh. 3-A, pp. 1, 70. Even assuming some of PAWC's FPFTY projections are accurate, OCA Witness Ralph Smith concluded that PAWC had a revenue sufficiency for water of $\$ 68,333,994$ and a rate increase of $\$ 30,906,901$ for wastewater under traditional ratemaking, but that number remains speculative given the uncertainty of the projections and future operations. OCA St. 2SR at 5-6; OCA Exh. LA-6, Sch. A. Simply put, in the near term, PAWC's rates are adequate at this time. After the COVID-19 pandemic has passed, PAWC can file again for rate increases when the Company's financial projections will be founded on more stable, and thus predictable, economic conditions.

The current and projected ratepayer affordability of rates gives strong weight to the conclusion that granting PAWC's rate requests in this proceeding would unnecessarily harm ratepayers and not result in just and reasonable rates. If, however, the economic situation worsens significantly and cash flow becomes a concern for PAWC, the Company could preserve cash by deferring for several months certain construction projects, such as growth-related projects or longerterm system rehabilitation activities, which are not needed to ensure the current provision of safe

[^6]and reliable service to existing customers. OCA St. 1 at 30. In addition, Mr. Rubin explained that other large utilities have been taking advantage of the very low cost of debt and issuing 10-year notes or bonds at what are historically low interest rates. Id. He explained that low-cost, long-term financing can help provide cash flow needed to keep existing rates in effect throughout the pandemic without suffering significant economic harm. ${ }^{14}$ Id. Given the vast uncertainty and lack of support for PAWC's claimed costs, the OCA submits that rate increases at this time are not necessary or reasonable.

## 2. Case Law From Similar Economic Circumstances Provides Precedent For the Commission to Deny A Rate Increase Due to Extreme Customer Hardships.

A rejection of PAWC's rate increases due to the economic hardships and uncertainties accompanying the COVID-19 pandemic as well as the uncertainties surrounding the FPFTY projections, while not common by any means, would be a legally viable and not an unprecedented ratemaking solution during this abnormal time. OCA St. 1 at 22-24. When it comes to ratemaking, "[a]ll that is protected against, in a constitutional sense, is that the rates fixed by the Commission be higher than a confiscatory level." Federal Power Comm'n v. Texaco, Inc., 417 U.S. 380, 39292 (1974) (citing Federal Power Comm'n v. Natural Gas Pipeline Co., 315 U.S. 575, 585 (1942)).

On the topic of rate of return, the U.S. Supreme Court has held:
[ $t$ ]he return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally.

[^7](Bluefield). The Court has also held that, "whether a particular rate is 'unjust' or 'unreasonable' will depend to some extent on what is a fair rate of return given the risks under a particular rate setting, and on the amount of capital upon which the investors are entitled to earn on that return." Duquesne Light Co. v. Barasch, 488 U.S. 299, 310 (1989) (Duquesne Light).

It is clear that the Commission is required to balance the consumer and utility's interests. "The rate-making process..., i.e., the fixing of 'just and reasonable' rates, involves a balancing of the investor and consumer interests . . . and does not insure that the business shall produce revenues." Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944) (Hope). "The owners of a property dedicated to the public service cannot be said to suffer injury if a rate is fixed for an experimental period, which probably will produce a fair return on the present fair value of their property." Market St. R. Co. v. Railroad Comm'n of Ca., 324 U.S. 548 (1945).

During the last large-scale nationwide pandemic, the Influenza of 1918, the Supreme Judicial Court of Massachusetts upheld a public service commission ratemaking order that was not expected to permit the utility to earn a profit due to the abnormal times. Donham v. Public Serv.

Comm'n, 232 Mass. 309, 317, 122 N.E. 397, 401 (1919) (Donham). The court's stated:
To be just and reasonable, within the meaning of the constitutional guaranty, the rates must be prescribed with reasonable regard for the cost to the carrier of the service rendered and for the value of the property employed therein; but this does not mean that regard is to be had only for the interests of the carrier, or that the rates must necessarily be such as to render its business profitable, for reasonable regard must also be had for the value of the service to the public. And where the cost to the carrier is not kept within reasonable limits, or where for any reasons its business cannot reasonably be so conducted as to render it profitable the misfortune must fall upon the carrier, as would be the case if it were engaged in any other line of business. ${ }^{15}$

[^8]Although the utility was facing hardships of its own, the court noted that it did not deprive the commission of its regulatory responsibility to "exercise its judgment for the protection of the public interests when it does not reduce substantially the revenue proposed to be exacted from the public by the owners of the public utility." Donham, 232 Mass. at 326, 122 N.E. at 405. In addition, the court emphasized that the rates were "likely to be impermanent and experimental." Id. In reference to this case, Mr. Rubin testified that:
[t]he idea that ratemaking must adapt to extraordinary conditions is neither new nor novel. A century ago during another serious pandemic, regulators adapted, took actions that provided relief to the public, and did not inflict long-term harm on the utility.

OCA St. 1 at 24.
Here in Pennsylvania during the Great Depression, the Public Service Commission (PSC) called on utilities to reduce rates so that they would earn no more than $6 \%$ on their rate base. Re Utility Rates During Economic Emergency, 3 P.U.R. NS 123 (Pa. PSC 1934); PAWC Exh. JHC3R. In recognition that societal economic conditions should affect utility ratemaking, the PSC stated, "this Commission should take cognizance of the present economic conditions prevailing in the United States and as such economic conditions particularly affect the welfare of the people of this commonwealth." Id. at 124. Similar to the result of the case in Massachusetts during the Influenza and the PSC's action in response to the Great Depression, the OCA's proposal to deny PAWC's proposed increases in rates reflects both a viable and reasonable solution to the abnormal and unexpected set of circumstances under which the Commission is currently tasked with developing just and reasonable rates for a population of ratepayers financially distressed by a nationwide pandemic.

Denying PAWC's requested rate increase due to the current societal economic conditions would be an appropriate and valid exercise of the Commission's authority in this proceeding.

Section 315(a) of the Public Utility Code places the burden of proving the reasonableness of a proposed rate on the utility. 66 Pa . C.S. § $315(\mathrm{a})$. The evidence necessary to meet that burden must be substantial. ${ }^{16}$ PAWC has not proven that rate increases would be just and reasonable at this time.

The Commission would be fully within its authority to reject PAWC's rate increase requests due to the current economic conditions because (1) rates would not be confiscatory as it is projected that the Company would continue to earn a profit in the near future and (2) simply put, it is only the opportunity to earn a fair return that a utility is entitled to. As the U.S. Supreme Court held in Hope, the "lowest reasonable rate" is one that is not confiscatory in the constitutional sense. ${ }^{17}$ The OCA's calculations demonstrate that, at PAWC's current rates, it will still earn a $7.70 \%$ and $2.84 \%$ rate of return for water and wastewater, respectively. See OCA App. A.1, Table I (Total Water), Table I (Total Wastewater). While this may not be a desirable rate of return for the Company, it is sufficient compensation in the constitutional sense and fully within the Commission's authority.

> 3. The Principles of Public Utility Regulation Lend Support to the OCA's Claim That Increasing Rates During This Financially Challenging Time For Ratepayers Would Not Lead to Just and Reasonable Rates.

To understand how just and reasonable rates are affected by a major economic event such as the COVID-19 pandemic, Mr. Rubin presents a valuable review of the regulated-monopoly framework of public utilities in this country and the determination of just and reasonable rates. OCA St. 1 at 7-11. Mr. Rubin testified that, "At its core, regulation is designed to protect utility consumers from what otherwise would be the unfettered power of a monopoly to set prices and the conditions of service." OCA St. 1 at 7. Mr. Rubin explains that utility regulators should attempt to set rates within the "zone of reasonableness" which captures the interests of the ratepayers, the utility's investors, officers and employees, and local governments whose residents are served by

[^9]the utility. Id. at 8. Mr. Rubin explains that, under normal conditions, there is often an area of overlap of interests between utility customers and the utility, including its investors. Id. Within that area, regulators are provided a range of rates that utility customers would be willing and able to pay for service and investors would consider a reasonable return on their investment. Id. at 9 .

However, Mr. Rubin testifies, under certain conditions the two ranges may not overlapcreating no "zone of reasonableness" at all. Id. at 9-10. When this occurs, regulators are tasked with setting rates outside of one of the ranges, or both. Id. at 10 . Under the above-described economic conditions faced by PAWC's customers brought on by the pandemic, the range of rates the customers would be willing and able to pay for service has shifted away from the range of rates which would, in the eyes of the utility, provide a reasonable return on investment.

In his Rebuttal Testimony, PAWC witness James H. Cawley states that "sound and accepted utility ratemaking should not be deterred by unsettling economic circumstances." PAWC St. 14-R at 22. Mr. Rubin explained why Mr. Cawley's statement is the "very antithesis of sound ratemaking in the public interest":

Utility regulators must recognize the economic environment in which utilities operate. This is supposed to be reflected not just in the authorized rate of return, but also in the ultimate rates determined to be just and reasonable. As I explained in my direct testimony, whether a rate is just and reasonable is a function not just of the utility's costs but also of the value and affordability of service to the customer.

OCA St. 1 SR at 21.
Given the description of significant income loss experienced in PAWC's service territory discussed in Section III.B above, the OCA submits that keeping rates constant is a reasonable balance and completely lawful exercise of Commission authority. While this is not the profit PAWC would prefer, there is no reasonable basis for the Company to have a higher return at this time. The OCA emphasizes that this is a temporary measure until future conditions are known.

As Mr. Rubin explained, regulation must always consider current economic conditions. Mr.
Rubin testified:
If regulation is supposed to be a substitute for market forces, then we must recognize that except for those commodities experiencing significant imbalances of supply and demand due to the pandemic, competitive businesses cannot sustainably raise prices when their customers' incomes have decreased significantly...Simply stated, what may have been a "just and reasonable" rate earlier this year may be unreasonable today.

OCA St. 1 at 12 (emphasis added). Mr. Rubin also stated:
Importantly, though, regulation is not designed to insulate the utility or its investors from normal market forces, technological improvements, or general economic conditions. If market forces (such as technological change) result in significant reductions in the demand for service, then the utility may not be able to recover its costs. That is not a failure of regulation, but a natural evolution of the market -businesses fail if they cannot keep up with changes in consumers' preferences or respond to technological innovations.

Similarly, if economic conditions change such that rates become unaffordable to many customers, rates may need to be reduced in order to remain "just and reasonable from the perspective of customers.

Id. at 7-8 (emphasis added). PAWC witness Cawley disagreed with the statement that regulation
is supposed to be a substitute for market forces. PAWC St. 14-R at 27. Although this concept would appear to be non-controversial, as Mr. Rubin based it on his decades of experience appearing before the Commission, he provided a Commission statement that he believes contradicts Mr. Cawley's position and accurately represents utility regulation in Pennsylvania ${ }^{18}$ :

Even in general business enterprises, unfortunate or inexpedient management expenditures, even if prudently made, may not always be totally recovered from their customers; the market may not so permit as customers may reject the product or service at such cost. Regulation provides a substitute for market influences so as to protect the interest of captive customers of the public utility.

[^10]OCA St. 1 SR at 23 (citing Pa. P.U.C. v. Duquesne Light Co., 59 Pa. PUC 67, 91 (1985) (emphasis added).

Thus, rejecting PAWC's requested rate increase at this time is an appropriate result during the COVID-19 pandemic and an appropriate response to the market imbalance caused by PAWC's customers' reduced ability to pay utility bills. As explained above, this can be done and PAWC would still have sufficient income.

## 4. The Projections in PAWC's Early Pandemic Filing Cannot Be Given Any Credence in Determining Future Rates in a Vastly Different Economic Environment.

The OCA submits that the lack of reliability of PAWC's FPFTY projections in its filing submitted just weeks after the pandemic reached its service territory is another basis for PAWC's rate increases to be rejected. Mr. Rubin testified:

The Company filed this case on April 29, 2020, when its service area -- indeed the entire world -- was being devastated with the worst pandemic in a century. While I understand that it takes months to prepare a rate filing, and that PAWC prepared this case assuming "business as usual," there was nothing that compelled it to actually file the case. To state the obvious, life and business in the Company's service territory are now anything but normal.

OCA St. 1 at 12. The OCA submits that the changes and uncertainties in FPFTY assumptions, including interest rates, inflation, and how much consumption for each customer classes and other elements that enter into the ratemaking process, could not be accurately projected in the months leading up to PAWC's April filing or relied on to make reasonable findings or conclusions in this proceeding.. Id. at 27. Additionally, the use of the FPFTY is discretionary and, the Commission may, at its discretion, adjust the Company's rates on the basis of it FPFTY data evidencing the accuracy of its estimates. ${ }^{19} \mathrm{Mr}$. Rubin testified:

[^11]...I conclude that the Commission cannot have any confidence in the projections made by PAWC for the FPFTY; there is simply too much uncertainty. It would be neither just nor reasonable to set rates based on the assumptions the Company made when it filed this case in late April. Virtually every assumption is changing as a result of the pandemic. As a consequence, it is my opinion that it is reasonable -- I would go so far as to say required -- for the Commission to reject PAWC's request to increase its rates. The Commission cannot have any certainty about the appropriate, ongoing level of expenses, interest rates, consumption patterns, and the numerous other factors that affect the determination of an appropriate level of rates.

Id. at 29-30 (emphasis added). Given the devastating financial impacts on customers and the uncertain economic future of the next few years and the unreliability of the projections, Mr. Rubin concluded:

Faced with this unprecedented public health and economic crisis, I respectfully submit that the Commission cannot treat this case as "business as usual." Almost no other business in PAWC's service area is conducting business as usual; residential consumers are using Columbia's services differently than they do during normal circumstances (few if any people are usually at home 24 hours per day, 7 days a week, preparing every meal at home, and so on).

Respectfully, the Commission cannot focus on PAWC's historic costs, or on cost projections prepared before the pandemic, and assume that the resulting rates will be "just and reasonable." The Commission must focus on what rates are reasonable for consumers to pay under these extraordinary conditions.

Id. at 22 . This rate increase was requested at a time of extreme uncertainty not only in terms of the economy at large, but also in terms of projected customer usage, projected expenses, projected capital expenditures, and revenue required to provide service. In addition to the effect of the COVID-19 pandemic on the Company's projections, OCA Witness Ralph J. Smith has calculated a revenue sufficiency as set forth in OCA St. 2 and Exhibit LA-6. The OCA therefore submits that the Commission should not accept PAWC's projections and at a minimum, deny PAWC's requested rate increases.

[^12]
## D. Conclusion

With an unprecedented number of ratepayers unemployed and/or experiencing income loss - during this pandemic and in the foreseeable future - it is not reasonable to expect ratepayers currently struggling to pay utility bills to have the income to cover increased natural gas bills if higher rates go into effect, especially as we approach the winter months. Ratepayers are suffering during this pandemic and granting a request for an increase in water and wastewater rates, as if PAWC should be shielded from the economic impacts caused by this pandemic, would not be just and reasonable. As stated before, the OCA calculations present that PAWC could continue water and wastewater operations, recover all of its expenses at present rates, and earn a profit in the near term. The OCA respectfully requests the Commission find that rates at present rates will provide the Company sufficient compensation for the near future and deny this rate increase as it not an appropriate time to raise the rates paid by PAWC's customers who are currently struggling to navigate these turbulent economic times.

## IV. PAWC'S PROPOSED MULTI-YEAR RATE PLAN

PAWC has proposed to increase its water and wastewater rates in January 2021 by $\$ 92.4$ million ( $12.9 \%$ ) and by $\$ 46.2$ million ( $5.8 \%$ above the January 2021 level) in January 2022. OCA St. 1 at 32. PAWC proposes rate increases in January 2021 and January 2022 pursuant to Section 1330 of the Public Utility Code. 66 Pa. C.S. § 1330. As discussed below, Mr. Rubin found that this is not an appropriate case to consider a multiyear rate plan (MYRP). Id. However, if a MYRP is approved, OCA witness Rothschild addresses considerations regarding the appropriate rate of return and OCA witness Smith provided adjustments to 2021 (Rate Year 1) and 2022 (Rate Year 2). In addition, OCA witness Alexander recommends customer service related metrics if a MYRP is approved.

Based on his experience with PAWC and in jurisdictions that use MYRP, Mr. Rubin identified three factors that make a MYRP inappropriate in this case. OCA St. 1 at 33-35. First, as discussed in Section III, supra, Pennsylvania is in the midst of the COVID-19 pandemic. Id. at 33. The pandemic affects nearly all aspects of daily life, there is uncertainty about how long it will last, and how long it will take the economy to recover. Id. Mr. Rubin explained that he has "serious doubts" about the reliability of PAWC's projections for 2021 and 2022. Id. He concluded, "With all of this uncertainty, this is not an appropriate time to project capital additions, expenses, sales, revenues, and capital costs two years into the future." Id.

The second factor that makes a MYRP inappropriate in this case is that one of the stated purposes of a MYRP is to delay the filing of the next rate case, while providing benefits to customers. OCA St. 1 at 33. The types of benefits a MYRP (or other alternative ratemaking) might provide were addressed by the Commission in a 2019 Policy Statement. ${ }^{20}$ Id.; 52 Pa . Code §§ 69.3301-69.3302. Mr. Rubin noted that the Company did not discuss any of these factors in its testimony. ${ }^{21}$ Id.

The third factor that makes a MYRP inappropriate in this case, as explained by Mr. Rubin, is based on his experience in other jurisdictions that routinely use MYRPs. OCA St. 1 at 34. In his

[^13]experience rates for the years beyond the test year are based on specific cost increases like a contractual wage increases or specific capital plans. He explained how that process can work:

Before the start of each rate year, the utility will make a filing that documents its actual expenditures for the pre-identified items and then calculates the rate year increase and rates. Future rate levels are not set years in advance; rather a process is established that allows the utility to update particular elements of its cost of service, and to prove that the increases actually occurred, before implementing a future rate increase.

OCA St. 1 at 34. In contrast, PAWC's proposed process is that the Commission determine in this case what rates will be for 2022 and nothing can change that. OCA St. 1 at 35. Mr. Rubin explained that it will not matter if the Company installs the plant it is projecting, whether costs increase or decrease, whether the Company reduces its capital costs by taking advantage of historically low interest rates, whether sales change, or anything else changes, before 2022. Id. In his experience that is not how MYRPs work because no one can accurately forecast an entire revenue requirement two years in advance. He added that this issue is exacerbated while we are in the midst of the pandemic and do not know how water demand commodity prices, inflation, interest rates, or other components of the revenue requirement. Id.

For the reasons discussed above, Mr. Rubin recommended that the Commission reject the Company's request for a MYRP and determine rates in this case that will remain in effect until the end of PAWC's next rate proceeding. OCA St. 1 at 35 . He recommended that the next rate proceeding should include separate revenue requirements and rate calculations for stormwater service in the combined sewer systems. Id.

In rebuttal, PAWC witness Nevirauskas discussed the Company's ability to make projections during the pandemic. PAWC St. 1-R at 8-16. It is disingenuous for PAWC to maintain that its projections made before the pandemic, and not revised, are an appropriate basis to set rates for 2021 and 2022. Mr. Rubin noted the impact that the ongoing pandemic has had during 2020,
and that it may continue to have during 2021 and 2022, PAWC's Rate Years 1 and 2. These changes to all aspects of the components of the revenue requirements are not accounted for in PAWC's filed case. Mr. Nevirauskas did not address Mr. Rubin's other two concerns and no other PAWC witness discussed the OCA's recommendation to reject the MYRP. OCA St. 1 SR at 6. The OCA submits that PAWC did not support its proposed MYRP and for all of the reasons provided by Mr. Rubin, the MYRP should be rejected.

If the Commission does not accept the OCA's recommendation to reject PAWC's proposed MYRP, OCA witness Smith provided recommendations regarding the revenue requirement for 2021 and 2022 as discussed in Sections V through VIII, infra. OCA witness Rothschild discussed the impact on return on equity in OCA Statement 3 as discussed in Section IX, infra.

## V. RATE BASE

## A. Utility Plant in Service

The OCA has not raised an issue with regard to PAWC's utility plant in service.

## B. Average Versus Year-End Rate Base

Under Act 58 of 2018, utilities are permitted to develop rates through the use of multiyear rate plans. See 66 Pa. C.S. § 1330. The use of a fully projected future test year (FPFTY) in a multiyear rate plan is intended to allow rates to be set to reflect the costs that will be incurred during each year in the MYRP the rates will be in effect. PAWC utilized two projected rate years to establish the Company's cost of service for the period ending December 31, 2021 (Rate Year 1) and December 31, 2022 (Rate Year 2) for determining its revenue requirement in this proceeding under the proposed MYRP. ${ }^{22}$ OCA St. 2 at 17. PAWC used an average rate base FPFTY for 2021,

[^14]which is the first year of its proposed MYRP and an end of year rate base for 2022, which is the second year of its proposed MYRP. OCA St. 2 at 17.

The OCA objects to the Company's use of an end of year rate base for 2022. OCA witness
Smith discusses the standardized nature and importance of using average rate base in MYRPs:
Based on my experience, in other states where multi-year rate plans are used, an average test year concept is applied for each year in the multi-year rate plan. In order to achieve matching of the revenue requirement in each year of a multi-year rate plan, the rate base is based on the average for that year, rather than upon values as of a single date. The use of an average properly matches the collection of the revenue requirement during each year of the MRP. To be clear, although the Commission has allowed the use of a year-end rate base for a FPFTY, the Commission has not allowed year-end rate base in the context of multi-year rate plans that project even further into the future. In my professional opinion, utilizing the end of year rate base for MRPs would be a radical and extreme departure from traditional ratemaking.

OCA St. 2SR at $42 .{ }^{23}$
Mr. Smith demonstrated that PAWC has overstated its cost of service for Rate Year 2 in its MYRP by reflecting costs at end of year levels rather than at the levels of costs that will be experienced during Rate Year 2. OCA St. 2 at 17-18. In other words, rather than reflecting costs that will be incurred during the 2022 Rate Year 2 in its MYRP, PAWC has reflected costs that will be incurred as of January 1, 2023. Id. at 18. In contrast, using an average rate base for Rate Year 2 properly matches the collection of the revenue requirement during each year of a MYRP with the incurrence of the projected cost of providing utility service in that year. OCA St. 2 at 21.

The OCA has recommended that PAWC's MYRP be rejected in its entirety. OCA St. 2SR
at 44. However, if PAWC's proposed MYRP were to be adopted, the OCA recommends that an

[^15]average rate base should be used for Rate Year 2 to mitigate the impact of the rate increase on customers. Id.; see OCA App. A.3, Exh. LA-8, Sch. B-1, at 1-8 (reflecting average balances of plant in service, accumulated depreciation and other rate base components for Rate Year 2).

In rebuttal, PAWC witness Nevirauskas claims that if an average rate base were used, the Company will have to file more frequent base rate cases to prevent erosion of its authorized rate of return. PAWC St. 1R at 34. There is no support, however, for this claim. To be clear, using an average test-year still provides recovery of a portion (the average) of the Company's rate base and expenses during 2022. Thus, using a MYRP and an average test-year, PAWC will still avoid almost all attrition for 18 months (2021 and half of 2022). Further, by early 2023, after the Company has made all of the plant investment that was included in its base rate claim (and barring overearning), it can reinstate its water and wastewater Distribution System Improvement Charges (DSIC). ${ }^{24}$ Id. at 33; 66 Pa . C.S. §§ 1357(a)(1), 1358(b)(2)-(3).

## C. Rate Base Adjustment Relating to Amortization of EADIT

OCA witness Smith recommended an adjustment to rate base to incorporate the impact of his recommended adjustment to PAWC's proposed amortization period for unprotected Excess Accumulated Deferred Income Taxes, referred to as "excess ADIT" or "EADIT". OCA App. A.2, Table II (end of Year 2021); OCA App. A.3, Exh. LA-8, Sch. C-11 at 5 (2022 FPFTY); OCA St. 2 at 110; OCA St. 2SR at 55.

[^16]
## D. Cash Working Capital

OCA witness Smith recommended adjustments to the Company's proposed Cash Working Capital to incorporate the impacts of his expense adjustments. See OCA App. A.1-A.2, Tables IV, VI; OCA App. A.3, Exh. LA-8, Sch. B-2; OCA St. 2 at 38-43.

## VI. REVENUES

PAWC is seeking a large amount of additional revenue from customers as a result of this Company-proposed ratemaking adjustment although the trend cited by PAWC is not new. OCA St. 2 at 50. The Company's adjustment, if adopted, would have customers preemptively paying higher rates for estimated declines in future usage. Id. at 51. It would enable PAWC to increase its revenue requirements and customer rates while also having its customers pay for water that PAWC projects its customers will not be using in the future. Id.

The OCA notes that as a result of the COVID-19 pandemic, there was a statewide shutdown of schools and business on March 16, 2020 in an effort to halt the spread of the COVID-19. OCA St. 2 at 52. As a result of the statewide shutdown and the subsequent increase of Pennsylvanians staying at home, it stands to reason that residential water usage has increased during this period. Id. at 53. Given the current circumstances in Pennsylvania and the unknown duration of the Governor's disaster emergency, OCA witness Smith testified that the Company's projected decrease in residential water usage for the 2020 FTY cannot be relied upon. OCA St. 2 at 53. As such, the OCA recommends that the portion of PAWC's adjustment related to estimated declining residential water usage for the 2020 FTY be rejected. OCA St. 2 at 53-55; OCA App. A.3, Exh. LA-8, Sch. C-1B through C-1H.

## VII. OPERATING AND MAINTENANCE EXPENSES

## A. Payroll Costs - Prorating Wage Increases

Following from the OCA's recommendation to utilize an average rate base instead of an end of year rate base for the MYRP as proposed by the Company, OCA witness Smith made an adjustment to the Company's salary and wages and, following from that adjustment, an adjustment to Defined Contribution Plan and Employee Stock Purchase Plan and Group Insurance expenses. OCA St. 2 SR at 46-48, 50-53; see OCA App. A.3, Exh. LA-8, Schs. C-5 at 1-7, C-7.
B. Performance Based Compensation (PAWC and Service Co.)

1. Annual Performance Plan

The OCA recommends that PAWC's and its allocated Annual Performance Plan (APP) costs for the affiliate Service Company be reduced by $\square$ because the program's growth strategy and payment of the awards are driven by financial gains to shareholders. Additionally, the increased costs are beyond what is necessary for the provision of safe and reliable utility service at just and reasonable rates. OCA St. 2 SR at 50 . The OCA's recommendation to

OCA St. 2SR at 32.
The OCA further recommends that PAWC's and its affiliate Service Company's costs for its LTPP should be eliminated from PAWC's cost of providing utility service for ratepayers. OCA St. 2SR at 50 .

OCA witness Smith testified in regard to the APP as follows:




OCA St. 2 at 69. As shown in the chart above from the Company's APP
fund,


Ratepayers should not be required to fully fund executive and management compensation as derived from the Company's APP, especially given the current difficulties faced by ratepayers due to the COVID-19 pandemic. The OCA's recommendation results in revenue requirement

[^17]reductions to the Company's APP expense and APP expense related to AWWSC. OCA App. A.2, Table II; OCA St. 2SR at 48-49; App.3, Exh. LA-8, Sch. C-6.

## 2. Stock-Based Compensation Expense/LTPP

The OCA submits that ratepayers should not be required to pay executive or management compensation which is based on the performance of PAWC's stock price (or the stock price of its parent company). The Company proposes to charge its ratepayers to fund the full amount of stock based compensation costs that are directly charged to PAWC and the stock based compensation costs that are included in the Service Company fees that are allocated to PAWC. OCA St. 2SR at 37. The Company's stock-based compensation plan is designed to benefit the Company's shareholders and does not provide any quantitative benefits to ratepayers. OCA St. 2 at 76. The Company, moreover, was not able to provide any studies that demonstrated a quantitative benefit to ratepayers from the provision of stock-based compensation to PAWC and affiliated service company executives. OCA St. 2 at 75.

The Kentucky Public Service Commission recently denied recovery of 50 percent of APP expense and 100 percent of Long Term Performance Plan (LTPP) expense for Kentucky-American Water Company related to the financial performance measures associated with both plans, stating:

The Commission has consistently disallowed recovery of the cost of employee incentive compensation plans that are tied to financial measures because such plans benefit shareholders while ratepayers receive little benefit. However, the Commission has also held that the amount removed for ratemaking purposes should be based on the performance measures and not the funding measures. This distinction is important because, while 100 percent of Kentucky-American's LTPP performance measures are tied to earnings measures, the APP performance measures are based on 50 percent on financial measures and 50 percent on non-financial measures.

The Commission finds that it is reasonable to remove 50 percent, or $\$ 636,832$, of the $\$ 1,273,663$ cost for the APP that is tied to financial measures, and 100 percent, or $\$ 496,746$ of the cost for the LTPP that is tied to financial measures for ratemaking purposes.

OCA St. 2 at 71 (citing KAWC 2019 at *69-71 (emphasis in original)).
The California Public Utilities Commission also recently denied recovery of a portion of incentive compensation expense for California-American Water Company (Cal-Am) that relates to the financial performance measures of APP expense. The California Decision states as follows:

In recent GRCs, the Commission reduced the expenses requested for incentive compensation when performance goals benefit both shareholders and ratepayers. Cal-Am's 2018 Proxy Statement states that the 2017 APP performance goals are based on (1) Adjusted Earnings Per Share (50\%), (2) Customer Satisfaction (15\%), (3) Occupational Safety and Health Administration (OSHA) Recordable Incident Rate (7.5\%), (4) Days Away/Restricted or Job Transfer Rate (DART) (7.5\%), (5) Environmental Leadership (10\%), and (6) Operational Efficiency (10\%). Upon reviewing the performance metrics that Cal-Am historically used for its APP, we find that shareholders and ratepayers equally benefit when these metrics are met because the safety, environmental, and operational goals benefit ratepayers while the financial goals benefit shareholders. Therefore, we find that shareholders should also share $50 \%$ of the costs in funding the APP and reduce Cal-Am's APP request by $50 \%$.

OCA St. 2 at 72 (citing CalAm 2018 at *118-19).
It is neither reasonable nor appropriate regulatory policy to require ratepayers to fund a shareholder-oriented expense, especially when many ratepayers are struggling with financial difficulties due to the COVID-19 pandemic. OCA St. 2 at 76-77. For this and the reasons discussed above, the costs of the LTPP in which the PAWC and the affiliate Service Company participate should be eliminated from PAWC's cost of providing utility service to ratepayers. OCA St. 2SR at 38 ; see OCA App. A.2, Table II.

## C. Capitalization Rate

The Company applied capitalization rates to its MYRP consisting of the average of the capitalization rates for 2017, 2018, and 2019. OCA St. 2 at 82 ; OCA St. 2SR at 36. OCA witness Smith noted that, if the capitalization rate were fluctuating up and down each year, it may be appropriate to apply an average. OCA St. 2 at 82 . However, the Company's capitalization rate has consistently increased each consecutive year. OCA St 2 at 82 ; OCA St. 2SR at 39. As such, OCA
witness Smith recommended that, rather than using a historic 2017-2019 average, the most recent capitalization rate from 2019 should be used for 2021 Rate Year 1 and 2022 Rate Year 2, as they are both fully projected rate years. OCA St. 2 at $83-84$; OCA St. 2 SR at 53-54; see OCA App. A.2, Table III; OCA App. A.3, Exh. LA-8, Sch. C-8A.

## D. Annual Depreciation

Following from OCA's recommendation to use an average rate base, OCA witness Smith recommended an adjustment to the Company's depreciation expense based on average 2022 plant in service. OCA St. 2 at 90-92; OCA St. 2SR at 56; see OCA App. A.3, Exh. LA-8, Sch. C-14.

## VIII. TAXES

## A. Taxes Other Than Income Taxes

Following from OCA's recommendation to use an average rate base, OCA witness Smith made an adjustment to the Company's property tax expense. OCA St. 2 at 89-90; OCA St. 2SR at 55-56; OCA App. A.3, Exh. LA-8, Sch. C-13.

## B. Income Taxes - Excess ADIT

The Company has proposed to amortize its unprotected Excess Accumulated Deferred Income Taxes (EADIT), using an Average Rate Assumption Method (ARAM). OCA St. 2SR at 9. OCA witness Smith recommends that the Company's unprotected EADIT be amortized over a three-year period using the straight-line method, rather than the approximately 40-year period proposed by PAWC under the ARAM method. OCA St. 2 at 103; see OCA App. A.2, Table II; OCA St. 2SR at 9-10; OCA Exh. LA-7, Sch. C-11 at 1, Col. B; OCA Exh. LA-7 at 1, Col. C; OCA Exh. LA-7, Sch. C-11 at 4.

The Commission has discretion under the TCJA in determining the amortization period for all unprotected EADIT. OCA St. 2 at 107-08. The amortization period established in this case will
have a significant impact on rates. The longer the amortization period and the higher the allowed return on equity, the greater the increase to revenue requirement and, ultimately, customer rates. OCA Cross Exam. Exhs. 1-2; Tr. 756-57, 761-62 (Wilde). The OCA’s adjustment would reduce revenue requirement by almost $\$ 30$ million on a total Company basis. OCA Exh. LA-7, Sch. B-3; OCA St. 2SR at 31.

The following table illustrates the effect of utilizing different amortization periods for unprotected EADIT, by comparing the OCA's recommended three-year amortization period for unprotected EADIT (at the OCA's recommended cost of capital and return on equity) to longer amortization periods:

Rate Year Ending December 31, 2021

| Line No. | Description |  | Total Company | Water Operations | Sewer Operations |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | (A) | (B) | (C) |
|  | 6-Year Unprotected EADIT Amortization |  |  |  |  |
| 1 | Revenue Requirement - 3 Years Unprotected EADIT Amortization | S | $(37,427,093)$ | \$ $(68,333,994)$ | \$30,906,901 |
| 2 | Revenue Requirement - 6 Years Unprotected EADIT Amortization | \$ | $(14,647,855)$ | \$ $(47,589,045)$ | \$32,941,190 |
| 3 | Difference | \$ | 22,779,238 | \$ 20,744,949 | \$ 2,034,289 |
|  | 8-Year Unprotected EADIT Amortization |  |  |  |  |
| 4 | Revenue Requirement - 3 Years Unprotected EADIT Amortization | \$ | $(37,427,093)$ | \$ $(68,333,994)$ | \$30,906,901 |
| 5 | Revenue Requirement - 8 Years Unprotected EADIT Amortization | \$ | $(8,953,006)$ | \$ (42,402,767) | \$33,449,761 |
| 6 | Difference | \$ | 28,474,087 | \$ 25,931,227 | \$ 2,542,861 |
|  | 10-Year Unprotected EADIT Amortization |  |  |  |  |
| 7 | Revenue Requirement - 3 Years Unprotected EADIT Amortization | \$ | $(37,427,093)$ | \$ $(68,333,994)$ | \$30,906,901 |
| 8 | Revenue Requirement - 10 Years Unprotected EADIT Amortization | \$ | $(5,536,225)$ | \$ $(39,291,081)$ | \$33,754,856 |
| 9 | Difference | \$ | 31,890,868 | \$ 29,042,913 | \$ 2,847,955 |
|  | 15-Year Unprotected EADIT Amortization |  |  |  |  |
| 10 | Revenue Requirement - 3 Years Unprotected EADIT Amortization | \$ | $(37,427,093)$ | \$ $(68,333,994)$ | \$30,906,901 |
| 11 | Revenue Requirement - 15 Years Unprotected EADIT Amortization | \$ | $(980,331)$ | \$ $(35,142,059)$ | \$34,161,728 |
| 12 | Difference | \$ | 36,446,762 | \$ 33,191,935 | \$ 3,254,827 |
|  | 20-Year Unprotected EADIT Amortization |  |  |  |  |
| 13 | Revenue Requirement - 3 Years Unprotected EADIT Amortization | \$ | $(37,427,093)$ | \$ $(68,333,994)$ | \$30,906,901 |
| 14 | Revenue Requirement - 20 Years Unprotected EADIT Amortization | S | 1,297,579 | \$ (33,067,548) | \$34,365,127 |
| 15 | Difference | \$ | 38,724,672 | \$ 35,266,446 | \$ 3,458,226 |

OCA Cross Exh. 1. If a higher return on equity and overall capital is allowed in this case than recommended by the OCA, it will increase the impact of lengthening the amortization period for unprotected EADIT, as shown by comparing the "Difference" line in the tables above and below.

Pennsylvania American Water Company
Docket Nos. R-2020-3019369 and R-2020-3019371
Revenue Requirement Impacts of EADIT Amortization Scenarios Differences From Surrebuttal - 3 Year Amortization Unprotected EADIT and a 9.5\% ROE

Rate Year Ending December 31, 2021

| Line No. | Description |  | Total Company | Water Operations | Sewer Operations |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | (A) | (B) | (C) |
|  | 3-Year Unprotected EADIT Amortization Using a 9.5\% ROE |  |  |  |  |
| 1 | Revenue Requirement - 3 Years Unprotected EADIT Amortization - OCA Surrebuttal | \$ | $(37,427,093)$ | \$ (68,333,994) | \$30,906,901 |
| 2 | Revenue Requirement - 3 Years Unprotected EADIT Amortization and 9.5\% ROE | \$ | 8,011,891 | \$ (29,851,809). | \$37,863,700 |
| 3 | Difference | \$ | 45,438,984 | \$ 38,482,185 | \$ 6,956,799 |
|  | 6-Year Unprotected EADIT Amortization Using a 9.5\% ROE |  |  |  |  |
| 4 | Revenue Requirement - 3 Years Unprotected EADIT Amortization - OCA Surrebuttal | \$ | $(37,427,093)$ | \$ ( $68,333,994$ ) | \$30,906,901 |
| 5 | Revenue Requirement - 6 Years Unprotected EADIT Amortization and 9.5\% ROE | \$ | 30,605,493 | \$ $(9,276,812)$ | \$39,882,306 |
| 6 | Difference | \$ | 68,032,587 | \$ 59,057,182 | \$ 8,975,405 |
|  | 8-Year Unprotected EADIT Amortization Using a 9.5\% ROE |  |  |  |  |
| 7 | Revenue Requirement - 3 Years Unprotected EADIT Amortization - OCA Surrebuttal | \$ | $(37,427,093)$ | \$ (68,333,994) | \$30,906,901 |
| 8 | Revenue Requirement - 8 Years Unprotected EADIT Amortization and 9.5\% ROE | \$ | 36,253,938 | \$ $(4,133,017)$ | \$40,386,956 |
| 9 | Difference | \$ | 73,681,032 | \$ 64,200,977 | \$ 9,480,055 |
|  | 10-Year Unprotected EADIT Amortization Using a 9.5\% ROE |  |  |  |  |
| 10 | Revenue Requirement - 3 Years Unprotected EADIT Amortization - OCA Surrebuttal | \$ | $(37,427,093)$ | \$ (68,333,994) | \$30,906,901 |
| 11 | Revenue Requirement - 10 Years Unprotected EADIT Amortization and 9.5\% ROE | \$ | 39,642,862 | \$ $(1,046,832)$ | \$40,689,693 |
| 12 | Difference | \$ | 77,069,955 | \$ 67,287,162 | \$ 9,782,793 |
|  | 15-Year Unprotected EADIT Amortization Using a 9.5\% ROE |  |  |  |  |
| 13 | Revenue Requirement - 3 Years Unprotected EADIT Amortization - OCA Surrebuttal | \$ | (37,427,093) | \$ (68,333,994) | \$ 30,906,901 |
| 14 | Revenue Requirement - 15 Years Unprotected EADIT Amortization and 9.5\% ROE | \$ | 44,161,636 | \$ 3,068,204 | \$41,093,432 |
| 15 | Difference | \$ | 81,588,729 | \$ 71,402,198 | \$10,186,531 |
|  | 20-Year Unprotected EADIT Amortization Using a 9.5\% ROE |  |  |  |  |
| 16 | Revenue Requirement - 3 Years Unprotected EADIT Amortization - OCA Surrebuttal | \$ | $(37,427,093)$ | \$ (68,333,994) | \$30,906,901 |
| 17 | Revenue Requirement - 20 Years Unprotected EADIT Amortization and 9.5\% ROE | \$ | 46,420,978 | \$ 5,125,722 | \$41,295,256 |
| 18 | Difference | \$ | 83,848,071 | \$ 73,459,716 | \$10,388,355 |

OCA Cross Exh. 2.

A three-year amortization period is reasonable and consistent with other amortization periods used by the Company in its proposed tariff. OCA St. 2 at 106. Amortizing the unprotected EADIT amount over a three year period promotes intergenerational equity as it returns the excess income tax money to the customers who paid rates based on the previous $35 \%$ corporate tax rate
and it helps to mitigate the rate impact. ${ }^{26}$ OCA St. 2SR at 19-20; OCA App. A.2, Table II; OCA
App. A.3, Exh. LA-8, Sch. C-11 at 5.
The Company's position is unreasonable as it does not come close to matching the return of the unprotected EADIT to the ratepayers who paid the monies that contributed to the EADIT at issue. OCA St. 2SR at 18. PAWC claims that returning unprotected EADIT over a longer time frame benefits ratepayers, however, the analysis provided by Company witness Wilde is seriously flowed as each of the calculated revenue requirement amounts presented in PAWC's Exhibit JRW3 fails to take into account the time value of money. ${ }^{27}$ OCA St. 2SR at 10-12, 16-17, 22; OCA Exh.

LA-9. Once the time value of money is taken into account, the three-year amortization is clearly
shown to financially benefit ratepayers. Id. Mr. Smith explained:
If the cost of consumer credit is approximately 8 percent or higher, consumers are financially better off with a three-year amortization of unprotected EADIT. For customers who have a high cost of consumer credit, such as those using credit card plan financing, such customers are far better off on a present value basis with a threeyear amortization of unprotected EADIT.

OCA St. 2 SR at $12 .{ }^{28}$

[^18]The OCA submits that, both a traditional ratemaking approach and the realities of the current economic and public health situation due to the pandemic support returning customer supplied customers to the customers who supplied the capital in a reasonable, shorter time period than 40 years. As such, the OCA respectfully requests that the Commission adopt a three-year amortization period for PAWC's unprotected EADIT. The OCA's recommended adjustment to income tax expense can be found in OCA App. A.2, Table II and App. A.3, Exh.t LA-8, Sched. C-11, page 5.

## IX. RATE OF RETURN

PAWC seeks an $8.02 \%$ overall rate of return, including a cost of equity of $10.80 \%$, and a cost of debt of $4.47 \%$. PAWC St. No. 13, Sch. 8. The Company's $10.8 \%$ return on common equity includes a premium for management performance of at least 25 basis points. PAWC St. No. 13 at 76. The Company's proposed cost of capital is excessive as illustrated by the testimony of OCA witness Aaron Rothschild. OCA St. 3 at 9-12, 58-74. Mr. Rothschild uses a Discounted Cash Flow (DCF) analysis and a Capital Asset Pricing Model (CAPM) as a check. OCA St. 3 at 31-58. His analysis demonstrates that under a business as usual approach for PAWC's water operations, the market-derived cost of common equity is $8.00 \%$, and the overall rate of return is $6.30 \%$, based upon a capital structure of $48.30 \%$ debt and $51.64 \%$ common equity. Id. at 2-7; OCA Schs. ALR-1, ALR-3. For PAWC's wastewater operations, a market-derived cost of common equity is $8.05 \%$, and the overall rate of return is $6.08 \%$, based upon a capital structure of $39.44 \%$ debt and $50.37 \%$ common equity. Id. The OCA submits that in the event the Commission determines PAWC is entitled to an increase at this time, Mr. Rothschild has presented a cost of capital proposal under a business as usual approach that accurately portrays the current low cost capital environment and reflects reasonable returns for investors (OCA St. 3 at 16-18, 29-30), balanced with the concern for PAWC consumers who will be paying the increased rates. Mr. Rothschild's approach also
considers the financial hardships facing many PAWC consumers as a result of the COVID-19 pandemic. OCA St. 3 at 14-18.

If the OCA's recommendation that no increase be approved as a result of the ongoing COVID-19 pandemic and the related economic impact on PAWC's customers is adopted, the resulting overall rates of return of $7.70 \%$ for water (with a capital structure of $51.64 \%$ cost of common equity and $48.3 \%$ cost of debt), and $2.84 \%$ for wastewater (with a capital structure of $50.37 \%$ cost of common equity and $39.44 \%$ cost of debt) represent a fair rate of return that balances the interests of consumers and shareholders and would be in the public interest. See, supra, Section III; OCA App. A.1, Table I(A); App. A.1, Table I(A).

## A. Capital Structure

PAWC proposes using a capital structure of $56.06 \%$ common equity and $43.88 \%$ debt. PAWC St. 13 at 77. The OCA disagrees with the use of this capital structure because the common equity ratio of PAWC's requested capital structure is significantly higher than the average of the seven regulated water utilities in the proxy group (51.6\%), and the common equity ratio of its parent, American Water Works (41.4\%). See Sch. ALR-5 at 5.

The Pennsylvania Superior Court has held the following regarding capital structure of utilities that are wholly owned subsidiaries:

Where, as here, the utility is a wholly owned subsidiary, its capital structure may not be one which it would maintain if it were obliged to obtain its debt and equity financing on the open market rather than from a parent company. In such instances the actual capital structure may be weighted too heavily on the debt side or the equity side...The use of the actual capital structure in such peculiar circumstances might be unfair to either the utility or its customers, depending upon whether debt or equity is disproportionately high. Under such circumstances the commission must make adjustments based upon substantial evidence in order to reach a fair result.

Riverton Consol. Water Co. v. Pa. P.U.C., 140 A.2d 114 at 121 (Pa. Super. 1958) (Riverton). A utility is not entitled to have the cost of capital computed on an "ideal" capital structure, but rather,
one which is fair, reasonable, and stable. Id. at 121-22. Based on this analysis, the Court agreed with the Commission's decision to adjust the utility's capital structure downward. Similar to Riverton, the Commission should adjust PAWC's proposed common equity ratio downward because it is significantly higher than that of its parent company and the average of similar water companies in the OCA's proxy group.

For PAWC's water operations for the rate year ending December 31, 2021, OCA witness Rothschild recommends a capital structure of $51.64 \%$ common equity and $48.30 \%$ debt based upon comparisons to the companies in the proxy group which utilize common equity ratios between $41.4 \%$ and $58.7 \%$. OCA St. 3 at 13. For PAWC's wastewater operations for the rate year ending December 31, 2021, Mr. Rothschild recommends a capital structure of $50.37 \%$ common equity and 39.44\% debt. Id. at 3. The Commission should reject PAWC's proposed capital structure and adopt the OCA's recommendation.

## B. Cost of Long-Term Debt

Ms. Bulkley proposed using a cost of long-term debt of $4.47 \%$ for the Year 1 ending December 31, 2021. PAWC St. 13 at 80. The OCA does not object to the use of this rate and has used it in the OCA's analysis. However, no long-term debt rate should be established now for Year 2. Mr. Rothschild cautions that if a Multi-Year Rate Plan were to be approved, PAWC should be required to update its cost of debt before Year 2 rates become effective because the projected debt cost rate could overstate the cost of debt during 2021 and 2022. OCA St. 3 at 13.

## C. Common Equity Cost Rate

COVID-19 has made it more challenging to determine the current cost of capital because it has drastically increased the speed and intensity of capital market change. Id. Instead of relying solely on historical data and analyst forecasts, Mr. Rothschild uses current market prices (e.g., stocks, bonds, options, etc.), which measure investors' expectations directly. Id. PAWC witness

Bulkley utilizes a non-market based approach which relies on historical data. OCA St. 3SR at 3 . Ms. Bulkley's approach is inappropriate, especially considering the current economic climate.

Ms. Bulkley proposes a $10.80 \%$ cost of equity. This is substantially higher than the returns allowed for utilities in other states in recent years. ${ }^{29}$ OCA St. 3 at 12-13. Mr. Rothschild used a constant growth form of the Discounted Cash Flow (DCF) method, based on a water-only proxy group, that determines growth based on the sustainable retention growth procedure and a nonconstant DCF method. OCA St. 3 at 31. Mr. Rothschild's constant growth form DCF analysis indicates a cost of equity range of between $7.84 \%$ and $7.96 \%$ for the Water Proxy Group. OCA St. 3 at 40-41; OCA Sch. ALR-3 at 1. As these results use analysts' forecasts to derive sustainable growth, in part, and analysts' forecasts of dividend growth and book value growth in the nonconstant form of the DCF method, the results should be considered conservatively high. Id. This is because analysts' forecasts of such growth have been known to be overstated. Mr. Rothschild's non-constant growth DCF method indicates a cost of equity of between $5.30 \%$ and $6.09 \%$. OCA St. 3 at 45. Mr. Rothschild implemented the Capital Asset Pricing Model (CAPM), as a check on his DCF analysis. OCA St. 3 at 31, 46-58.

## 1. The Legal Framework for Determining What Rate of Return is Fair to PAWC Consumers and the Company's Investors

The Commission is responsible for protecting the public interest. City of Pittsburgh v. Pa. P.U.C., 126 A.2d 777, 785 (Pa. Super. 1956) (City of Pittsburgh). Generally, a public utility is entitled to no more than a reasonable opportunity to earn a fair rate of return on shareholder investment. The Court in City of Pittsburgh stated that " $[\mathrm{i}] \mathrm{t}$ is the function of the commission in

[^19]fixing a fair rate of return to consider not only the interest of the utility but that of the general public as well. The commission stands between the public and the utility." Id.

Typically, cost of capital is the starting point for determining a fair rate of return. Pa. P.U.C. v. Philadelphia Suburban Water Co., 71 Pa. PUC 593, 623 (1989) (PSWC 1989). The Commission has defined an appropriate rate of return as:
[T]he amount of money a utility earns, over and above operating expenses, depreciation expense and taxes, expressed as a percentage of the legally established net valuation of utility property, the rate base. Included in the 'return' are interest on long-term debt, dividends on preferred stock, and earnings on common stock equity. In other words, the return is the money earned from operations which is available for distribution among the capital. In the case of common stockholders, part of their share may be retained as surplus.

Pa. P.U.C. v. Emporium Water Co., 95 Pa. PUC 191, 196, 208 PUR4th 502, 507 (2001) (EWC
2001) (quoting Public Utility Economics, Garfield and Lovejoy, 116 (1964)). Further, "[ $t$ ]he return authorized must not be confiscatory, and must be based upon the evidence presented." PSWC 1989, 71 Pa. PUC at 623 (citing Pittsburgh v. Pa. P.U.C., 165 Pa. Super. 519, 69 A.2d 844 (1949)).

A public utility with facilities and assets used and useful in the public service is entitled to no more than a reasonable opportunity to earn a fair rate of return on its investment. Pa. P.U.C. v. Roaring Creek Water Co., 87 Pa. PUC 826, 844 (1997). The United States Supreme Court established the standard with which to evaluate whether a rate of return is fair in Bluefield, stating:

The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management. . .to raise the money necessary for the proper discharge of public duties.

262 U.S. at 693. The Court also said that allowed rates of return should reflect the following:
[A] return on the value of the [utility's] property which it employs for the convenience of the public equal to that. . .being made at the same time... on investments in other business undertakings which are attended by corresponding risks and uncertainties.

Id. at 692. Twenty-one years later, the Court reviewed the issue of fair rate of return in Hope. Therein, the Court held that a fair rate of return "should be commensurate with returns on investments in other enterprises having corresponding risks" while being sufficient "to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and attract capital." Hope at 603. The Court noted that " $[t]$ he rate-making process under the Act, i.e., the fixing of 'just and reasonable' rates, involves a balancing of the investor and consumer interests . . . and does not insure that the business shall produce revenues." Id. More recently, the Court stated that consumers are obliged to rely upon regulatory commissions to protect them from excessive rates and charges.

See Permian Basin Area Rate Cases, 390 U.S. 747, 794-95 (1968) (citing Atlantic Refining Co. v. Public Serv. Comm'n, 360 U.S. 378, 388 (1959)).

Finally, in Duquesne Light Co. v. Barasch, the Court stated:
whether a particular rate is 'unjust' or 'unreasonable' will depend to some extent on what is a fair rate of return given the risks under a particular rate setting, and on the amount of capital upon which the investors are entitled to earn on that return.

488 U.S. 299 at 310. In determining a fair rate of return this Commission has described its task as follows:

A fair rate of return for a public utility, however, is not a matter which is to be determined by the application of a mathematical formula. It requires the exercise of informed judgment based upon an evaluation of the particular facts presented in each proceeding. There is no one precise answer to the question as to what constitutes the proper rate of return. The interests of the Company and its investors are to be considered along with those of the customers, all to the end of assuring adequate service to the public at the least cost, while at the same time maintaining the financial integrity of the utility.

Pa. P.U.C. v. Pennsylvania Power Co., 55 Pa. PUC 552, 579 (1982) (emphasis added). See Pa.
P.U.C. v. National Fuel Gas Dist. Corp., 73 Pa. PUC 552, 603-605 (1990).

## 2. Cost of Equity Calculation

a. Proxy Group

Mr. Rothschild included the following seven utility companies in the Water Proxy Group: 1) American States Water, 2) American Water Works, 3) Aqua America, 4) California Water Service Group, 5) Middlesex Water Company, 6) SJW Corp, and 7) York Water. OCA St. 3 at 30. Ms. Bulkley's proxy group includes 13 publicly traded water and natural gas companies. PAWC St. No. 13 at 40, Figure 11. Mr. Rothschild's proxy group represents a more accurate comparison group because all of the companies he included have significant water and wastewater operations. OCA St. 3 at 30. Seven of the 13 companies in Ms. Bulkley's proxy group are natural gas companies with potentially difference risk profiles and therefore a different cost of equity than PAWC. Id. As explained further below, Ms. Bulkley's proxy group represents an inappropriate comparison group and should not be utilized.

Ms. Bulkley acknowledges there is a trend towards consolidation in the utility industry. PAWC St. No. 13 at 40. Most of the companies included in her proxy group have been involved in mergers and acquisitions within the last several years, some as recently as early 2020. It is reasonable to conclude that this trend will continue resulting in stock volatility for the years to come. Comparing PAWC's risk profile to those of the natural gas companies included in Ms. Bulkley's proxy group which have been, and will likely continue to be, actively involved in mergers and acquisitions is inappropriate.

Furthermore, the Commission has rejected use of a non-water utility barometer group in a water rate case. Pa. P.U.C. v. Philadelphia Suburban Water Co., 1991 Pa. PUC LEXIS 206, *126 (1991) (Philadelphia Suburban). In that case, Philadelphia Suburban Water Company (PSWC) utilized a small electric company barometer group. Id. The Commission found the Office of Trial Staff's argument concerning PSWC's use of an electric company barometer group as non-risk
similar to PSWC to be valid and rejected PSWC's electric company barometer group. Id. Instead, the Commission only focused on the water company barometer groups in its deliberations. Id. at 127. Similarly, the Commission should reject PAWC's proxy group as is because it includes natural gas companies which are non-risk similar to PAWC.

## b. Application of Constant Growth DCF Model

Mr. Rothschild uses a constant growth form of the Discounted Cash Flow (DCF) method that determines growth based on the sustainable retention growth procedure and a non-constant DCF method. Mr. Rothschild's constant growth form DCF analysis indicates a cost of equity range of between $7.84 \%$ and $7.96 \%$ for the Water Proxy Group. See Sch. ALR-3 at 1.

Mr. Rothschild obtained the stock Price ("P") from the closing prices of the stocks on July 31, 2020. OCA St. 3 at 38. He also obtained an average stock price for the 12 months ending July 31, 2020. Id. The value of the future expected return on equity ("r") is based on the average return on book equity expected by Value Line, adjusted in consideration of recent returns. Id. Mr. Rothschild also made a computation that was based on a review of both the earned return on equity consistent with analysts' consensus earnings growth rate expectations and on the actual earned returns on equity. Id. For a stable industry such as utility companies, investors will typically look at actual earned returns on equity as one meaningful input into what can be expected for future earned returns on book equity. See OCA Sch. ALR-3 at 1.

Since the stock prices for the comparative companies are substantially higher than their book value, the return investors expect to receive on their market price investment is considerably less than whatever is the anticipated return on book value. OCA St. 3 at 38. If the market price is low relative to book value, the cost of equity will be higher than the future expected return on book equity, and if the market price is high, then the return on book equity will be less than the cost of equity. Id. at 38-39.

Utility companies also grow by selling new common stock. Mr. Rothschild quantified this growth by multiplying the amount that the actual market-to-book ratio exceeds 1.0 , by the compound annual growth rate of stock that Value Line forecasts. See Sch. ALR-3 at 1. Mr. Rothschild presents DCF results based on the most recent stock pricing data from July 31, 2020 as well as the average of the high and low stick price over the past 12 months to arrive at a range of reasonable values. OCA St. 3 at 39. The DCF result based on the average of the high and low stock prices for the year ending July 31,2020 is $7.84 \%$, and the DCF result based on the stock price as of July 31, 2020 is $7.96 \%$. Id.; OCA Sch. ALR-3 at 1.

The appropriate value of " $r$ " is the value anticipated by investors to be maintained on average in the future. OCA St. 3 at 40. Based on the combination of the forecasted return on equity derived from the Zacks consensus, recent historical actual earned returns, and Value Line's forecast, Mr. Rothschild utilized a $10.60 \%$ value of " $r$ " for the DCF growth computation. Id.

## c. Application of Non-Constant Growth DCF Model

The non-constant growth form of the DCF model determines the return on investment expected by investors based on an estimate of each separate annual cash flow the investor expects to receive. OCA St. 3 at 41. For the purpose of this computation, Mr. Rothschild incorporated Value Line's detailed annual forecasts to arrive at the specific non-constant growth expectations that an investor who trusts Value Line would expect. Id.; Sch. ALR-3 at 3.

In the first stage, cash flow entry is the cash outflow an investor would experience when buying a share of stock at the market price. OCA St. 3 at 41. The subsequent years of cash flow are equal to the dividends per share that Value Line forecasts. Id. For the intermediate years of the forecast period in which Value Line does not provide a specific dividend, the annual dividends were obtained by estimating that dividend growth would persist at a compound annual rate. Id. The cash flow at the end of the forecast period consists of both the last year's dividend forecast by Value

Line, and the proceeds from the sale of the stock. Id. The stock price used to determine the proceeds from selling the stock was obtained by estimating that the stock price would grow at the same rate at which Value Line forecasts book value to grow. Id.

Mr. Rothschild utilized annual expected cash flows in his DCF analysis because it is easier to input the data and for observers to visualize what is occurring. Id. at 42. Since dividends are paid quarterly and not annually, this produces a small overstatement of the cost of equity. Id. A quarterly model would show dividends being paid sooner and would also show earnings being available sooner. OCA St. 3 at 43. A company that receives its earnings sooner, rather than at the end of the year, has the opportunity to compound them. Id. Since revenues, and therefore earnings, are essentially received every day, a company that is supposed to earn an annual rate of $9.00 \%$ on equity would have to earn only $8.62 \%$ if the return were compounded daily. Id. This reduction from $9.00 \%$ to $8.62 \%$ would then be partially offset by the impact of the quarterly dividend payment to bring the result of switching from the simplifying annual model closer to, but still a bit below $9.00 \%$. Id.

Ms. Bulkley utilizes an Expected Earnings analysis. She claims that Mr. Rothschild's DCF analysis does not rely on earnings growth rates. PAWC St. 13-R at 78-80. As explained by Mr. Rothschild, even though the non-constant DCF model uses cash flow expectations as the valuation parameter, it still relies on earnings. OCA St. 3 at 43. The model relies on an expectation of future cash flows. Id. Future cash flows are derived from dividends during the time the stock is owned and capital gains from the sale of the stock. Id. Since earnings impact both dividends and stock price, the non-constant DCF model relies on earnings. Id. A major strength of the DCF model is its recognition of the difference between earnings paid out as a dividend and earnings retained in the business. OCA St. 3 at 43-44.

Under the non-constant DCF model, it is not necessary for earnings and dividends to grow at a constant rate for the model to accurately determine the cost of equity because the non-constant form of the DCF model separately discounts each and every future expected cash flow and does not rely on any assumptions of constant growth. OCA St. 3 at 45.

## d. CAPM

CAPM relates return to risk. OCA St. 3 at 46. Specifically, it relates the expected return on an investment in a security to the risk of investing in that security. Id. The riskier the investment, the greater the return. Id. Investors in a firm's equity face both firm-specific risk, such as management performance, and market risk, including impacts from the overall market such as recession. Id. The CAPM predicts that for a given equity security, the cost of equity has a positive linear relationship to the sensitivity of the stock's returns to movements in the overall market (e.g., S\&P 500). OCA St. 3 at 46-47. A security's market sensitivity is measured by its beta. Id. at 47 . The higher the beta of a stock, the higher the company's cost of equity-the return required by the investor to invest in the stock. Id.

To implement the CAPM, Mr. Rothschild determined the appropriate values for the three model inputs: Risk Free Rate, Beta, and Equity Risk Premium. OCA St. 3 at 47. How the three model inputs were calculated along with a summary of the CAPM cost of equity numbers derived from those inputs are discussed below.

## i. Risk Free Rates

It is generally preferable to use the market yield on short-term U.S. Treasury yields as the risk-free rate because these bonds have a beta close to zero. OCA St. 3 at 48. However, Mr. Rothschild chose to use a risk-free rate based on both long- and short-term treasury yields because investors expect short-term interest rates to increase. Id. Based on short-term U.S. Treasury bills (3 months) as of July 31, 2020, Mr. Rothschild determined the short-term risk-free rate is $0.09 \%$.

Id. He determined the long-term risk-free rate to be $1.20 \%$ based on the yield of long-term U.S. Treasury bonds ( 30 years) as of July 31, 2020. Id.

## ii. Betas

Mr. Rothschild used two betas, a forward beta and a hybrid beta, since the cost of equity should be based on investor expectations. OCA St. 3 at 49. The forward beta is based on forwardlooking investor expectations of non-diversifiable risk, and the hybrid beta is based on both forward-looking investor expectations and historical return data. Id.

The following illustrates the two betas used by Mr. Rothschild in his CAPM analysis:

1. Hybrid Beta: 50\% Option-Implied Beta (6 months) $+25 \%$ Historical Beta (6 months) $+15 \%$ Historical Beta ( 2 years) $+10 \%$ Historical Beta (5 years).
2. Forward Beta: $100 \%$ Option-Implied Beta (6 months).

OCA St. 3 at 51.
His option-implied betas were calculated by using publicly-available trading information for all the options for a given security (company or index) for a complete trading day. OCA St. 3 at 53. Calculating option-implied betas requires (1) obtaining stock option data for that company and a market index, (2) filtering the stock option data, (3) calculating the option-implied volatility for the company and for the index, (4) calculating the option-implied skewness for the company and for the index, and (5) calculating option-implied betas for the company based on implied volatility and skewness for the company and for the index. Id. Mr. Rothschild used the same methodology used by the Chicago Board of Options Exchange (CBOE) in calculating the Volatility Index (VIX) and SKEW Index. Id.

His historical betas were calculated by following the methodology used by Value Line. OCA St. 3 at 51-52. The only major difference between Mr. Rothschild's calculations and Value

Line's calculations is that Value Line uses the NYSE Composite Index and Mr. Rothschild used the S\&P 500 Index as the market index. Id. at 52.

## iii. Stock Options

Stock options are the right to buy or sell a stock at a specific price for a specified amount of time. OCA St. 3 at 49. A call option is the right to buy a stock at a specified exercise or strike price or before a maturity date, and a put option is the right to sell a stock at a specified exercise or strike price on or before a maturity date. Id. The market prices of put options and call options provide information regarding the probability distribution of future stock prices expected by investors. OCA St. 3 at 50. This information can be used to determine investors' return expectations including the relationship between the return expectations for individual Water Proxy Group companies and those for the overall market. Id.

## iv. Equity Risk Premium

Mr. Rothschild's equity risk premium is the expected return on the $\mathrm{S} \& \mathrm{P} 500$ minus the riskfree rate as described above. OCA St. 3 at 56. The implied volatility changes over time as investors’ perception of risk changes. Id. For example, during a crisis such as the COVID-19 pandemic and its implications on the market, implied volatility generally increases as investors expect that stock market prices have a greater change of large swings compared to times when there is no crisis. Id. Mr. Rothschild calculated his equity risk premium in two ways: a weighted risk premium which accounts for investors' expectations over the past three months, and a spot risk premium which is based on investors' expectations as of July 31, 2020. See OCA St. 3 at 56-58 (charts summarizing the results of the CAPM).

## 3. Analysis of PAWC's Cost of Equity

Ms. Bulkley recommends that the Company be allowed a return on equity of $10.80 \%$ and an overall cost of capital of $8.02 \%$. PAWC St. No. 13 at 3 . She made this determination by applying
her own version of the Discounted Cash Flow (DCF) Model, Risk Premium approach, and Capital Asset Pricing Model (CAPM) to a proxy group of 13 publicly traded water and natural gas utilities. PAWC St. No. 13 at 40, Fig. 11. She claims that it is appropriate to rely on several cost of equity models because investors and regulators are concerned that DCF results are not reasonable in current capital markets. PAWC St. No. 13 at 3.

Despite Ms. Bulkley's assertion, the Commission relies primarily on the use of the DCF analysis, and has done so for many years. ${ }^{30}$ In January 2004, the Commission wrote:

Historically, we have primarily relied on the DCF methodology in arriving at our determination of the proper cost of common equity. We have, in many recent decisions, determined the cost of common equity primarily based upon the DCF method and informed judgment. See Pennsylvania Public Utility Commission v. Philadelphia Suburban Water Company, 71 Pa. PUC 593, 623-632 (1989); Pennsylvania Public Utility Commission v. Western Pennsylvania Water Company, 67 Pa. PUC 529, 559-570 (1988); Pennsylvania Public Utility Commission v. Roaring Creek Water Company, 150 PUR4th 449, 483-488 (1994); Pennsylvania Public Utility Commission v. York Water Company, 75 Pa. PUC 134, 153-167 (1991); Pennsylvania Public Utility Commission v. Equitable Company, 73 Pa. PUC 345-346 (1990). We determine that the DCF method is the preferred method of analysis to determine a market based common equity cost rate. ${ }^{31}$

In its recent UGI-Electric decision, the Commission affirmed its primary reliance on the DCF method, stating that it has "found no reason to deviate from the use of this method in the instant case. ${ }^{32}$ This Commission has stated that determining a fair rate of return is an exercise of informed judgment, based upon the facts of each case. ${ }^{33}$ "The interests of the Company and its

[^20]investors are to be considered along with those of the customer, all to the end of assuring adequate service to the public at the least cost, while at the same time maintaining the financial integrity of the utility involved. ${ }^{34}$

In coming to this informed judgment, the Commission has stated on numerous occasions its preference to rely upon the DCF methodology over other methods such as the Risk Premium (RP) and Capital Asset Pricing Model (CAPM) in determining the rate of return. In PPL's 2012 and 2004 base rate case, the Commission reaffirmed its reliance upon the DCF method. ${ }^{35}$ The Commission additionally noted, however, that while it is not required, other methodologies can be used to check DCF results. ${ }^{36}$

Ms. Bulkley admits that "the Commission has traditionally relied primarily on the DCF method to estimate the cost of equity for regulated utilities." PAWC St. 13-R at 103. However, she argues that a DCF-only approach should not be used in this case based upon one 2012 PPL Electric Utilities case. In that case, the Commission recognized that market conditions were causing the DCF model to produce results that were much lower than other models such as the CAPM and Risk Premium. ${ }^{37}$ PAWC St. 13-R at 103-04. The OCA submits that market conditions are much different now, and likely will be in the foreseeable future, because of the COVID-19 pandemic. Furthermore, market conditions are unknown and therefore, immeasurable as a result of the pandemic, and consumers are facing significant financial hardship with no sign of immediate improvement. Therefore, the Commission should utilize its traditional DCF approach and reject PAWC's position.

[^21]Ms. Bulkley's $10.80 \%$ cost of equity and $8.02 \%$ cost of capital recommendations significantly overstate PAWC's market-based cost of equity. OCA St. 3 at 61 . If her recommendations are used to set rates, consumers will be considerably overcharged. Id. Her cost of equity recommendation is excessive because: 1) her cost of equity recommendation is based on a flawed analytical approach and an inappropriate definition of the cost of equity, despite defining it correctly in considerable portions of testimony, 2) her interpretation of current capital markets include knowable and/or speculative predictions, and 3) her comments about the relevance of the DCF method results in the current high market-to-book ratio environment. Id.

Instead, the OCA's cost of equity and capital recommendations, based on Mr. Rothschild's DCF analysis and use of CAPM as a check, should be adopted in the event the Commission determines PAWC is entitled to an increase at this time.

## 4. PAWC's Proposed Multi-Year Rate Plan

Mr. Rothschild discusses how PAWC's request for a MYRP relates to his cost of equity recommendation in two ways. OCA St. 3 at 75. First, if approved, the MYRP could impact the risk of investing in PAWC and therefore its cost of equity. Id. Second, there is a risk that this plan would lead to excessive earnings for PAWC and inflated customer rates. Id. OCA witness Rubin recommended the Commission reject PAWC's request for a MYRP.

If, however, the Commission approves PAWC's requested MYRP, Mr. Rothschild recommends that the Commission implement consumer protection measures in the form of an earnings sharing mechanism. Id. at 75. These measures are particularly important now because of increased uncertainty and concerns regarding consumers' ability to pay for basic living expenses, including utility bills. Id.
5. Fair Market Value Legislation's Impact on Cost of Equity: Section 1329 Reduces PAWC's Cost of Equity

Section 1329 of the Code allows a public utility to utilize fair market valuation when acquiring water and wastewater systems that are owned by a municipality or authority. 66 Pa . C.S. § 1329 (Section 1329). The Commission has stated that "Section 1329 helps mitigate the risk that a utility will not be able to fully recover its investment when water or wastewater assets are acquired from a municipal or authority." Application of Aqua Pennsylvania Wastewater, Inc., A-20172605434, Order at 4 (Nov. 8, 2017).

The passage of Section 1329 significantly reduces the risk of an investor-owned utility as it will be able to include the purchase price of a municipal water or wastewater system into rate base. OCA St. 3 at 78. In recognizing that fair market value legislation reduces investment risk, Ryan Wobbrock, a senior analyst at Moody's stated that "[w]hat is most important from a credit perspective is clarity surrounding the recoverability of the investment, and this legislation definitely helps provide that." ${ }^{38}$

In recognition of the risk-reducing influence of fair market value legislation, Mr. Rothschild recommends a cost of equity for PAWC of $8.00 \%$ which is below the midpoint of his cost of equity calculations for his Water Proxy Group (8.22\%). Id. at 80. For additional discussion of OCA's recommendations related to the shift in revenue requirement for acquisitions made under Section 1329, please see OCA St. 1 and, infra, Section XII.D.

[^22]
## D. Business Risks and Management Performance

PAWC witnesses Mr. Nevirauskas and Ms. Bulkley recommend that the Commission adopt a rate of return on equity in the upper end of Ms. Bulkley's range of ROE estimates ( $10.0 \%-10.8 \%$ ) in recognition of PAWC's superior management performance. OCA St. 3 at 80. Mr. Nevirauskas stated that PAWC should receive the $10.8 \%$ ROE or at least 25 basis points added to the ROE determined by the Commission. PAWC St. 1 at 41. PAWC claims that its request for 25 basis points in recognition of management performance is consistent with the Commission's decision in Aqua's 2007 base rate case. Id.

The COVID-19 pandemic presents unique circumstances and hardship for many PAWC customers, and PAWC should not be permitted to receive both an acquisition premium and an ROE enhancement at this time. Mr. Rothschild recommends that the Commission consider the burden on consumers as a result of the pandemic. OCA St. 3 at 81. When the Commission approved a 25 basis point request for Aqua Pennsylvania, Pennsylvania was not experiencing the effects of a global pandemic. It is unconscionable to award a management bonus at a time when PAWC's customers-both residential and business-are suffering the significant economic impacts from COVID-19. Second, PAWC should not be permitted to receive both an acquisition premium and an ROE enhancement regarding its acquisition of Delaware Sewer Company. OCA St. 3 at 81 . Finally, Ms. Bulkley's cost of equity recommendation of $10.80 \%$ is not market-based which results in a cost of equity that is significantly above a market-based rate. Id. Therefore, an allowed return on equity below Ms. Bulkley's range of ROE estimates ( $10.0 \%-10.8 \%$ ) should not be the criteria for any ROE enhancements. Id.

For the reasons stated above, the Commission should reject the positions of PAWC and adopt the OCA's recommendations.
E. Other Parties' Equity Cost Rate Recommendations and Principal Areas of Dispute

The OCA has addressed its recommendations and the areas of dispute in Sections IX.A. through IX.D, above.

## X. REGIONALIZATION AND CONSOLIDATION SURCHARGE

## A. Introduction

PAWC has proposed a Regionalization and Consolidation Surcharge that will collect, from existing customers, Section 1329 acquisition costs upon closing and up to the end of the next rate case. OCA St. 1 at 70. As explained below, the OCA submits that the surcharge proposal should be denied because it is contrary to the provisions of Section 1329, and it is contrary to sound ratemaking policies. Id. at 70-79.

## B. PAWC's Surcharge Imposes Additional Burdens on Existing Customers Solely Due to Increased Costs Related to Section 1329 Acquisitions.

The Regionalization and Consolidation Surcharge (RCS or surcharge) would collect the "revenue deficiency" from Section 1329 acquisitions that have closed since the Company's last rate case. OCA St. 1 at 70-71. The "revenue deficiency" is defined as the difference between the annual revenue requirement (return on the ratemaking rate base determined in the Section 1329 application, taxes, depreciation, and operation and maintenance expenses) and the revenue received from the acquired customers. Id. at 71. The surcharge would be revised each April. Id. at 70. There also would be a limit of no more than $5 \%$ of the revenues from existing water and wastewater customers, excluding public fire protection revenues and other surcharge revenues. Id. at 71. The surcharge would not apply to public fire protection customers. Id. at 70 .

Mr. Rubin calculated an estimate of the maximum surcharge revenues to be $\$ 38,850,794$.
OCA St. 1 at 71. Thus, the surcharge would permit PAWC to collect more than $\$ 38$ million
annually between rate cases from all existing PAWC customers, as a result of Section 1329 acquisitions. His calculations are show in Table 7, replicated below:

| Table 7: PAWC Proposed Subsidy Under <br> Regionalization and Consolidation Surcharge |  |
| :---: | :---: |
| Rate Zone | Proposed Revenues <br> (Excluding Public Fire) |
| Main Water | $\$ 694,179,269$ |
| Steelton Water | 288,607 |
| Main Wastewater (WW) | $29,411,453$ |
| Exeter WW | $10,026,829$ |
| Sadsbury WW | 952,612 |
| Scranton WW | $26,075,165$ |
| McKeesport WW | $14,298,866$ |
| Kane WW | $1,783,086$ |
| Total revenue base | $\$ 777,015,887$ |
|  | $5.00 \%$ |
| x Maximum surcharge | $\$ 38,850,794$ |

OCA St. 1 at 72. Mr. Rubin explained that the surcharge revenues of $\$ 38$ million (which would come from all PAWC Zone 1 water and wastewater customers) are two times the $\$ 19.1$ million subsidy that PAWC proposes to collect from water Zone 1 customers for Section 1329 acquisitions (discussed in Section XII.D, infra). OCA St. 1 at 71. If the surcharge and the proposed subsidies are approved, PAWC would collect more than $\$ 57$ million per year ( $\$ 38$ million from the surcharge and $\$ 19.1$ million from the wastewater subsidies) to support Section 1329 acquisitions, which is $7.5 \%$ of its proposed revenue requirement. Id.
C. PAWC's Proposed Surcharge Is Contrary to Section 1329 and Sound Regulatory Policy.

1. Section 1329

Section 1329 provides that the ratemaking rate base of the selling utility shall be incorporated into the rate base of the acquiring public utility in its next base rate case. 66 Pa . C.S. § 1329(c). Further, 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." 66 Pa . C.S. § 1329(d)(5). If the selling utility's cost of service is not incorporated into the revenue requirement until the next base rate case, it would be inconsistent with the Section 1329 requirements to increase rates for existing customers based on that revenue requirement. ${ }^{39}$ This is especially true given that the acquired customers' rates are required to stay at their current levels (i.e., not reflecting the revenue requirement associated with the ratemaking rate base approved as part of the Section 1329 filing or the proposed surcharge).

In addition, Section 1329 requires that acquired customers' rates will remain at current levels ${ }^{40}$ and that those rates will not change until new rates are approved for the acquiring utility as a result of a base rate case. See 66 Pa. C.S. §§ 1329 (d)(1)(v) and (d)(4). It would be inconsistent and unfair to require existing customers' rates to increase during the time between closing and when new rates are approved in the next base rate case.

## 2. PAWC Has Not Established That It Is Reasonable and Necessary to Have an Automatic Rate Adjustment For the 1329 "Revenue Deficiency".

Mr. Rubin explained the conflict between the ratemaking process, and the automatic rate adjustment proposed by PAWC as follows:
[T]he ratemaking process involves a matching of revenues, expenses, investment, return, customers, and consumption. Automatic rate adjustments for specific expense or capital items break this relationship. The matching principle involves a synchronous examination of the cost of service and sources of revenue, as well other considerations such as the quality of service and efficiency of management. That synchronization is the reason why we use a test year when a rate case is filed.

OCA St. 1 at 72-73. Mr. Rubin stated:

[^23]The use of automatic rate adjustment mechanisms for only certain aspects of the Company's revenue requirement violates the matching principle and helps to destroy the underlying relationship between utility rates and levels of cost and investment.

OCA St. 1 at 73. He explained that the general rule is that automatic rate adjustments should be used only for significant volatile expenses that are outside of the utility's control. OCA St. 1 at 73, 76. Examples include gas cost adjustment or a surcharge to reflect changes in income tax rates. ${ }^{41}$ Mr. Rubin explained that the utility's ability to control expenditures is an important consideration in determining whether an automatic adjustment clause should be adopted. Automatic rate adjustments remove any incentive for the utility to be efficient. OCA St. 1 at 74. He explained that the ratemaking process is "designed to foster management efficiency between rate cases." Id. He explained why there is a focus on achieving and maintaining efficiency:

A focus on achieving and maintaining efficiency is a pillar of informed ratemaking. Automatic rate adjustments, however, remove any incentive the utility has to achieve or maintain efficiencies. Under automatic rate adjustment mechanisms, any change in the unit cost of the product, and any change in the amount of the product purchased, would flow directly to captive customers. Failure to obtain available efficiencies, or failure to protect existing efficiencies, can only lead to everincreasing utility rates. As an example, if a utility were allowed to automatically recover the cost of heating and cooling its office buildings, there would be no incentive for the utility to try to find a lower-cost energy supplier, invest in insulation or re-program the thermostats in its buildings - actions that most every other business would take in response to changes in energy costs.

OCA St. 1 at $74 .{ }^{42}$
Mr. Rubin found that the proposed surcharge failed to meet the criteria he discussed. OCA
St. 1 at 76. He found that the automatic rate adjustment would recover costs that are within the

[^24]Company's control (the amount and the timing). Id. He also found that there is a potential for significant trade-offs or efficiencies that come from the acquisition and those would not be captured in the surcharge. OCA St. 1 at 76. He also has a concern about the size of the subsidies that PAWC is asking water Zone 1 customers to pay. Id. at 77. Mr. Rubin also identified another problem with the surcharge because it includes revenues from all existing water and wastewater customers, yet PAWC already has the wastewater customers' rates subsidized under Section 1311(c). He concluded that is it neither just nor reasonable to require customers who, according to the Company, cannot pay their own cost of service to receive an additional rate increase that will be used to provide a subsidy to other, newly acquired customers. Mr. Rubin stated, "If wastewater and Steelton water customers can afford to pay higher rates that money should be used to reduce the subsidies paid by Zone 1 water customers; not to provide even more subsidies to newly acquired customers." Id.

Finally, Mr. Rubin discussed the policy reasons that undercut the proposed surcharge:
The underlying premise of Section 1329 is that acquisition prices will be based on an arms' length negotiations. An arms' length negotiation requires a tension between the buyer and seller -- the buyer wants to pay as little as possible and the seller wants to receive as much as possible. The arms' length negotiated price is a compromise between those two extremes. In Section 1329 negotiations, however, there is no incentive for the buyer to pay as little as possible. In fact, the profit motivation is for the buyer to pay as much as possible, subject only to the amount that can be justified by an appraisal. In other words, there is no tension between the buyer and seller -- both want the price to be as high as can be justified by the appraisals.

The only potential check on the process (as it currently exists) is that the utility's investors bear the cost of supporting a portion of the purchase price until the conclusion of its next base rate case. This does not appear to be much of a check on the process, but it at least provides a modest incentive to control the purchase price.

The proposed Regionalization and Consolidation Surcharge would remove even that modest check on the process. Rather than investors paying to support a portion of the purchase price between rate cases (perhaps for a year or two), investors would be at risk for only a few months (between the time of closing and the end of the calendar year).

As I explained above, I would prefer for investors to have a greater incentive to control the size of the purchase price by being required to support the capital that cannot be supported by the rates of the acquired customers. Under no circumstances, however, should investors' risks be lessened further.

OCA St. 1 at 78. As a result of his review, Mr. Rubin recommended that the Commission reject the proposed Regionalization and Consolidation Surcharge "as being contrary to the public interest and neither just nor reasonable." Id. at 79.

In rebuttal, PAWC witness Grundusky characterized the surcharge as providing for earlier recovery to mitigate financial lag associated with acquisitions and that PAWC would recover a portion earlier but would recover a lesser amount later. Those statements are not correct. Currently, the return received by investors is based on the revenues received from the acquired customers between closing and the conclusion of the next rate case. OCA St. 1 SR at 14. The existing customers do not provide any subsidies during that time. Id. Nor is PAWC permitted to defer the return and its investors must bear the risk of putting capital to work between rate cases. Id. The surcharge would increase PAWC's revenues and existing customers' rates almost immediately upon closing, and as Mr. Rubin noted, the investors would benefit and existing customers would be harmed.

Mr. Rubin provided an example of how the proposed automatic adjustment rate will operate and explains how it will increase revenues from existing customers with no offsetting benefit in later years. OCA St. 1 SR at 15-17. Those increased revenues would flow directly to shareholders. Id. at 17. The Table is replicated below:

Table 1-S: Hypothetical Example Showing Effect of Proposed Regionalization and Consolidation Surcharge on Existing Customers and Investors

|  | Without Surcharge |  | With Surcharge |  |
| :---: | :---: | :---: | :---: | :---: |
| Year | Existing | Investors' | Existing | Investors' |
|  | Return | Customers, | Return |  |


|  | Revenues |  | Revenues |  |
| ---: | ---: | ---: | ---: | ---: |
| 2021 | 0 | 25,000 | 45,000 | 70,000 |
| 2022 | 0 | 25,000 | 43,250 | 68,250 |
| 2023 | 0 | 25,000 | 41,544 | 66,544 |
| 2024 | 39,880 | 64,880 | 39,880 | 64,880 |
| 2025 | 38,258 | 63,258 | 38,258 | 63,258 |
| Total | $\mathbf{7 8 , 1 3 8}$ | $\mathbf{2 0 3 , 1 3 8}$ | $\mathbf{2 0 7 , 9 3 2}$ | $\mathbf{3 3 2 , 9 3 2}$ |

The Table shows the first five years of additional revenues that would be paid with the surcharge and the impact that has on the investors' return. See OCA St. 1 SR at 16. It also shows that there is no reduction in future costs paid by PAWC's customers, but it does enhance the return to PAWC's investors between closing and the next base rate case. Id. Mr. Rubin concluded:

Mr. Grundusky is incorrect when he states the surcharge "does not increase the amount recovered by PAWC" or that it would "recover a lesser amount later." The surcharge would absolutely increase the amount recovered by PAWC, it would not decrease future recoveries, and it would do so to the detriment of existing customers.

OCA St. 1 SR at 14-15.

For the reasons set forth above, the OCA submits that the proposed Regionalization and Consolidation Surcharge should be rejected.

## XI. PENSION/OPEB TRACKER

The Company proposed a new tracker for Pension and Other Post-Employment Benefits (OPEB) expenses in which variations between projected and actual expenses would be recorded in deferral accounts. OCA St. 2 at 111; OCA St. 2SR at 57; PAWC St. 1 at 25-30. The OCA submits that PAWC's proposed Pension and OPEB tracker should be denied as it constitutes impermissible single issue ratemaking. ${ }^{43}$

[^25]
## XII. RATE STRUCTURE AND RATE DESIGN

## A. Introduction

OCA witness Rubin's recommended adjustments to PAWC's water cost of service studies have been resolved. He also provided recommendations regarding the combined sewer cost of service studies, rate design, including the scale back if PAWC is granted any increases in revenue requirement, the allocation of wastewater revenue requirement to water customers, the allocation of Steelton water revenue requirement to water customers, and the necessity for the development of a stormwater rate. OCA St. 1 at 35-95. The OCA submits that Mr. Rubin's recommendations should be adopted in this proceeding.

## B. Cost of Service Study

PAWC prepared two water cost of service studies (COSS) (Water excluding Steelton and Rate Zone 5 (Steelton)). PAWC Exh. 12-B and PAWC Exh. 12-A. PAWC prepared three sanitary sewer COSS (Exeter, Sadsbury, and sanitary sewer excluding Exeter and Sadsbury). PAWC Exhs. 12-D, 12-E, 12-C. PAWC prepared three combined sewer COSS (Scranton, McKeesport, and Kane). PAWC Exhs. 12-F, 12-G, and 12-H. Each COSS has separate schedules for Rate Year 1 (2021) and Rate Year 2 (2022). ${ }^{44}$ OCA St. 1 at 36.

OCA witness Rubin's adjustments to the water COSS were accepted and resolved. OCA St. 1 at 37-40, Sch. SJR-8; OCA St. 1SR at 17. Mr. Rubin did not have any adjustments to the sanitary sewer COSS. OCA St. 1 at 40 . As discussed below (Section XII.F) with regard to stormwater rates, the separation of costs between sanitary sewer and stormwater is a key issue to ensure that the costs are accurately assigned. If the costs are not assigned, it requires sanitary sewer

[^26]customers and water customers if wastewater costs are shifted to water customers) to pay costs that are not related to wastewater service.

## C. Rate Design Proposals

## 1. Residential Rate Design-Water

For 2021, PAWC projects that it will have 612,000 residential customers in Zone 1, 1,700 customers in Zone 5 (Steelton) and 1,300 customers in four additional zones. OCA St. 1 at 79. Mr. Rubin noted that all but 100 of those customers have meters that are $1-1 / 2$-inch or smaller in diameter. Id. Mr. Rubin supports many of the changes proposed by PAWC and recommends a number of additional changes as discussed below. OCA St. 1 at 79-86.

## a. PAWC Proposed Changes to the Structure of Residential Rates.

PAWC proposes two changes in the structure of residential rates. First, it proposes to charge the same customer charge to residential customers with meter sizes of 1-1/2 inches or smaller. OCA St. 1 at 80. However, it has not applied the same change in Zone 5 where it is still proposing higher customer charges for the residential customers with 1 -inch and $1-1 / 2$-inch meters. Id. at $81 . \mathrm{Mr}$. Rubin recommended that the same change be applied to Zone 5 which would eliminate possible concerns about rate discrimination and would facilitate the eventual consolidation with Zone 1. Id. at 82 . He also recommended that the minimum allowance should be eliminated for residential customers with 1 -inch and $1-1 / 2$-inch meter sizes. Id.

Second, for Zone 4, PAWC proposed 1) a substantial reduction in the minimum charge, 2) to eliminate the minimum usage allowance of 3,000 gallons per month, and 3) to eliminate any rate blocks so that all consumption would be charged at the same rate. OCA St. 1 at 81 . Mr. Rubin supported the proposed changes to Zone 4 because eliminating the minimum usage allowance gives customers more control over their bills, and lowers the bills for lower use customers without imposing a burden on higher-use customers. Id. at 82 .

## b. OCA Proposed Changes to the Structure of Residential Rates

In addition to PAWC's proposed changes, discussed above, Mr. Rubin proposed another change in the structure of residential rates. He recommended that the minimum usage allowance for $5 / 8$-inch meters in Zone 5 be reduced from 1,700 gallons per month to 1,000 gallons per month. Id. at 83. Mr. Rubin explained that his recommendation will start a transition to the eventual elimination of the minimum allowance. Id.

Mr. Rubin made additional adjustments to Zone 5 residential rates to ease the impact of a smaller minimum allowance. First, Mr. Rubin recommends that the $40 \%$ increase, ${ }^{45}$ proposed by PAWC to be divided between Rate year 1 and Rate year 2, should be used for the increase in 2021. OCA St. 1 at 84. Based on this recommendation and his recommended reduction in the minimum allowance, Mr. Rubin recommended that the existing 5/8-inch customer charge (\$14.78 per month) be kept at that level and that the volumetric rate be set at $\$ 1.000$ per 100 gallons for all residential usage. OCA St. 1 at 84-85. He provided examples of the impacts of his recommendations at the Company's proposed revenue requirement. The largest percentage increase would be for any customer who uses exactly 1,700 gallons in a month (the current minimum allowance). Id. at 85 . That bill would increase from $\$ 14.78$ to $\$ 21.78$, an increase of $\$ 7.00$ per month, or $47.4 \%$. Id. Most residential bills (those using more than 3,000 gallons per month) would have increases in the range of $25 \%$ to $35 \%$ according to Mr. Rubin. Id.

PAWC proposed a Zone 1 customer charge of $\$ 18.00$ per month for a $5 / 8$-inch meter. Mr. Rubin explained that the proposed customer charge is higher than the direct customer-related cost for a $5 / 8$-inch meter, which is $\$ 17.06$. OCA St. 1 at 83 . He noted that when the calculation of direct costs is adjusted to reflect the same charge for residential customers with meter sizes up to

[^27]and including $1-1 / 2$-inch, and to recognize the reduced rates paid by low-income customers, the direct cost Mr. Rubin calculated is approximately $\$ 17.72$ per month or about $9 \%$ higher than the currently effective charge of $\$ 16.25$ per month. Id. at 83-84. He explained that in context of the proposed Year 1 increase of $12.7 \%$, he considered it reasonable to round this charge up to $\$ 18.00$ per month. Id. at 84 . However, if the revenue requirement determined by the Commission is less than what the Company proposed, all Zone 1 charges should be scaled back proportionately. Id.

## 2. Residential Rate Design - Wastewater

Mr. Rubin addressed the Company's residential rate design for wastewater. OCA St. 1 at
86-94. Mr. Rubin provided an overview of the existing wastewater rates:
The Company has 10 different rate areas for wastewater service. The rates vary significantly from one area to another, with current customer charges ranging from $\$ 7.50$ in Turbotville (Zone 8) to $\$ 30$ or more per month in Koppel, McKeesport, and Kane. Often those higher customer charges are coupled with a large minimum usage allowance. PAWC also has a wastewater rate area where all customers receive flatrate service at a cost of either $\$ 75.10$ or $\$ 54.60$ per month (Franklin Township) depending on the treatment used to serve the customer.

OCA St. 1 at 86. Mr. Rubin explained his understanding that the Company is guided by two main goals in setting wastewater rates: 1) complying with provisions of any commission orders or settlements for acquired systems, and 2) moving towards rate consolidation and the elimination of minimum usage allowances. Id. Mr. Rubin found those goals to be reasonable but explained that they should not be the only goals. Id. at 87 . He explained what other goals need to be considered:
[T]here should be specific criteria that limit the costs transferred to Zone 1 water customers or that otherwise subsidize Section 1329 premiums paid by the Company. In addition, the Company has given more weight to a provision in its Asset Purchase Agreement with Scranton than the Commission is required to give to that provision (as I discuss below). I also find two instances where the Company has proposed extremely large rate increases (more than $50 \%$ for many customers).

Id. As discussed below, the OCA submits that its recommendations should be adopted.

## a. Zone 3 (Scranton Area) Rates

The current rates in Zone 3 are a $\$ 19.50$ per month customer charge and a volumetric charge of $\$ 0.6173$ per 100 gallons. OCA St. 1 at 87 . PAWC proposes no increase to the customer charge and a volumetric increase to $\$ 0.7212$ per 100 gallons, or $16.8 \%$. Id. The increased revenues from residential wastewater customers, in Year 1, would be $\$ 1.17$ million, or $8.4 \%$ and the total increase in revenues would be $\$ 2.83$ million in Year 1. Id. Mr. Rubin explained that the COSS for Scranton shows a total cost of service of $\$ 34.75$ million, while current rates produce $\$ 23.47$ million, or a shortfall of $\$ 11.3$ million. Id. An increase of $50 \%$ would be needed to bring rates to cost of service. Id. at $87-88$. Mr. Rubin explained that PAWC's proposal would make "very slow progress toward closing the gap between costs and revenues" while the remaining gap would be passed on to Zone 1 water customers. Id. at 88 .

The Company's proposal to limit Zone 3 to less than a 12\% increase, while proposing much larger increases in other zones, is based on its Asset Purchase Agreement pursuant to which it purchased the Scranton-area wastewater assets, and in which it agreed to limit the increase that it can propose during the first ten years of ownership. OCA St. 1 at 88. The agreement does not limit the increase the Commission can approve in this case or any other rate case. Id.; see Joint Application of Pennsylvania-American Water Co. and the Sewer Authority of the City of Scranton, Docket No. A-2016-2537209, Order at 8, 71-72 (Oct. 19, 2016).

Mr. Rubin recommends that the rate in Zone 3 be increased by approximately 20\%. OCA St. 1 at 88. Although much less of an increase proposed by PAWC in other rate areas, it would begin to make progress toward moving rates to cost and lessen the subsidies paid by Zone 1 water customers. That $20 \%$ increase would increase revenues by $\$ 4.66$ million (compared to $\$ 2.76$ million under PAWC's proposal), which would reduce the Zone 1 water subsidy by $\$ 1.9$ million.

Id. Also important is that it would be a meaningful move towards cost of service which should make it feasible to have Zone 3 pay cost-based rates within the next two rate cases. Id.

To ensure that the rates collect these additional revenues, Mr. Rubin recommends that the rates be increased across-the-board. OCA St. 1 at 89 . His recommendation is due to the significant stormwater costs that are included in the revenue requirement and PAWC's inability to charge those costs to customers, as discussed infra. Id.

## b. Zone 4 (Koppel) Rates

The current rates in Zone 4 are a $\$ 30.00$ per month customer charge and a volumetric charge of $\$ 0.6500$ per 100 gallons. OCA St. 1 at 89 . PAWC proposes to decrease the customer charge to $\$ 11.00$ per month and increase the volumetric charge to $\$ 1.7631$ per 100 gallons. Id. The increased revenues from residential wastewater customers, in Year 1, would be $\$ 44,867$, or $23.55 \%$. Id. Mr. Rubin's concern with this proposal is that it results in "highly disparate" impacts on residential customers, with some customers receiving significant decreases while others would see increase of $50 \%$ or more. Id. In addition, the Company is proposing increases of $11 \%$ for other classes in Zone 4. OCA St. 1 at 90 .

Mr. Rubin recommended a decrease of the residential customer charge to $\$ 24.00$ per month and an increase to the residential volumetric charge to $\$ 0.9750$, or $50 \%$. Id. He explained that these changes would keep the bill impact for most customers to under $33 \%$. Id. The resulting revenue shortfall is $\$ 35,000$ which he recommended be added to the $\$ 2.4$ million subsidy from the sanitary wastewater zones (excluding Sadsbury and Exeter). Id.

## c. Zone 6 (McKeesport) Rates

Zone 6 has two service areas - McKeesport and Port Vue. In McKeesport, for most residential customers, the current rates in Zone 6 are a $\$ 30.70$ per month customer charge (includes the first 2,000 gallons per month) and a volumetric charge (for flows over 2,000 gallons per month)
of $\$ 1.275$ per 100 gallons. OCA St. 1 at 91 . PAWC proposes to eliminate the minimum usage allowance, reduce the customer charge to $\$ 11.00$ per month, and increase the volumetric charge to $\$ 1.7631$ per 100 gallons. Id. Most residential customers would have bills increase by less than $40 \%$ and very low usage customers would have their bill decline. Id. Mr. Rubin did not have any changes to PAWC's proposal for the McKeesport service area. Id.

Port Vue customers are billed quarterly and the current rates are $\$ 58.05$ per quarter, which includes the first 4,000 gallons of water per quarter and a volumetric charge (for flows over 4,000 per quarter) of $\$ 0.995$ per 100 gallons. OCA St. 1 at 91 . PAWC proposes to eliminate the minimum allowance and charge Port Vue customers the same as the McKeesport area customers. Id. The impact on Port Vue customers would be an increase of approximately 70\%. Id.

Mr. Rubin agreed with setting the Port Vue customer charge at $\$ 11.00$ per month (\$33 per quarter) and eliminating the minimum usage allowance. OCA St. 1 at 93 . However, he recommended limiting the increase to the volumetric charge to $40 \%$, or $\$ 1.393$ per 100 gallons. Id. He explained that these changes would ensure that no customer bill would increase by more than $46 \%$ (most bills would increase by $40 \%$ or less). Id. The resulting revenue shortfall is approximately $\$ 230,000$ which he recommended be added to the water Zone 1 subsidy. Id. at 94 .

## 3. OCA's Scale Back Proposal

Mr. Rubin provided a scale back proposal to be used if the Commission reduces the proposed revenue requirements in rates zones that are being subsidized by water Zone 1 customers. OCA St. 1 at 94-95. He recommended that the reduction in the revenue requirement first reduce the water Zone 1 subsidy in proportion to the subsidy paid by each customer class under PAWC's
proposal for Rate Year 1. Id. at 94. Any remaining reduction would be applied proportionally to the rates in the particular rate zone. ${ }^{46}$ Id.

The OCA's accounting recommendations (OCA St. 2) result in a substantial reduction in water Zone 1, and some other zones, while some rate zones would have rate increases. OCA St. 1 at 94. Mr. Rubin explained that his recommendation would be the same - reductions in subsidized rate zones' revenue requirement should be applied to reduce the water Zone 1 subsidy for that zone. Id. If the subsidy is eliminated any remaining reduction would be applied to reduce the rates paid by customers in that zone. Id.

## D. Allocation of Wastewater Revenue Requirement to Water Operations

## 1. Introduction

This is the first rate case that includes Section 1329 acquisitions and a request to subsidize those acquisitions by shifting costs to water customers pursuant to Section 1311(c) of the Public Utility Code. 66 Pa . C.S. §§ 1311(c) and 1329. The ratemaking interplay, as proposed by PAWC, would require its water Zone 1customers to pay a substantial subsidy that is primarily due to the six acquisitions completed by PAWC to date under Section 1329. Under PAWC's proposed subsidies water Zone 1 customers would pay an additional $\$ 32,851,568^{47}$ or $4.9 \%$, to subsidize the wastewater rate zones as set forth below:

| Table 2: PAWC Proposed Subsidies from Rate Zone 1 Water Customers |  |  |  |
| :--- | :--- | :--- | :--- |
| Rate Area | Revenue <br> Requirement | PAWC Proposed <br> Revenues | Subsidy |
| Steelton water | $\$ 5,189,852$ | $\$ 3,413,023$ | $\$(1,776,829)$ |
| Wastewater excl. <br> Sadsbury \& Exeter | $33,213,134$ | $30,785,011$ | $(2,428,123)$ |

[^28]| Exeter WW | $15,130,505$ | $11,071,133$ | $(4,059,372)$ |
| :--- | ---: | ---: | ---: |
| Sadsbury WW | $1,838,386$ | 959,853 | $(878,533)$ |
| Scranton WW | $34,754,312$ | $26,297,265$ | $(8,457,047)$ |
| McKeesport WW | $30,047,582$ | $14,503,073$ | $(15,544,509)$ |
| Kane WW | $3,287,466$ | $1,803,482$ | $(1,483,984)$ |
| Total | $\$ 123,461,237$ | $\$ 88,832,840$ | $\$(34,628,397)$ |

OCA St. 1 at 53 (footnotes omitted). This subsidy, related to seven wastewater acquisitions, is equivalent to $41 \%$ of the total increase proposed by PAWC in this case for water Zone 1 customers in Rate Year 1. OCA St. 1 at 53. Mr. Rubin recommended that the Commission permit a limited subsidy from Rate Zone 1 water customers to be paid to each Section 1329 rate area, but that the subsidy should not compensate the Company for the full return on the purchase price increment it paid over the net original cost of the property.

## 2. The Impact on Water Customers of PAWC's Proposed Subsidies

Section 1311(c) allows, but does not require, the Commission to allocate a portion of the wastewater revenue requirement to a combined water and wastewater customer base if it is in the public interest. 66 Pa . C.S. § 1311(c). PAWC, as a utility providing both water and wastewater service, has proposed to shift wastewater revenue requirement to its water Zone 1 customers, as shown above. Section 1311(c) was enacted as part of Act 11 of 2012 and has been used by PAWC in its rate cases filed in 2013 and 2017 to propose a shift of wastewater revenue requirement to water Zone 1 customers. However, the issue of how the Commission should consider proposals made pursuant to Section 1311(c) has not been litigated because both of PAWC's cases were resolved by settlement. ${ }^{48}$ In the 2013 and 2017 rate cases, as well as in this case, Mr. Rubin has provided criteria that can be used to evaluate the proposed Section 1311(c) subsidies.

[^29]As noted above, this is the first case to include acquisitions filed under Section 1329 of the Public Utility Code, which was enacted in 2016. 66 Pa. C.S. § 1329. Mr. Rubin described the ratemaking impact of Section 1329:

Section 1329 allows a water or wastewater utility to pay more than depreciated original cost for the assets of other water or wastewater providers, and to include the purchase price (rather than net original cost) in the rate base. By including the purchase price in rate base, the Company is charging customers higher rates than would have been permitted under original-cost ratemaking. The Commission's policy of gradually moving toward rate consolidation (also known as single-tariff pricing), in conjunction with any rate increase limits that may be part of the acquisition transaction, can result in Rate Zone 1 water customers paying additional subsidies to support the acquired customers.

OCA St. 1 at 52 (footnote omitted). Mr. Rubin noted his concern about the proposed subsidies. He described the impact of the acquisitions:

The Company makes it seem as if its investors are providing the compensation to selling municipalities, but in fact the Company is requiring its statewide water customers to pay most of the costs associated with the above-cost acquisitions.

OCA St. 1 at 53. He also explained that this is even more apparent with the Company's proposed Regionalization and Consolidation Surcharge, as discussed in Section X, supra. Mr. Rubin provided Table 3 that is a summary of the Section 1329 Transactions completed by PAWC. The Table is replicated below:

| Table 3: Summary of Section 1329 Transactions <br> (\$ million, except customers) |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | :---: |
| Rate Area | Closing <br> Date | Customers | Net Original <br> Cost <br> (\$ million) | § 1329 <br> Rate Base <br> (\$ million) | Difference <br> (\$ million) | PAWC Cost <br> to <br> Customers <br> @ 14\% |  |
| Steelton water | $10 / 9 / 2019$ | 2,415 | 14.43 | 20.50 | 6.07 | 0.85 |  |
| Exeter WW | $10 / 24 / 2019$ | 9,015 | 40.06 | 92.00 | 51.94 | 7.27 |  |
| Sadsbury WW | $3 / 6 / 2019$ | 998 | 7.48 | 8.30 | 0.82 | 0.11 |  |
| McKeesport <br> WW | $12 / 18 / 2017$ | 12,700 | 80.09 | 158.00 | 77.91 | 10.91 |  |
| Kane WW | Not closed | 2,019 | 12.07 | 17.56 | 5.49 | 0.77 |  |
| Total |  | $\mathbf{2 7 , 1 4 7}$ | $\mathbf{1 5 4 . 1 3}$ | $\mathbf{2 9 6 . 3 6}$ | $\mathbf{1 4 2 . 2 3}$ | $\mathbf{1 9 . 9 1}$ |  |

OCA St. 1 at 55 (footnote omitted). Mr. Rubin explained that the last column in Table 3 shows the amount of the increased revenue requirement to PAWC customers resulting from these acquisitions. For wastewater acquisitions under Section 1329, the increased revenue requirement is $\$ 19,060,000 .{ }^{49}$ When Mr. Rubin combined the Tables to determine how much of the total costs in the acquired systems are proposed to be transferred to water Zone 1 customer, he shows that "PAWC's water customers are being asked to bear $100 \%$ of the Section 1329 cost increase." OCA St. 1 at 55. Table 4 is set forth below:

Table 4: PAWC Proposed Percentage of Section 1329 Subsidy
to be Paid by Rate Zone 1 Water Customers

| Rate Area | PAWC Proposed <br> Subsidy by Zone 1 <br> Customers (Table 2) | Section 1329 Revenue <br> Requirement Increase <br> (Table 3) | Percent of Section <br> 1329 Increase Borne <br> by Zone 1 Water <br> Customers |
| :--- | :---: | :---: | :---: |
| Steelton water | $(\$ 1,776,829)$ | $\$ 850,000$ | $100 \%$ |
| Exeter WW | $(4,059,372)$ | $7,270,000$ | $56 \%$ |
| Sadsbury WW | $(878,533)$ | 110,000 | $100 \%$ |
| McKeesport WW | $(15,544,509)$ | $10,910,000$ | $100 \%$ |
| Kane WW | $(1,483,984)$ | 770,000 | $100 \%$ |
| Total | $(\$ 23,743,227)$ | $\$ 19,910,000$ | $100 \%$ |

[^30]OCA St. 1 at 55. Mr. Rubin explained the import of this Table:
Zone 1 water customers are being asked to provide subsidies totaling $\$ 23.74$ million to the systems acquired under Section 1329. That amount includes the entire revenue requirement associated with the increase in rate base caused by Section 1329 ( $\$ 19.91$ million), plus an additional $\$ 3.8$ million to subsidize operating costs in the acquired systems.

OCA St. 1 at 55 (emphasis added). PAWC's proposed subsidies must be reviewed under Section 1311 (c) to determine if they are in the public interest.

## 3. A Framework for Determining Whether PAWC's Proposed Subsidies Are in the Public Interest.

Mr. Rubin explained that he Commission has not issued any orders, policy statements, or regulations to establish criteria for how it would determine whether to use its discretion to permit an allocation of wastewater revenue requirement to water customers pursuant to Section 1311(c). OCA St. 1 at 56. The statute itself does not contain any directive or guidelines. Id. Absent such directives or guidance, Mr. Rubin reviewed basic regulatory principles to recommend a framework to determine whether a proposed allocation is in the public interest.

Mr. Rubin explained that defining the public interest can be difficult and that there can be more than one aspect of the public that is interested in or affected by any issue. OCA St. 1 at 56. Mr. Rubin identified "at least two distinct elements of the affected public: the utility's wastewater customers and the utility's water customers." Id. Mr. Rubin also explained that establishing a policy on this issue could affect future acquisitions so the "public interest" could "include a consideration of policies that promote the cost-effective provision of safe and reliable water and wastewater service throughout the Commonwealth." Id. at 57.

As Mr. Rubin pointed out, because Section 1311 (c) is discretionary, "At one extreme, the Commission could do nothing." Mr. Rubin concluded, "Such a decision would be lawful but would not accomplish an important purpose of the statute, which is to provide some relief to wastewater
customers in relatively small service areas." OCA St. 1 at 57. He explained that at the other extreme, the entire wastewater revenue requirement could be allocated to water customers. He concluded that although that might be lawful, it would violate a number of established regulatory principles. ${ }^{50}$ Id. at 57-58. Mr. Rubin recommends reviewing the regulatory principles provided by James Bonbright and noted that there is general agreement that the principles should be considered when establishing and evaluating utility rates. Id. at 58. Those principles are:

- Practicality, including simplicity, understandability, ability to implement, and public acceptability;
- Clarity in its interpretation;
- Effectiveness in yielding the total revenue requirement;
- Stability in revenues from year to year;
- Continuity of rates, including the concept of gradualism;
- Fairness in relation to the cost of serving different types of customers;
- Avoidance of undue discrimination among similarly situated customers; and
- Encouragement of efficient consumption practices.

Bonbright also suggests that the most important of these criteria are adequacy (collection of the revenue requirement), efficiency (encouragement of economically efficient consumption and discouragement of waste), and fairness to all customer classes. He notes that these criteria are primary "not only because of their widespread acceptance but also because most of the more detailed criteria are ancillary" to these three principles.

OCA St. 1 at 58-59 (footnotes omitted). Mr. Rubin considers the principles of efficiency and fairness to be paramount and did not consider that the approach selected would have a major effect on the utility's ability to collect its revenue requirement so he did not consider that principle further. Id. at 59.

Regarding the principle of efficiency, Mr. Rubin explained that it relates to sending proper price signals to customers so that the price paid "accurately reflects the cost of providing service." OCA St. 1 at 59-60. To evaluate the efficiency principle, Mr. Rubin looked at "(1) the degree to

[^31]which water customers are also wastewater customers, (2) the amount by which wastewater rates would be reduced below cost, and (3) the amount by which water rates will be increased above cost." OCA St. 1 at 61 . Allocating wastewater revenue requirement to water customers could result in setting wastewater rates below cost and water rates above cost which may be different from the utility's full cost of service. Mr. Rubin explained that, he "would consider a price that at least meets the basic cost of providing service under average (that is, non-peaking) conditions to be the minimum price that should be charged for utility service." Id. Estimating the highest price that should be paid would be one that is equal to the value of service received by the customer, however, there is the concern of affordability of service to the customer. Id. at 62 .

Regarding the principle of fairness, Mr. Rubin explained that it applies when similarly situated customers are treated differently. OCA St. 1 at 62 . He noted that when most customers are both water and wastewater customers of the same utility, then fairness is likely not a significant concern. Id. Where, most water customers are not also wastewater customers, then fairness could be a significant issue. Mr. Rubin provided the following explanation:

A water customer who receives its wastewater service from a different provider would be paying its own water costs, its own wastewater costs (to another provider), plus a portion of the costs of wastewater service for the few wastewater customers of the utility. Depending on the magnitude of the subsidy sought by the utility, it may be unfair to ask customers to pay their own wastewater costs plus a portion of wastewater costs for wastewater customers of the utility.

OCA St. 1 at 62. The evaluation of fairness depends on two of the same factors Mr. Rubin identified for the efficiency principle: (1) the degree to which water customers are also wastewater customers, and (2) the amount by which water rates will be increased above cost. Id. at 63 . Mr. Rubin noted that the provision of stormwater service in Scranton, McKeesport, and Kane areas "exacerbate the concerns with fairness." Customers in other parts of PAWC's service territory already may pay separate stormwater charges from their municipalities and some may also pay wastewater charges
to other providers as well. Id. As Mr. Rubin explained, "This further tilts the fairness balance toward not requiring water customers to subsidize wastewater and stormwater costs." Id.

## 4. Section 1311(c) Must Be Applied Cautiously When There Is a Significant Acquisition Adjustment.

Mr. Rubin explained that Section 1311 (c) was enacted based on the assumption that the rate base in wastewater service areas, with minor exceptions, would be based on the net original cost of property. OCA St. 1 at 64 . He noted that using net original cost serves as a check on the amounts that can be charged to customers, eliminates any significant profit motivation that sellers of wastewater systems may have to inflate the asking price for the utility assets. Id. He explained the impact of Section 1329:

The enactment of Section 1329 in 2016, however, significantly changes that calculus. Section 1329 authorizes the acquisition of water and wastewater systems at prices that could be significantly more than the net original cost of the property, as shown above.

OCA St. 1 at 64. Mr. Rubin notes that the potential of using Section 1311(c) in combination with a Section 1329 acquisition "might result in water customers throughout the Commonwealth subsidizing municipal government purposes in a few locations while also promoting profit growth for utility shareholders. Id. Mr. Rubin recommended that the Commission should be "extremely judicious in its use of its Section 1311(c) discretionary authority particularly when a Section 1329 acquisition is involved." Id.

Mr. Rubin provided an overview of regulatory mechanisms that have been used in other states to address similar concerns. Based on his review, Mr. Rubin found that in trying to balance fairness to new and existing customers, and to try to control the magnitude of resulting rate increases, it would be reasonable to require the Section 1329 premium to be paid only by customers in that service area. OCA St. 1 at 65. Mr. Rubin also explained that such a mechanism would not necessarily be permanent and that there could be consolidation over time as rates in separate areas
become closer (part of that would occur through the combination of new plant investment unrelated to Section 1329 along with the depreciation of the Section 1329 purchase price). Id. at 65-66. Table 5 shows the portion of the proposed subsidy that is unrelated to the rate base impact of Section 1329 and would cover system operations. Under that scenario, as shown in Table 5, there would a total wastewater subsidy of $\$ 6,117,026$. Mr. Rubin recommends that this type of subsidy would be reasonable even though it would still require water Zone 1 customers to subsidize these systems. Id. at 66. He characterized it as a transition to charging full-cost rates to newly acquired customers.

Mr. Rubin also reviewed the situation where the asset purchase agreement may contractually limit the Company's ability to increase rates. OCA St. 1 at 67 . To the extent that a utility's customers subsidize the operating costs of the newly acquired systems, the utility's investors should bear the increased costs related to the ratemaking rate base through a reduced return. Id. Mr. Rubin explained that this approach is consistent with Section 1329 because the ratemaking rate base approved in the application is included in rates, but the statute does not mandate the rate of return that the utility is permitted to earn on the rate base. Id. at 68. "The effect of my recommendation would be to reduce the return allowed on the Section 1329 portion of the rate base until the acquired customers can fully support that investment." Id. He also noted that the return to the utility is based on the return on total rate base, not the return on a specific item of rate base. Id. at 69. It is Mr. Rubin's opinion that this approach would not result in a significant reduction in PAWC's overall return on its total rate base. Id.

Mr. Rubin recommended that the Commission implement the increases proposed by PAWC in each of the Section 1329 rate areas (except for the rate reduction in Sadsbury). OCA St. 1 at 69, Table 3. The subsidy for each 1329 rate area is also shown in Table 6, replicated below. The
estimated impact of these recommendations on the Company's income available for return and overall return, as a percentage of its total rate base, is shown in the last two columns below.

| Table 6: Summary of OCA Recommendations for Section 1329 Rate Areas |  |  |  |  |  |
| :--- | ---: | :--- | ---: | ---: | ---: |
| Rate Area | Increase in <br> Sales <br> Revenues | Subsidy paid <br> by Zone 1 <br> Water | Subsidy paid <br> by Investors | Est. Change <br> in Income | Est. Change <br> in Return |
| Steelton water | $\$ 589,679$ | $\$ 926,829$ | $\$ 850,000$ | $\$ 593,721$ | $0.0149 \%$ |
| Exeter | $2,841,697$ | 0 | $4,059,372$ | $2,835,452$ | $0.0713 \%$ |
| Sadsbury | 0 | 768,533 | 110,000 | 76,834 | $0.0019 \%$ |
| McKeesport | $2,024,332$ | $4,634,509$ | $10,910,000$ | $7,620,583$ | $0.1917 \%$ |
| Kane | 315,576 | 713,984 | 770,000 | 537,841 | $0.0135 \%$ |
| Total | $\$ 5,771,284$ | $\$ 7,043,855$ | $\$ 16,699,372$ | $\$ 11,664,432$ | $0.2934 \%$ |

OCA St. 1 at 70 (footnotes omitted). It is important to understand that the Company is not denied a return on the investment but rather the return is impacted by the numbers shown in the last column. Mr. Rubin concluded that this did not result in an unreasonable return to the utility's investors. OCA St. 1 at 69.

## E. Allocation of Steelton Revenue Requirement to Other Water Operations

The subsidy proposed by PAWC for Steelton Water, also a Section 1329 acquisition, is $\$ 1,776,829$. Section 1311 (c) does not apply to this situation because it is a proposed subsidy of a water revenue requirement by other water customers. However, it still must be examined to determine whether it is reasonable for water customers to pay a subsidy that goes beyond the operations costs and cover the ratemaking rate base and return for all of the reasons discussed above.

Mr. Rubin recommended that the subsidy to be paid by water Zone 1 customers for Steelton be set at $\$ 926,829$, while investors would cover $\$ 850,000$. OCA St. 1 at 70 , Table 6 . The resulting change in return is $0.0149 \%$.

## F. Separate Stormwater Rate

As noted above, the separation of costs between sanitary sewer and stormwater is a key issue to ensure that the costs are accurately assigned. If the costs are not assigned, it requires
sanitary sewer customers and water customers if wastewater costs are shifted to water customers)
to pay costs that are not related to wastewater service.

## 1. The Differences between Stormwater and Sanitary Sewer Services

A combined sewer system provides both sanitary sewage service and stormwater removal through a single network of pipes. OCA St. 1 at 36. Mr. Rubin explained what stormwater utility service is:

Stormwater utility service is designed to safely, and in compliance with environmental regulations, remove stormwater flows (also known as runoff) from a service area's streets, rights of way, parking lots, roofs, sidewalks, and other impervious surfaces. Unlike other utility services, stormwater flows are not subject to being separately metered, and they are not directly related to the consumption of another service that can be directly measured.

OCA St. 1 at 40-41. He noted two additional important differences between stormwater service and other utility services. First, a "significant portion of stormwater flows" come from public streets and rights of way which he called right-of-way flows. Id. at 41. There are different methods to recover right-of-way-related costs, but "the charge for that service is neither avoidable, controllable, nor caused by any individual customer." Id.

Mr. Rubin explained that stormwater and wastewater are fundamentally different services.
His testimony is summarized in the chart below:

| Wastewater | Stormwater |
| :--- | :--- |
| The customer controls its wastewater <br> production and disposal and collects <br> wastewater produced in a building into a pipe <br> (the service line) that connects to the utility's <br> wastewater main | Stormwater is generated by precipitation (rainfall and the <br> melting of snow and ice) and a customer may have some <br> limited ability to control some of the stormwater that is <br> generated |
|  | Stormwater is not initially contained in pipes; some <br> stormwater falls on pervious, unfrozen ground that can <br> absorb some (but usually not all) of the stormwater. Other <br> stormwater falls on roofs, streets, sidewalks, frozen ground, <br> and other largely impervious surfaces where the stormwater <br> is not absorbed and flows downhill. |
|  | Stormwater is controlled by directing the flow of the runoff <br> so that it does not create flooding on private property or <br> public streets and highways. Stormwater control occurs by |


|  | grading properties, parking lots, and driveways to control <br> the flow of stormwater, designing streets to direct the flow <br> of stormwater (which is one reason curbs are so important <br> on urban streets). installing stormwater retention basins to <br> reduce peak storm flows, maintaining streets to ensure a <br> proper flows of stormwater (for example by cleaning streets, <br> repairing curbs, and cleaning storm drains), and |
| :--- | :--- | :--- |
| Pipes lead from each property to the centralized <br> wastewater treatment plant | Stormwater enters storm drains that collect stormwater in a <br> network of pipes and that may involve numerous facilities <br> including catch basins, streets and curbs, storm drains, |
| stormwater pipes (where there is a separate system), and |  |
| CSO control facilities (in a combined stormwater- |  |
| wastewater system). |  |

OCA St. 1 at 43-44. Mr. Rubin summarized the biggest difference between stormwater and wastewater, as follows:

The biggest difference between stormwater and wastewater, therefore, is that a customer does not create stormwater but may have some ability to control it, and most stormwater flows above ground until it ultimately reaches a storm drain. In contrast, a customer directly creates and controls all wastewater flows and all of those flows are piped directly into the wastewater system.

OCA St. 1 at 43. The second significant difference is that the control of stormwater (described above) is done by the entity responsible for the property and that entity may be different from the entity that uses other utility services on the property or the property may not be an existing water or wastewater customer. ${ }^{52}$ Id. For that reason, Mr. Rubin explained that it is important that the entity responsible for stormwater control be responsible for stormwater costs associated with the

[^32]property. Id. Assigning cost to those responsible will give "an appropriate incentive to control stormwater flows from the property into the CSS." Id.

## 2. The Recognized Way to Charge for Stormwater Service

In 2019, there were more than 1,700 communities and utilities that have separate fees or charges for stormwater service, including 27 in Pennsylvania. ${ }^{53}$ OCA St. 1 at 44. The Pennsylvania communities who had established stormwater fees ranged in population size from 1,931 to 1,536,471. OCA St. 1, Sch. SJR-8, W. Ky. Survey, Table A-1. Mr. Rubin noted that most of those fees in the United States, and nearly all fees in Pennsylvania, are based on measuring impervious surface area of the property. OCA St. 1 at 44. A typical or average residential area is calculated based on the impervious surface area for the properties and that Equivalent Residential Unit (ERU) is the basis for developing stormwater rates for larger, non-residential properties. Id. There may be fee reductions for properties that significantly control stormwater fees.

Mr. Rubin opined that this fee structure, based on impervious surfaces, is a fair way to collect stormwater costs. Id. He finds it to be consistent with "well-established regulatory and judicial precedents about principles of cost causation and the determination of rates that are just, reasonable, and non-discriminatory." OCA St. 1 at 44-45. Using property characteristics, like impervious surface area, rather than water use, to allocate and collect stormwater costs is important because there are properties that contribute to stormwater flows but are not water or wastewater customers, e.g., parking lots or facilities, and some outdoor recreation facilities. Id. at 45. There could be a significant number of stormwater only customers. For example in the currently pending Pittsburgh Water and Sewer Authority (PWSA) rate case, PWSA estimates that it will have

[^33]approximately 8,000 stormwater-only customers when it proposes stormwater rates later this year, compared to about 100,000 wastewater customers currently. Id. In a recent Halifax Regional Water Commission case, it had more than 19,000 stormwater-only customers compared to approximately 75,000 wastewater customers. Id.

## 3. PAWC Collects Stormwater Costs From Water and Wastewater Customers.

PAWC allocates all stormwater-related costs in the same way that it allocated infiltration and inflow (I\&I) costs in a sanitary sewer system. OCA St. 1 at 45. It did not propose a separate rate for stormwater service in any rate area because it says that it has not been ordered to do so. OCA St. 1 at 45, 46. The result is that those costs of controlling and treating stormwater are collected from sanitary wastewater customers, through customer and flow charges, and from water customers through the wastewater subsidy. Id. at 46.

According to PAWC it is allocating stormwater costs in the same way as I\&I based on the Manual of Practice No. 27, Financing and Charges for Wastewater Systems published by the Water Environment Federation ("WEF Manual"). ${ }^{54}$ OCA St. 1 at 47. However, Mr. Rubin explained that the WEF manual does not support allocating costs in same manner as I\&I costs. OCA St. 1 at 47. The first problem with PAWC's reliance on the WEF manual is that PAWC witness Heppenstall cited to the third edition published in 2004. In the fourth edition, published in 2018, the WEF manual includes more information about allocating stormwater-related costs and how to collect those costs. Mr. Rubin noted that the 2018 edition has a new chapter on "Wet Weather Financing and Cost Recovery". OCA St. 1, Sch. SJR-9. Mr. Rubin explained that the chapter begins with an introduction which states, in part:

The characteristics of wet weather flows and their potential environmental, economic, and community effects are quite different from that of groundwater

[^34]inflow and infiltration (I/I) that occur naturally in a wastewater system.' The text continues to explain that 'many wastewater utilities, especially those with a CSS' are facing significant stormwater control costs that it may not be reasonable or fair to collect through traditional wastewater rates. In addition, ratesetting principles such as fairness, along with providing incentives for property owners to reduce stormwater flows, suggest the need for a separate stormwater fee.

OCA St. 1 at 47 citing Sch. SJR-9, p. 3 (WEF Manual, p. 184).
The WEF Manual does not support the Company's position. The WEF manual states that although cost recovery through sewer charges may provide for "administrative simplicity", that approach may affect equity of cost recovery because of the "limited correlation" between the volume of water usage (used to develop sewer charges) and the magnitude of a property's wet weather contribution. OCA St. 1 at 47-48 citing Sch. SJR-9, pp. 8 and 9 (WEF Manual pp. 189190). The WEF manual also points out the importance of providing property owners with an opportunity to reduce fees by reducing wet weather flows. Id. at 48. Mr. Rubin also pointed to a 2013 WEF manual that addresses approaches to stormwater programs including how to develop fees or charges for stormwater service. Id. citing Water Environment Federation, User-Fee-Funded Stormwater Programs (2 ${ }^{\text {nd }}$ ed. 2013). In the 2018 Western Kentucky survey, 19 of the 27 stormwater utilities in Pennsylvania use an ERU method based on impervious area or similar property characteristics. Id. at 50, Sch. SJR-8, Table 1A.

The definition of wastewater was added to the Public Utility Code in 2016, 66 Pa. C.S. § 102, indicated that it is not dispositive of the ratemaking treatment for the costs related to the provision of wastewater. OCA St. 1 at 48. Mr. Rubin explained that the "Commission has established separate rates and conditions for the provision of industrial wastewater service (requiring pretreatment and setting the costs of that service), as compared to domestic wastewater service, even though the flows are ultimately commingled in the same sewer mains." Id. at $49 . \mathrm{He}$ concluded that, "The explicit inclusion of stormwater as part of wastewater does not eliminate the
need for the Commission to determine the cost of providing stormwater service or determining who should pay those costs." Id.

This is not a theoretical difference of opinion regarding cost allocation. As Mr. Rubin explained the stormwater-related costs are "very significant" in the combined-sewer systems. The stormwater-related costs account for approximately $46 \%$ of the revenue requirement in those three rate zones, or $\$ 31,148,927$ of the total $\$ 68,089,360$ in combined-sewer system revenue requirements, as shown below:

Table 1: Stormwater-related costs as a percent of revenue requirement ${ }^{55}$

| Rate Area | Revenue <br> Requirement | Stormwater Costs | Stormwater as <br> Percent of Total |
| :--- | ---: | :---: | :---: |
| Scranton WW | $\$ 34,754,312$ | $\$ 14,083,139$ | $40.5 \%$ |
| McKeesport WW | $30,047,582$ | $16,279,882$ | $54.2 \%$ |
| Kane WW | $3,287,466$ | 785,906 | $23.9 \%$ |
| Total | $\$ 68,089,360$ | $\$ 31,148,927$ | $45.7 \%$ |

OCA St. 1 at 50. PAWC's continued shift of these costs onto wastewater and water customers on the basis of their water usage is not just or reasonable, and it should not be the way that rates are set. However, PAWC has not done the work necessary to determine the impervious area of properties and has not identified stormwater-only customers. Id.

In this case, Mr. Rubin recommends that existing rates in the combined-sewer rate areas should be increased by an equal percentage, or across-the-board. ${ }^{56}$ OCA St. 1 at 51 . He acknowledges that his recommendation will perpetuate the inequity that is inherent in the existing rates, but without the necessary data, he concluded that any attempt to modify those rates would

[^35]suffer from the same problems as the existing rates and could cause the rates to move further away from the cost of service. Id.

Regarding a path forward, Mr. Rubin recommends that, in this case, the Commission order PAWC to develop a stormwater fee to collect stormwater-related costs in the three CSS rate zones (Scranton, McKeesport, and Kane). This recommendation is important to address the inequity that exists in the current rates and that would continue under PAWC's failure to address this issue. Mr. Rubin explained:

Collecting stormwater costs based on water consumption or on a per-customer basis is grossly unfair, especially to tenants and smaller properties with little impervious surface area. Moreover, failing to recognize that properties that are not wastewater customers (such as parking lots and others I mentioned above) can contribute significantly to stormwater flows makes the collection of stormwater costs through wastewater rates unduly discriminatory and grossly unreasonable.

OCA St. 1 at 50. The OCA submits that these recommendations should be adopted as being consistent with the general ratemaking principles. PAWC has failed to provide any evidence that its current or proposed rates for the combined-sewer systems are just and reasonable.

## XIII. RECOMMENDATIONS FOR ACTIONS RELATED TO THE COVID-19 EMERGENCY

The OCA will not address the matters raised under Section XIII but reserves the right to respond in its Reply Brief, as necessary, to matters raised by other parties.

## XIV. LOW-INCOME CUSTOMER ASSISTANCE

Mr. Colton reviewed PAWC's current low-income bill discount program (BDP) to examine its impact on bill payment outcomes. He also examined the affordability of PAWC low income bills at the current discounts, and PAWC's proposed discounts, and recommends modifications. OCA St. 4 at 3, 16-43. He also recommends three steps that PAWC should take to improve
enrollment in its BDP. Id. at 3, 43-68. Based on his review of the data available and his analysis, he made the following recommendations:

- That PAWC maintain the basic structure of its low-income bill assistance program. By maintaining the basic structure, what I mean is that I recommend preserving PAWC's structure of providing a discount on the customer charge and volumetric charge for water service, and providing a volumetric discount for wastewater service.
- That rather than using a uniform across-the-board discount as PAWC currently proposes, where the discount does not vary based on income, PAWC should adopt a three-tier discount. The discounts currently proposed by PAWC would be retained for customers with income at or above $100 \%$ of Poverty. Modified discounts would be provided to customers with income at: (1) below $50 \%$ of Poverty; and (2) between $50 \%$ and $100 \%$ of Poverty.
- That, no later than six months after a final order in this proceeding, PAWC should present an Arrearage Management Plan to the Commission for review and approval. The AMP should be designed through a multi-party stakeholder consultative process, with BCS specifically invited to participate as a stakeholder;
- That PAWC be directed to budget $\$ 50,000$ to hire an expert consultant to develop, within twelve months of a final order in this proceeding, a grass-roots, boots-on-the-ground outreach plan for its low-income bill discount that relies on community-based "trusted messengers" to help identify and enroll eligible customers in its bill discount. The outreach program should be directed to explicitly identify how it implements each of the principles set forth below: (1) using the community as a "boots-on-the-ground" means of identifying and engaging the hard-to-reach population; (2) going to the community (reaching them "where they live, work, shop, play and pray") rather than making the community come to you; and (3) relying on grassroots "trusted messengers" from within the community.
- That PAWC's new outreach plan should reflect focused consumer education and outreach efforts, tailored to the demographics of its individual service territory. The plan should, in particular, identify efforts to educate and enroll eligible and interested customers at or below $50 \%$ of the Federal Poverty Level.
- That PAWC identify the 2,159 low-income customers who were found to be eligible for its low-income bill discount between January 2018 and April 2020 (or an updated number as of the date of a final order in this proceeding) and, without further action on the part of the customer, enroll those customers in the bill discount to the extent they remain PAWC customers. Moreover, PAWC should retroactively provide these customers who applied for the discount, been found to be eligible, and nonetheless were not enrolled, with benefits
retroactive to the month in which they were found to be eligible. To the extent that customers are found to have had service disconnected, they should be reconnected without cost and enrolled in the bill discount.
- That PAWC delete the following language both from its water and from its wastewater tariffs: "To remain eligible for this rate, such customer must continually make timely payments on the discounted bills."

OCA St. 4 at 4-5. PAWC has agreed to address the 2,159 low-income customers who were found to be eligible but not enrolled in the BDP. PAWC St. 17-R at 9; OCA St. 4SR at 10-11. Also resolved is the tariff revision recommended by Mr. Colton. Id.; OCA St. 4SR at 12-13. The OCA submits that the remaining recommendations are reasonable and should be adopted.

## A. H2O Discount Program Design

Mr. Colton used a series of metrics to assess the effectiveness of PAWC's BDP in promoting more affordable bill payments by its low-income customers. OCA St. 4 at 8-16. Specifically he looked at the level of complete payments, the timeliness of payments, and the level of unsolicited payments. Id. at 8 . As detailed in his testimony, the BDP has not been effective in generating payments from BDP customers. OCA St. 4 at 15.

Mr. Colton measures the completeness of payments through a Payment Coverage Ratio. OCA St. 4 at 9. This is a ratio of dollars of payments received divided by dollars of bills issued to customers. Id. Mr. Colton explained the results, as follows:

Even given the bill discounts PAWC provides to its low-income customers, the lowincome Payment Coverage Ratio is consistently lower than the residential Payment Coverage Ratio as a whole. For the 29 -month period (January 2018 through May 2020), while the average residential Payment Coverage Ratio is $96.7 \%$, the average low-income Payment Coverage Ratio is $76.8 \%$ (a difference of $19.9 \%$ ).

OCA St. 4 at 9 (footnote omitted).
The second metric that Mr. Colton used to assess the effectiveness of the current BDP was the timeliness of payments made by the BDP participants. Using PAWC's data for the time period
from January 2018 through May 2020, there was only one month (April 2020 when more than half of the participants made a full and on-time payment. OCA St. 4 at 12 . Generally, between $43 \%$ and $46 \%$ of the participants made full and on-time payments. Id. Mr. Colton also reviewed the "Bills Behind" statistic to assess the timeliness of payments. OCA St. 4 at 12. That metric puts the level of arrearage in the numerator and the average bill in the denominator to assess how many bill payments were missed. Id. at 12-13. Mr. Colton found that PAWC's low-income customers are two more Bills Behind (5.85 in 2018 and 5.31 in 2019) than its residential customers in ( 3.15 in 2018 and 3.29 in 2019).

Regarding the third metric to measure the effectiveness of the PAWC BDP, Mr. Colton looked at the collection efforts that are required for PAWC to generate the payments it receives. He found that PAWC performs more than four times more nonpayment disconnections for every $\$ 1,000$ in payments from its BDP participants than its total residential customers and about 3 times more disconnections for each 1,000 payments than it performs for its total residential customer population. OCA St. 4 at 15. The data demonstrates that PAWC's BDP is not successful in assisting low-income customers to afford their water and wastewater bills, despite PAWC's assertion to the contrary.

Mr. Colton, using the income ranges from the PAWC service territory zip codes, shows the burdens of PAWC water bills and PAWC water and wastewater bills at the specific level of FPL, with no discount. OCA St. 4 at 20-21. This data shows the need for a bill discount and for enrolling customers in the bill discount program. Id. at 20 . Water bill burdens ${ }^{57}$ range from $7 \%$ to more than $10 \%$ of income for customers below $50 \%$ of FPL and from $2 \%$ to more than $4 \%$ for customers between $125-150 \%$ of FPL. OCA St. 4 at 20; Table 5. For a combined water/wastewater bill, the

[^36]bill burden for all customers at $50 \%$ of FPL is $15 \%$ or more and ranges from more than $4 \%$ to more than $6 \%$ for customers at $125-150 \%$ of FPL. Id. Mr. Colton then applied the proposed PAWC bill discount to these same FPL income ranges and found that it improves the affordability of water and combined water/wastewater bills but not for those at the lowest brackets of the FPL. ${ }^{58}$ OCA St. 4 at 22-24, Table 6 . He noted that the data demonstrates the problem with a uniform across-the-board discount:

While the PAWC proposed discount largely addresses the water burdens being experienced at the two higher levels of Poverty ( $100 \%$ to $125 \% ; 125 \%$ to $150 \%$ ) for low-income customers who income-qualify for the PAWC discount, the discount falls short for the two lower ranges of Poverty.

OCA St. 4 at 23 (emphasis added).
Mr. Colton recommended the basic structure of the BDP be maintained (discounts applied to customer charge and to the volumetric charge for water and to the volumetric charge for wastewater). OCA St. 4 at 24. He recommended that PAWC modify its discount and implement a three-tiered discount that varies based on income, rather than maintaining the across-the-board discount used by PAWC. Id. A three-tier discount would be structured to yield bill burdens for service, whether water, combined water and wastewater, or wastewater only, that allow PAWC's low-income customers to see a "more sustainably payable bill burden." Id. at 25 . Mr. Colton's discounts are set forth in OCA Statement 4, on page 25. Mr. Colton recommended a three-tiered discount for wastewater bills also. His discount levels are set forth in OCA Statement 4, on page $43 .{ }^{59}$

[^37]
## B. Hardship Fund

Mr. Colton reviewed PAWC's existing Hardship Grant Fund and found that it is not funded at a sufficient level and is significantly inadequate to address the shortcomings in the uniform across-the-board discount that PAWC provides. OCA St. 4 at 35-41.

## C. Low-Income Customer Outreach, Data Collection and Reporting

Mr. Colton provided three administrative improvements that he recommends PAWC be directed to pursue to improve the delivery of its low-income assistance program, irrespective of whether any other changes are ordered. OCA St. 4 at 44-68. He recommended improvement in outreach, communications between income eligibility confirmation and enrollment, and eliminating program dismissal for nonpayment.

PAWC enrolls a small fraction of its customers who are income-eligible for the BDP. OCA St. 4 at 44. Specifically, PAWC enrolls approximately 22,000 low-income customers each year. Id., Table 11. That is a fraction of the 119,859 eligible low-income customers (income below $150 \%$ of FPL). ${ }^{60}$ Id. at 45 . This means that about $16.7 \%$ of PAWC's income-eligible customers are enrolled in the BDP. ${ }^{61}$ Id. This low level of enrollment exists even though PAWC has operated its low-income BDP for 29 years. Id. Mr. Colton noted that in comparison to energy utilities, this rate is substantially lower than those utilities' enrollment rates. OCA St. 4 at 45. Mr. Colton

[^38]recommended that PAWC should target outreach towards areas of its service territory with the greatest number of income-eligible customers but also to areas with the greatest proportion of the lowest income customers, which is not something PAWC currently does. OCA St. 4 at 49. PAWC does not know the number of customers who are income-eligible but are not enrolled. OCA St. 4 at 51. PAWC also does not attempt to target its outreach towards areas that might have more income-eligible customers. Id. at 50. Mr. Colton concluded, "[T]he common thread that runs throughout PAWC's outreach efforts is the fact that the outreach is system-wide and untargeted."

OCA St. 4 at 52.
Mr. Colton recommended that PAWC budget $\$ 50,000$ to hire an independent expert consultant to develop an outreach plan within twelve months of an Order in this proceeding. He recommended that the report explicitly identify how it implements the following principles:

1. Using the community as a "boots-on-the-ground" means of identifying and engaging the hard-to-reach population.
2. Going to the community (reaching them "where they live, work, shop, play and pray") rather than making the community come to you.
3. Relying on grassroots "trusted messengers" from within the community.

Moreover, I recommend that PAWC's new outreach plan should reflect focused consumer education and outreach efforts, tailored to the demographics of its individual service territory. The plan should, in particular, identify efforts to educate and enroll eligible and interested customers at or below 50\% of the Federal Poverty Level.

OCA St. 4 at 58-59.

## D. Comprehensive Universal Service Plan

The OCA will not address the matters raised under Section XIV.D but reserves the right to respond in its Reply Brief, as necessary, to matters raised by other parties.

## E. Winter Shut-Off Moratorium

The OCA will not address the matters raised under Section XIV.E but reserves the right to respond in its Reply Brief, as necessary, to matters raised by other parties.

## XV. SERVICE QUALITY AND CUSTOMER SERVICE ISSUES

Based on the review of PAWC's customer service performance and service quality conducted by OCA witnesses Alexander and Fought, the OCA makes the following recommendations:

- PAWC should establish minimum performance standards for several aspects of customer service, including call center, leaks, main breaks, kept field appointments and response to complaints. Objective standards and monitoring of those standards are a means to ensure that PAWC maintains and, where necessary, improves its level of performance relative to other major Pennsylvania utilities. OCA St. 5 at 7-14, 18-19, 30; OCA St. 5SR at 6, 8-9, 12, 14-15.
- PAWC should be required to take steps to improve the monthly performance of its call center. While the 2019 performance improved compared to 2018, the wide swings in performance and the generally below average performance in all areas should be corrected. Customers who call in any month should be provided with reasonable customer service. Specific performance standards should be implemented. OCA St. 5 at 7-8; OCA Exh. BA2; OCA St. 5SR at 15.
- PAWC should be required to conduct regular audits of the third-party call centers to ensure that the rights and remedies available to Pennsylvania residential customers pursuant to Chapter 56 are affirmatively offered and presented when making contact with such customers who have received a termination notice. OCA St. 5 at 13; OCA St. 5SR at 17. The documentation regarding BCS-verified infractions shows repeated instances of PAWC representatives threatening termination prior to resolution of a dispute. OCA St. 5 at 11. The results of such audits should be reported to BCS as part of the quarterly customer complaint analysis that the OCA recommends below.
- PAWC should be required to submit a quarterly analysis of its complaint trends, identify the underlying root cause of the complaints, and document the steps taken to respond to this analysis. A closer supervision of this information is warranted to ensure that ongoing improvements are made to customer service, particularly, in light of the existence of the multi-state management structure and operation of four call centers that serve Pennsylvania customers. OCA St. 5 at 11-14.
- PAWC should provide its customer logs in live Excel format because a searchable format will facilitate review. OCA St. 6 at 13. The logs should also include information about the
final disposition of the complaint because that is required by Commission regulation. Id.
- PAWC should be required to develop a program of routine customer satisfaction surveys that conform to the unified approach and methodology used by the larger Pennsylvania electric and natural gas utilities. The current one-sentence request for determining customer satisfaction is insufficient. OCA St. 5 at 18; OCA St. 5SR at 9-10
- PAWC should modify its training materials to explicitly empower the employee to use their discretion to withdraw and seek guidance from management before terminating service, when they do observe an unusual condition that could result in danger or harm from termination. OCA St. 5 at 17-18; OCA St. 5SR at 10-11.


## A. Customer Performance Service Standards

PAWC does not have specific internal standards for many essential performance areas. OCA St. 5 at 25, 29-30. OCA witness Alexander testified that this is a serious concern and unusual for a utility of the size of PAWC in Pennsylvania and an affiliate of a 16-state parent company. OCA St. 5SR at 2-3, 5-6. PAWC has acquired many Pennsylvania water and wastewater systems in recent years so that increasing numbers of customers are dependent on this entity for essential services. Id. Those customers are entitled to reasonable and reliable customer service, despite the growing size of their utility. Objective standards and monitoring of those standards is a means to ensure that PAWC maintains and, where necessary, improves its level of performance relative to other major Pennsylvania utilities.

The OCA recommends minimum performance standards for several aspects of customer service, including call center, leaks, main breaks, kept field appointments and response to complaints. Specifically, the OCA requests that the Commission require PAWC to meet the following standards:

| Service Quality and <br> Customer Service Standard | Performance Standard | Basis for Proposed Standard |
| :--- | :--- | :--- |
| Call Center Annual Average <br> Speed of Answer | 1 minute (60 seconds) | Pennsylvania typical <br> performance; requires significant <br> annual average improvement |
| Call Center Annual <br> Abandonment Rate | $4 \%$ | Pennsylvania typical <br> performance; requires <br> improvement |
| Average Monthly Response <br> Time for Leaks (damage) |  | Track this information and <br> propose a standard within 60 <br> days |
| Frequency of Main Breaks | 0.19 main breaks per mile | PAWC 2019 performance |
| Kept Field Appointments | $98 \%$ | PAWC current performance |
| Justified Complaints <br> (per 1,000 customers) | $20 \%$ reduction in complaints <br> and payment arrangement <br> requests from 2019 | Improvement required |
| Complaint Infractions | $20 \%$ reduction from 2019 | Improvement required |
| Response Time to BCS <br> Complaints | $<20$ days | PAWC current performance |
| Customer Billing Inquiries | $90 \%$ resolved w/in 20 days | PAWC objective |

OCA St. 5 at 30; OCA St. 5SR at 6. Each recommended standard is discussed below.
The Commission has broad authority to consider a utility's customer service and quality of service performance. ${ }^{62}$ Section 1504 of the Public Utility Code provides:

The commission may, after reasonable notice and hearing, upon its own motion or upon complaint:
(1) Prescribe as to service and facilities, including the crossing of facilities, just and reasonable standards, classifications, regulations and practices to be furnished, imposed, observed and followed by any or all public utilities.
$66 \mathrm{~Pa} . \mathrm{C} . \mathrm{S} . \S$ 1504. In the context of a base rate case, evaluation of the "efficiency, effectiveness, and adequacy of service" by the Commission is affirmatively required. ${ }^{63}$ Further, in its consideration whether to maintain existing rates or as a condition of any rate increase, the

[^39]Commission has authority to order improvements to service. Pa. P.U.C. v. Pennsylvania Gas \&
Water Co., 61 PaPUC 409, 415-16, 74 PUR4th 238, 244-45 (1986) (PG\&W 1986); 66 Pa. C.S. §
1501 (every public utility shall make all changes and improvements to service as shall be necessary to make such service adequate, efficient, safe and reasonable).

By way of example, in a Philadelphia Gas Works rate case, the Commission approved specific service quality and customer service performance standards similar to those recommended by the OCA in this proceeding. The Commission conditioned PGW's interim rate increase as follows:

PGW must show improvement in its customer service functions and report on its progress to the Commission on a quarterly basis. Such reports should include: monthly call center access reports for customer service and collection call centers (to include average speed of answer, average abandonment time, number of abandoned calls, average delay in queue and the percentage of calls answered); monthly customer dispute reports (to include the number of customer disputes filed, the number and percentage of disputes responded to in under thirty days, and the average response time); the number and percentage of residential bills which PGW failed to render during the relevant billing cycles; the number and percentage of residential meters for which PGW has failed to obtain actual or customer supplied readings during the prior six months; and, monthly reports showing the number and percentage of missed customer service appointments. ${ }^{64}$

The Commission has also approved specific service quality and customer service performance standards in the context of merger and acquisition proceedings. ${ }^{65}$ OCA St. 5 at 25.

As such, in this rate proceeding, PAWC must justify its existing and proposed rates, in part, based on its ability to perform its essential quality of service and customer service functions at a reasonable performance level. In determining what is a reasonable performance level, OCA witness Alexander compared PAWC's performance to that of other major Pennsylvania utilities. OCA St.

[^40]5 at $7,10,23,27-30$. The OCA recommends that PAWC be required to submit quarterly reports regarding its performance in the customer service areas addressed by the standards. The OCA submits that Commission should open an investigation if the reports show a persistent failure to meet reasonable performance standards. ${ }^{66,67}$

## 1. Average Answer Time and Call Abandonment Rate

The OCA addresses its recommended performance standard for call answer time and abandonment rate under Section XV.B.1, infra, in the context of a broader discussion of PAWC's call centers.

## 2. Response Time to Leaks and Outage Restoration, Keeping Customer Appointments

Ensuring that the utility's distribution system is operating to prevent loss of service and to respond promptly to correct leaks and disruptions is an essential duty of any water utility. 66 Pa . C.S. § 1501 (service "shall be reasonably continuous and without unreasonable interruptions or delay"); 52 Pa . Code § 65.20 ("Leak detection. A system of leak detection should be utilized on a regular basis, with leaks being repaired as expeditiously and economically as possible"); OCA St. 5 at 9. OCA witness Alexander raised a concern that PAWC does not currently track the response time for leaks, i.e. the amount of time from the utility becoming aware of the incident until the

[^41]repair is completed. OCA St. 5 at 9; PAWC St. 2R at 4. PAWC witness William Andrew Clarkson objected to applying the same standard to all types of leaks because some are not addressed as quickly, such as breaks that do not result in an outage and leaks on customer-owned service lines that are not the Company's responsibility to repair. PAWC St. 2R at 4-5. Consistent with that information, the OCA recommends that PAWC begin to track leak information for breaks that disrupt service and, based on that data, propose a performance standard within 60 days of the entry of the Commission's final Order in this proceeding.

The OCA also recommends using PAWC's 2019 level of performance as the standard for keeping appointments. The Company reported that it met $98 \%$ of its customer field appointments in 2019 and has an internal goal to maintain this level of performance. OCA St. 5 at 9 (citing PAWC Response to OCA-I-001, Att. 4, 5). OCA witness Alexander agreed that a $98 \%$ standard is reasonable and typical of major utilities. Id.

PAWC witness Clarkson objected to setting minimum performance standards for leaks, outages, or appointments on the grounds that there are no "industry" standards or regulatory requirements. PAWC Statement No. 2 R. It remains, however, that preventing and mitigating service disruptions and keeping appointments with customers are fundamental aspects of providing adequate and reasonable service. Moreover, the specific performance standards that the OCA recommended are based on the Company's own historical performance. OCA St. 5SR at 12 . PAWC witness Bruce Aiton provided updated data on the frequency of main breaks showing a decrease in their frequency, both system-wide and in the Pittsburgh system. PAWC St. 3R at 29. This is a positive development and further indication that the standard for main break rates proposed by the OCA is reasonable and achievable. The OCA's proposed standards should be adopted, to maintain existing quality of service in these areas.

## 3. Customer Billing Accuracy and Resolution of Inquiries

The OCA also recommends establishing a performance standard for PAWC's billing accuracy and timeliness of resolving billing inquiries. PAWC already tracks certain billing performance metrics, such as "out of balance invoices," "customer billing inquiries," and "account resolution follow-up." OCA St. 5 at 18-19. Based on review of the data provided, Ms. Alexander observed that PAWC's "baseline" appears to set a target for $90 \%$ to $95 \%$ of these customer contacts and concerns to be resolved in less than 20 days. During the last two years, the Company generally met or exceeded that baseline. Id. Accordingly, the OCA recommends that PAWC should be required to continue its objective to resolve $90 \%$ of its billing inquiries within 20 days.

## B. Call Centers

PAWC relies on customer call centers as the main method by which customers can communicate individually with PAWC. OCA St. 5 at 6-7. Therefore, the operation of its call centers is crucial to the Company's ability to deliver a reasonable level of customer service.

## 1. Average Answer Time and Call Abandonment Rate

PAWC provided combined, monthly data for its four call centers ${ }^{68}$ from January 2018 through April 2020, which OCA witness Alexander used to calculate annual average results for three key indicators of performance:

| Year | Percent Calls <br> Answered in 60 <br> Seconds | Abandonment Rate | Average Speed of <br> Answer (minutes) |
| :--- | :--- | :--- | :--- |
| 2018 | $55.89 \%$ | $18.36 \%$ | $06: 40$ |
| 2019 | $67.83 \%$ | $5.99 \%$ | $02: 33$ |
| 2020 (Jan-April) | $71 \%$ | $5.91 \%$ | $02: 28$ |

[^42]OCA St. 5 at 7; OCA Exh. BA-2. As discussed by Ms. Alexander, the data shows extremely poor performance in PAWC's ability to answer calls in a timely manner and avoid a significant abandonment rate (the percentage of calls in the queue to be answered by a customer service representative that are abandoned due to a long wait time). OCA St. 5 at 7.

In addition, the monthly results reflect a dramatic swing in call center performance that is masked in the annual averages. OCA St. 5 at 8. For example, although the average abandonment rate for 2019 and 2020 was roughly $6.0 \%$, in certain months during 2019 and 2020, the abandonment rate ranged from $9 \%$ to $12 \%$. Id. While the average speed of answer has significantly improved from 6:40 (minutes) in 2018 to approximately 2:30 in 2019 and 2020, the monthly results indicate an ongoing difficulty in meeting a reasonable target performance on a routine basis. OCA St. 5 at 7; OCA Exh. BA-2. In certain months, the speed of answer was over 4 and 5 minutes. Id. at 8. Ms. Alexander determined that the key variable in call center performance is the volume of calls and the number of available call center representatives on hand to answer the calls, such that PAWC can improve performance with better prediction of call volume and ensuring adequate, trained personnel are available to respond to call volume at predicted high call volume days and times. Id.

Currently, PAWC does not have any specific performance metrics or targets for its call center performance. OCA St. 5 at 8, n. 8. Ms. Alexander recommended that PAWC should be required to take steps to improve the monthly performance of its call center and, specifically, to bring its performance in line with other Pennsylvania utilities. Id. at 7, 30. Specifically, the OCA recommends that PAWC's call centers should establish the following performance standards: (1) an average time of answer of 60 seconds or less and (2) a call abandonment rate of less than $4 \%$.

## 2. Pennsylvania-Specific Audits of Third-Party Call Centers

PAWC's call centers located in Kentucky and Tennessee are operated by third parties under contract with American Water Works Service Company (AWWSC). ${ }^{69}$ PAWC St. 18R at 1-2. Representatives from the two third-party call centers make outbound calls to customers who have received a termination notice for nonpayment or other legal reasons, to seek payment or resolution of the cause of the notice. OCA St. 5 SR at 13,16 . These two call centers make a significant percentage of their outbound calls to Pennsylvania customers: $65 \%$ for the Kentucky call center and $35 \%$ for the Tennessee call center. Id. at 16 (citing PAWC Response to OCA-XXIII-13).

OCA witness Alexander raised a concern whether these representatives are adequately trained and supervised to provide all of the Pennsylvania-specific rights and remedies to customers when discussing how to respond to a termination notice. OCA St. 5SR at 16. Her concern is based on the realistic and reasonable difficulty in properly supervising over 200 customer service representatives, in four different call centers that serve 16 different states and handle calls for thousands of customers on a daily basis, particularly in light of BCS's findings of verified complaints and those with infractions. Id. at 16; OCA St. 5 at 13. To address that concern, the OCA recommends that PAWC be required to conduct regular audits of the third-party call centers to ensure that the rights and remedies available to Pennsylvania residential customers pursuant to Chapter 56 are affirmatively offered and presented when making contact with such customers who have received a termination notice. The results of such audits should be reported to BCS as part of the quarterly customer complaint analysis that the OCA recommends. See Section XV.C.1, below.

[^43]
## C. Customer Complaints

## 1. Reporting on PAWC's Analysis of Root Causes of Disputes and Complaints and Response to Identified Trends

The Commission's Bureau of Consumer Services (BCS) publishes a quarterly Utility Consumer Activities Report and Evaluation (UCARE) for major Pennsylvania electric, gas, telephone and water utilities, ${ }^{70}$ which summarizes and compares historical data regarding informal complaints. ${ }^{71}$ Review of the 2019 calendar year data for PAWC ${ }^{72}$ raises several concerns:

- $15 \%$ of the residential customer complaints were "justified" ${ }^{73}$
- $24 \%$ of the payment arrangement requests were "justified," that is, reflected PAWC's failure to apply the proper policies in handling the customer's interaction prior to the customer's informal appeal to BCS.
- The percentage of PAWC's payment arrangement appeals was the highest of any Pennsylvania water utility.
- The response time by PAWC to provide the necessary documentation requested by BCS to resolve customer complaints decreased slightly from 24.1 days in 2018 to 20.6 days in $2019 .{ }^{74}$
- BCS recorded 62 (of which 61 related to Chapter 56 of the Commission's regulations) verified "infractions" ${ }^{75}$ based on its analysis of PAWC informal customer complaints filed with BCS in 2019. A review of the communications sent by BCS to PAWC to document these infractions shows a repeated instance of PAWC threatening termination prior to resolution of a dispute.

OCA St. 5 at 10-11.

[^44]While some improvements have resulted from PAWC's review of informal complaints, the 2019 data from the UCARE Report shows that further improvements are needed. Tracking and evaluating disputes and informal or formal complaints are key to ensuring ongoing improvements in customer service "because that evaluation is likely to spot the "red flag" that indicates a systemic issue or concern that requires management's attention and, in some cases, a change in policy or procedure" and may also identify violations of the Commission's regulations. Id. PAWC relies on identifying "red flags" to ensure that call center representatives are providing proper information and offering the required consumer protections to Pennsylvania customers. OCA St. 5at 13-14. This need is underscored by PAWC's multi-state management structure and operation of four call centers that serve Pennsylvania customers. Id.

To ensure that ongoing improvements are made to customer service, a closer supervision of PAWC's complaints and disputes and associated trends and causes is necessary. OCA St. 5 at 1013, 16. Specifically, the OCA recommends that PAWC be required to submit a quarterly analysis to BCS of its complaint trends, which identifies the underlying root cause of the disputes and complaints and documents the steps taken to respond to this analysis. Id. at 28 . The root cause analysis should review why the customer's communication with PAWC resulted in a dispute and how the PAWC customer service representative handled the initial communication, as well as the evaluation of the PAWC training materials and the integration of PAWC's field and maintenance staff for investigations of leaks and billing issues. Id. at 12.

## 2. Complaint Logs

In accordance with the PUC's requirements, a public utility must make a full and prompt investigation of complaints made by the Commission or others, including customers, relating to service or facilities and keep these records for at least five years. 52 Pa. Code § 65.3 (Complaints);

OCA St. 6 at 10. The written records ${ }^{76}$ must show the name and address of the complainant, the date and character of the complaint and the final disposition of the complaint. Id.

For purposes of complying with the requirement to identify the "character" of the complaint, PAWC started with categories used by BCS and has supplemented that list to include an additional 66 categories. Mr. Fought proposed that an additional 10 categories be included for water systems and an additional 6 categories for wastewater systems. PAWC agreed to add all of the requested categories to those it will use for its customer logs beginning with complaints received on and after January 2, 2021. PAWC St. 17R at 15; Tr. 791-92. OCA witness Fought made two additional recommendations. First, PAWC should provide the logs in live Excel format. OCA St. 6 at 13. The logs are extensive and a searchable format will facilitate review of the logs. Second, PAWC's customer logs should include information about the final disposition of the complaint. Id. This request is expressly required by Section 65.3 of the Commission's regulations. 52 Pa . Code $\S 65.3$ (utility complaint records should include "the final disposition of the complaint").

## D. Customer Satisfaction Surveys

Currently, PAWC measures customer satisfaction with its performance by asking customers whether they are "overall satisfied with American Water" and about the "overall performance" by the customer service representative. OCA St. 5 at 18 (citing PAWC Response to OCA-I-001, Att. 7). The actual results of these one-time questions shows a significant deterioration in 2020 (to date) compared to 2019 with regard to satisfaction with the call center representative's handling of the call and overall with American Water. ${ }^{77}$ OCA St. 5SR at 9. Further, the questions are insufficient because they do not obtain more detailed information concerning the customer's review of the

[^45]actual recent transaction. OCA St. 5 at 18. OCA witness Alexander noted that BCS has approved survey instruments for major Pennsylvania electric and gas utilities, which obtain information from customers about their experience in reaching the utility, using the automated phone system and interacting with the customer representative, in addition to their overall satisfaction. ${ }^{78}$ OCA St. 5 at 18. The OCA recommends that PAWC develop routine customer satisfaction surveys consistent with those approved by BCS for other major utilities. Id.; OCA St. 5SR at 9-10.

## E. Training on Termination of Service

PAWC witness Dean accepted Ms. Alexander's recommendation to enhance and expand PAWC's training of its field representatives to include scenarios and written instructions when there is an allegation of pending dispute or complaint, or allegation relating to domestic abuse. PAWC St. 17 R at 14.

PAWC, however, does not train personnel to detect conditions that would result in danger or harm to those at the residence if water service is terminated at that time. OCA St. 5 at 18. This issue has serious consequences for vulnerable customers whose health or safety depends on water service (and home heating, where water is required by the heating system). Id. at 18; OCA St. 5SR at 10-11. The OCA recommends that PAWC revise its training documents to expressly include these additional situations.

PAWC has acknowledged that when field representatives "encounter circumstances not specifically identified in the law or PUC regulation, they are instructed to contact their supervisor and/or business performance team members before terminating service." OCA St. 5SR at 11. The

[^46]OCA agrees with this overall approach and recommends that PAWC modify its training materials to expressly include this instruction. Specifically, where field personnel observe an unusual condition at the premises which raises a question whether termination at that time may adversely impact the health and safety of the occupants of the dwelling, or the safety of PAWC's employee or the public, the training materials should explicitly empower the employee to use their discretion to withdraw and seek guidance from management before terminating service. Id.

## F. Pressure Surveys and Pressures

The OCA recommends that, to protect customer service lines and inside plumbing in situations where PAWC elects to provide higher than 125 p.s.i.g. static pressure, the Company should either (1) provide a pressure reducer protecting the customer's service line or (2) provide an insurance policy covering repair or replacement of the service line. OCA St. 6 at 6; OCA St. 6SR at 10-11. As Mr. Fought explained: "If this approach was implemented, the cost of protecting service lines with pressures over 125 psi would be taken into account in deciding the most economical way to provide service to higher ground elevations." OCA St. 6SR at 11.

## G. Main Extensions

## 1. Introduction

PAWC's tariff contains an exception to the general rule requiring a Contribution in Aid of Construction (CIAC) for main extensions. Under PAWC's tariff, main extensions may be provided to customers without a CIAC where there is a substantial public need, and the public health and safety may be compromised without access to a public water supply. PAWC's Tariff Rule 27.1(F) provides:

Where substantial public need exists and the public health and safety may be compromised by the absence of a public water supply in a portion of the Company's authorized service territory, the Company, subject to the Commission's prior approval, may install main extensions and Special utility services facilities without
the payment of the Customer Contribution that would otherwise be required under subparagraphs $(A)(3)$ and $(D)(2)$, respectively of the Rule 27.1. ${ }^{79}$

In this case, OCA witness Fought recommended two projects for main extensions that meet the criteria set forth in Tariff Rule 27.1(F). OCA St. 6 at 7-8; OCA St. 6-SR at 16-17. In each project, designated as Area 1 and Area 2, the impacted consumers must have water hauled in to serve their needs and otherwise lack access to potable water. Pursuant to the provisions of Tariff Rule 27.1(F), the potential consumers have significant health and/or safety impacts due to the lack of available potable water.

## 2. PAWC Should Extend a Main to Serve Area 1.

OCA witness Fought recommended a main extension for Area 1 in the area of 51 Ullom Road, Washington County. The Company has made two previous main extensions to the area as a result of the settlements in the prior 2013 and 2017 base rate proceedings. The impacted potential consumer, Robert Teagarden, testified at the August 18, 2020, 6 p.m. Public Input Hearing in this proceeding. Tr. 197-98. Mr. Teagarden testified:

Approximately five years ago I lost my well. A neighbor down the road also lost their well the same day. Since that time, I've had the DEP involved. I had State Representative Jesse White involved. I'm finding out, there's some fracking in the area. I have a well within probably 1,400 feet of my house. Of course, everything was denied. So I had no choice. It was getting close to wintertime. I put a 1,500gallon concrete tank in my yard, currently having water hauled in since that time. In the meantime, the neighbor next door sold her property, and I have had five houses built in that time, and every one of those houses has received public water. Right now, I'm the only one within my house - this area that does not have public water to their house.

My understanding, because if I want water to my house, it's going to cost me $\$ 30,000$, and I can't justify why. Everybody else got their water, I have no water.

The whole township is - it's - some of it's - some of it's rural, some of it's not, but most of the rural town has water except for my residence. Now I have my neighbor,

[^47]he had on, other neighbors had on, they've got their water. There's only two other houses on this road, we have no water.

And I feel I deserve to have water in my house. Why do I have to live like a pioneer? But everybody turned their back, DEP turned their back, the representative turned [his] back. So I was left with no choice but to do what I had to do to get water to my home.

Tr. 197-98; see OCA St. 6 at 7. As OCA witness Fought testified, the potential consumer in Area 1 meets the public health and safety requirements for a main extension and he continued to recommend that the main extension be evaluated and approved if needed to solve the health and safety issues. OCA St. 6-SR at 13.

Mr. Teagarden's property is located in the area of two prior main extensions that were completed pursuant to Tariff Rule 27.1(F) as a result of the settlements of the 2013 and 2017 base rate proceedings. ${ }^{80}$ OCA witness Fought testified:

Mr. Teagarden testified that he believed that he is the only possible customer in the area in need of water service. A main was extended in the area two other times pursuant to Tariff Rule 27.1 as a result of the settlements of the 2013 and 2017 base rate proceedings. Even though Mr. Teagarden is unaware of other potential customers in the area, I would encourage the Company to survey the area and identify possible additional opportunities to extend the main to similarly-situated customers. His situation is worse than many of the others that were served by the Company with the two previous main extensions because he has to have water hauled in to support his needs and due to the cost of [the] system, the system is under-sized for his needs.

OCA St. 6-SR at 14.
The OCA submits that Area 1 meets the requirement of substantial public needs requirement under Tariff Rule 27.1 (F). The OCA recommends that the Company proceed with a proposed main extension to the area of 51 Ullom Road, Washington, Pa . The Company should continue to explore whether other connections are possible in the area.

[^48]
## 3. The Company Should Extend a Main to Serve Area 2.

The potential consumers in Area 2 also meet the requirements for a main extension under
Tariff Rule 27.1(F). OCA witness Fought recommended a main extension in the area of Campbell
Road and Old Steubenville Pike in Bulger, Pa. (Area 2). OCA witness Fought testified:
The OCA was recently contacted by two potential customers located on Old Steubenville Pike and Campbell Road who desire public water supplied to their property. They believe that their well water was adversely affected by a fracking incident is currently the subject of a grand jury investigation by the Office of Attorney General. In addition to the 121 Campbell Road property (that was addressed in the 2017 rate settlement), there may be other homes in need of water service in the area due to the fracking incident.

OCA St. 6 at 7.
OCA witness Fought described two potential consumers in the area. The first is the Old
Steubenville Pike household. Mr. Fought testified:
The household at Old Steubenville Pike has had many illnesses possibly due to environmental reasons and possibly due to the contamination of their well. The potential customer's testimony is included beginning at page 18 of the Attorney General's Grand Jury Report. They do not believe that their water is potable due to the fracking incident. They only use the well water for household purposes and do not use the water for drinking or cooking. At times, they smell sulphur when they run the water. They claim staining of their toilets with a pinkish-orange color. The potential customer claims that a pinkish plastic like substance accumulates in the back of commode. The household also claims that they have had damage to their washing machine due to the water and that their whites have become dingy as a result of the water.

At the time they were building their house, they understood that there was a contract for PAWC to provide the area where their property was located with public water service. However, after an election, the new Robinson Township Supervisors and PAWC decided to void that contract. As part of the settlement of its last rate case, PAWC provided service to a neighbor at 121 Campbell Road.

OCA St. 6 at 7-8.
While the Old Steubenville Road area is outside of its service territory, the Company could apply for a certificate of public convenience under Sections 1102(a) and 1103(a) of the Public Utility Code to extend its service territory to serve these potential customers. 66 Pa. C.S. §§

1102(a), 1103(a). Since PAWC is already a certificated public utility in Pennsylvania, the Commission may apply the standard of "continuing fitness to serve" to the application. ${ }^{81}$

Moreover, the Company appears to have also previously explored the idea of serving customers on Steubenville Pike. OCA witness Fought testified:

It is my understanding, in 2014, the Company had an agreement with Robinson Township to install 4,250 feet of water main to provide service to nine customers along the Steubenville Pike. This agreement was cancelled after new Township Supervisors were elected. If that 4,250 feet of main were installed, it could now serve 9812 Old Steubenville Pike and another potential 20 customers in the area along or nearby that main.

OCA St. 6-SR at 15-16.

In addition to the Old Steubenville Pike potential consumers, OCA witness Fought also recommended a main extension to the adjacent Campbell Road. OCA witness Fought described the Campbell Road household:

The household located on Campbell Road, Bulger, Pa. is adjacent to the 121 Campbell Road property that received a main extension as a result of PAWC's last base rate proceeding. This household seeks two taps, one for the farm and one for the house.

They claim that the water quality in their well changed five years ago. It previously was crystal clear and now they sometimes have a white swirl in their water that eventually settles. They also sometimes smell a sulphur odor from the water and their toilets have been stained an orange color.

The family continued to consume the well water until July of 2020. Three of the four household members have serious kidney and adrenal gland health issues, including their 12 year old daughter, and they attribute the health issues to consumption of the water over the last five year.

The water has also impacted their animals and livestock. They have had several kittens that have had to be put down due to kidney failure. The calves that consume the well water have not flourished and have started to atrophy. When the potential customer has moved them to another field not fed by the well water, the calves have rebounded.

[^49]OCA St. 6 at 7-8.
Company witness Aiton testified that an extension to serve Campbell Road would cost an estimated $\$ 205,000$. PAWC St. 3R at 13. The Company argued that the proposed main extension should not be approved because of quality of service issues raised by only serving two customers on the Area 2 main extension. PAWC St. 3R at 13-14. The OCA submits that PAWC witness Aiton has misunderstood the OCA's testimony regarding Area 2. The OCA also believes that additional potential customers may be served in the area, but has only been directly contacted by two of the customers in the area. OCA witness Fought testified that a review of Google Earth maps shows approximately 20 possible customers in or nearby Area 2. OCA St. 6SR at 16.

The consumers in Area 2 meet the requirements of Tariff Rule 27.1 (F). There may potentially be 20 other customers located in the area. The potential consumers have identified health and safety impacts from the lack of potable water. Moreover, due to on-going litigation, there may be a potential for financial compensation from the third party drilling companies for a main extension to this area. The OCA submits that a main extension for the Area 2 customers should be considered under Tariff Rule 27.1(F).

## H. Sewage Backups

OCA witness Fought addressed sewers backing up into basements in areas served by combined sewers. OCA St. 6SR at 5. The OCA recommends that PAWC be required to ensure that implementation of the Long Term Control Plans does not cause more sewage backups in existing or new service areas. OCA St. 6 SR at 6 . Also, the Company should be directed to provide information to its customers that have basements connected to combined sewers informing them on how to eliminate sewage backups. Id. PAWC did not address these recommendations in its testimony. Therefore, the OCA's position should be adopted.

## I. Tenant Issues and Protections

The OCA will not address the matters raised under Sections XV.I through XV.K but reserves the right to respond in its Reply Brief, as necessary, to matters raised by other parties.

## J. Language Access

K. Protection for Victims of Domestic Violence

## XVI. TARIFF CHANGES

## A. Limitation of Liability

PAWC proposes new limitation of liability provisions in its water and wastewater tariffs. ${ }^{82}$ The OCA opposes the proposed tariff changes because they are overly broad and would (1) limit liability for negligent actions for injury or damages that are not related to interruption or cessation of service, (2) limit liability for injury or damage resulting from intentional actions (i.e. reckless or intentional behavior) and (3) contains so many conditions that it effectively exculpates PAWC from liability. ${ }^{83}$ OCA St. 5 at 21-22; OCA St. 5SR at 18-19.

The Company's proposed language improperly limits PAWC's liability for reckless and intentional actions. Proposed Rule 15 states, in relevant part:
[t]he Company shall not be liable to any Customer or third party for any loss or damage due to any negligent, reckless or intentional act of omission or commission, by the Company, its employees or agents
(1) where the loss or damage involves an act of God, accident, strike, storm, riot, fire, flood, epidemic, pandemic, or any other cause beyond the Company's control;
(2) where the loss or damage does not involve a duty of the Company, its employees or agents, including breaks or leaks on facilities that are not owned by the Company,

[^50]such as breaks, leaks, defects or conditions in facilities of other utilities located in the same trench or in the Customer's own service line, meter vault, pressure reducing valve, back flow prevention device, check valve, pressure relief valve, or any other control valve, internal plumbing or fixture, or any other device installed on the customer facility, or due to the materials out of which those facilities are made;
(3) where the loss or damage does not involve a breach of a duty of the Company, its employees or agents, including where the Company does not receive actual notice, either written or oral, that a Company facility (located within the public right-of-way, in a sidewalk or on a Customer's property) is in need of repair, such as the condition or elevation of a vault, meter pit, curb box or valve box that is not proven to have been in that condition at the time of installation or that is caused by a plumber, developer, facility owner or other person or event; or
(4) where the claim involves strict products liability, breach of contract, or breach of actual or implied warranties of merchantability or fitness for a particular purpose, express or implied. ${ }^{84}$

This proposed language also appears to exculpate PAWC from liability for negligent (as well as reckless and intentional) actions. OCA St. 5 at 22; OCA St. 5SR at 18-19. Accordingly, PAWC's tariffs should be revised to eliminate the overly broad limitation of liability proposed.

PAWC witness Everette opposed the OCA's recommended revisions to PAWC's proposed limitation of liability language. PAWC St. 4-R at 19-23. First, Ms. Everette contends that the proposed tariff does not in fact eliminate liability, but only under certain conditions. Id. at 19. As stated by OCA witness Alexander, however, it is not readily apparent to what circumstances one or more of these conditions would not apply. OCA St. 5 at 21-22; OCA St. 5SR at 18-19. Further, the extensive list of conditions is not the type of "narrow and limited" exception for negligent behavior allowed by the Courts. See DeFrancesco; Behrend. PAWC's language also improperly expands the scope of the limitation of liability beyond actions relating to the "interruption or cessation of service" authorized by the Commission's policy statement, 52 Pa . Code § 69.87.

[^51]Second, Ms. Everette contends that the Company's proposed limitation of liability is not out of line with other Pennsylvania utilities. PAWC St. 4-R at 21-22. PAWC's proposed tariff, however, is the only one that expressly limits liability for reckless or intentional actions. None of the utilities that Ms. Everette references contain that express limitation. In fact, National Fuel Gas Distribution Corporation's (NFG) tariff specifically rejects that limitation. NFG's tariff states:
[t]he Company shall not be liable in any amount for damages, direct or consequential, where service meets requirements of the Public Utility Code. This limitation of liability, however, shall not apply to Company conduct which is found to be willful, wanton or reckless.

PAWC St. 4-R at 21-22. Ms. Everette recognizes that PECO Energy Company's tariff expressly excludes willful misconduct from its limitation of liability provision. Id. at 21, n. 10. Other Pennsylvania utilities, including UGI Electric and UGI Central Penn Gas, also expressly exclude negligent actions from their limitation of liability provisions. ${ }^{85}$

PAWC's proposed limitation provisions are also broader than tariffs approved for its American Water affiliates. OCA St. 5 at 22-23. New Jersey American Water does not include any generic limitation on liability and its limitation for liability for multi-use service provides that the Company may be liable if the harm was caused by its own negligence. Id. at 22. West Virginia American Water limits liability for acts "beyond its control," but not for reckless or negligent acts of its employees or agents. Id. at 23. For these reasons, PAWC's proposed revisions to the limitation of liability provisions in its tariff should be denied.

## B. Chapter 56 Customer Protections to Be Included in Tariff

PAWC's existing and proposed tariff rules and regulations do not reference, identify or describe, even at a high level, how the Company applies Chapter 56 and other essential consumer

[^52]protections required for residential customers. OCA St. 5 at 20-21; OCA St. 5 SR at $11 ; 52 \mathrm{~Pa}$. Code Ch. 56. As such, the OCA recommends that PAWC's tariffs should be revised to include the essential consumer protections required by Chapter 56.
C. Align Tariff Language on Low-Income Customers with Actual Practice

This issue has been resolved.

## XVII. CONCLUSION

For the reasons set forth in the OCA's Main Brief, the OCA respectfully requests the Commission deny any rate increase to Pennsylvania-American Water Company at this time. The Company's customers are experiencing substantial economic and personal hardships as a result of the continuing COVID-19 pandemic, and any rate increase at this time would not result in just and reasonable rates. Should the Commission determine, however, that some increase is needed, then the OCA's alternative positions and adjustments should be adopted and Pennsylvania-American should receive a rate reduction in water and minimal increases in wastewater, and its request for a multiyear rate plan should be denied. In addition, its proposed trackers should be denied and other actions taken as set forth in the OCA's Main Brief.

Erin L. Gannon
Senior Assistant Consumer Advocate
PA Attorney I.D. \# 83487
E-Mail: EGannon@paoca.org
Counsel For:
Tanya J. McCloskey
Acting Consumer Advocate
Office of Consumer Advocate
555 Walnut Street
$5^{\text {th }}$ Floor, Forum Place
Harrisburg, PA 17101-1923
Phone: (717) 783-5048
Fax: (717) 783-7152
Dated: November 18, 2020
299617

Respectfully submitted,

## /s/Christine Maloni Hoover

Christine Maloni Hoover
Senior Assistant Consumer Advocate
PA Attorney I.D. \# 50026
E-Mail: CHoover@paoca.org
Harrison W. Breitman
Assistant Consumer Advocate
PA Attorney I.D. \# 320580
E-Mail: HBreitman@paoca.org
Lauren E. Guerra
Assistant Consumer Advocate
PA Attorney I.D. \# 323192
E-Mail: LGuerra@paoca.org
Christy M. Appleby
Assistant Consumer Advocate
PA Attorney I.D. \# 85824
E-Mail: CAppleby@paoca.org

TABLE I
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Total Water

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) | Company Adjustments (1) | PAWC Pro Forma Rebuttal Filing Present Rates | OCA <br> Adjustments | OCA <br> Pro Forma Present Rates | OCA <br> Revenue Increase |  | Total Allowable Revenues |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ |  | \$ |
| Operating Revenue | 642,348,898 | 366,536 | 642,715,434 | 0 | 642,715,434 |  | 0 | 642,715,434 |
| Expenses: |  |  |  |  |  |  |  |  |
| O \& M Expense | 213,937,875 | $(437,627)$ | 213,500,249 | $(7,043,113)$ | 206,457,136 |  | 0 | 206,457,136 |
| Depreciation | 144,092,856 | 2,229,045 | 146,321,901 | 0 | 146,321,901 |  | 0 | 146,321,901 |
| Amortizations | $(6,771,123)$ | $(51,743)$ | $(6,822,866)$ |  | $(6,822,866)$ |  |  | $(6,822,866)$ |
| Taxes, Other | 11,354,620 | 420,317 | 11,774,937 | $(132,068)$ | 11,642,869 |  | 0 | 11,642,869 |
| Income Taxes: |  |  |  |  |  |  |  |  |
| State | 15,569,030 | $(29,484)$ | 15,539,546 | $(277,092)$ | 15,262,454 |  | 0 | 15,262,454 |
| Federal | 30,496,528 | $(34,956)$ | 30,461,572 | $(27,562,128)$ | 2,899,444 |  | 0 | 2,899,444 |
| Amort of ITC and Excess DFIT | $(233,592)$ | 0 | $(233,592)$ |  | $(233,592)$ |  |  | $(233,592)$ |
| Total Expenses | 408,446,194 | 2,095,552 | 410,541,746 | $(35,014,401)$ | 375,527,345 |  | 0 | 375,527,345 |
| Net Inc. Available for Return | 233,902,704 | (1,729,016) | 232,173,688 | 35,014,401 | 267,188,089 |  | (0) | 267,188,089 |
| Rate Base | 3,328,329,601 | 116,473,294 | 3,444,802,895 | 25,134,328 | 3,469,937,223 |  |  | 3,469,937,223 |
| Rate of Return | 7.03\% |  | 6.74\% |  | 7.70\% |  |  | 7.70008422\% |

(1) Company Main Brief

| TABLE I(A) <br> Pennsylvania-American Water Company RATE OF RETURN R-2020-3019369, R-2020-3019371 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Water Operations | Structure | Cost | After-Tax <br> Weighted Cost | Effective <br> Tax Rate Complement | Pre-Tax Weighted Cost Rate |
| Total Cost of Debt |  |  | 2.19\% |  |  |
| Long-term Debt | 48.30\% | 4.53\% | 2.19\% |  | 2.19\% |
| Short-term Debt | 0.00\% | 0.00\% | 0.00\% |  |  |
| Preferred Stock | 0.06\% | 8.73\% | 0.01\% | 0.711160 | 0.01\% |
| Common Equity | 51.64\% | 10.66\% | 5.51\% | 0.711160 | 7.74\% |
|  | 100.00\% |  | 7.70008422\% |  | 9.94\% |
| Pre-Tax Interest Coverage | 4.54 |  |  |  |  |
| After-Tax Interest Coverage | 3.52 |  |  |  |  |

TABLE I
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Total Wastewater

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) | Company Adjustments (1) | PAWC Pro Forma Rebuttal Filing <br> Present Rates | OCA <br> Adjustments | OCA <br> Pro Forma Present Rates | OCA <br> Revenue Increase |  | Total <br> Allowable <br> Revenues |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ |  | \$ |
| Operating Revenue | 73,100,482 | 0 | 73,100,482 | 0 | 73,100,482 |  | 0 | 73,100,482 |
| Expenses: |  |  |  |  |  |  |  |  |
| O \& M Expense | 29,701,245 | 21,121 | 29,722,366 | $(1,011,274)$ | 28,711,091 |  | 0 | 28,711,091 |
| Depreciation | 25,944,030 | 736,371 | 26,680,401 | 0 | 26,680,401 |  | 0 | 26,680,401 |
| Amortizations | $(105,637)$ | 67,791 | $(37,846)$ |  | $(37,846)$ |  |  | $(37,846)$ |
| Taxes, Other | 2,616,818 | 658,973 | 3,275,790 | $(16,981)$ | 3,258,809 |  | 0 | 3,258,809 |
| Income Taxes: |  |  |  |  |  |  |  |  |
| State | $(1,094,710)$ | $(71,461)$ | $(1,166,171)$ | 76,715 | $(1,089,456)$ |  | 0 | (1,089,456) |
| Federal | $(673,745)$ | $(133,170)$ | $(806,915)$ | $(2,503,799)$ | $(3,310,714)$ |  | 0 | $(3,310,714)$ |
| Amort of ITC and Excess DFIT | 0 | 0 | 0 |  | 0 |  |  | 0 |
| Total Expenses | 56,388,001 | 1,279,624 | 57,667,625 | $(3,455,339)$ | 54,212,286 |  | 0 | 54,212,286 |
| Net Inc. Available for Return | 16,712,481 | $(1,279,624)$ | 15,432,857 | 3,455,339 | 18,888,196 |  | (0) | 18,888,196 |
| Rate Base | 647,008,274 | 16,206,465 | 663,214,739 | 2,534,509 | 665,749,248 |  |  | 665,749,248 |
| Rate of Return | 2.58\% |  | 2.33\% |  | 2.84\% |  |  | 2.83713362\% |

```
TABLE I(A)
Pennsylvania-American Water Company
RATE OF RETURN
R-2020-3019369, R-2020-3019371
```


## Wastewater Operations

| Wastewat | Structure | Cost | After-Tax <br> Weighted Cost | Effective <br> Tax Rate Complement | Pre-Tax <br> Weighted Cost Rate |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Total Cost of Debt |  |  | 2.02\% |  |  |
| Long-term Debt | 39.44\% | 4.46\% | 1.76\% |  | 1.76\% |
| WW-Specific LTD | 10.14\% | 2.55\% | 0.26\% |  |  |
| Preferred Stock | 0.05\% | 8.80\% | 0.00\% | 0.711174 | 0.00\% |
| Common Equity | 50.37\% | 1.63\% | 0.82\% | 0.711174 | 1.15\% |
|  | 100.00\% |  | 2.83713363\% |  | 2.91\% |

Pre-Tax Interest Coverage 1.65
After-Tax Interest Coverage 1.61

TABLE I
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Water Operations Excluding Steelton

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) | Company Adjustments (1) | PAWC Pro Forma Rebuttal Filing | OCA Adjustments | OCA <br> Pro Forma <br> Present Rates | OCA <br> Revenue Increase |  | Total Allowable Revenues |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ |  | \$ |
| Operating Revenue | 639,540,327 | 366,536 | 639,906,863 | 0 | 639,906,863 |  | 0 | 639,906,863 |
| Expenses: $\quad$ - |  |  |  |  |  |  |  |  |
| O \& M Expense | 212,205,637 | $(437,302)$ | 211,768,335 | $(7,015,863)$ | 204,752,471 |  | 0 | 204,752,471 |
| Depreciation | 143,245,719 | 2,187,393 | 145,433,112 | 0 | 145,433,112 |  | 0 | 145,433,112 |
| Amortizations | (6,789,516) | $(51,743)$ | $(6,841,259)$ |  | (6,841,259) |  |  | $(6,841,259)$ |
| Taxes, Other | 11,236,002 | 342,222 | 11,578,224 | $(131,764)$ | 11,446,460 |  | 0 | 11,446,460 |
| Income Taxes: |  |  |  |  |  |  |  |  |
| State | 15,651,149 | $(21,699)$ | 15,629,450 | $(273,231)$ | 15,356,219 |  | 0 | 15,356,219 |
| Federal | 30,564,448 | $(20,225)$ | 30,544,223 | $(27,554,821)$ | 2,989,402 |  | 0 | 2,989,402 |
| Amort of ITC and Excess DFIT | $(233,592)$ | 0 | $(233,592)$ |  | $(233,592)$ |  |  | $(233,592)$ |
| Total Expenses | 405,879,846 | 1,998,646 | 407,878,492 | (34,975,679) | 372,902,813 |  | 0 | 372,902,813 |
| Net Inc. Available for Return | 233,660,481 | (1,632,110) | 232,028,371 | 34,975,679 | 267,004,050 |  | 0 | 267,004,050 |
| Rate Base | 3,304,569,811 | 115,885,108 | 3,420,454,919 | 25,144,500 | 3,445,599,419 |  |  | 3,445,599,419 |
| Rate of Return | 7.07\% |  | 6.78\% |  | 7.75\% |  |  | 7.74913208\% |

(1) Company Main Brief

TABLE I(A)
Pennsylvania-American Water Company
RATE OF RETURN
R-2020-3019369, R-2020-3019371

## Water Operations Excluding Steelton

|  | Structure | Cost | After-Tax Weighted Cost | Effective Tax Rate Complement | Pre-Tax <br> Weighted Cost Rate |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Total Cost of Debt |  |  | $2.18786057 \%$ |  |  |
| Long-term Debt | 48.30\% | 4.53\% | 2.18786057\% |  | 2.19\% |
| Short-term Debt | 0.00\% | 0.00\% | 0.00000000\% |  |  |
| Preferred Stock | 0.06\% | 8.73\% | 0.00523800\% | 0.711160 | 0.01\% |
| Common Equity | 51.64\% | 10.76\% | $5.55603351 \%$ | 0.711160 | 7.81\% |
|  | 100.00\% |  | 7.74913208\% |  | 10.01\% |
| Pre-Tax Interest Coverage | 4.57 |  |  |  |  |
| After-Tax Interest Coverage | 3.54 |  |  |  |  |

```
TABLE I(B)
Pennsylvania-American Water Company
REVENUE FACTOR
R-2020-3019369, R-2020-3019371
```


## Water Operations Excluding Steelton

| 100\% | 1.00000000 |
| :---: | :---: |
| Less: |  |
| Uncollectible Accounts Factor (*) | 0.01205000 |
| PUC, OCA, OSBA Assessment Factors (*) | 0.00575930 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.00000000 |
|  | 0.9821907 |
| State Income Tax Rate (*) | 0.0998718 |
| Effective State Income Tax Rate | 0.0980932 |
| Factor After Local and State Taxes | 0.8840975 |
| Federal Income Tax Rate (*) | 0.2099342 |
| Effective Federal Income Tax Rate | 0.1856023 |
| Revenue Factor (100\% - Effective Tax Rates) | 0.6984952 |

(*) Company Main Brief

## TABLE II

Pennsylvania-American Water Company
SUMMARY OF ADJUSTMENTS
R-2020-3019369, R-2020-3019371

## Water Operations Excluding Steelton

| Adjustments | Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State Income Tax | Federal Income Tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| RATE BASE: |  |  |  |  |  |  |  |
| CWC: |  |  |  |  |  |  |  |
| Int. \& Div. (Table IV) | $(1,207,000)$ |  |  |  |  |  |  |
| Taxes (Table V) | (1,207,00) |  |  |  |  |  |  |
| O \& M (Tabie VI) | $(686,340)$ |  |  |  |  |  |  |
| Excess Accumulated Deferred Income Taxes | 27,037,840 |  |  |  |  |  |  |
| REVENUES: |  |  |  |  |  |  |  |
|  |  | 0 |  |  |  | 0 | 0 |
| EXPENSES: |  |  |  |  |  |  |  |
| Annual Performance Plan Expense |  |  | $(1,722,407)$ |  | $(131,764)$ | 185,232 | 350,477 |
| Capitalization Rate |  |  | $(1,859,403)$ |  |  | 185,754 | 351,466 |
| Annual Performance Plan - AWWSC |  |  | $(1,801,885)$ |  |  | 180,008 | 340,594 |
| Stock-Based Compensation Expense - AWWSC |  |  | $(1,647,068)$ |  |  | 164,542 | 311,330 |
| Amortization of Outreach Consultant Costs |  |  | 14,899 |  |  | $(1,488)$ | $(2,816)$ |
| TAXES: |  |  |  |  |  |  |  |
| Excess Accumulated Deferred Income Tax Amortization |  |  |  |  |  |  | (27,037,840) |
| Interest Synchronization (Table lll) |  |  |  |  |  | $(987,279)$ | $(1,868,032)$ |
| TOTALS | 25,144,500 | 0 | (7,015,863) | 0 | (131,764) | $\underline{(273,231)}$ | $\underline{(27,554,821)}$ |

TABLE III
Pennsylvania-American Water Company
INTEREST SYNCHRONIZATION
R-2020-3019369, R-2020-3019371

## Water Operations Excluding Steelton

Amount
\$

Company Rate Base Claim
OCA Rate Base Adjustments
OCA Rate Base
Weighted Cost of Debt
OCA Interest Expense
Company Claim (1)
Total OCA Adjustment
Company Adjustment
Net OCA Interest Adjustment
State Income Tax Rate
State Income Tax Adjustment
Net OCA Interest Adjustment State Income Tax Adjustment

Net OCA Adjustment for F.I.T.
Federal Income Tax Rate
Federal Income Tax Adjustment
\$ 3,420,454,919 25,144,500
\$ 3,445,599,419
2.19\%
\$ $75,384,911$
\$ 65,499,454
\$ $(9,885,457)$
$\$ \quad$ -
$\$ \quad(9,885,457)$
9.99\%
—._(987,279)
$(9,885,457)$
$(987,279)$
$(8,898,178)$
20.99\%
$(1,868,032)$
(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company
CASH WORKING CAPITAL - Interest and Dividends
R-2020-3019369, R-2020-3019371

## Water Operations Excluding Steelton

| Accrued Interest |  | Preferred Stock Dividends |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Long-Term Debt | Shori-Term Debt |  |  |
| Company Rate Base Claim | \$3,420,454,919 | \$3,420,454,919 | Company Rate Base Claim | \$3,420,454,919 |
| OCA Rate Base Adjustments | \$25,144,500 | \$25,144,500 | OCA Rate Base Adjustments | \$25,144,500 |
| OCA Rate Base | \$3,445,599,419 | \$3,445,599,419 | OCA Rate Base | \$3,445,599,419 |
| Weighted Cost of Debt | 2.18786057\% | 0.00\% | Weighted Cost Pref. Stock | 0.00523800\% |
| OCA Annual Interest Exp. | \$75,384,911 | \$0 | OCA Preferred Dividends | \$180,480 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |
| Working Capital Adjustment |  |  |  |  |
| OCA Daily Interest Exp. | \$206,534 | \$0 | OCA Daily Dividends | \$494 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |
| OCA Working Capital | (\$8,612,468) | \$0 |  | \$2,223 |
| Company Claim (1) | \$0 | \$0 | Company Claim (1) | \$0 |
| OCA Adjustment | (\$8,612,468) | \$0 |  | \$2,223 |


| Total Interest \& Dividend Adj. | $(\$ 8,610,245)$ |
| :--- | ---: |
| Less: Company Claim (1) | $(\$ 7,402,977)$ |
| OCA Adjustment | $(\$ 1,207,268)$ |
| Rounded to $\$ 1,000$ | $(\$ 1,207,000)$ |

(1) Company Main Brief.

TABLE V
Pennsylvania-American Water Company CASH WORKING CAPITAL -TAXES R-2020-3019369, R-2020-3019371

| Description | Company Proforma Tax Expense Present Rates | ALJ <br> Adjustments | ALJ Pro forma Tax Expense Present Rates | ALJ <br> Allowance | ALJ <br> Adjusted Taxes at Present Rates | Daily Expense | Net Lead/ Lag Days | Accrued Tax Adjustment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PUC Assessment | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Public Utility Realty | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| Capital Stock Tax | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| State Income Tax | \$0 | (\$273,231) | (\$273,231) | \$0 | (\$273,231) | (\$748.58) | 0.00 | \$0 |
| Federal Income Tax | \$0 | (\$27,554,821) | (\$27,554,821) | \$0 | (\$27,554,821) | (\$75,492.66) | 0.00 | \$0 |
|  | \$0 | $\underline{(\$ 27,828,052)}$ | (\$27,828,052) | \$0 | (\$27,828,052) |  |  |  |
|  |  |  |  |  |  | ALJ Allowance |  | 0 |
|  |  |  |  |  |  | Company Claim (1) |  | 0 |
|  |  |  |  |  |  | ALJ Adjustment |  | 0 |

TABLE VI
Pennsyivania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE R-2020-3019369, R-2020-3019371

## Water Operations Excluding Steelton

| Description | Company Pro forma F.T.Y. Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$56,686,235 | ( $\$ 3,448,953$ ) | \$53,237,282 | 12.14 | \$646,300,609 |
| Chemicals | \$11,198,264 | \$0 | \$11,198,264 | 48.81 | \$546,587,278 |
| Group Insurance | \$9,765,865 | \$0 | \$9,765,865 | 10.92 | \$106,643,246 |
| Insurance, Other | \$13,166,870 | \$0 | \$13,166,870 | -53.43 | (\$703,505,837) |
| Labor | \$59,611,870 | (\$1,854,171) | \$57,757,699 | 12.14 | \$701,178,471 |
| Leased Equip./Rent | \$390,060 | \$0 | \$390,060 | 42.65 | \$16,636,059 |
| Leased Vehicles | \$2,476,857 | \$0 | \$2,476,857 | 39.23 | \$97,167,100 |
| Miscellaneous | \$31,413,610 | ( $\$ 1,844,504$ ) | \$29,569,106 | 31.01 | \$916,937,973 |
| Natural Gas | \$994,248 | \$0 | \$994,248 | 18.90 | \$18,791,287 |
| Power | \$11,746,309 | \$0 | \$11,746,309 | 24.97 | \$293,305,336 |
| Purchased Water | \$2,965,191 | \$0 | \$2,965,191 | 34.69 | \$102,862,480 |
| Telephone | \$3,798,036 | \$0 | \$3,798,036 | 8.71 | \$33,080,894 |
| Waste Disposal | \$1,830,364 | \$0 | \$1,830,364 | 45.65 | \$83,556,117 |
| Post Retirement Benefits | (\$2,529,410) | \$0 | (\$2,529,410) | 0.00 | \$0 |
| Pensions | ( $\$ 390,013$ ) | \$0 | $(\$ 390,013)$ | 13.14 | (\$5,124,771) |
|  | \$203,124,356 | (\$7,147,627) | \$195,976,729 | 14.60 | \$2,854,416,242 |


| OCA Average Revenue Lag | 50.7 |
| :--- | ---: |
| Less: OCA Avg. Expense Lag | 14.6 |
| Net Difference | 36.1 |
| OCA Pro forma |  |
| O \& M Expense per Day |  |
| OCA CWC for O \& M | $\$ 536,923$ |
| Less: Company Claim (1) | $\underline{\$ 19,403,491}$ |
| OCA Adjustment | $\underline{\$ 20,089,831}$ |
| $(\$ 686,340)$ |  |

(1) Company Main Brief

TABLEI
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Water Operations Steelton

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) |  | Company Adjustments (1) |  | PAWC Pro Forma Rebuttal Filing <br> Present Rates |  | OCA <br> Adjustments |  | OCA <br> Pro Forma <br> Present Rates |  | OCA <br> Revenue Increase |  | Total Allowable Revenues |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | \$ |  | \$ |  | \$ |  | \$ |  | \$ |  | \$ |  | \$ |
| Operating Revenue | \$ | 2,808,571 | \$ | - | \$ | 2,808,571 | \$ | - | \$ | 2,808,571 | \$ | - | \$ | 2,808,571 |
| Expenses: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| O \& M Expense | \$ | 1,732,238 | \$ | (324) | \$ | 1,731,914 | \$ | $(27,250)$ | \$ | 1,704,664 | \$ | - | \$ | 1,704,664 |
| Depreciation | \$ | 847,137 | \$ | 41,652 | \$ | 888,789 | \$ | - | \$ | 888,789 | \$ | - | \$ | 888,789 |
| Amortizations | \$ | 18,393 | \$ | - | \$ | 18,393 |  |  | \$ | 18,393 |  |  | \$ | 18,393 |
| Taxes, Other | \$ | 118,618 | \$ | 78,095 | \$ | 196,713 | \$ | (304) | \$ | 196,409 | \$ | - | \$ | 196,409 |
| Income Taxes: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| State | \$ | $(82,119)$ | \$ | $(7,785)$ | \$ | $(89,904)$ | \$ | $(3,861)$ | \$ | $(93,765)$ | \$ | - | \$ | $(93,765)$ |
| Federal | \$ | $(67,920)$ | \$ | $(14,731)$ | \$ | $(82,651)$ | \$ | $(7,307)$ | \$ | $(89,958)$ | \$ | - | \$ | $(89,958)$ |
| Amort of ITC and Excess DFIT | \$ | - | \$ | - | \$ | - |  |  | \$ | - |  |  | \$ | - |
| Total Expenses | \$ | 2,566,348 | \$ | 96,906 | \$ | 2,663,254 | \$ | $(38,722)$ | \$ | 2,624,532 | \$ | - | \$ | 2,624,532 |
| Net Inc. Available for Return | \$ | 242,223 | \$ | (96,906) | \$ | 145,317 | \$ | 38,722 | \$ | 184,039 | \$ | - | \$ | 184,039 |
| Rate Base | \$ | 23,759,790 | \$ | 588,186 | \$ | 24,347,976 | \$ | $(10,172)$ | \$ | 24,337,804 |  |  | \$ | 24,337,804 |
| Rate of Return |  | 1.019\% |  |  |  | 0.60\% |  |  |  | 0.76\% |  |  |  | 0.75618403\% |

(1) Company Main Brief

TABLE I(A)

## Pennsylvania-American Water Company <br> RATE OF RETURN <br> R-2020-3019369, R-2020-3019371

## Water Operations Steelton

|  |  | After-Tax | Effective | Pre-Tax |
| :--- | :---: | :---: | :---: | :---: |
|  |  | Weighted | Tax Rate | Weighted |
| Structure | Cost | Cost | Complement |  |


| Total Cost of Debt |  |  | $2.19 \%$ |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Long-term Debt | $48.30 \%$ | $4.53 \%$ | $2.19 \%$ |  | $2.19 \%$ |
| Short-term Debt | $0.00 \%$ | $0.00 \%$ | $0.00 \%$ |  |  |
| Preferred Stock | $0.06 \%$ | $8.73 \%$ | $0.01 \%$ | 0.711160 | $0.01 \%$ |
| Common Equity | $51.64 \%$ | $-2.78 \%$ | $-1.44 \%$ | 0.711160 | $-2.02 \%$ |
|  |  |  | $\underline{0.75618403 \%}$ |  | $0.18 \%$ |
|  |  |  |  |  |  |

Pre-Tax Interest Coverage 0.08
After-Tax Interest Coverage 0.35

TABLE (B)
Pennsylvania-American Water Company
REVENUE FACTOR
R-2020-3019369, R-2020-3019371
Water Operations Steelton

| 100\% | 1.00000000 |
| :--- | ---: |
| Less: | 0.01205024 |
| Uncollectible Accounts Factor (*) | 0.00575951 |
| PUC, OCA, OSBA Assessment Factors ( ${ }^{*}$ ) | 0.00000000 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.9821903 |
|  | 0.0998721 |
| State Income Tax Rate (*) | 0.0980934 |
| Effective State Income Tax Rate | 0.2099343 |
| Factor After Local and State Taxes | 0.1856022 |
| Federal Income Tax Rate (*) |  |
| Effective Federal Income Tax Rate | 0.6984946 |
| Revenue Factor (100\% - Effective Tax Rates) |  |

(*) Company Main Brief

TABLE II
Pennsylvania-American Water Company
SUMMARY OF ADJUSTMENTS
R-2020-3019369, R-2020-3019371

## Water Operations Steelton

| Adiustments | Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State Income Tax | Federal Income Tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| RATE BASE: cWC: <br> Int. \& Div. (Table IV) Taxes (Table V) 0 \& $M$ (Table Vi) | $\begin{gathered} (8,000) \\ 0 \\ (2,172) \end{gathered}$ |  |  |  |  |  |  |
| REVENUES: |  |  |  |  |  |  |  |
| EXPENSES: |  |  |  |  |  |  |  |
| Annual Performance Plan Expense |  |  | $(3,970)$ $(11110)$ |  | (304) | 427 1.110 | 808 2,100 |
| Annual Performance Plan - AWWSC |  |  | $(6,392)$ |  |  | 639 | 1,208 |
| Stock-Based Compensation Expense - AWWSC |  |  | $(5,843)$ |  |  | 584 | 1,104 |
| Amortization of Outreach Consultant Costs |  |  | 65 |  |  | (7) | (12) |
| TAXES: |  |  |  |  |  |  |  |
| Interest Synchronization (Table ill) |  |  |  |  |  | $(6,614)$ | $(12,515)$ |
| TOTALS | $(10,172)$ | 0 | $(27,250)$ | 0 | (304) | $(3,861)$ | (7,307) |

TABLE III
Pennsylvania-American Water Company INTEREST SYNCHRONIZATION
R-2020-3019369, R-2020-3019371

| Water Operations Steelton |  | Amount \$ |
| :---: | :---: | :---: |
| Company Rate Base Claim | \$ | 24,347,976 |
| OCA Rate Base Adjustments |  | $(10,172)$ |
| OCA Rate Base | \$ | 24,337,804 |
| Weighted Cost of Debt |  | 2.18786057\% |
| OCA Interest Expense | \$ | 532,477 |
| Company Claim (1) | \$ | 466,248 |
| Total OCA Adjustment | \$ | $(66,230)$ |
| Company Adjustment | \$ | - |
| Net OCA Interest Adjustment | \$ | $(66,230)$ |
| State Income Tax Rate |  | 9.99\% |
| State Income Tax Adjustment |  | $(6,614)$ |
| Net OCA Interest Adjustment |  | $(66,230)$ |
| State Income Tax Adjustment |  | $(6,614)$ |
| Net OCA Adjustment for F.I.T. |  | $(59,616)$ |
| Federal Income Tax Rate |  | 20.99\% |
| Federal Income Tax Adjustment |  | $(12,515)$ |

(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company
CASH WORKING CAPITAL - Interest and Dividends
R-2020-3019369, R-2020-3019371

## Water Operations Steelton

| Accrued Interest |  | Preferred Stock Dividends |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Long-Term Debt | Short-Term Debt |  |  |
| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 24,347,976 \\ (\$ 10,172) \\ \hline \end{array}$ | $\begin{array}{r} \$ 24,347,976 \\ (\$ 10,172) \\ \hline \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 24,347,976 \\ (\$ 10,172) \\ \hline \end{array}$ |
| OCA Rate Base Weighted Cost of Debt | $\begin{gathered} \$ 24,337,804 \\ 2.18786057 \% \\ \hline \end{gathered}$ | $\begin{array}{r} \$ 24,337,804 \\ 0.00 \% \\ \hline \end{array}$ | OCA Rate Base Weighted Cost Pref. Stock | $\begin{gathered} \$ 24,337,804 \\ 0.00523800 \% \\ \hline \end{gathered}$ |
| OCA Annual Interest Exp. | \$532,477 | \$0 | OCA Preferred Dividends | \$1,275 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |
| Working Capital Adjustment |  |  |  |  |
| OCA Daily Interest Exp. | \$1,459 | \$0 | OCA Daily Dividends | \$3 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |
| OCA Working Capital | $(\$ 60,840)$ | \$0 |  | \$14 |
| Company Claim (1) | . \$0 | \$0 | Company Claim (1) | \$0 |
| OCA Adjustment | $(\$ 60,840)$ | \$0 |  | \$14 |


| Total Interest \& Dividend Adj. | $(\$ 60,826)$ |
| :--- | ---: |
| Less: Company Claim (1) | $(\$ 53,238)$ |
| OCA Adjustment | $(\$ 7,588)$ |
| Rounded to $\$ 1,000$ | $(\$ 8,000)$ |

(1) Company Main Brief.

| Description | TABLE V <br> Pennsylvania-American Water Company CASH WORKING CAPITAL -TAXES R-2020-3019369, R-2020-3019371 |  |  |  |  | Daily Expense | $\begin{aligned} & \text { Net Lead/ } \\ & \text { Lag Days } \\ & \hline \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Company Proforma Tax Expense Present Rates | ALJ <br> Adjustments | ALJ Pro forma Tax Expense Present $\qquad$ Rates | ALJ <br> Allowance | ALJ <br> Adjusted Taxes at Present Rates |  |  | Accrued Tax Adjustment |
| PUC Assessment | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Public Utility Realty | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| Capital Stock Tax | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | S0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| State Income Tax | \$0 | $(\$ 3,861)$ | (\$3,861) | \$0 | $(\$ 3,861)$ | (\$10.58) | 0.00 | \$0 |
| Federal Income Tax | \$0 | $(\$ 7,307)$ | (\$7,307) | \$0 | $(\$ 7,307)$ | (\$20.02) | 0.00 | \$0 |
|  | \$0 | (\$11,168) | $(\$ 11,168)$ | \$0 | (\$11,168) |  |  |  |
|  |  |  |  |  |  | ALJ Allowance |  | 0 |
|  |  |  |  |  |  | Company Claim (1) |  | 0 |
|  |  |  |  |  |  | ALJ Adjustment |  | 0 |

(1) Company Main Brief

TABLE VI
Pennsylvania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE R-2020-3019369, R-2020-3019371

| Water Operations Steelton |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Description | Company Pro forma F.T.Y. <br> Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| Service Company | \$201,087 | (\$12,235) | \$188,853 | 12.14 | \$2,292,671 |
| Chemicals | \$92,159 | \$0 | \$92,159 | 48.81 | \$4,498,281 |
| Group Insurance | \$64,179 | \$0 | \$64,179 | 10.92 | \$700,835 |
| Insurance, Other | \$67,894 | \$0 | \$67,894 | -53.43 | $(\$ 3,627,576)$ |
| Labor | \$341,794 | $(\$ 4,274)$ | \$337,520 | 12.14 | \$4,097,492 |
| Leased Equip./Rent | \$0 | \$0 | \$0 | 42.65 | \$0 |
| Leased Vehicles | \$16,149 | \$0 | \$16,149 | 39.23 | \$633,525 |
| Miscellaneous | \$817,828 | $(\$ 11,045)$ | \$806,783 | 31.01 | \$25,018,335 |
| Natural Gas | \$0 | \$0 | \$0 | 18.90 | \$0 |
| Power | \$107,438 | \$0 | \$107,438 | 24.97 | \$2,682,727 |
| Purchased Water | \$0 | \$0 | \$0 | 34.69 | \$0 |
| Telephone | \$3,023 | \$0 | \$3,023 | 8.71 | \$26,330 |
| Waste Disposal | \$0 | \$0 | \$0 | 45.65 | \$0 |
| Post Retirement Benefits | \$3,456 | \$0 | \$3,456 | 0.00 | \$0 |
| Pensions | \$6,360 | \$0 | \$6,360 | 13.14 | \$83,570 |
|  | \$1,721,367 | $(\$ 27,554)$ | \$1,693,813 | 21.50 | \$36,406,190 |


| OCA Average Revenue Lag | 50.7 |
| :--- | ---: |
| Less: OCA Avg. Expense Lag | 21.5 |
| Net Difference | 29.2 |
| OCA Pro forma |  |
| O \& M Expense per Day |  |
|  | $\$ 4,641$ |
| OCA CWC for O \& M | $\$ 135,535$ |
| Less: Company Claim (1) | $\$ 137,707$ |
| OCA Adjustment | $(\$ 2,172)$ |

(1) Company Main Brief

TABLE I
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Wastewater SSS Excluding Sadsbury and Exeter Operations

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) | Company Adjustments (1) | PAWC Pro Forma Rebuttal Filing <br> Present Rates | OCA <br> Adjustments | OCA <br> Pro Forma <br> Present Rates | OCA Revenue Increase |  | Total Allowable Revenues |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | - \$ | \$ | \$ | \$ | \$ |  | \$ |
| Operating Revenue | 26,594,302 | 0 | 26,594,302 | 0 | 26,594,302 |  | 0 | 26,594,302 |
| Expenses: O \& M Expense | 8,805,616 | 5,069 | 8,810,685 | $(231,752)$ | 8,578,933 |  | 0 | 8,578,933 |
| Depreciation | 9,056,728 | 612,347 | 9,669,075 | 0 | 9,669,075 |  | 0 | 9,669,075 |
| Amortizations | $(328,512)$ | 67,565 | $(260,947)$ |  | $(260,947)$ |  |  | $(260,947)$ |
| Taxes, Other | 558,636 | 14,602 | 573,238 | $(4,955)$ | 568,283 |  | 0 | 568,283 |
| Income Taxes: State | $(3,090)$ | $(16,164)$ | $(19,254)$ | 13,311 | $(5,943)$ |  | 0 | $(5,943)$ |
| Federal | $(133,012)$ | $(28,798)$ | $(161,810)$ | (2,290,678) | $(2,452,488)$ |  | 0 | $(2,452,488)$ |
| Amort of ITC and Excess DFIT | \$ | \$ | \$ |  | \$ - |  | \$ |  |
| Total Expenses | 17,956,366 | 654,621 | 18,610,986 | (2,514,074) | 16,096,913 |  | 0 | 16,096,913 |
| Net Inc. Available for Return | 8,637,936 | (654,621) | 7,983,316 | 2,514,074 | 10,497,389 |  | 0 | 10,497,389 |
| Rate Base | 184,077,745 | 11,309,431 | 195,387,176 | 2,267,447 | 197,654,623 |  |  | 197,654,623 |
| Rate of Return | 4.69\% |  | 4.09\% |  | 5.31\% |  |  | 5.31097586\% |

(1) Company Main Brief

TABLE I(A)
Pennsylvania-American Water Company
RATE OF RETURN
R-2020-3019369, R-2020-3019371


Pre-Tax Interest Coverage 3.63
After-Tax Interest Coverage 3.02

TABLE (B)
Pennsylvania-American Water Company
REVENUE FACTOR
R-2020-3019369, R-2020-3019371

## Wastewater SSS Excluding Sadsbury and Exeter Operations

| 100\% | 1.00000000 |
| :---: | :---: |
| Less: |  |
| Uncollectible Accounts Factor (*) | 0.01205003 |
| PUC, OCA, OSBA Assessment Factors (*) | 0.00536014 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.00000000 |
|  | 0.9825898 |
| State Income Tax Rate (*) | 0.0998674 |
| Effective State Income Tax Rate | 0.0981287 |
| Factor After Local and State Taxes | 0.8844611 |
| Federal Income Tax Rate ( ${ }^{*}$ ) | 0.2099242 |
| Effective Federal Income Tax Rate | 0.1856698 |
| Revenue Factor (100\% - Effective Tax Rates) | 0.698791 |

(*) Company Main Brief

## TABLE II

Pennsylvania-American Water Company SUMMARY OF ADJUSTMENTS
R-2020-3019369, R-2020-3019371
Wastewater SSS Excluding Sadsbury and Exeter Operations

| Adjustments | Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | $\begin{gathered} \text { State } \\ \text { Income Tax } \end{gathered}$ | Federal Income Tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| RATE BASE: |  |  |  |  |  |  |  |
| CWC: |  |  |  |  |  |  |  |
| Int. \& Div. (Table IV) | $(31,000)$ |  |  |  |  |  |  |
| Taxes (Table V) | 0 |  |  |  |  |  |  |
| O \& M (Table VI) | $(17,419)$ |  |  |  |  |  |  |
| Excess Accumulated Deferred Income Taxes | 2,315,866 |  |  |  |  |  |  |
| REVENUES: |  |  |  |  |  |  |  |
|  |  | 0 |  |  |  | 0 | 0 |
| EXPENSES: |  |  |  |  |  |  |  |
| Annual Performance Plan Expense |  |  | $(64,768)$ |  | $(4,955)$ | 6,965 | 13,179 |
| Capitalization Rate |  |  | $(153,844)$ |  |  | 15,369 | 29,080 |
| Annual Performance Plan - AWWSC |  |  | $(7,189)$ |  |  | 718 | 1,359 |
| Stock-Based Compensation Expense - AWWSC |  |  | $(6,571)$ |  |  | 656 | 1,242 |
| Arrortization of Outreach Consultant Costs |  |  | 619 |  |  | (62) | (117) |
| TAXES: |  |  |  |  |  |  |  |
| Excess Accumulated Deferred Income Tax Amortization |  |  |  |  |  |  | $(2,315,866)$ |
| Interest Synchronization (Table III) |  |  |  |  |  | $(10,335)$ | $(19,555)$ |
| TOTALS | 2,267,447 | 0 | (231,752) | 0 | (4,955) | 13,311 | (2,290,678) |

TABLE III
Pennsylvania-American Water Company
INTEREST SYNCHRONIZATION
R-2020-3019369, R-2020-3019371

| Wastewater SSS Excluding Sadsbury and Exeter Operations |  | Amount \$ |
| :---: | :---: | :---: |
| Company Rate Base Claim | \$ | 195,387,176 |
| OCA Rate Base Adjustments |  | 2,267,447 |
| OCA Rate Base | \$ | 197,654,623 |
| Weighted Cost of Debt |  | 1.76000000\% |
| OCA Interest Expense | \$ | 3,478,721 |
| Company Claim (1) | \$ | 3,375,237 |
| Total OCA Adjustment | \$ | $(103,484)$ |
| Company Adjustment | \$ |  |
| Net OCA Interest Adjustment | \$ | $(103,484)$ |
| State Income Tax Rate |  | 9.99\% |
| State Income Tax Adjustment |  | $(10,335)$ |
| Net OCA Interest Adjustment |  | $(103,484)$ |
| State Income Tax Adjustment |  | $(10,335)$ |
| Net OCA Adjustment for F.I.T. |  | $(93,149)$ |
| Federal Income Tax Rate |  | 20.99\% |
| Federal Income Tax Adjustment |  | $(19,555)$ |

(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company CASH WORKING CAPITAL - Interest and Dividends

R-2020-3019369, R-2020-3019371
Wastewater SSS Excluding Sadsbury and Exeter Operations

| Accrued Interest | Preferred Stock Dividends |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Long-Term Debt | LT Debt - WW Specific |  |  |
| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 195,387,176 \\ \$ 2,267,447 \\ \hline \end{array}$ | $\begin{array}{r} \$ 195,387,176 \\ \$ 2,267,447 \\ \hline \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 195,387,176 \\ \$ 2,267,447 \\ \hline \end{array}$ |
| OCA Rate Base <br> Weighted Cost of Debt | $\begin{array}{r} \$ 197,654,623 \\ 1.76 \% \\ \hline \end{array}$ | $\begin{array}{r} \$ 197,654,623 \\ 0.26 \% \\ \hline \end{array}$ | OCA Rate Base Weighted Cost Pref. Stock | $\begin{array}{r} \$ 197,654,623 \\ 0.00 \% \\ \hline \end{array}$ |
| OCA Annual Interest Exp. | \$3,478,721 | \$513,902 | OCA Preferred Dividends | \$0 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | -41.7 | Net Lag Days | 4.5 |
| Working Capital Adjustment |  |  |  |  |
| OCA Daily Interest Exp. <br> Net Lag Days | $\begin{array}{r} \$ 9,531 \\ -41.7 \\ \hline \end{array}$ | $\begin{array}{r} \$ 1,408 \\ -41.7 \\ \hline \end{array}$ | OCA Daily Dividends Net Lag Days | $\$ 0$ 4.5 |
| OCA Working Capital Company Claim (1) | $\begin{array}{r} (\$ 397,443) \\ \$ 0 \\ \hline \end{array}$ | $\begin{array}{r} (\$ 58,712) \\ \$ 0 \\ \hline \end{array}$ | Company Claim (1) | \$0 $\$ 0$ |
| OCA Adjustment | (\$397,443) | (\$58,712) |  | \$0 |


| Total Interest \& Dividend Adj. | $(\$ 456,155)$ <br> Less: Company Claim (1) |
| :--- | ---: |
| OCA Adjustment | $(\$ 351,033)$ |
| Rounded to $\$ 1,000$ | $(\$ 31,000)$ |

(1) Company Main Brief.

| Description | Company Proforma Tax Expense Present Rates | ALJ <br> Adjustments | ALJ <br> Pro forma Tax Expense Present Rates | ALJ <br> Allowance | ALJ Adjusted Taxes at Present Rates | Daily Expense | Net Lead/ Lag Days | Accrued Tax Adjustment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PUC Assessment | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Public Utility Realty | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| Capital Stock Tax | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| State Income Tax | \$0 | \$13,311 | \$13,311 | \$0 | \$13,311 | \$36.47 | 0.00 | \$0 |
| Federal income Tax | \$0 | (\$2,290,678) | (\$2,290,678) | \$0 | (\$2,290,678) | $(\$ 6,275.83)$ | 0.00 | \$0 |
|  | \$0 | $(\$ 2,277,367)$ | (\$2,277,367) | \$0 | (\$2,277,367) |  |  |  |
|  |  |  |  |  |  | Al. J Allowance |  | 0 |
|  |  |  |  |  |  | Company Claim (1) |  | 0 |
|  |  |  |  |  |  | ALJ Adjustment |  | 0 |

(1) Company Main Brief

TABLE V
Pennsylvania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE R-2020-3019369, R-2020-3019371

## Wastewater SSS Excluding Sadsbury and Exeter Operations

| Description | Company Pro forma F.T.Y. <br> Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$226,150 | (\$13,760) | \$212,391 | 12.14 | \$2,578,424 |
| Chemicals | \$676,129 | \$0 | \$676,129 | 48.81 | \$33,001,871 |
| Group Insurance | \$450,101 | \$0 | \$450,101 | 10.92 | \$4,915,103 |
| Insurance, Other | \$805,473 | \$0 | \$805,473 | -53.43 | $(\$ 43,036,422)$ |
| Labor | \$2,196,944 | $(\$ 69,723)$ | \$2,127,221 | 12.14 | \$25,824,464 |
| Leased Equip./Rent | \$4,544 | \$0 | \$4,544 | 42.65 | \$193,802 |
| Leased Vehicles | \$74,819 | \$0 | \$74,819 | 39.23 | \$2,935,149 |
| Miscellaneous | \$1,583,304 | (\$153,224) | \$1,430,080 | 31.01 | \$44,346,767 |
| Natural Gas | \$57,141 | \$0 | \$57,141 | 18.90 | \$1,079,965 |
| Power | \$1,097,164 | \$0 | \$1,097,164 | 24.97 | \$27,396,185 |
| Purchased Water | \$0 | \$0 | \$0 | 34.69 | \$0 |
| Telephone | \$142,321 | \$0 | \$142,321 | 8.71 | \$1,239,616 |
| Waste Disposal | \$1,189,447 | \$0 | \$1,189,447 | 45.65 | \$54,298,237 |
| Post Retirement Benefits | \$24,290 | \$0 | \$24,290 | 0.00 | \$0 |
| Pensions | \$119,003 | \$0 | \$119,003 | 13.14 | \$1,563,699 |
|  | \$8,646,830 | $(\$ 236,707)$ | \$8,410,123 | 18.60 | \$156,336,860 |


| OCA Average Revenue Lag | 50.6 |
| :--- | ---: |
| Less: OCA Avg. Expense Lag | 18.6 |
| Net Difference | 32.0 |
| OCA Pro forma |  |
| O \& M Expense per Day |  |
| OCA CWC for O \& M | $\$ 23,041$ |
| Less: Company Claim (1) | $\$ 738,292$ |
| OCA Adjustment | $\$ 755,711$ |

(1) Company Main Brief

TABLE
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Wastewater SSS Sadsbury Operations

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) | Company Adjustments (1) | PAWC Pro Forma Rebuttal Filing <br> Present Rates | OCA <br> Adjustments | OCA <br> Pro Forma <br> Present Rates | OCA Revenue Increase | Total Allowable Revenues |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Operating Revenue | 1,019,361 | 0 | 1,019,361 | 0 | 1,019,361 | 0 | 1,019,361 |
| Expenses: |  |  |  |  |  |  |  |
| O \& M Expense | 132,092 | 335 | 132,427 | $(4,085)$ | 128,341 | 0 | 128,341 |
| Depreciation | 200,484 | (705) | 199,779 | - | 199,779 | 0 | 199,779 |
| Amortizations | 27,024 | 0 | 27,024 |  | 27,024 |  | 27,024 |
| Taxes, Other | 8,513 | 574 | 9,087 | (43) | 9,044 | 0 | 9,044 |
| income Taxes: |  |  |  |  |  |  |  |
| State | 40,615 | 402 | 41,017 | 147 | 41,164 | 0 | 41,164 |
| Federal | 97,150 | 760 | 97,910 | 277 | 98,187 | 0 | 98,187 |
| Amort of ITC and Excess DFIT | 0 | 0 | 0 |  | 0 |  | 0 |
| Total Expenses | 505,877 | 1,366 | 507,243 | $(3,704)$ | 503,539 | 0 | 503,539 |
| Net Inc. Available for Return | 513,484 | $(1,366)$ | 512,117 | 3,704 | 515,822 | 0 | 515,822 |
| Rate Base | 8,266,613 | $(65,973)$ | 8,200,640 | (328) | 8,200,312 |  | 8,200,312 |
| Rate of Return | 6.212\% |  | 6.24\% |  | 6.29\% |  | 6.29027157\% |

(1) Company Main Brief

TABLE I(A)
Pennsylvania-American Water Company
RATE OF RETURN
R-2020-3019369, R-2020-3019371

| Wastewater SSS Sadsbury Operations |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Structure | Cost | After-Tax Weighted Cost | Effective <br> Tax Rate Complement | Pre-Tax Weighted Cost Rate |
| Total Cost of Debt |  |  | 2.02\% |  |  |
| Long-term Debt | 39.44\% | 4.46\% | 1.76\% |  | 1.76\% |
| WW-Specific LTD | 10.14\% | 2.55\% | 0.26\% |  |  |
| Preferred Stock | 0.05\% | 8.80\% | 0.00\% | 0.711181 | 0.00\% |
| Common Equity | 50.37\% | 8.48\% | 4.27\% | 0.711181 | 6.01\% |
|  | 100.00\% |  | 6.29027157\% |  | 7.77\% |

## Pre-Tax Interest Coverage <br> 4.41

After-Tax Interest Coverage $\quad 3.57$3.57

TABLE $1(B)$

## Pennsylvania-American Water Company <br> REVENUE FACTOR <br> R-2020-3019369, R-2020-3019371

Wastewater SSS Sadsbury Operations

| 100\% | 1.00000000 |
| :--- | ---: | ---: |
| Less: |  |
| Uncollectible Accounts Factor (*) | 0.01205403 |
| PUC, OCA, OSBA Assessment Factors (*) | 0.00576644 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.00000000 |
|  | 0.9821795 |
| State Income Tax Rate (*) | 0.0998633 |
| Effective State Income Tax Rate | 0.0980837 |
| Factor After Local and State Taxes | 0.8840958 |
| Federal Income Tax Rate (*) | 0.2099193 |
| Effective Federal Income Tax Rate | 0.1855888 |

(*) Company Main Brief

## Wastewater SSS Sadsbury Operations

| Adiustments | Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State Income Tax | Federal Income Tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| RATE BASE: |  |  |  |  |  |  |  |
| CWC: |  |  |  |  |  |  |  |
| Int. \& Div. (Table IV) | 0 |  |  |  |  |  |  |
| Taxes (Table V) | 0 |  |  |  |  |  |  |
| O \& M (Table VI) | (328) |  |  |  |  |  |  |
| REVENUES: |  |  |  |  |  |  |  |
|  |  | 0 |  |  |  | 0 | 0 |
| EXPENSES: |  |  |  |  |  |  |  |
| Annual Performance Plan Expense |  |  | (572) |  | (43) | 61 | 116 |
| Capitalization Rate |  |  | $(1,764)$ |  |  | 176 | 334 |
| Annual Performance Plan - AWWSC |  |  | (926) |  |  | 93 | 175 |
| Stock-Based Compensation Expense - AWWSC |  |  | (847) |  |  | 85 | 160 |
| Amortization of Outreach Consultant Costs |  |  | 24 |  |  | (2) | (5) |
| TAXES: |  |  |  |  |  |  |  |
| Interest Synchronization (Table III) |  |  |  |  |  | (266) | (503) |
| totals | (328) | 0 | (4,085) | 0 | (43) | 147 | 277 |

TABLE III
Pennsylvania-American Water Company
INTEREST SYNCHRONIZATION
R-2020-3019369, R-2020-3019371

| Wastewater SSS Sadsbury Operations | Amount \$ |  |
| :---: | :---: | :---: |
| Company Rate Base Claim | \$ | 8,200,640 |
| OCA Rate Base Adjustments |  | (328) |
| OCA Rate Base | \$ | 8,200,312 |
| Weighted Cost of Debt |  | 1.76\% |
| OCA Interest Expense | \$ | 144,325 |
| Company Claim (1) | \$ | 141,663 |
| Total OCA Adjustment | \$ | $(2,663)$ |
| Company Adjustment | \$ | - |
| Net OCA Interest Adjustment | \$ | $(2,663)$ |
| State Income Tax Rate |  | 9.99\% |
| State Income Tax Adjustment |  | (266) |
| Net OCA Interest Adjustment |  | $(2,663)$ |
| State Income Tax Adjustment |  | (266) |
| Net OCA Adjustment for F.I.T. |  | $(2,397)$ |
| Federal Income Tax Rate |  | 20.99\% |
| Federal Income Tax Adjustment |  | (503) |

(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company
CASH WORKING CAPITAL - Interest and Dividends
R-2020-3019369, R-2020-3019371

## Wastewater SSS Sadsbury Operations

Accrued Interest

|  | Long-Term Debt | LT Debt - WW Specific | Preferred Stock Dividends |  |
| :---: | :---: | :---: | :---: | :---: |
| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 8,200,640 \\ (\$ 328) \\ \hline \end{array}$ | $\begin{array}{r} \$ 8,200,640 \\ (\$ 328) \\ \hline \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 8,200,640 \\ (\$ 328) \\ \hline \end{array}$ |
| OCA Rate Base <br> Weighted Cost of Debt | $\begin{array}{r} \$ 8,200,312 \\ 1.76 \% \\ \hline \end{array}$ | $\begin{array}{r} \$ 8,200,312 \\ 0.26 \% \\ \hline \end{array}$ | OCA Rate Base <br> Weighted Cost Pref. Stock | $\begin{array}{r} \$ 8,200,312 \\ 0.00 \% \\ \hline \end{array}$ |
| OCA Annual Interest Exp. | \$144,325 | \$21,321 | OCA Preferred Dividends | \$0 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |

## Working Capital Adjustment

| OCA Daily Interest Exp. <br> Net Lag Days | $\begin{aligned} & \$ 395 \\ & -41.7 \\ & \hline \end{aligned}$ | $\begin{gathered} \$ 58 \\ -41.7 \\ \hline \end{gathered}$ | OCA Daily Dividends Net Lag Days | $\begin{aligned} & \$ 0 \\ & 4.5 \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| OCA Working Capital Company Claim (1) | $\begin{array}{r} (\$ 16,472) \\ \$ 0 \\ \hline \end{array}$ | $\begin{array}{r} (\$ 2,419) \\ \$ 0 \\ \hline \end{array}$ | Company Claim (1) | \$0 $\$ 0$ |
| OCA Adjustment | (\$16,472) | (\$2,419) |  | \$0 |


| Total Interest \& Dividend Adj. | $(\$ 18,891)$ <br> Less: Company Claim (1) |
| :--- | ---: |
| OCA Adjustment | $\$ 19,094)$ |

(1) Company Main Brief.

TABLE V
Pennsylvania-American Water Company CASH WORKING CAPITAL-TAXES R-2020-3019369, R-2020-3019371

| Description | Company Proforma Tax Expense Present Rates | ALJ <br> Adjustments | ALJ <br> Pro forma Tax Expense Present Rates | ALJ <br> Allowance | ALJ <br> Adjusted Taxes at Present Rates | Daily Expense | Net Lead/ Lag Days | Accrued Tax Adjustment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PUC Assessment | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Public Utility Reaity | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| Capital Stock Tax | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| State Income Tax | \$0 | \$147 | \$147 | \$0 | \$147 | \$0.40 | 0.00 | \$0 |
| Federal Income Tax | \$0 | \$277 | \$277 | \$0 | \$277 | \$0.76 | 0.00 | \$0 |
|  | \$0 | \$424 | \$424 | \$0 | \$424 |  |  |  |
|  |  |  |  |  |  | ALJ Allowance |  | 0 |
|  |  |  |  |  |  | Company Claim (1) |  | 0 |
|  |  |  |  |  |  | ALJ Adjustment |  | 0 |

(1) Company Main Brief

> TABLE VI
> Pennsylvania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE R-2020-3019369, R-2020-3019371

## Wastewater SSS Sadsbury Operations

| Description | Company <br> Pro forma <br> F.T.Y. <br> Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$29,143 | (\$1,773) | \$27,370 | 12.14 | \$332,271 |
| Chemicals | \$0 | \$0 | \$0 | 48.81 | \$0 |
| Group Insurance | \$3,272 | \$0 | \$3,272 | 10.92 | \$35,730 |
| Insurance, Other | \$27,775 | \$0 | \$27,775 | -53.43 | (\$1,484,018) |
| Labor | \$20,593 | (\$615) | \$19,978 | 12.14 | \$242,532 |
| Leased Equip./Rent | \$0 | \$0 | \$0 | 42.65 | \$0 |
| Leased Vehicles | \$4,254 | \$0 | \$4,254 | 39.23 | \$166,884 |
| Miscellaneous | \$25,805 | (\$1,741) | \$24,065 | 31.01 | \$746,240 |
| Natural Gas | \$0 | \$0 | \$0 | 18.90 | \$0 |
| Power | \$9,017 | \$0 | \$9,017 | 24.97 | \$225,154 |
| Purchased Water | \$0 | \$0 | \$0 | 34.69 | \$0 |
| Telephone | \$0 | \$0 | \$0 | 8.71 | \$0 |
| Waste Disposal | \$0 | \$0 | \$0 | 45.65 | \$0 |
| Post Retirement Benefits | \$0 | \$0 | \$0 | 0.00 | \$0 |
| Pensions | \$0 | \$0 | \$0 | 13.14 | \$0 |
|  | \$119,859 | $(\$ 4,128)$ | \$115,730 | 2.30 | \$264,793 |


| OCA Average Revenue Lag | 50.7 |
| :--- | ---: |
| Less: OCA Avg. Expense Lag | 2.3 |
|  |  |
| Net Difference | 48.4 |
| OCA Pro forma |  |
| O \& M Expense per Days | $\$ 317$ |


| OCA CWC for O \& M | $\$ 15,350$ |
| :--- | ---: |
| Less: Company Claim (1) | $\$ 15,678$ |
| OCA Adjustment | $(\$ 328)$ |

(1) Company Main Brief

TABLE
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Wastewater SSS Exeter Operations

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) | Company Adjustments (1) | PAWC Pro Forma Rebuttal Filing <br> Present Rates | OCA <br> Adjustments | OCA <br> Pro Forma <br> Present Rates | OCA Revenue Increase |  | Total Allowable Revenues |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ |  | \$ |
| Operating Revenue | 8,186,390 | 0 | 8,186,390 | 0 | 8,186,390 |  | 0 | 8,186,390 |
| Expenses: $\quad$ - 8, |  |  |  |  |  |  |  |  |
| O \& M Expense | 2,373,934 | 2,589 | 2,376,522 | $(73,902)$ | 2,302,620 |  | 0 | 2,302,620 |
| Depreciation | 3,621,605 | 21,475 | 3,643,080 | 0 | 3,643,080 |  | 0 | 3,643,080 |
| Amortizations | 30,983 | 0 | 30,983 |  | 30,983 |  |  | 30,983 |
| Taxes, Other | 443,735 | 622,803 | 1,066,537 | $(1,491)$ | 1,065,046 |  | 0 | 1,065,046 |
| Income Taxes: 0 |  |  |  |  |  |  |  |  |
| State | $(202,755)$ | $(59,385)$ | $(262,140)$ | 4,573 | $(257,567)$ |  | 0 | $(257,567)$ |
| Federal | $(13,501)$ | $(112,363)$ | $(125,864)$ | 8,653 | $(117,211)$ |  | 0 | $(117,211)$ |
| Amort of ITC and Excess DFIT | 0 | 0 | 0 |  | 0 |  |  | 0 |
| Total Expenses | 6,254,000 | 475,118 | 6,729,118 | $(62,167)$ | 6,666,951 |  | 0 | 6,666,951 |
| Net Inc. Available for Return | 1,932,390 | $(475,118)$ | 1,457,272 | 62,167 | 1,519,439 |  | 0 | 1,519,439 |
| Rate Base | 90,923,800 | 466,051 | 91,389,851 | $(6,412)$ | 91,383,439 |  |  | 91,383,439 |
| Rate of Return | 2.125\% |  | 1.59\% |  | 1.66\% |  |  | 1.66270707\% |

(1) Company Main Brief

TABLE I(A)

```
Pennsylvania-American Water Company
RATE OF RETURN R-2020-3019369, R-2020-3019371
```

| Wastewater SSS Exeter Operations |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Structure | Cost | After-Tax <br> Weighted Cost | Effective <br> Tax Rate Complement | Pre-Tax <br> Weighted Cost Rate |
| Total Cost of Debt |  |  | 2.02\% |  |  |
| Long-term Debt | 39.44\% | 4.46\% | 1.76\% |  | 1.76\% |
| WW-Specific LTD | 10.14\% | 2.55\% | 0.26\% |  |  |
| Preferred Stock | 0.05\% | 8.80\% | 0.00\% | 0.711174 | 0.00\% |
| Common Equity | 50.37\% | -0.70\% | -0.35\% | 0.711174 | -0.50\% |
|  | 100.00\% |  | 1.66270707\% |  | 1.26\% |

Pre-Tax Interest Coverage 0.72
After-Tax Interest Coverage
0.94

TABLE I(B)
Pennsylvania-American Water Company
REVENUE FACTOR
R-2020-3019369, R-2020-3019371
Wastewater SSS Exeter Operations

| 100\% | 1.00000000 |
| :---: | :---: |
| Less: |  |
| Uncollectible Accounts Factor ( ${ }^{*}$ ) | 0.01205006 |
| PUC, OCA, OSBA Assessment Factors (*) | 0.00575927 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.00000000 |
|  | 0.9821907 |
| State Income Tax Rate (*) | 0.0998671 |
| Effective State Income Tax Rate | 0.0980885 |
| Factor After Local and State Taxes | 0.8841021 |
| Federal Income Tax Rate (*) | 0.2099229 |
| Effective Federal Income Tax Rate | 0.1855933 |
| Revenue Factor (100\% - Effective Tax Rates) | 0.6985088 |

(*) Company Main Brief

| TABLE II <br> Pennsylvania-American Water Company SUMMARY OF ADJUSTMENTS R-2020-3019369, R-2020-3019371 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wastewater SSS Exeter Operations |  |  |  |  |  |  |  |
| Adjustments | Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State Income Tax | Federal Income Tax |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| RATE BASE: |  |  |  |  |  |  |  |
| CWC: |  |  |  |  |  |  |  |
| Int. \& Div. (Table IV) | $(1,000)$ |  |  |  |  |  |  |
| Taxes (Table V) |  |  |  |  |  |  |  |
| O \& M (Table VI) | $(5,412)$ |  |  |  |  |  |  |
| REVENUES: |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| EXPENSES: |  |  |  |  |  |  |  |
| Annual Performance Plan Expense |  |  | $(19,477)$ |  | $(1,491)$ | 2,095 | 3,963 |
| Capitalization Rate |  |  | $(44,686)$ |  |  | 4,464 | 8,447 |
| Annual Performance Plan - AWWSC |  |  | $(5,188)$ |  |  | 518 | 981 |
| Stock-Based Compensation Expense - AWWSC |  |  | $(4,742)$ |  |  | 474 | 896 |
| Amortization of Outreach Consultant Costs |  |  | 191 |  |  | (19) | (36) |
| TAXES: |  |  |  |  |  |  |  |
| Interest Synchronization (Table ill) |  |  |  |  |  | $(2,959)$ | $(5,598)$ |
| TOTALS | (6,412) | 0 | (73,902) | 0 | (1,491) | 4,573 | 8,653 |

TABLE III
Pennsylvania-American Water Company INTEREST SYNCHRONIZATION R-2020-3019369, R-2020-3019371

## Wastewater SSS Exeter Operations

## Company Rate Base Claim

OCA Rate Base Adjustments
OCA Rate Base
Weighted Cost of Debt
OCA Interest Expense
Company Claim (1)
Total OCA Adjustment
Company Adjustment
Net OCA Interest Adjustment
State Income Tax Rate
State Income Tax Adjustment
Net OCA Interest Adjustment
State Income Tax Adjustment
Net OCA Adjustment for F.I.T.
Federal Income Tax Rate
Federal Income Tax Adjustment

|  | Amount <br> $\$$ |  |
| :---: | ---: | :---: |
|  | $91,389,851$ <br> $(6,412)$ |  |
| $\$$ | $91,383,439$ <br> $1.76 \%$ |  |
| $\$$ | $1,608,349$ <br> $1,578,724$ |  |
| $\$$ | $(29,624)$ <br> $\$$ |  |
| $\$$ | $(29,624)$ <br> $9.99 \%$ |  |
|  | $(2,959)$ |  |
|  | $(29,624)$ <br> $(2,959)$ |  |
|  | $(26,665)$ <br> $20.99 \%$ |  |

(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company
CASH WORKING CAPITAL - Interest and Dividends
R-2020-3019369, R-2020-3019371

## Wastewater SSS Exeter Operations

Accrued Interest

|  | Long-Term Debt | LT Debt - WW Specific | Preferred Stock Dividends |  |
| :---: | :---: | :---: | :---: | :---: |
| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 91,389,851 \\ (\$ 6,412) \\ \hline \end{array}$ | $\begin{array}{r} \$ 91,389,851 \\ (\$ 6,412) \\ \hline \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 91,389,851 \\ (\$ 6,412) \end{array}$ |
| OCA Rate Base Weighted Cost of Debt | $\begin{array}{r} \$ 91,383,439 \\ 1.76 \% \\ \hline \end{array}$ | $\begin{array}{r} \$ 91,383,439 \\ 0.26 \% \\ \hline \end{array}$ | OCA Rate Base Weighted Cost Pref. Stock | $\begin{array}{r} \$ 91,383,439 \\ 0.00 \% \\ \hline \end{array}$ |
| OCA Annual interest Exp. | \$1,608,349 | \$237,597 | OCA Preferred Dividends | \$0 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |
| Working Capital Adjustment |  |  |  |  |
| OCA Daily Interest Exp. <br> Net Lag Days | $\begin{array}{r} \$ 4,406 \\ \quad-41.7 \\ \hline \end{array}$ | $\begin{aligned} & \$ 651 \\ & -41.7 \\ & \hline \end{aligned}$ | OCA Daily Dividends Net Lag Days | $\begin{aligned} & \$ 0 \\ & 4.5 \end{aligned}$ |
| OCA Working Capital Company Claim (1) | $\begin{array}{r} (\$ 183,730) \\ \$ 0 \\ \hline \end{array}$ | $\begin{array}{r} (\$ 27,147) \\ \$ 0 \\ \hline \end{array}$ | Company Claim (1) | $\begin{aligned} & \$ 0 \\ & \$ 0 \\ & \hline \end{aligned}$ |
| OCA Adjustment | (\$183,730) | (\$27,147) |  | So |

Total Interest \& Dividend Adj.
Less: Company Claim (1)
OCA Adjustment
Rounded to $\$ 1,000$
$\square$
(\$210,877)
$\square$
(1) Company Main Brief.

TABLE V
Pennsylvania-American Water Company CASH WORKING CAPITAL -TAXES
R-2020-3019369, R-2020-3019371

| Description | Company Proforma Tax Expense Present Rates | ALJ <br> Adjustments | ALJ <br> Pro forma Tax Expense Present Rates | ALJ <br> Allowance | ALJ Adjusted Taxes at Present Rates | Daily Expense | Net Lead/ Lag Days | Accrued Tax Adjustment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PUC Assessment | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Public Utility Realty | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| Capital Stock Tax | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| Captal Stock Tax | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| State Income Tax | \$0 | \$4,573 | \$4,573 | \$0 | \$4,573 | \$12.53 | 0.00 | \$0 |
| Federal Income Tax | \$0 | \$8,653 | \$8,653 | \$0 | \$8,653 | \$23.71 | 0.00 | \$0 |
|  | \$0 | \$13,226 | \$13,226 | \$0 | \$13,226 |  |  |  |
|  |  |  |  |  |  | ALJ Allowance |  | 0 |
|  |  |  |  |  |  | Company Claim |  | 0 |
|  |  |  |  |  |  | ALJ Adjustment |  | 0 |

(1) Company Main Brief

TABLE VI
Pennsylvania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE

R-2020-3019369, R-2020-3019371

## Wastewater SSS Exeter Operations

| Description | Company Pro forma F.T.Y. Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$163,201 | $(\$ 9,930)$ | \$153,272 | 12.14 | \$1,860,718 |
| Chemicals | \$153,451 | \$0 | \$153,451 | 48.81 | \$7,489,943 |
| Group Insurance | \$124,830 | \$0 | \$124,830 | 10.92 | \$1,363,144 |
| Insurance, Other | \$302,439 | \$0 | \$302,439 | -53.43 | (\$16,159,316) |
| Labor | \$617,187 | $(\$ 20,968)$ | \$596,219 | 12.14 | \$7,238,099 |
| Leased Equip./Rent | \$123 | \$0 | \$123 | 42.65 | \$5,246 |
| Leased Vehicles | \$29,885 | \$0 | \$29,885 | 39.23 | \$1,172,389 |
| Miscellaneous | \$414,198 | $(\$ 44,495)$ | \$369,702 | 31.01 | \$11,464,473 |
| Natural Gas | \$0 | \$0 | \$0 | 18.90 | \$0 |
| Power | \$283,577 | \$0 | \$283,577 | 24.97 | \$7,080,918 |
| Purchased Water | \$0 | \$0 | \$0 | 34.69 | \$0 |
| Telephone | \$2,740 | \$0 | \$2,740 | 8.71 | \$23,865 |
| Waste Disposal | \$216,103 | \$0 | \$216,103 | 45.65 | \$9,865,115 |
| Post Retirement Benefits | \$779 | \$0 | \$779 | 0.00 | \$0 |
| Pensions | \$4,114 | \$0 | \$4,114 | 13.14 | \$54,058 |
|  | \$2,312,627 | (\$75,393) | \$2,237,234 | 14.10 | \$31,458,652 |


| OCA Average Revenue Lag | 50.7 |
| :--- | ---: |
| Less: OCA Avg. Expense Lag | 14.1 |
| Net Difference | 36.6 |
| OCA Pro forma | Days |
| O \& M Expense per Day | $\$ 6,129$ |
| OCA CWC for O \& M | $\$ 224,585$ |
| Less: Company Claim (1) | $\$ 229,997$ |
| OCA Adjustment | $(\$ 5,412)$ |

(1) Company Main Brief

TABLE I
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Wastewater CSS Scranton Operations

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) | Company Adjustments <br> (1) | PAWC Pro Forma Rebuttal Filing Present Rates | ALJ <br> Adjustments | ALJ <br> Pro Forma <br> Present Rates | ALJ <br> Revenue Increase | Total Allowable Revenues |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\$$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Operating Revenue | 23,457,185 | 0 | 23,457,185 | 0 | 23,457,185 | 0 | 23,457,185 |
| Expenses: O \& M Expense | 10,879,177 | 7,297 | 10,886,474 | $(437,689)$ | 10,448,785 | 0 | 10,448,785 |
| Depreciation | 6,312,629 | 119,583 | 6,432,212 | 0 | 6,432,212 | 0 | 6,432,212 |
| Amortizations | $(156,664)$ | 0 | $(156,664)$ |  | $(156,664)$ |  | (156,664) |
| Taxes, Other | 967,922 | 13,207 | 981,129 | $(7,346)$ | 973,783 | 0 | 973,783 |
| Income Taxes: State | $(129,026)$ | $(2,258)$ | $(131,284)$ | 38,039 | $(93,245)$ | 0 | $(93,245)$ |
| Federal | 227,983 | $(4,015)$ | 223,968 | $(261,113)$ | $(37,145)$ | 0 | $(37,145)$ |
| Amort of ITC and Excess DFIT | 0 | 0 | 0 |  | 0 |  | 0 |
| Total Expenses | 18,102,021 | 133,814 | 18,235,835 | $(668,109)$ | 17,567,726 | 0 | 17,567,726 |
| Net Inc. Available for Return | 5,355,164 | $(133,814)$ | 5,221,350 | 668,109 | 5,889,459 | 0 | 5,889,459 |
| Rate Base | 177,564,450 | 4,059,090 | 181,623,540 | 294,675 | 181,918,215 |  | 181,918,215 |
| Rate of Return | 3.02\% |  | 2.87\% |  | 3.24\% |  | 3.23742129\% |

(1) Company Main Brief

TABLE I(A)
Pennsylvania-American Water Company
RATE OF RETURN
R-2020-3019369, R-2020-3019371

| Wastewater CSS Scranton Operations |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Structure | Cost | After-Tax Weighted Cost | Effective <br> Tax Rate Complement | Pre-Tax Weighted Cost Rate |
| Total Cost of Debt |  |  | 2.02\% |  |  |
| Long-term Debt | 39.44\% | 4.46\% | 1.76\% |  | 1.76\% |
| WW-Specific LTD | 10.14\% | 2.55\% | 0.26\% |  |  |
| Preferred Stock | 0.05\% | 8.80\% | 0.00\% | 0.711174 | 0.00\% |
| Common Equity | 50.37\% | 2.42\% | 1.22\% | 0.711174 | 1.72\% |
|  | 100.00\% |  | $3.23742129 \%$ |  | 3.48\% |

Pre-Tax Interest Coverage 1.98
After-Tax Interest Coverage 1.84

TABLE I(B)
Pennsylvania-American Water Company REVENUE FACTOR R-2020-3019369, R-2020-3019371

Wastewater CSS Scranton Operations

| $100 \%$ | 1.00000000 |
| :--- | ---: | ---: |
| Less: | 0.01204997 |
| Uncollectible Accounts Factor (*) | 0.00575925 |
| PUC, OCA, OSBA Assessment Factors (*) | 0.00000000 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.9821908 |
|  | 0.0998670 |
| State Income Tax Rate (*) | 0.0980885 |
| Effective State Income Tax Rate | 0.8841023 |
| Factor After Local and State Taxes | 0.2099230 |
| Federal Income Tax Rate (*) | 0.1855934 |
| Effective Federal Income Tax Rate |  |
| Revenue Factor (100\% - Effective Tax Rates) | 0.0 .6985089 |

(*) Company Main Brief

# TABLE II <br> Pennsylvania-American Water Company SUMMARY OF ADJUSTMENTS <br> R-2020-3019369, R-2020-3019371 

## Wastewater CSS Scranton Operations

| Adjustments | Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State Income Tax | Federai Income Tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |


| RATE BASE: |  |
| :--- | :---: |
| CWC: |  |
| Int. \& Div. (Table IV) | $(10,000)$ |
| Taxes (Table V) | 0 |
| O \& M (Table VI) | $(28,410)$ |
| Excess Accumulated Deferred Income Taxes | 333,086 |

REVENUES:
0
0
0

EXPENSES:
Annual Performance Plan Expense
Capitalization Rate
Annual Performance Plan - AWWSC
Stock-Based Compensation Expense - AWWSC
Amortization of Outreach Consultant Costs
TAXES:
Excess Accumulated Deferred Income Tax Amortization
Interest Synchronization
(Table iil)
TOTALS $\qquad$

TABLE III
Pennsylvania-American Water Company INTEREST SYNCHRONIZATION R-2020-3019369, R-2020-3019371

| Wastewater CSS Scranton Operations |  | Amount \$ |
| :---: | :---: | :---: |
| Company Rate Base Claim | \$ | 181,623,540 |
| OCA Rate Base Adjustments |  | 294,675 |
| OCA Rate Base | \$ | 181,918,215 |
| Weighted Cost of Debt |  | 1.76\% |
| OCA Interest Expense | \$ | 3,201,761 |
| Company Claim (1) | \$ | 3,137,476 |
| Total OCA Adjustment | \$ | $(64,285)$ |
| Company Adjustment | \$ |  |
| Net OCA Interest Adjustment | \$ | $(64,285)$ |
| State Income Tax Rate |  | 9.99\% |
| State Income Tax Adjustment |  | $(6,420)$ |
| Net OCA Interest Adjustment |  | $(64,285)$ |
| State Income Tax Adjustment |  | $(6,420)$ |
| Net OCA Adjustment for F.I.T. |  | $(57,865)$ |
| Federal Income Tax Rate |  | 20.99\% |
| Federal Income Tax Adjustment |  | $(12,148)$ |

(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company
CASH WORKING CAPITAL - Interest and Dividends R-2020-3019369, R-2020-3019371

## Wastewater CSS Scranton Operations

Accrued Interest

|  | Long-Term Debt | LT Debt - WW Specific | Preferred Stock Dividends |  |
| :---: | :---: | :---: | :---: | :---: |
| Company Rate Base Claim OCA Rate Base Adjustments | $\$ 181,623,540$ $\$ 294,675$ | $\begin{array}{r} \$ 181,623,540 \\ \$ 294,675 \\ \hline \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 181,623,540 \\ \$ 294,675 \\ \hline \end{array}$ |
| OCA Rate Base Weighted Cost of Debt | $\begin{array}{r} \$ 181,918,215 \\ 1.76 \% \\ \hline \end{array}$ | $\begin{array}{r} \$ 181,918,215 \\ 0.26 \% \\ \hline \end{array}$ | OCA Rate Base <br> Weighted Cost Pref. Stock | $\begin{array}{r} \$ 181,918,215 \\ 0.00 \% \\ \hline \end{array}$ |
| OCA Annual Interest Exp. | \$3,201,761 | \$472,987 | OCA Preferred Dividends | \$0 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |
| Working Capital Adjustment |  |  |  |  |
| OCA Daily Interest Exp. <br> Net Lag Days | $\begin{array}{r} \$ 8,772 \\ -41.7 \\ \hline \end{array}$ | $\begin{array}{r} \$ 1,296 \\ -41.7 \\ \hline \end{array}$ | OCA Daily Dividends Net Lag Days | $\begin{aligned} & \$ 0 \\ & 4.5 \end{aligned}$ |
| OCA Working Capital Company Claim (1) | $\begin{array}{r} (\$ 365,792) \\ \$ 0 \\ \hline \end{array}$ | $\begin{array}{r} (\$ 54,043) \\ \$ 0 \\ \hline \end{array}$ | Company Claim (1) | \$0 $\$ 0$ |
| OCA Adjustment | (\$365,792) | (\$54,043) |  | \$0 |

Total Interest \& Dividend Adj. Less: Company Claim (1)
OCA Adjustment
Rounded to $\$ 1,000$
$(\$ 419,835)$
$(\$ 409,983)$
$(\$ 9,852)$
( $\$ 10,000$ )
(1) Company Main Brief.

TABLE V
Pennsylvania-American Water Company CASH WORKING CAPITAL -TAXES
R-2020-3019369, R-2020-3019371

| Description | Company Proforma Tax Expense Present Rates | ALJ <br> Adjustments | ALJ Pro forma Tax Expense Present Rates | ALJ <br> Allowance | ALJ <br> Adjusted Taxes at Present Rates | Daily Expense | Net Lead/ <br> Lag Days | Accrued Tax Adjustment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PUC Assessment | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Pubic Utility Reality | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| Capital Stock Tax | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| State Income Tax | \$0 | \$38,039 | \$38,039 | \$0 | \$38,039 | \$104.22 | 0.00 | \$0 |
| Federal Income Tax | \$0 | (\$261,113) | $(\$ 261,113)$ | \$0 | (\$261,113) | (\$715.38) | 0.00 | \$0 |
|  | \$0 | (\$223,074) | $(\$ 223,074)$ | \$0 | (\$223,074) |  |  |  |
|  |  |  |  |  |  | ALJ Allowance |  | 0 |
|  |  |  |  |  |  | Company Claim (1) |  | 0 |
|  |  |  |  |  |  | ALJ Adjustment |  | 0 |

(1) Company Main Brief

TABLE VI
Pennsylvania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE R-2020-3019369, R-2020-3019371

## Wastewater CSS Scranton Operations

| Description | Company Pro forma F.T.Y. Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$125,315 | $(\$ 7,625)$ | \$117,691 | 12.14 | \$1,428,766 |
| Chemicals | \$1,450,898 | \$0 | \$1,450,898 | 48.81 | \$70,818,313 |
| Group Insurance | \$849,157 | \$0 | \$849,157 | 10.92 | \$9,272,794 |
| Insurance, Other | \$521,551 | \$0 | \$521,551 | -53.43 | (\$27,866,470) |
| Labor | \$4,905,473 | $(\$ 103,384)$ | \$4,802,089 | 12.14 | \$58,297,360 |
| Leased Equip./Rent | \$17,206 | \$0 | \$17,206 | 42.65 | \$733,836 |
| Leased Vehicles | \$328,934 | \$0 | \$328,934 | 39.23 | \$12,904,081 |
| Miscellaneous | \$1,001,510 | $(\$ 334,027)$ | \$667,484 | 31.01 | \$20,698,664 |
| Natural Gas | \$53,395 | \$0 | \$53,395 | 18.90 | \$1,009,166 |
| Power | \$392,644 | \$0 | \$392,644 | 24.97 | \$9,804,321 |
| Purchased Water | \$0 | \$0 | \$0 | 34.69 | \$0 |
| Telephone | \$55,286 | \$0 | \$55,286 | 8.71 | \$481,541 |
| Waste Disposa! | \$953,470 | \$0 | \$953,470 | 45.65 | \$43,525,906 |
| Post Retirement Benefits | \$57,341 | \$0 | \$57,341 | 0.00 | \$0 |
| Pensions | \$194,373 | \$0 | \$194,373 | 13.14 | \$2,554,061 |
|  | \$10,906,553 | (\$445,035) | \$10,461,518 | 19.50 | \$203,662,339 |


| OCA Average Revenue Lag Less: OCA Avg. Expense Lag | $\begin{gathered} 50.7 \\ 19.5 \\ \hline \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: |
| Net Difference | 31.2 | Days |  |
| OCA Pro forma O \& M Expense per Day | \$28,662 |  |  |
| OCA CWC for O \& M <br> Less: Company Claim (1) | $\begin{array}{r} \$ 894,913 \\ \$ 923,323 \\ \hline \end{array}$ | 894,913 | \$0 |
| OCA Adjustment | (\$28,410) |  |  |
| (1) Company Main Brief |  | $\begin{aligned} & 31.2229693 \\ & 31.2000000 \\ & 0.02296925 \end{aligned}$ |  |

TABLE 1
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Wastewater CSS McKeesport Operations

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) | Company Adjustments (1) | PAWC Pro Forma Rebuttal Filing Present Rates | OCA <br> Adjustments | OCA <br> Pro Forma <br> Present Rates | OCA Revenue Increase |  | Total Allowable Revenues |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\$$ |  | \$ | \$ | \$ | \$ |  | \$ |
| Operating Revenue | 12,369,057 | 0 | 12,369,057 | 0 | 12,369,057 |  | 0 | 12,369,057 |
| Expenses: O \& M Expense | 6,945,160 | 5,487 | 6,950,647 | $(263,880)$ | 6,686,767 |  | 0 | 6,686,767 |
| Depreciation | 5,946,797 | $(27,552)$ | 5,919,245 | 0 | 5,919,245 |  | 0 | 5,919,245 |
| Amortizations | 301,857 | 2,231 | 304,088 |  | 304,088 |  |  | 304,088 |
| Taxes, Other | 573,586 | 6,956 | 580,542 | $(3,146)$ | 577,396 |  | 0 | 577,396 |
| Income Taxes: State | $(721,886)$ | 5,849 | $(716,037)$ | 21,280 | $(694,757)$ |  | 0 | $(694,757)$ |
| Federal | $(786,478)$ | 11,066 | $(775,412)$ | 40,264 | $(735,148)$ |  | 0 | $(735,148)$ |
| Amort of ITC and Excess DFIT | 0 | 0 | 0 |  | 0 |  |  | 0 |
| Total Expenses | 12,259,036 | 4,037 | 12,263,073 | $(205,482)$ | 12,057,591 |  | 0 | 12,057,591 |
| Net Inc. Available for Return | 110,021 | $(4,037)$ | 105,984 | 205,482 | 311,466 |  | 0 | 311,466 |
| Rate Base | 167,005,729 | 118,981 | 167,124,710 | $(19,881)$ | 167,104,829 |  |  | 167,104,829 |
| Rate of Return | 0.066\% |  | 0.06\% |  | 0.19\% |  |  | 0.18638953\% |

(1) Company Main Brief

TABLE I(A)
Pennsylvania-American Water Company
RATE OF RETURN R-2020-3019369, R-2020-3019371

| Wastewater CSS McKeesport Operations |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Structure | Cost | After-Tax Weighted Cost | Effective <br> Tax Rate Complement | Pre-Tax Weighted Cost Rate |
| Total Cost of Debt |  |  | 2.02\% |  |  |
| Long-term Debt | 39.44\% | 4.46\% | 1.76\% |  | 1.76\% |
| WW-Specific LTD | 10.14\% | 2.55\% | 0.26\% |  |  |
| Preferred Stock | 0.05\% | 8.80\% | 0.00\% | 0.711174 | 0.00\% |
| Common Equity | 50.37\% | -3.64\% | -1.83\% | 0.711174 | -2.57\% |
|  | 100.00\% |  | 0.18638953\% |  | -0.81\% |

Pre-Tax Interest Coverage $\quad-0.46$
After-Tax Interest Coverage 0.11

TABLE I(B)
Pennsylvania-American Water Company
REVENUE FACTOR
R-2020-3019369, R-2020-3019371

Wastewater CSS McKeesport Operations

| $100 \%$ | 1.00000000 |
| :--- | ---: | ---: |
| Less: | 0.01204999 |
| Uncollectible Accounts Factor (*) | 0.00575936 |
| PUC, OCA, OSBA Assessment Factors (*) | 0.00000000 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.9821907 |
|  | 0.0998670 |
| State Income Tax Rate (*) | 0.0980884 |
| Effective State Income Tax Rate | 0.8841022 |
| Factor After Local and State Taxes | 0.2099230 |
| Federal Income Tax Rate (*) | 0.1855934 |
| Effective Federal Income Tax Rate | 0.0 .6985088 |

(*) Company Main Brief

| TABLE II <br> Pennsylvania-American Water Company SUMMARY OF ADJUSTMENTS R-2020-3019369, R-2020-3019371 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wastewater CSS McKeesport Operations |  |  |  |  |  |  |  |
| Adjustments | Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State <br> Income Tax | Federal Income Tax |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| RATE BASE: |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| int. \& Div. (Table IV) | 0 |  |  |  |  |  |  |
| Taxes (Table V) | 0 |  |  |  |  |  |  |
| O \& M (Table VI) | $(19,881)$ |  |  |  |  |  |  |
| REVENUES: |  |  |  |  |  |  |  |
| EXPENSES: |  |  |  |  |  |  |  |
| Annual Performance Plan Expense |  |  | $(41,135)$ |  | $(3,146)$ | 4,424 | 8,370 |
| Capitalization Rate |  |  | $(171,009)$ |  |  | 17,084 | 32,324 |
| Annual Performance Plan - AWWSC |  |  | $(27,180)$ |  |  | 2,715 | 5,138 |
| Stock-Based Compensation Expense - AWWSC |  |  | $(24,844)$ |  |  | 2,482 | $4,696$ |
| Amortization of Outreach Consultant Costs |  |  | 288 |  |  | (29) |  |
| TAXES: |  |  |  |  |  |  |  |
| Interest Synchronization <br> (Table !il) |  |  |  |  |  |  |  |
| TOTALS | (19,881) | 0 | (263,880) | 0 | $(3,146)$ | 21,280 | 40,264 |

TABLE III
Pennsylvania-American Water Company
INTEREST SYNCHRONIZATION
R-2020-3019369, R-2020-3019371

| Wastewater CSS McKeesport Operations | Amount |  |
| :--- | ---: | ---: |
| S |  |  |

(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company
CASH WORKING CAPITAL - Interest and Dividends
R-2020-3019369, R-2020-3019371

## Wastewater CSS McKeesport Operations

| Accrued Interest |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Long-Term Debt | LT Debt-WW Specific | Preferred Stock Dividends |  |
| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 167,124,710 \\ (\$ 19,881) \\ \hline \end{array}$ | $\begin{array}{r} \$ 167,124,710 \\ (\$ 19,881) \\ \hline \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 167,124,710 \\ (\$ 19,881) \\ \hline \end{array}$ |
| OCA Rate Base <br> Weighted Cost of Debt | $\begin{array}{r} \$ 167,104,829 \\ 1.76 \% \\ \hline \end{array}$ | $\begin{array}{r} \$ 167,104,829 \\ 0.26 \% \\ \hline \end{array}$ | OCA Rate Base <br> Weighted Cost Pref. Stock | $\begin{array}{r} \$ 167,104,829 \\ 0.00 \% \\ \hline \end{array}$ |
| OCA Annual Interest Exp. | \$2,941,045 | \$434,473 | OCA Preferred Dividends | \$0 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |
| Working Capital Adjustment |  |  |  |  |
| OCA Daily Interest Exp. <br> Net Lag Days | $\begin{array}{r} \$ 8,058 \\ -41.7 \\ \hline \end{array}$ | $\begin{array}{r} \$ 1,190 \\ -41.7 \\ \hline \end{array}$ | OCA Daily Dividends Net Lag Days | $\begin{aligned} & \$ 0 \\ & 4.5 \\ & \hline \end{aligned}$ |
| OCA Working Capital Company Claim (1) | $\begin{array}{r} (\$ 336,019) \\ \$ 0 \\ \hline \end{array}$ | $\begin{array}{r} (\$ 49,623) \\ \$ 0 \\ \hline \end{array}$ | Company Claim (1) | \$0 $\$ 0$ |
| OCA Adjustment | (\$336,019) | (\$49,623) |  | \$0 |


| Total Interest \& Dividend Adj. | $(\$ 385,642)$ |
| :--- | ---: |
| Less: Company Claim (1) | $(\$ 385,593)$ |
| OCA Adjustment | $(\$ 49)$ |
|  | $\$ 0$ |

[^53]table V
Pennsyivania-American Water Company
CASH WORKING CAPITAL-TAXES
R-2020-3019369, R-2020-3019371

| Description | Company Proforma Tax Expense Present Rates | ALJ <br> Adjustments | ALJ <br> Pro forma Tax Expense Present Rates | ALJ <br> Allowance | ALJ <br> Adjusted Taxes at Present Rates | Daily Expense | Net Lead/ Lag Days | Accrued Tax Adjustment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PUC Assessment | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Public Utility Realty | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| Capital Stock Tax | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| State Income Tax | \$0 | \$21,280 | \$21,280 | \$0 | \$21,280 | \$58.30 | 0.00 | \$0 |
| Federal Income Tax | \$0 | \$40,264 | \$40,264 | \$0 | \$40,264 | \$110.31 | 0.00 | \$0 |
|  | \$0 | \$61,544 | \$61,544 | \$0 | \$61,544 |  |  |  |
|  |  |  |  |  |  | ALJ Allowance |  | 0 |
|  |  |  |  |  |  | Company Claim |  | 0 |
|  |  |  |  |  |  | ALJ Adjustmen |  | 0 |

[^54]TABLE VI
Pennsylvania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE R-2020-3019369, R-2020-3019371

## Wastewater CSS McKeesport Operations

| Description | Company Pro forma F.T.Y. <br> Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$855,058 | $(\$ 52,024)$ | \$803,034 | 12.14 | \$9,748,836 |
| Chemicals | \$14,999 | \$0 | \$14,999 | 48.81 | \$732,111 |
| Group Insurance | \$464,322 | \$0 | \$464,322 | 10.92 | \$5,070,396 |
| Insurance, Other | \$538,525 | \$0 | \$538,525 | -53.43 | (\$28,773,391) |
| Labor | \$2,402,835 | $(\$ 44,281)$ | \$2,358,555 | 12.14 | \$28,632,852 |
| Leased Equip./Rent | \$11,471 | \$0 | \$11,471 | 42.65 | \$489,238 |
| Leased Vehicles | \$76,772 | \$0 | \$76,772 | 39.23 | \$3,011,766 |
| Miscellaneous | \$1,014,556 | (\$170,721) | \$843,835 | 31.01 | \$26,167,311 |
| Natural Gas | \$34,387 | \$0 | \$34,387 | 18.90 | \$649,914 |
| Power | \$1,000,836 | \$0 | \$1,000,836 | 24.97 | \$24,990,875 |
| Purchased Water | \$0 | \$0 | \$0 | 34.69 | \$0 |
| Telephone | \$88,795 | \$0 | \$88,795 | 8.71 | \$773,404 |
| Waste Disposal | \$284,760 | \$0 | \$284,760 | 45.65 | \$12,999,294 |
| Post Retirement Benefits | \$40,192 | \$0 | \$40,192 | 0.00 | \$0 |
| Pensions | \$128,152 | \$0 | \$128,152 | 13.14 | \$1,683,917 |
|  | \$6,955,661 | (\$267,026) | \$6,688,635 | 12.90 | \$86,176,523 |


| OCA Average Revenue Lag | 50.7 |
| :--- | ---: |
| Less: OCA Avg. Expense Lag | 12.9 |
| Net Difference | 37.8 |
| OCA Pro forma |  |
| O \& M Expense per Day | $\$ 18,325$ |
| OCA CWC for O \& M | $\$ 692,851$ |
| Less: Company Claim (1) | $\$ 712,732$ |
| OCA Adjustment | $(\$ 19,881)$ |

(1) Company Main Brief

TABLE I
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Wastewater CSS Kane Operations

|  | Pro Forma |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pro Forma <br> Present Rates (1) | Company Adjustments (1) | Present Rates <br> (Revised) (1) | OCA <br> Adjustments | OCA <br> Pro Forma <br> Present Rates | Revenue Increase |  | Total Allowable Revenues |
|  | \$ | \$ | \$ | \$ | \$ | \$ |  | \$ |
| Operating Revenue | 1,474,187 | 0 | 1,474,187 | 0 | 1,474,187 |  | 0 | 1,474,187 |
| Expenses: $\quad 1$ |  |  |  |  |  |  |  |  |
| O \& M Expense | 565,267 | 344 | 565,611 | 34 | 565,645 |  | 0 | 565,645 |
| Depreciation | 805,787 | 11,223 | 817,010 | 0 | 817,010 |  | 0 | 817,010 |
| Amortizations | 19,675 | $(2,005)$ | 17,670 |  | 17,670 |  |  | 17,670 |
| Taxes, Other | 64,427 | 831 | 65,258 | 0 | 65,258 |  | 0 | 65,258 |
| Income Taxes: |  |  |  |  |  |  |  |  |
| State | $(78,568)$ | 95 | $(78,473)$ | (635) | $(79,108)$ |  | 0 | $(79,108)$ |
| Federal | $(65,887)$ | 180 | $(65,707)$ | $(1,202)$ | $(66,909)$ |  | 0 | $(66,909)$ |
| Amort of ITC and Excess DFIT | 0 | 0 | 0 |  | 0 |  |  | 0 |
| Total Expenses | 1,310,701 | 10,668 | 1,321,369 | $(1,803)$ | 1,319,566 |  | 0 | 1,319,566 |
| Net Inc. Available for Return | 163,486 | (10,668) | 152,818 | 1,803 | 154,621 |  | 0 | 154,621 |
| Rate Base | 19,169,938 | 318,884 | 19,488,822 | (992) | 19,487,830 |  |  | 19,487,830 |
| Rate of Return | 0.853\% |  | 0.78\% |  | 0.79\% |  |  | 0.79342203\% |

(1) Company Main Brief

TABLE I(A)<br>Pennsylvania-American Water Company<br>RATE OF RETURN<br>R-2020-3019369, R-2020-3019371

Wastewater CSS Kane Operations

| Structure | Cost | After-Tax <br> Weighted <br> Cost | Effective <br> Tax Rate <br> Complement | Pre-Tax <br> Weighted <br> Cost Rate |
| :--- | :--- | :--- | :--- | :--- |


| Total Cost of Debt | 2.02\% |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Long-term Debt | 39.44\% | 4.46\% | 1.76\% |  | 1.76\% |
| WW-Specific LTD | 10.14\% | 2.55\% | 0.26\% |  |  |
| Preferred Stock | 0.05\% | 8.80\% | 0.00\% | 0.711174 | 0.00\% |
| Common Equity | 50.37\% | -2.43\% | -1.22\% | 0.711174 | -1.72\% |
|  | 100.00\% |  | 0.79342203\% |  | 0.04\% |

Pre-Tax Interest Coverage 0.02
After-Tax Interest Coverage 0.45

TABLE I(B)
Pennsylvania-American Water Company
REVENUE FACTOR
R-2020-3019369, R-2020-3019371

## Wastewater CSS Kane Operations

| $100 \%$ | 1.00000000 |
| :--- | ---: | ---: |
| Less: |  |
| Uncollectible Accounts Factor ( ${ }^{*}$ ) | 0.01204999 |
| PUC, OCA, OSBA Assessment Factors (*) | 0.00575973 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.00000000 |
|  | 0.9821903 |
| State Income Tax Rate (*) | 0.0998672 |
| Effective State Income Tax Rate | 0.0980886 |
| Factor After Local and State Taxes | 0.8841017 |
| Federal Income Tax Rate (*) | 0.2099227 |
| Effective Federal Income Tax Rate | 0.1855931 |
| Revenue Factor (100\% - Effective Tax Rates) | 0 |

(*) Company Main Brief

TABLE II
Pennsylvania-American Water Company
SUMMARY OF ADJUSTMENTS
R-2020-3019369, R-2020-3019371

## Wastewater CSS Kane Operations

| Adjustments | Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State Income Tax | Federal Income Tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| RATE BASE: |  |  |  |  |  |  |  |
| CWC: |  |  |  |  |  |  |  |
| Int. \& Div. (Table IV) | $(1,000)$ |  |  |  |  |  |  |
| Taxes (Table V) | 0 |  |  |  |  |  |  |
| O \& M (Table VI) | 8 |  |  |  |  |  |  |
| REVENUES: |  |  |  |  |  |  |  |
|  |  | 0 |  |  |  | 0 | 0 |
| EXPENSES: |  |  |  |  |  |  |  |
| Annual Performance Plan Expense |  |  |  |  |  | 0 | 0 |
| Capitalization Rate |  |  |  |  |  | 0 | 0 |
| Annual Performance Plan - AWWSC |  |  |  |  |  | 0 | 0 |
| Stock-Based Compensation Expense - AWWSC |  |  |  |  |  | 0 | 0 |
| Amortization of Outreach Consultant Costs |  |  | 34 |  |  | (3) | (7) |
| TAXES: |  |  |  |  |  |  |  |
| Interest Synchronization (Table III) |  |  |  |  |  | (632) | $(1,195)$ |
| TOTALS | (992) | 0 | 34 | 0 | 0 | (635) | (1,202) |

TABLE III
Pennsylvania-American Water Company
INTEREST SYNCHRONIZATION
R-2020-3019369, R-2020-3019371

## Wastewater CSS Kane Operations

|  | Amount \$ |
| :---: | :---: |
| \$ | $\begin{array}{r} 19,488,822 \\ (992) \end{array}$ |
| \$ | $\begin{array}{r} 19,487,830 \\ 1.76 \% \\ \hline \end{array}$ |
| $\begin{aligned} & \$ \\ & \$ \end{aligned}$ | $\begin{aligned} & 342,986 \\ & 336,662 \end{aligned}$ |
| $\begin{aligned} & \$ \\ & \$ \\ & \hline \end{aligned}$ | $(6,324)$ - |
| \$ | $\begin{array}{r} (6,324) \\ 9.99 \% \\ \hline \end{array}$ |
|  | (632) |
|  | $\begin{array}{r} (6,324) \\ \quad(632) \\ \hline \end{array}$ |
|  | $\begin{array}{r} (5,692) \\ 20.99 \% \\ \hline \end{array}$ |
|  | $(1,195)$ |

(1) Company Main Brief

TABLEIV
Pennsylvania-American Water Company
CASH WORKING CAPITAL - Interest and Dividends
R-2020-3019369, R-2020-3019371

## Wastewater CSS Kane Operations

Accrued interest

|  | Long-Term Debt | LT Debt - WW Specific | Preferred Stock Dividends |  |
| :---: | :---: | :---: | :---: | :---: |
| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 19,488,822 \\ (\$ 992) \\ \hline \end{array}$ | $\begin{array}{r} \$ 19,488,822 \\ (\$ 992) \\ \hline \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 19,488,822 \\ (\$ 992) \\ \hline \end{array}$ |
| OCA Rate Base Weighted Cost of Debt | $\begin{array}{r} \$ 19,487,830 \\ 1.76 \% \\ \hline \end{array}$ | $\begin{array}{r} \$ 19,487,830 \\ 0.26 \% \\ \hline \end{array}$ | OCA Rate Base Weighted Cost Pref. Stock | $\begin{array}{r} \$ 19,487,830 \\ 0.00 \% \\ \hline \end{array}$ |
| OCA Annual Interest Exp. | \$342,986 | \$50,668 | OCA Preferred Dividends | \$0 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |

Working Capitai Adjustment

| OCA Daily Interest Exp. <br> Net Lag Days | $\begin{aligned} & \$ 940 \\ & -41.7 \\ & \hline \end{aligned}$ | $\begin{aligned} & \$ 139 \\ & -41.7 \\ & \hline \end{aligned}$ | OCA Daily Dividends Net Lag Days | $\begin{aligned} & \$ 0 \\ & 4.5 \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| OCA Working Capital | $(\$ 39,198)$ | $(\$ 5,796)$ |  | \$0 |
| Company Claim (1) | \$0 | \$0 | Company Claim (1) | \$0 |
| OCA Adjustment | (\$39,198) | (\$5,796) |  | \$0 |


| Total Interest \& Dividend Adj. | $(\$ 44,994)$ <br> $(\$ 44,276)$ |
| :--- | ---: |
| Less: Company Claim (1) | $(\$ 718)$ |
| OCA Adjustment | $(\$ 1,000)$ |
| Rounded to $\$ 1,000$ |  |

(1) Company Main Brief.

TABLE V
Pennsylvania-American Water Company
CASH WORKING CAPITAL -TAXES
R-2020-3019369, R-2020-3019371

| Description | Company Proforma Tax Expense Present Rates | ALJ <br> Adjustments | ALJ <br> Pro forma Tax Expense Present Rates | ALJ <br> Allowance | ALJ <br> Adjusted Taxes at Present Rates |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PUC Assessment | \$0 | \$0 | \$0 | \$0 | \$0 |
| Public Utility Realty | \$0 | \$0 | \$0 |  | \$0 |
| Capital Stock Tax | \$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 |
| State Income Tax | \$0 | (\$635) | (\$635) | \$0 | (\$635) |
| Federal Income Tax | \$0 | (\$1,202) | (\$1,202) | \$0 | (\$1,202) |
|  | \$0 | $(\$ 1,837)$ | $(\$ 1,837)$ | \$0 | $(\$ 1,837)$ |


| Daily Expense | Net Lead/ <br> Lag Days |  | Accrued Tax <br> Adjustment |
| :---: | ---: | ---: | ---: |
|  |  |  |  |
| $\$ 0.00$ | 0.00 | $\$ 0$ |  |
| $\$ 0.00$ | 0.00 | $\$ 0$ |  |
| $\$ 0.00$ | 0.00 | $\$ 0$ |  |
| $\$ 0.00$ | 0.00 | $\$ 0$ |  |
| $\$ 0.00$ | 0.00 | $\$ 0$ |  |
| $\$ 0.00$ | 0.00 | $\$ 0$ |  |
| $\$ 0.00$ | 0.00 | $\$ 0$ |  |
| $\$ 0.00$ | 0.00 | $\$ 0$ |  |
| $\$ 0.00$ | 0.00 | $\$ 0$ |  |
| $\$ 0.00$ | 0.00 | $\$ 0$ |  |
| $\$ 0.00$ | 0.00 | $\$ 0$ |  |
| $(\$ 1.74)$ | 0.00 | $\$ 0$ |  |
| $(\$ 3.29)$ | 0.00 |  | $\$ 0$ |
|  |  |  | $\$ 0$ |
|  |  |  | $\$ 0$ |

## ALJ Allowance

Company Claim (1)
ALJ Adjustment
0

TABLE V1
Pennsylvania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE R-2020-3019369, R-2020-3019371

## Wastewater CSS Kane Operations

| Description | Company Pro forma F.T.Y. <br> Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$0 | \$0 | \$0 | 12.14 | \$0 |
| Chemicals | \$0 | \$0 | \$0 | 48.81 | \$0 |
| Group Insurance | \$0 | \$0 | \$0 | 10.92 | \$0 |
| Insurance, Other | \$0 | \$0 | \$0 | -53.43 | \$0 |
| Labor | \$12,057 | \$0 | \$12,057 | 12.14 | \$146,372 |
| Leased Equip./Rent | \$0 | \$0 | \$0 | 42.65 | \$0 |
| Leased Vehicles | \$0 | \$0 | \$0 | 39.23 | \$0 |
| Miscellaneous | \$543,965 | \$34 | \$543,999 | 31.01 | \$16,869,417 |
| Natural Gas | \$0 | \$0 | \$0 | 18.90 | \$0 |
| Power | \$0 | \$0 | \$0 | 24.97 | \$0 |
| Purchased Water | \$0 | \$0 | \$0 | 34.69 | \$0 |
| Telephone | \$0 | \$0 | \$0 | 8.71 | \$0 |
| Waste Disposal | \$0 | \$0 | \$0 | 45.65 | \$0 |
| Post Retirement Benefits | \$0 | \$0 | \$0 | 0.00 | \$0 |
| Pensions | \$0 | \$0 | \$0 | 13.14 | \$0 |
|  | \$556,022 | \$34 | \$556,056 | 30.60 | \$17,015,789 |


| OCA Average Revenue Lag | 50.7 |
| :--- | ---: |
| Less: OCA Avg. Expense Lag | 30.6 |
| Net Difference | 20.1 |
| Days |  |
| OCA Pro forma |  |
| O \& M Expense per Day | $\$ 1,523$ |
| OCA CWC for O \& M | $\$ 30,620$ |
| Less: Company Claim (1) | $\$ 30,612$ |
| OCA Adjustment | $\$ 8$ |

(1) Company Main Brief

TABLE I
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Water Operations Excluding Steelton

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) | Company Adjustments (1) | PAWC Pro Forma Rebuttal Filing Present Rates | OCA <br> Adjustments | OCA <br> Pro Forma <br> Present Rates | OCA <br> Revenue Increase | Total Allowable Revenues |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Operating Revenue | 639,540,327 | 366,536 | 639,906,863 | 0 | 639,906,863 | $(70,274,181)$ | 569,632,682 |
| Expenses: |  |  |  |  |  |  |  |
| O \& M Expense | 212,205,637 | $(437,302)$ | 211,768,335 | $(7,015,863)$ | 204,752,471 | $(846,804)$ | 203,905,667 |
| Depreciation | 143,245,719 | 2,187,393 | 145,433,112 | 0 | 145,433,112 | 0 | 145,433,112 |
| Amortizations | $(6,789,516)$ | $(51,743)$ | $(6,841,259)$ |  | $(6,841,259)$ |  | $(6,841,259)$ |
| Taxes, Other | 11,236,002 | 342,222 | 11,578,224 | $(131,764)$ | 11,446,460 | $(404,730)$ | 11,041,730 |
| Income Taxes: |  |  |  |  |  |  |  |
| State | 15,651,149 | $(21,699)$ | 15,629,450 | $(273,231)$ | 15,356,219 | $(6,893,418)$ | 8,462,801 |
| Federal | 30,564,448 | $(20,225)$ | 30,544,223 | $(27,554,821)$ | 2,989,402 | $(13,043,052)$ | $(10,053,650)$ |
| Amort of ITC and Excess DFIT | $(233,592)$ | 0 | $(233,592)$ |  | $(233,592)$ |  | $(233,592)$ |
| Total Expenses | 405,879,846 | 1,998,646 | 407,878,492 | $(34,975,679)$ | 372,902,813 | (21,188,004) | 351,714,809 |
| Net Inc. Available for Return | 233,660,481 | $(1,632,110)$ | 232,028,371 | 34,975,679 | 267,004,050 | $(49,086,179)$ | 217,917,871 |
| Rate Base | 3,304,569,811 | 115,885,108 | 3,420,454,919 | 25,144,500 | 3,445,599,419 |  | 3,445,599,419 |
| Rate of Return | 7.07\% |  | 6.78\% |  |  |  | 6.32\% |
| (1) Company Main Brief |  |  |  |  |  |  | 6.32\% |

TABLE I(A)
Pennsylvania-American Water Company
RATE OF RETURN
R-2020-3019369, R-2020-3019371
Water Operations Excluding Steelton

|  | Structure | Cost | After-Tax <br> Weighted Cost | Effective <br> Tax Rate Complement | Pre-Tax <br> Weighted Cost Rate |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Total Cost of Debt |  |  | $2.18786057 \%$ |  |  |
| Long-term Debt | 48.30\% | 4.53\% | $2.18786057 \%$ |  | 2.19\% |
| Short-term Debt | 0.00\% | 0.00\% | 0.00000000\% |  |  |
| Preferred Stock | 0.06\% | 8.73\% | 0.00523800\% | 0.711160 | 0.01\% |
| Common Equity | 51.64\% | 8.00\% | 4.13142857\% | 0.711160 | 5.81\% |
|  | 100.00\% |  | 6.32452714\% |  | 8.01\% |

Pre-Tax Interest Coverage 3.66
After-Tax Interest Coverage 2.89

TABLE I(B)

## Pennsylvania-American Water Company <br> REVENUE FACTOR R-2020-3019369, R-2020-3019371

## Water Operations Excluding Steelton

| 100\% | 1.00000000 |
| :---: | :---: |
| Less: |  |
| Uncollectible Accounts Factor (*) | 0.01205000 |
| PUC, OCA, OSBA Assessment Factors (*) | 0.00575930 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.00000000 |
|  | 0.9821907 |
| State Income Tax Rate (*) | 0.0998718 |
| Effective State Income Tax Rate | 0.0980932 |
| Factor After Local and State Taxes | 0.8840975 |
| Federal Income Tax Rate (*) | 0.2099342 |
| Effective Federal Income Tax Rate | 0.1856023 |
| Revenue Factor (100\% - Effective Tax Rates) | 0.6984952 |

(*) Company Main Brief

| Adiustments | Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State Income Tax | Federal Income Tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| RATE BASE: |  |  |  |  |  |  |  |
| CWC: |  |  |  |  |  |  |  |
| Int. \& Div. (Table IV) | (1,207,000) |  |  |  |  |  |  |
| Taxes (Table V) | 0 |  |  |  |  |  |  |
| O \& M (Table VI) | $(686,340)$ |  |  |  |  |  |  |
| Excess Accumulated Deferred Income Taxes | 27,037,840 |  |  |  |  |  |  |
| REVENUES: |  |  |  |  |  |  |  |
| EXPENSES: |  |  |  |  |  |  |  |
| Annual Performance Plan Expense |  |  | $(1,722,407)$ |  | $(131,764)$ | 185,232 | 350,477 |
| Capitalization Rate |  |  | $(1,859,403)$ |  |  | 185,754 | 351,466 |
| Annual Performance Plan - AWWSC |  |  | $(1,801,885)$ |  |  | 180,008 | 340,594 |
| Stock-Based Compensation Expense - AWWSC |  |  | $(1,647,068)$ |  |  | 164,542 | 311,330 |
|  |  |  |  |  |  |  |  |
| TAXES: |  |  |  |  |  |  | $\begin{array}{r} (27,037,840) \\ (1,868,032) \end{array}$ |
|  |  |  |  |  |  |  |  |
| Excess Accumulated Deferred income Iax Amortization Interest Synchronization <br> (Table III) |  |  |  |  |  | (987,279) |  |
| TOTALS | 25,144,500 | 0 | (7,015,863) | 0 | (131,764) | (273,231) | (27,554,821) |

TABLE III
Pennsylvania-American Water Company INTEREST SYNCHRONIZATION
R-2020-3019369, R-2020-3019371

## Water Operations Excluding Steelton <br> Amount <br> \$

| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \text { 3,420,454,919 } \\ 25,144,500 \\ \hline \end{array}$ |  |
| :---: | :---: | :---: |
| OCA Rate Base | \$ 3,445,599,419 |  |
| Weighted Cost of Debt | 2.19\% |  |
| OCA Interest Expense | \$ | 75,384,911 |
| Company Claim (1) | \$ | 65,499,454 |
| Total OCA Adjustment | \$ | $(9,885,457)$ |
| Company Adjustment | \$ |  |
| Net OCA Interest Adjustment | \$ | $(9,885,457)$ |
| State Income Tax Rate |  | 9.99\% |
| State Income Tax Adjustment |  | $(987,279)$ |
| Net OCA Interest Adjustment |  | $(9,885,457)$ |
| State Income Tax Adjustment |  | $(987,279)$ |
| Net OCA Adjustment for F.I.T. |  | $(8,898,178)$ |
| Federal Income Tax Rate |  | 20.99\% |
| Federal Income Tax Adjustment |  | $(1,868,032)$ |

(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company CASH WORKING CAPITAL - Interest and Dividends

R-2020-3019369, R-2020-3019371

## Water Operations Excluding Steelton

| Accrued Interest |  | Preferred Stock Dividends |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Long-Term Debt | Short-Term Debt |  |  |
| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 3,420,454,919 \\ \$ 25,144,500 \\ \hline \end{array}$ | $\begin{array}{r} \$ 3,420,454,919 \\ \$ 25,144,500 \\ \hline \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 3,420,454,919 \\ \$ 25,144,500 \\ \hline \end{array}$ |
| OCA Rate Base Weighted Cost of Debt | $\begin{array}{r} \$ 3,445,599,419 \\ 2.18786057 \% \\ \hline \end{array}$ | $\begin{array}{r} \$ 3,445,599,419 \\ 0.00 \% \\ \hline \end{array}$ | OCA Rate Base Weighted Cost Pref. Stock | $\begin{array}{r} \$ 3,445,599,419 \\ 0.00523800 \% \\ \hline \end{array}$ |
| OCA Annual Interest Exp. | \$75,384,911 | \$0 | OCA Preferred Dividends | \$180,480 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |
| Working Capital Adjustment |  |  |  |  |
| OCA Daily Interest Exp. <br> Net Lag Days | $\begin{array}{r} \$ 206,534 \\ -41.7 \\ \hline \end{array}$ | $\begin{aligned} & \$ 0 \\ & 0.0 \\ & \hline \end{aligned}$ | OCA Daily Dividends Net Lag Days | $\begin{array}{r} \$ 494 \\ 4.5 \\ \hline \end{array}$ |
| OCA Working Capital Company Claim (1) | $\begin{array}{r} (\$ 8,612,468) \\ \$ 0 \\ \hline \end{array}$ | $\begin{aligned} & \$ 0 \\ & \$ 0 \end{aligned}$ | Company Claim (1) | $\begin{array}{r} \$ 2,223 \\ \hline \end{array}$ |
| OCA Adjustment | (\$8,612,468) | \$0 |  | \$2,223 |


| Total Interest \& Dividend Adj. | $(\$ 8,610,245)$ |
| :--- | ---: |
| Less: Company Claim (1) | $(\$ 7,402,977)$ |
| OCA Adjustment | $(\$ 1,207,268)$ |
| Rounded to $\$ 1,000$ | $(\$ 1,207,000)$ |

(1) Company Main Brief.

TABLE V
Pennsylvania-American Water Company CASH WORKING CAPITAL-TAXES R-2020-3019369, R-2020-3019371

|  | Compan |  | ALJ |  | ALJ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Proforma |  | Pro forma |  | Adjusted |  |  |  |
|  | Tax Expense |  | Tax Expense |  | Taxes at |  |  |  |
| Description | Present Rates | ALJ <br> Adjustments | Present Rates | ALJ <br> Allowance | Present <br> Rates | Daily Expense | Net Lead/ <br> Lag Days | Accrued Tax Adjustment |

## Public Utility Realty <br> Capital Stock Tax

|  | $\$ 0$ |
| :--- | :--- |
|  | $\$ 0$ |
|  | $\$ 0$ |
|  | $\$ 0$ |
|  | $\$ 0$ |
|  | $\$ 0$ |
|  | $\$ 0$ |
|  | $\$ 0$ |
|  | $\$ 0$ |
| State Income Tax | $\$ 0$ |


| $\$ 0$ | $\$ 0$ |
| :--- | :--- |
| $\$ 0$ | $\$ 0$ |
| $\$ 0$ | $\$ 0$ |
| $\$ 0$ | $\$ 0$ |
| $\$ 0$ | $\$ 0$ |
| $\$ 0$ | $\$ 0$ |
| $\$ 0$ | $\$ 0$ |
| $\$ 0$ | $\$ 0$ |
| $\$ 0$ | $\$ 0$ |
| $\$ 0$ | $\$ 0$ |
| $\$ 0$ | $\$ 0$ |
| 0 |  |
| 0 |  |


| $\$ 0$ |
| ---: |
| $\$ 0$ |
| $\$ 0$ |
| $\$ 0$ |
| $\$ 0$ |
| $\$ 0$ |
| $\$ 0$ |
| $\$ 0$ |
| $\$ 0$ |
| $\$ 0$ |
| $\$ 0$ |
| $\$ 0$ |
| $\$ 0$ |


| $\$ 0$ | $\$ 0$ |
| ---: | ---: |
| $\$ 0$ | $\$ 0$ |
| $\$ 0$ | $\$ 0$ |
|  | $\$ 0$ |
|  | $\$ 0$ |
|  | $\$ 0$ |
|  | $\$ 0$ |
|  | $\$ 0$ |
| $\$ 0$ | $\$ 0$ |
| $\$ 0$ | $\$ 0$ |
|  | $\$ 0$ |
|  | $\$ 0$ |
|  |  |
|  | $\$ 0$ |


| $\$ 0.00$ | 0.00 | $\$ 0$ |
| :--- | :--- | :--- |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |

## $\$ 0$

$\qquad$
$\$ 0$

| ALJ Allowance | 0 |
| :--- | ---: |
| Company Claim (1) | 0 |
| ALJ Adjustment | 0 |

(1) Company Main Brief

TABLE VI
Pennsylvania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE R-2020-3019369, R-2020-3019371

## Water Operations Excluding Steelton

| Description | Company Pro forma F.T.Y. Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$56,686,235 | (\$3,448,953) | \$53,237,282 | 12.14 | \$646,300,609 |
| Chemicals | \$11,198,264 | \$0 | \$11,198,264 | 48.81 | \$546,587,278 |
| Group Insurance | \$9,765,865 | \$0 | \$9,765,865 | 10.92 | \$106,643,246 |
| Insurance, Other | \$13,166,870 | \$0 | \$13,166,870 | -53.43 | $(\$ 703,505,837)$ |
| Labor | \$59,611,870 | (\$1,854,171) | \$57,757,699 | 12.14 | \$701,178,471 |
| Leased Equip./Rent | \$390,060 | \$0 | \$390,060 | 42.65 | \$16,636,059 |
| Leased Vehicles | \$2,476,857 | \$0 | \$2,476,857 | 39.23 | \$97,167,100 |
| Miscellaneous | \$31,413,610 | (\$1,844,504) | \$29,569,106 | 31.01 | \$916,937,973 |
| Natural Gas | \$994,248 | \$0 | \$994,248 | 18.90 | \$18,791,287 |
| Power | \$11,746,309 | \$0 | \$11,746,309 | 24.97 | \$293,305,336 |
| Purchased Water | \$2,965,191 | \$0 | \$2,965,191 | 34.69 | \$102,862,480 |
| Telephone | \$3,798,036 | \$0 | \$3,798,036 | 8.71 | \$33,080,894 |
| Waste Disposal | \$1,830,364 | \$0 | \$1,830,364 | 45.65 | \$83,556,117 |
| Post Retirement Benefits | (\$2,529,410) | \$0 | (\$2,529,410) | 0.00 | \$0 |
| Pensions | (\$390,013) | \$0 | (\$390,013) | 13.14 | $(\$ 5,124,771)$ |
|  | \$203,124,356 | $(\$ 7,147,627)$ | \$195,976,729 | 14.60 | \$2,854,416,242 |


| OCA Average Revenue Lag | 50.7 |
| :--- | ---: |
| Less: OCA Avg. Expense Lag | 14.6 |
| Net Difference | 36.1 |
| OCA Pro forma |  |
| O \& M Expense per Day |  |
|  | $\$ 536,923$ |
| OCA CWC for O \& M |  |
| Less: Company Claim (1) | $\$ 19,403,491$ |
| OCA Adjustment | $\underline{\$ 20,089,831}$ |

(1) Company Main Brief

TABLE
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Water Operations Steelton

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) |  | Company Adjustments (1) |  | PAWC Pro Forma Rebuttal Filing <br> Present Rates |  | OCA <br> Adjustments |  | OCA Pro Forma Present Rates |  | OCA Revenue Increase |  | Total Allowable Revenues |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | \$ |  | \$ |  | \$ |  | \$ |  | \$ |  | \$ |  | \$ |
| Operating Revenue | \$ | 2,808,571 | \$ | - | \$ | 2,808,571 | \$ | - | \$ | 2,808,571 | \$ | 1,940,190 | \$ | 4,748,761 |
| Expenses: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| O \& M Expense | \$ | 1,732,238 | \$ | (324) | \$ | 1,731,914 | \$ | (27,250) | \$ | 1,704,664 | \$ | 23,380 | \$ | 1,728,044 |
| Depreciation | \$ | 847,137 | \$ | 41,652 | \$ | 888,789 | \$ | - | \$ | 888,789 | \$ | - | \$ | 888,789 |
| Amortizations | \$ | 18,393 | \$ | - | \$ | 18,393 |  |  | \$ | 18,393 |  |  | \$ | 18,393 |
| Taxes, Other | \$ | 118,618 | \$ | 78,095 | \$ | 196,713 | \$ | (304) | \$ | 196,409 | \$ | 11,175 | \$ | 207,584 |
| Income Taxes: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| State | \$ | $(82,119)$ | \$ | $(7,785)$ | \$ | $(89,904)$ | \$ | $(3,861)$ | \$ | $(93,765)$ | \$ | 190,320 | \$ | 96,555 |
| Federal | \$ | $(67,920)$ |  | $(14,731)$ | \$ | $(82,651)$ |  | $(7,307)$ | \$ | $(89,958)$ | \$ | 360,103 | \$ | 270,145 |
| Amort of ITC and Excess DFIT | \$ | , | \$ | , | \$ | , |  |  | \$ | , |  |  | \$ | , |
| Total Expenses | \$ | 2,566,348 | \$ | 96,906 | \$ | 2,663,254 | - | $(38,722)$ | \$ | 2,624,532 | \$ | 584,978 | \$ | 3,209,510 |
| Net Inc. Available for Return | \$ | 242,223 | \$ | $(96,906)$ | \$ | 145,317 | S | 38,722 | \$ | 184,039 | \$ | 1,355,212 | \$ | 1,539,251 |
| Rate Base | \$ | 23,759,790 | \$ | 588,186 | \$ | 24,347,976 | \$ | $(10,172)$ | \$ | 24,337,804 |  |  | \$ | 24,337,804 |
| Rate of Return |  | 1.019\% |  |  |  | 0.60\% |  |  |  |  |  |  |  | 6.32\% |
| (1) Company Main Brief |  |  |  |  |  |  |  |  |  |  |  |  |  | 6.32\% |

TABLE I(A)

## Pennsylvania-American Water Company <br> RATE OF RETURN <br> R-2020-3019369, R-2020-3019371

## Water Operations Steelton

| Structure | Cost | After-Tax <br> Weighted Cost | Effective <br> Tax Rate Complement | Pre-Tax Weighted Cost Rate |
| :---: | :---: | :---: | :---: | :---: |
| Structure | Cost |  |  |  |


| Total Cost of Debt |  |  | $2.19 \%$ |  | $2.19 \%$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Long-term Debt | $48.30 \%$ | $4.53 \%$ | $2.19 \%$ |  |  |
| Short-term Debt | $0.00 \%$ | $0.00 \%$ | $0.00 \%$ |  | $0.01 \%$ |
| Preferred Stock | $0.06 \%$ | $8.73 \%$ | $0.01 \%$ | 0.711160 | $5.81 \%$ |
| Common Equity | $51.64 \%$ | $8.00 \%$ | $4.13 \%$ | 0.711160 | - |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

Pre-Tax Interest Coverage 3.66
After-Tax Interest Coverage $\quad 2.89$

TABLE I(B)
Pennsylvania-American Water Company
REVENUE FACTOR
R-2020-3019369, R-2020-3019371

## Water Operations Steelton

| 100\% | 1.00000000 |
| :--- | ---: |
| Less: | 0.01205024 |
| Uncollectible Accounts Factor ( ${ }^{*}$ ) | 0.00575951 |
| PUC, OCA, OSBA Assessment Factors (*) | 0.00000000 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.0921903 |
|  | 0.0 .0988721 |
| State Income Tax Rate (*) | 0.8840968 |
| Effective State Income Tax Rate | 0.2099343 |
| Factor After Local and State Taxes | 0.1856022 |
| Federal Income Tax Rate (*) |  |
| Effective Federal Income Tax Rate | 0.6984946 |
| Revenue Factor (100\% - Effective Tax Rates) |  |

(*) Company Main Brief

## TABLE II

Pennsylvania-American Water Company
SUMMARY OF ADJUSTMENTS
R-2020-3019369, R-2020-3019371

## Water Operations Steelton

Adjustments

RATE BASE:
CWC:
Int. \& Div. (Table IV)
Taxes (Table V)
O \& M (Table VI)

REVENUES

EXPENSES:

Annual Performance Plan Expense
Capitalization Rate
Annual Performance Plan - AWWSC
Stock-Based Compensation Expense - AWWSC
Amortization of Outreach Consultant Costs
TAXES:
Interest Synchronization
(Table III)
TOTALS

| Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State Income Tax | Federal Income Tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$ | \$ | \$ | \$ | \$ | \$ | \$ |

$(8,000)$
$(2,172)$
.
0
0


TABLE III
Pennsylvania-American Water Company INTEREST SYNCHRONIZATION R-2020-3019369, R-2020-3019371

| Water Operations Steelton |  | Amount \$ |
| :---: | :---: | :---: |
| Company Rate Base Claim OCA Rate Base Adjustments | \$ | $\begin{array}{r} 24,347,976 \\ (10,172) \\ \hline \end{array}$ |
| OCA Rate Base | \$ | 24,337,804 |
| Weighted Cost of Debt |  | 2.18786057\% |
| OCA Interest Expense | \$ | 532,477 |
| Company Claim (1) | \$ | 466,248 |
| Total OCA Adjustment | \$ | $(66,230)$ |
| Company Adjustment | \$ | - |
| Net OCA Interest Adjustment | \$ | $(66,230)$ |
| State Income Tax Rate |  | 9.99\% |
| State Income Tax Adjustment |  | $(6,614)$ |
| Net OCA Interest Adjustment |  | $(66,230)$ |
| State Income Tax Adjustment |  | $(6,614)$ |
| Net OCA Adjustment for F.I.T. |  | $(59,616)$ |
| Federal Income Tax Rate |  | 20.99\% |
| Federal Income Tax Adjustment |  | $(12,515)$ |

(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company
CASH WORKING CAPITAL - Interest and Dividends
R-2020-3019369, R-2020-3019371

## Water Operations Steelton

Accrued Interest Preferred Stock Dividends

|  | Long-Term Debt | Short-Term Debt |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 24,347,976 \\ (\$ 10,172) \end{array}$ | $\begin{array}{r} \$ 24,347,976 \\ (\$ 10,172) \\ \hline \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 24,347,976 \\ (\$ 10,172) \\ \hline \end{array}$ |
| OCA Rate Base Weighted Cost of Debt | $\begin{array}{r} \$ 24,337,804 \\ 2.18786057 \% \\ \hline \end{array}$ | $\begin{array}{r} \$ 24,337,804 \\ 0.00 \% \\ \hline \end{array}$ | OCA Rate Base <br> Weighted Cost Pref. Stock | $\begin{gathered} \$ 24,337,804 \\ 0.00523800 \% \\ \hline \end{gathered}$ |
| OCA Annual Interest Exp. | \$532,477 | \$0 | OCA Preferred Dividends | \$1,275 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |
| Working Capital Adjustment |  |  |  |  |
| OCA Daily Interest Exp. | \$1,459 | \$0 | OCA Daily Dividends | \$3 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |
| OCA Working Capital | (\$60,840) | \$0 |  | \$14 |
| Company Claim (1) | \$0 | \$0 | Company Claim (1) | \$0 |
| OCA Adjustment | (\$60,840) | \$0 |  | \$14 |


| Total Interest \& Dividend Adj. | $(\$ 60,826)$ |
| :--- | ---: |
| Less: Company Claim (1) | $(\$ 53,238)$ |
| OCA Adjustment | $(\$ 7,588)$ |

Rounded to $\$ 1,000 \quad(\$ 8,000)$

[^55]TABLE V
Pennsylvania-American Water Company CASH WORKING CAPITAL -TAXES
R-2020-3019369, R-2020-3019371

| Description | Company <br> Proforma <br> Tax Expense <br> Present <br> Rates | ALJ <br> Adjustments | ALJ <br> Pro forma Tax Expense Present $\qquad$ | ALJ <br> Allowance | ALJ Adjusted Taxes at Present Rates | Daily Expense | Net Lead/ Lag Days | Accrued Tax Adjustment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PUC Assessment | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Public Utility Realty | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Capital Stock Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| State Income Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Federal Income Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |
|  |  |  |  |  |  | ALJ Allowance |  | 0 |
|  |  |  |  |  |  | Company Claim (1) |  | 0 |
|  |  |  |  |  |  | ALJ Adjustment |  | 0 |

(1) Company Main Brief

## TABLE V1

Pennsylvania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE R-2020-3019369, R-2020-3019371

## Water Operations Steelton

| Description | Company Pro forma F.T.Y. <br> Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$201,087 | $(\$ 12,235)$ | \$188,853 | 12.14 | \$2,292,671 |
| Chemicals | \$92,159 | \$0 | \$92,159 | 48.81 | \$4,498,281 |
| Group Insurance | \$64,179 | \$0 | \$64,179 | 10.92 | \$700,835 |
| Insurance, Other | \$67,894 | \$0 | \$67,894 | -53.43 | (\$3,627,576) |
| Labor | \$341,794 | $(\$ 4,274)$ | \$337,520 | 12.14 | \$4,097,492 |
| Leased Equip./Rent | \$0 | \$0 | \$0 | 42.65 | \$0 |
| Leased Vehicies | \$16,149 | \$0 | \$16,149 | 39.23 | \$633,525 |
| Miscellaneous | \$817,828 | (\$11,045) | \$806,783 | 31.01 | \$25,018,335 |
| Natural Gas | \$0 | \$0 | \$0 | 18.90 | \$0 |
| Power | \$107,438 | \$0 | \$107,438 | 24.97 | \$2,682,727 |
| Purchased Water | \$0 | \$0 | \$0 | 34.69 | \$0 |
| Telephone | \$3,023 | \$0 | \$3,023 | 8.71 | \$26,330 |
| Waste Disposal | \$0 | \$0 | \$0 | 45.65 | \$0 |
| Post Retirement Benefits | \$3,456 | \$0 | \$3,456 | 0.00 | \$0 |
| Pensions | \$6,360 | \$0 | \$6,360 | 13.14 | \$83,570 |
|  | \$1,721,367 | $(\$ 27,554)$ | \$1,693,813 | 21.50 | \$36,406,190 |


| OCA Average Revenue Lag | 50.7 |
| :--- | ---: |
| Less: OCA Avg. Expense Lag | 21.5 |
| Net Difference | 29.2 |
| OCA Pro forma |  |
| O \& M Expense per Day | $\$ 4,641$ |
| OCA CWC for O \& M | $\$ 135,535$ |
| Less: Company Claim (1) | $\$ 137,707$ |
| OCA Adjustment | $(\$ 2,172)$ |

(1) Company Main Brief

TABLE
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Wastewater SSS Excluding Sadsbury and Exeter Operations

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) | Company Adjustments (1) | PAWC Pro Forma Rebuttal Filing <br> Present Rates | OCA <br> Adjustments | OCA <br> Pro Forma <br> Present Rates | OCA Revenue Increase | Total Allowable Revenues |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Operating Revenue | 26,594,302 | 0 | 26,594,302 | 0 | 26,594,302 | 2,175,201 | 28,769,503 |
| Expenses: |  |  |  |  |  |  |  |
| O \& M Expense | 8,805,616 | 5,069 | 8,810,685 | (231,752) | 8,578,933 | 26,211 | 8,605,144 |
| Depreciation | 9,056,728 | 612,347 | 9,669,075 | 0 | 9,669,075 | 0 | 9,669,075 |
| Amortizations | $(328,512)$ | 67,565 | $(260,947)$ |  | $(260,947)$ |  | $(260,947)$ |
| Taxes, Other | 558,636 | 14,602 | 573,238 | $(4,955)$ | 568,283 | 11,659 | (260,942 |
| Income Taxes: |  |  |  |  |  |  |  |
| State | $(3,090)$ | $(16,164)$ | $(19,254)$ | 13,311 | $(5,943)$ | 213,450 | 207,507 |
| Federal | $(133,012)$ | $(28,798)$ | $(161,810)$ | $(2,290,678)$ | $(2,452,488)$ | 403,869 | (2,048,619) |
| Amort of ITC and Excess DFIT | \$ - | \$ | \$ |  | \$ - |  | \$ - |
| Total Expenses | 17,956,366 | 654,621 | 18,610,986 | $(2,514,074)$ | 16,096,913 | 655,189 | 16,752,102 |
| Net Inc. Available for Return | 8,637,936 | (654,621) | 7,983,316 | 2,514,074 | 10,497,389 | 1,520,012 | 12,017,401 |
| Rate Base | 184,077,745 | 11,309,431 | 195,387,176 | 2,267,447 | 197,654,623 |  | 197,654,623 |
| Rate of Return | 4.69\% |  | 4.09\% |  |  |  | 6.08\% |
| (1) Company Main Brief |  |  |  |  |  |  | 6.08\% |

TABLE I(A)
Pennsylvania-American Water Company
RATE OF RETURN
R-2020-3019369, R-2020-3019371

## Wastewater SSS Excluding Sadsbury and Exeter Operations

After-Tax
Weighted
Effective Tax Rate Pre-Tax Weighted
Structure
Cost Cost Complement Cost Rate

Total Cost of Debt
Long-term Debt WW-Specific LTD
Preferred Stock
Common Equity

|  |  | $2.018 \%$ |
| ---: | ---: | ---: |
| $39.44 \%$ | $4.46 \%$ | $1.760 \%$ |
| $10.14 \%$ | $2.55 \%$ | $0.260 \%$ |
| $0.05 \%$ | $8.80 \%$ | $0.000 \%$ |
| $50.37 \%$ | $8.05 \%$ | $4.060 \%$ |
| $100.00 \%$ |  | $6.080 \%$ |


|  | $1.76 \%$ |
| :--- | ---: |
| 0.711173 | $0.00 \%$ |
| 0.711173 | $5.71 \%$ |

Pre-Tax Interest Coverage

4.24

After-Tax Interest Coverage $\quad 3.45$

TABLE I(B)
Pennsylvania-American Water Company
REVENUE FACTOR
R-2020-3019369, R-2020-3019371
Wastewater SSS Excluding Sadsbury and Exeter Operations

| 100\% | 1.00000000 |
| :--- | ---: | ---: |
| Less: | 0.01205003 |
| Uncollectible Accounts Factor (*) | 0.00536014 |
| PUC, OCA, OSBA Assessment Factors (*) | 0.00000000 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.9825898 |
|  | - |
| State Income Tax Rate (*) | 0.0998674 |
| Effective State Income Tax Rate | 0.0981287 |
| Factor After Local and State Taxes | 0.8844611 |
| Federal Income Tax Rate (*) | 0.2099242 |
| Effective Federal Income Tax Rate | 0.1856698 |
|  |  |
| Revenue Factor (100\% - Effective Tax Rates) | 0.0 |

(*) Company Main Brief

## Wastewater SSS Excluding Sadsbury and Exeter Operations

| Adjustments | Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State Income Tax | Federal Income Tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| RATE BASE: |  |  |  |  |  |  |  |
| CWC: |  |  |  |  |  |  |  |
| Int. \& Div. (Table IV) | $(31,000)$ |  |  |  |  |  |  |
| Taxes (Table V) | 0 |  |  |  |  |  |  |
| $\bigcirc$ \& M (Table VI) | $(17,419)$ |  |  |  |  |  |  |
| Excess Accumulated Deferred Income Taxes | 2,315,866 |  |  |  |  |  |  |
| REVENUES: |  |  |  |  |  |  |  |
|  |  | 0 |  |  |  | 0 | 0 |
| EXPENSES: |  |  |  |  |  |  |  |
| Annual Performance Plan Expense |  |  | $(64,768)$ |  | $(4,955)$ | 6,965 | 13,179 |
| Capitalization Rate |  |  | $(153,844)$ |  |  | 15,369 | 28,080 |
| Annual Performance Plan - AWWSC |  |  | $(7,189)$ |  |  | 718 | 1,359 |
| Stock-Based Compensation Expense - AWWSC |  |  | $(6,571)$ |  |  | 656 | 1,242 |
| Amortization of Outreach Consultant Costs |  |  | 619 |  |  | (62) | (117) |
| TAXES: |  |  |  |  |  |  |  |
| Excess Accumulated Deferred Income Tax Amortization |  |  |  |  |  |  | (2,315,866) |
| Interest Synchronization <br> (Table III) |  |  |  |  |  | $(10,335)$ | $(19,555)$ |
| TOTALS | 2,267,447 | 0 | (231,752) | 0 | $(4,955)$ | 13,311 | (2,290,678) |

TABLE III
Pennsylvania-American Water Company INTEREST SYNCHRONIZATION
R-2020-3019369, R-2020-3019371

| Wastewater SSS Excluding Sadsbury and Exeter Operations |  | $\underset{\$}{\text { Amount }}$ |
| :---: | :---: | :---: |
| Company Rate Base Claim | \$ | 195,387,176 |
| OCA Rate Base Adjustments |  | 2,267,447 |
| OCA Rate Base | \$ | 197,654,623 |
| Weighted Cost of Debt |  | 1.76000000\% |
| OCA Interest Expense | \$ | 3,478,721 |
| Company Claim (1) | \$ | 3,375,237 |
| Total OCA Adjustment | \$ | $(103,484)$ |
| Company Adjustment | \$ | - |
| Net OCA Interest Adjustment | \$ | $(103,484)$ |
| State Income Tax Rate |  | 9.99\% |
| State Income Tax Adjustment |  | $(10,335)$ |
| Net OCA Interest Adjustment |  | $(103,484)$ |
| State Income Tax Adjustment |  | $(10,335)$ |
| Net OCA Adjustment for F.I.T. |  | $(93,149)$ |
| Federal Income Tax Rate |  | 20.99\% |
| Federal Income Tax Adjustment |  | $(19,555)$ |

(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company CASH WORKING CAPITAL - Interest and Dividends

R-2020-3019369, R-2020-3019371

## Wastewater SSS Excluding Sadsbury and Exeter Operations

| Accrued Interest |  | Preferred Stock Dividends |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Long-Term Debt | LT Debt - WW Specific |  |  |
| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 195,387,176 \\ \$ 2,267,447 \\ \hline \end{array}$ | $\begin{array}{r} \$ 195,387,176 \\ \$ 2,267,447 \\ \hline \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 195,387,176 \\ \$ 2,267,447 \\ \hline \end{array}$ |
| OCA Rate Base <br> Weighted Cost of Debt | $\begin{array}{r} \$ 197,654,623 \\ 1.76 \% \\ \hline \end{array}$ | $\begin{array}{r} \$ 197,654,623 \\ 0.26 \% \\ \hline \end{array}$ | OCA Rate Base <br> Weighted Cost Pref. Stock | $\begin{array}{r} \$ 197,654,623 \\ 0.00 \% \\ \hline \end{array}$ |
| OCA Annual Interest Exp. | \$3,478,721 | \$513,902 | OCA Preferred Dividends | \$0 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | -41.7 | Net Lag Days | 4.5 |
| Working Capital Adjustment |  |  |  |  |
| OCA Daily Interest Exp. <br> Net Lag Days | $\begin{array}{r} \$ 9,531 \\ -41.7 \\ \hline \end{array}$ | $\begin{array}{r} \$ 1,408 \\ -41.7 \\ \hline \end{array}$ | OCA Daily Dividends <br> Net Lag Days | $\$ 0$ |
| OCA Working Capital Company Claim (1) | $\begin{array}{r} (\$ 397,443) \\ \$ 0 \\ \hline \end{array}$ | $\begin{array}{r} (\$ 58,712) \\ \$ 0 \\ \hline \end{array}$ | Company Claim (1) | $\begin{aligned} & \$ 0 \\ & \$ 0 \\ & \hline \end{aligned}$ |
| OCA Adjustment | (\$397,443) | $(\$ 58,712)$ |  | \$0 |


| Total Interest \& Dividend Adj. | $(\$ 456,155)$ |
| :--- | ---: |
| Less: Company Claim (1) | $(\$ 425,033)$ |
| OCA Adjustment | $(\$ 31,122)$ |
| Rounded to $\$ 1,000$ | $(\$ 31,000)$ |

(1) Company Main Brief.

TABLE V
Pennsylvania-American Water Company CASH WORKING CAPITAL -TAXES R-2020-3019369, R-2020-3019371

| Description | Company Proforma Tax Expense Present Rates | ALJ <br> Adjustments | ALJ <br> Pro forma Tax Expense Present Rates | ALJ <br> Allowance | ALJ Adjusted Taxes at Present Rates | Daily Expense | Net Lead/ Lag Days | Accrued Tax Adjustment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PUC Assessment | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Public Utility Realty | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Capital Stock Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| State Income Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Federal Income Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0. |
|  | \$0 | S0 | \$0 | \$0 | \$0 |  |  |  |
|  |  |  |  |  |  | ALJ Allowance |  | 0 |
|  |  |  |  |  |  | Company Claim (1) |  | 0 |
|  |  |  |  |  |  | ALJ Adjustment |  | 0 |

(1) Company Main Brief

TABLE VI
Pennsylvania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE R-2020-3019369, R-2020-3019371

## Wastewater SSS Excluding Sadsbury and Exeter Operations

| Description | Company Pro forma F.T.Y. <br> Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$226,150 | (\$13,760) | \$212,391 | 12.14 | \$2,578,424 |
| Chemicals | \$676,129 | \$0 | \$676,129 | 48.81 | \$33,001,871 |
| Group Insurance | \$450,101 | \$0 | \$450,101 | 10.92 | \$4,915,103 |
| Insurance, Other | \$805,473 | \$0 | \$805,473 | -53.43 | (\$43,036,422) |
| Labor | \$2,196,944 | $(\$ 69,723)$ | \$2,127,221 | 12.14 | \$25,824,464 |
| Leased Equip./Rent | \$4,544 | \$0 | \$4,544 | 42.65 | \$193,802 |
| Leased Vehicles | \$74,819 | \$0 | \$74,819 | 39.23 | \$2,935,149 |
| Miscellaneous | \$1,583,304 | (\$153,224) | \$1,430,080 | 31.01 | \$44,346,767 |
| Natural Gas | \$57,141 | \$0 | \$57,141 | 18.90 | \$1,079,965 |
| Power | \$1,097,164 | \$0 | \$1,097,164 | 24.97 | \$27,396,185 |
| Purchased Water | \$0 | \$0 | \$0 | 34.69 | \$0 |
| Telephone | \$142,321 | \$0 | \$142,321 | 8.71 | \$1,239,616 |
| Waste Disposal | \$1,189,447 | \$0 | \$1,189,447 | 45.65 | \$54,298,237 |
| Post Retirement Benefits | \$24,290 | \$0 | \$24,290 | 0.00 | \$0 |
| Pensions | \$119,003 | \$0 | \$119,003 | 13.14 | \$1,563,699 |
|  | \$8,646,830 | $(\$ 236,707)$ | \$8,410,123 | 18.60 | \$156,336,860 |


| OCA Average Revenue Lag | 50.6 |
| :--- | ---: |
| Less: OCA Avg. Expense Lag | 18.6 |
| Net Difference | 32.0 |
| OCA Pro forma |  |
| O \& M Expense per Day | $\$ 23,041$ |
| OCA CWC for O \& M | $\$ 738,292$ |
| Less: Company Claim (1) | $\$ 755,711$ |
| OCA Adjustment | $(\$ 17,419)$ |

(1) Company Main Brief

TABLE
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Wastewater SSS Sadsbury Operations

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) | Company Adjustments <br> (1) | PAWC Pro Forma Rebuttal Filing Present Rates | OCA <br> Adjustments | OCA <br> Pro Forma <br> Present Rates | OCA Revenue Increase | Total <br> Allowable Revenues |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Operating Revenue | 1,019,361 | 0 | 1,019,361 | 0 | 1,019,361 | $(24,685)$ | 994,675 |
| Expenses: |  |  |  |  |  |  |  |
| O \& M Expense | 132,092 | 335 | 132,427 | $(4,085)$ | 128,341 | (298) | 128,043 |
| Depreciation | 200,484 | (705) | 199,779 | 0 | 199,779 | 0 | 199,779 |
| Amortizations | 27,024 | 0 | 27,024 |  | 27,024 |  | 27,024 |
| Taxes, Other | 8,513 | 574 | 9,087 | (43) | 9,044 | (142) | 8,902 |
| Income Taxes: |  |  |  |  |  |  |  |
| State | 40,615 | 402 | 41,017 | 147 | 41,164 | $(2,421)$ | 38,743 |
| Federal | 97,150 | 760 | 97,910 | 277 | 98,187 | $(4,581)$ | 93,606 |
| Amort of ITC and Excess DFIT | 0 | 0 | 0 |  | 0 |  | 0 |
| Total Expenses | 505,877 | 1,366 | 507,243 | $(3,704)$ | 503,539 | $(7,442)$ | 496,097 |
| Net Inc. Available for Return | 513,484 | $(1,366)$ | 512,117 | 3,704 | 515,822 | $(17,243)$ | 498,579 |
| Rate Base | 8,266,613 | $(65,973)$ | 8,200,640 | (328) | 8,200,312 |  | 8,200,312 |
| Rate of Return | 6.212\% |  | 6.24\% |  |  |  | 6.08\% |
|  |  |  |  |  |  |  | 6.08\% |

(1) Company Main Brief

TABLE I(A)
Pennsylvania-American Water Company
RATE OF RETURN
R-2020-3019369, R-2020-3019371
Wastewater SSS Sadsbury Operations

|  |  | After-Tax | Effective | Pre-Tax |
| :--- | :--- | :---: | :---: | :---: |
|  |  | Weighted | Tax Rate | Weighted |
| Structure | Cost | Cost | Complement | Cost Rate |


| Total Cost of Debt |  |  | $2.02 \%$ |  | $1.76 \%$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Long-term Debt | $39.44 \%$ | $4.46 \%$ | $1.76 \%$ |  |  |
| WW-Specific LTD | $10.14 \%$ | $2.55 \%$ | $0.26 \%$ |  | $0.00 \%$ |
| Preferred Stock | $0.05 \%$ | $8.80 \%$ | $0.00 \%$ | 0.711181 | $5.71 \%$ |
| Common Equity | $50.37 \%$ | $8.05 \%$ | $4.06 \%$ | 0.711181 | - |
|  |  |  |  |  | $7.47 \%$ |
|  | $100.00 \%$ |  |  |  |  |

Pre-Tax Interest Coverage 4.24
After-Tax Interest Coverage $\quad 3.45$

TABLE l(B)
Pennsylvania-American Water Company
REVENUE FACTOR
R-2020-3019369, R-2020-3019371

## Wastewater SSS Sadsbury Operations

| 100\% | 1.00000000 |
| :---: | :---: |
| Less: |  |
| Uncollectible Accounts Factor (*) | 0.01205403 |
| PUC, OCA, OSBA Assessment Factors (*) | 0.00576644 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.00000000 |
|  | 0.9821795 |
| State Income Tax Rate (*) | 0.0998633 |
| Effective State Income Tax Rate | 0.0980837 |
| Factor After Local and State Taxes | 0.8840958 |
| Federal Income Tax Rate (*) | 0.2099193 |
| Effective Federal Income Tax Rate | 0.1855888 |
| Revenue Factor (100\% - Effective Tax Rates) | 0.6985071 |

(*) Company Main Brief

## Wastewater SSS Sadsbury Operations

| Adjustments | Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State Income Tax | Federal Income Tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| RATE BASE: |  |  |  |  |  |  |  |
| CWC: |  |  |  |  |  |  |  |
| Int. \& Div. (Table IV) | 0 |  |  |  |  |  |  |
| Taxes (Table V) | 0 |  |  |  |  |  |  |
| O \& M (Table VI) | (328) |  |  |  |  |  |  |
| REVENUES: |  |  |  |  |  |  |  |
|  |  | 0 |  |  |  | 0 | 0 |
| EXPENSES: |  |  |  |  |  |  |  |
| Annual Performance Plan Expense |  |  | (572) |  | (43) | 61 | 116 |
| Capitalization Rate |  |  | $(1,764)$ |  |  | 176 | 334 |
| Annual Performance Plan - AWWSC |  |  | (926) |  |  | 93 | 175 |
| Stock-Based Compensation Expense - AWWSC |  |  | (847) |  |  | 85 | 160 |
| Amortization of Outreach Consultant Costs |  |  | 24 |  |  | (2) | (5) |
| TAXES: |  |  |  |  |  |  |  |
| Interest Synchronization (Table III) |  |  |  |  |  | (266) | (503) |
| TOTALS | (328) | 0 | $(4,085)$ | 0 | (43) | 147 | 277 |

TABLE III
Pennsylvania-American Water Company
INTEREST SYNCHRONIZATION
R-2020-3019369, R-2020-3019371
Wastewater SSS Sadsbury Operations

| Wastewater SSS Sadsbury Operations |  | Amount $\$$ |
| :---: | :---: | :---: |
| Company Rate Base Claim OCA Rate Base Adjustments | \$ | $\begin{array}{r} 8,200,640 \\ (328) \\ \hline \end{array}$ |
| OCA Rate Base Weighted Cost of Debt | \$ | $\begin{array}{r} 8,200,312 \\ 1.76 \% \\ \hline \end{array}$ |
| OCA Interest Expense Company Claim (1) | \$ | $\begin{aligned} & 144,325 \\ & 141,663 \\ & \hline \end{aligned}$ |
| Total OCA Adjustment Company Adjustment | \$ | $(2,663)$ |
| Net OCA Interest Adjustment State Income Tax Rate | \$ | $\begin{array}{r} (2,663) \\ 9.99 \% \\ \hline \end{array}$ |
| State Income Tax Adjustment |  | (266) |
| Net OCA Interest Adjustment State Income Tax Adjustment |  | $\begin{array}{r} (2,663) \\ (266) \\ \hline \end{array}$ |
| Net OCA Adjustment for F.I.T. <br> Federal Income Tax Rate |  | $\begin{array}{r} (2,397) \\ 20.99 \% \end{array}$ |
| Federal Income Tax Adjustment |  | (503) |

(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company CASH WORKING CAPITAL - Interest and Dividends

R-2020-3019369, R-2020-3019371

## Wastewater SSS Sadsbury Operations

Accrued Interest

|  | Long-Term Debt | LT Debt-WW Specific | Preferred Stock Dividends |  |
| :---: | :---: | :---: | :---: | :---: |
| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 8,200,640 \\ (\$ 328) \\ \hline \end{array}$ | $\begin{array}{r} \$ 8,200,640 \\ (\$ 328) \\ \hline \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 8,200,640 \\ (\$ 328) \\ \hline \end{array}$ |
| OCA Rate Base Weighted Cost of Debt | $\begin{array}{r} \$ 8,200,312 \\ 1.76 \% \\ \hline \end{array}$ | $\begin{array}{r} \$ 8,200,312 \\ 0.26 \% \\ \hline \end{array}$ | OCA Rate Base <br> Weighted Cost Pref. Stock | $\begin{array}{r} \$ 8,200,312 \\ 0.00 \% \\ \hline \end{array}$ |
| OCA Annual Interest Exp. | \$144,325 | \$21,321 | OCA Preferred Dividends | \$0 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |
| Working Capital Adjustment |  |  |  |  |
| OCA Daily Interest Exp. <br> Net Lag Days | $\begin{aligned} & \$ 395 \\ & -41.7 \\ & \hline \end{aligned}$ | $\begin{array}{r} \$ 58 \\ -41.7 \\ \hline \end{array}$ | OCA Daily Dividends Net Lag Days | $\begin{aligned} & \$ 0 \\ & 4.5 \\ & \hline \end{aligned}$ |
| OCA Working Capital Company Claim (1) | $\begin{array}{r} (\$ 16,472) \\ \$ 0 \\ \hline \end{array}$ | $\begin{array}{r} (\$ 2,419) \\ \$ 0 \\ \hline \end{array}$ | Company Claim (1) | $\begin{aligned} & \$ 0 \\ & \$ 0 \\ & \hline \end{aligned}$ |
| OCA Adjustment | $(\$ 16,472)$ | $(\$ 2,419)$ |  | \$0 |


| Total Interest \& Dividend Adj. | $(\$ 18,891)$ <br> $(\$ 19,094)$ |
| :--- | ---: |
| Less: Company Claim (1) | $\$ 204$ |
| OCA Adjustment | $\$ 0$ |
| Rounded to $\$ 1,000$ |  |

(1) Company Main Brief.

TABLE V

| Description | TABLE V <br> Pennsylvania-American Water Company CASH WORKING CAPITAL -TAXES R-2020-3019369, R-2020-3019371 |  |  |  |  | Daily Expense | Net Lead/ Lag Days |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Company Proforma Tax Expense Present Rates | ALJ <br> Adjustments | ALJ <br> Pro forma Tax Expense Present Rates | ALJ <br> Allowance | ALJ Adjusted Taxes at Present Rates |  |  | Accrued Tax Adjustment |
| PUC Assessment | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Public Utility Realty | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Capital Stock Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| State Income Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Federal Income Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |
|  |  |  |  |  |  | ALJ Allowance |  | 0 |
|  |  |  |  |  |  | Company Claim |  | 0 |
|  |  |  |  |  |  | ALJ Adjustment |  | 0 |

(1) Company Main Brief

TABLE VI
Pennsylvania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE

R-2020-3019369, R-2020-3019371

## Wastewater SSS Sadsbury Operations

| Description | Company Pro forma F.T.Y. <br> Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$29,143 | (\$1,773) | \$27,370 | 12.14 | \$332,271 |
| Chemicals | \$0 | \$0 | \$0 | 48.81 | \$0 |
| Group Insurance | \$3,272 | \$0 | \$3,272 | 10.92 | \$35,730 |
| Insurance, Other | \$27,775 | \$0 | \$27,775 | -53.43 | (\$1,484,018) |
| Labor | \$20,593 | (\$615) | \$19,978 | 12.14 | \$242,532 |
| Leased Equip./Rent | \$0 | \$0 | \$0 | 42.65 | \$0 |
| Leased Vehicles | \$4,254 | \$0 | \$4,254 | 39.23 | \$166,884 |
| Miscellaneous | \$25,805 | (\$1,741) | \$24,065 | 31.01 | \$746,240 |
| Natural Gas | \$0 | \$0 | \$0 | 18.90 | \$0 |
| Power | \$9,017 | \$0 | \$9,017 | 24.97 | \$225,154 |
| Purchased Water | \$0 | \$0 | \$0 | 34.69 | \$0 |
| Telephone | \$0 | \$0 | \$0 | 8.71 | \$0 |
| Waste Disposal | \$0 | \$0 | \$0 | 45.65 | \$0 |
| Post Retirement Benefits | \$0 | \$0 | \$0 | 0.00 | \$0 |
| Pensions | \$0 | \$0 | \$0 | 13.14 | \$0 |
|  | \$119,859 | (\$4,128) | \$115,730 | 2.30 | \$264,793 |


| OCA Average Revenue Lag | 50.7 |
| :--- | ---: |
| Less: OCA Avg. Expense Lag | 2.3 |
|  |  |
| Net Difference | 48.4 |
| OCA Pro forma | Days |
| O \& M Expense per Day | $\$ 317$ |
| OCA CWC for O \& M | $\$ 15,350$ |
| Less: Company Claim (1) | $\$ 15,678$ |
| OCA Adjustment | $(\$ 328)$ |

(1) Company Main Brief

TABLE I
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Wastewater SSS Exeter Operations

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) | Company Adjustments (1) | PAWC Pro Forma Rebuttal Filing <br> Present Rates | OCA <br> Adjustments | OCA <br> Pro Forma <br> Present Rates | OCA <br> Revenue Increase | Total Allowable Revenues |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Operating Revenue | 8,186,390 | 0 | 8,186,390 | 0 | 8,186,390 | 5,778,988 | 13,965,378 |
| Expenses: |  |  |  |  |  |  |  |
| O \& M Expense | 2,373,934 | 2,589 | 2,376,522 | $(73,902)$ | 2,302,620 | 69,637 | 2,372,257 |
| Depreciation | 3,621,605 | 21,475 | 3,643,080 | 0 | 3,643,080 | 0 | 3,643,080 |
| Amortizations | 30,983 | 0 | 30,983 |  | 30,983 |  | 30,983 |
| Taxes, Other | 443,735 | 622,803 | 1,066,537 | $(1,491)$ | 1,065,046 | 33,283 | 1,098,329 |
| Income Taxes: |  |  |  |  |  |  |  |
| State | $(202,755)$ | $(59,385)$ | $(262,140)$ | 4,573 | $(257,567)$ | 566,852 | 309,285 |
| Federal | $(13,501)$ | $(112,363)$ | $(125,864)$ | 8,653 | $(117,211)$ | 1,072,541 | 955,330 |
| Amort of ITC and Excess DFIT | 0 | 0 | 0 |  | 0 |  | 0 |
| Total Expenses | 6,254,000 | 475,118 | 6,729,118 | $(62,167)$ | 6,666,951 | 1,742,313 | 8,409,264 |
| Net Inc. Available for Return | 1,932,390 | $(475,118)$ | 1,457,272 | 62,167 | 1,519,439 | 4,036,674 | 5,556,113 |
| Rate Base | 90,923,800 | 466,051 | 91,389,851 | $(6,412)$ | 91,383,439 |  | 91,383,439 |
| Rate of Return | 2.125\% |  | 1.59\% |  |  |  | 6.08\% |
|  |  |  |  |  |  |  | 6.08\% |

(1) Company Main Brief

TABLE I(A)

## Pennsylvania-American Water Company

RATE OF RETURN
R-2020-3019369, R-2020-3019371

| Wastewater SSS Exeter Operations |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Structure | Cost | After-Tax <br> Weighted Cost | Effective <br> Tax Rate Complement | Pre-Tax Weighted Cost Rate |
| Total Cost of Debt |  |  | 2.02\% |  |  |
| Long-term Debt | 39.44\% | 4.46\% | 1.76\% |  | 1.76\% |
| WW-Specific LTD | 10.14\% | 2.55\% | 0.26\% |  |  |
| Preferred Stock | 0.05\% | 8.80\% | 0.00\% | 0.711174 | 0.00\% |
| Common Equity | 50.37\% | 8.05\% | 4.06\% | 0.711174 | 5.71\% |
|  | 100.00\% |  | 6.08\% |  | 7.47\% |
| Pre-Tax Interest Coverage | 4.24 |  |  |  |  |
| After-Tax Interest Coverage | 3.45 |  |  |  |  |

TABLE I(B)
Pennsylvania-American Water Company
REVENUE FACTOR R-2020-3019369, R-2020-3019371

## Wastewater SSS Exeter Operations

| 100\% | 1.00000000 |
| :---: | :---: |
| Less: |  |
| Uncollectible Accounts Factor (*) | 0.01205006 |
| PUC, OCA, OSBA Assessment Factors (*) | 0.00575927 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.00000000 |
|  | 0.9821907 |
| State Income Tax Rate ( ${ }^{*}$ ) | 0.0998671 |
| Effective State Income Tax Rate | 0.0980885 |
| Factor After Local and State Taxes | 0.8841021 |
| Federal Income Tax Rate (*) | 0.2099229 |
| Effective Federal Income Tax Rate | 0.1855933 |
| Revenue Factor (100\% - Effective Tax Rates) | 0.6985088 |

(*) Company Main Brief

TABLE II
Pennsylvania-American Water Company
SUMMARY OF ADJUSTMENTS
R-2020-3019369, R-2020-3019371

## Wastewater SSS Exeter Operations

| Adjustments | Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State Income Tax | Federal Income Tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| RATE BASE: CWC: <br> Int. \& Div. (Table IV) Taxes (Table V) O \& M (Table VI) | $\begin{gathered} (1,000) \\ 0 \\ (5,412) \end{gathered}$ |  |  |  |  |  |  |
| REVENUES: |  |  |  |  |  |  |  |
| EXPENSES: |  | 0 |  |  |  | 0 | 0 |
| Annual Performance Plan Expense |  |  | (19,477) |  | $(1,491)$ | 2,095 | 3,963 |
| Capitalization Rate |  |  | $(44,686)$ |  |  | 4,464 | 8,447 |
| Annual Performance Plan - AWWSC |  |  | $(5,188)$ |  |  | 518 | 981 |
| Stock-Based Compensation Expense - AWWSC |  |  | $(4,742)$ |  |  | 474 | 896 |
| Amortization of Outreach Consultant Costs |  |  | 191 |  |  | (19) | (36) |
| TAXES: |  |  |  |  |  |  |  |
| Interest Synchronization (Table III) |  |  |  |  |  | $(2,959)$ | $(5,598)$ |
| TOTALS | (6,412) | 0 | (73,902) | 0 | $(1,491)$ | 4,573 | 8,653 |

TABLE III
Pennsylvania-American Water Company INTEREST SYNCHRONIZATION R-2020-3019369, R-2020-3019371

| Wastewater SSS Exeter Operations | Amount$\$$ |  |
| :---: | :---: | :---: |
| Company Rate Base Claim | \$ | 91,389,851 |
| OCA Rate Base Adjustments |  | $(6,412)$ |
| OCA Rate Base | \$ | 91,383,439 |
| Weighted Cost of Debt |  | 1.76\% |
| OCA Interest Expense | \$ | 1,608,349 |
| Company Claim (1) | \$ | 1,578,724 |
| Total OCA Adjustment | \$ | $(29,624)$ |
| Company Adjustment | \$ | - |
| Net OCA Interest Adjustment | \$ | $(29,624)$ |
| State Income Tax Rate |  | 9.99\% |
| State Income Tax Adjustment |  | $(2,959)$ |
| Net OCA Interest Adjustment |  | $(29,624)$ |
| State Income Tax Adjustment |  | $(2,959)$ |
| Net OCA Adjustment for F.I.T. |  | $(26,665)$ |
| Federal Income Tax Rate |  | 20.99\% |
| Federal Income Tax Adjustment |  | $(5,598)$ |

(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company CASH WORKING CAPITAL - Interest and Dividends

R-2020-3019369, R-2020-3019371

## Wastewater SSS Exeter Operations

Accrued Interest
Long-Term Debt LT Debt-WW Specific Preferred Stock Dividends

| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 91,389,851 \\ (\$ 6,412) \\ \hline \end{array}$ | $\begin{array}{r} \$ 91,389,851 \\ (\$ 6,412) \\ \hline \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 91,389,851 \\ (\$ 6,412) \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: |
| OCA Rate Base | \$91,383,439 | \$91,383,439 | OCA Rate Base | \$91,383,439 |
| Weighted Cost of Debt | 1.76\% | 0.26\% | Weighted Cost Pref. Stock | 0.00\% |
| OCA Annual Interest Exp. | \$1,608,349 | \$237,597 | OCA Preferred Dividends | \$0 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |
| Working Capital Adjustment |  |  |  |  |
| OCA Daily Interest Exp. | \$4,406 | \$651 | OCA Daily Dividends | \$0 |
| Net Lag Days | -41.7 | -41.7 | Net Lag Days | 4.5 |
| OCA Working Capital | (\$183,730) | $(\$ 27,147)$ |  | \$0 |
| Company Claim (1) | \$0 | \$0 | Company Claim (1) | \$0 |
| OCA Adjustment | (\$183,730) | $(\$ 27,147)$ |  | \$0 |

Total Interest \& Dividend Adj.
Less: Company Claim (1)
OCA Adjustment
Rounded to $\$ 1,000$
(\$210,877)
$(\$ 209,951)$
(\$926)
(1) Company Main Brief.

| Description | TABLE V <br> Pennsylvania-American Water Company CASH WORKING CAPITAL-TAXES R-2020-3019369, R-2020-3019371 |  |  |  |  | Daily Expense |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Company Proforma Tax Expense Present Rates | ALJ J <br> Adjustments | ALJ Pro forma Tax Expense Present Rates | ALJ Allowance | ALJ Adjusted Taxes at Present Rates |  | $\begin{aligned} & \text { Net Lead/ } \\ & \text { Lag Days } \end{aligned}$ | Accrued Tax Adjustment |
| PUC Assessment | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Public Utility Realty | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Capital Stock Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| State income Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Federal Income Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |
|  |  |  |  |  |  | ALJ Allowance |  | 0 |
|  |  |  |  |  |  | Company Claim (1) |  | 0 |
|  |  |  |  |  |  | ALJ Adjustment |  | 0 |

TABLE VI
Pennsylvania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE R-2020-3019369, R-2020-3019371

## Wastewater SSS Exeter Operations

| Description | Company Pro forma F.T.Y. <br> Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$163,201 | (\$9,930) | \$153,272 | 12.14 | \$1,860,718 |
| Chemicals | \$153,451 | \$0 | \$153,451 | 48.81 | \$7,489,943 |
| Group Insurance | \$124,830 | \$0 | \$124,830 | 10.92 | \$1,363,144 |
| Insurance, Other | \$302,439 | \$0 | \$302,439 | -53.43 | (\$16,159,316) |
| Labor | \$617,187 | (\$20,968) | \$596,219 | 12.14 | \$7,238,099 |
| Leased Equip./Rent | \$123 | \$0 | \$123 | 42.65 | \$5,246 |
| Leased Vehicles | \$29,885 | \$0 | \$29,885 | 39.23 | \$1,172,389 |
| Miscellaneous | \$414,198 | (\$44,495) | \$369,702 | 31.01 | \$11,464,473 |
| Natural Gas | \$0 | \$0 | \$0 | 18.90 | \$0 |
| Power | \$283,577 | \$0 | \$283,577 | 24.97 | \$7,080,918 |
| Purchased Water | \$0 | \$0 | \$0 | 34.69 | \$0 |
| Telephone | \$2,740 | \$0 | \$2,740 | 8.71 | \$23,865 |
| Waste Disposal | \$216,103 | \$0 | \$216,103 | 45.65 | \$9,865,115 |
| Post Retirement Benefits | \$779 | \$0 | \$779 | 0.00 | \$0 |
| Pensions | \$4,114 | \$0 | \$4,114 | 13.14 | \$54,058 |
|  | \$2,312,627 | (\$75,393) | \$2,237,234 | 14.10 | \$31,458,652 |


| OCA Average Revenue Lag | 50.7 |
| :--- | ---: |
| Less: OCA Avg. Expense Lag | 14.1 |
| Net Difference | 36.6 |
| OCA Pro forma |  |
| O \& M Expense per Day |  |
|  | $\$ 6,129$ |
| OCA CWC for O \& M | $\$ 224,585$ |
| Less: Company Claim (1) | $\$ 229,997$ |
| OCA Adjustment | $(\$ 5,412)$ |

(1) Company Maîn Brief

TABLE I
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Wastewater CSS Scranton Operations

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) | Company Adjustments (1) | PAWC Pro Forma Rebuttal Filing <br> Present Rates | ALJ <br> Adjustments | ALJ <br> Pro Forma <br> Present Rates | ALJ Revenue Increase | Total Allowable Revenues |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Operating Revenue | 23,457,185 | 0 | 23,457,185 | 0 | 23,457,185 | 7,403,153 | 30,860,338 |
| Expenses: |  |  |  |  |  |  |  |
| O \& M Expense | 10,879,177 | 7,297 | 10,886,474 | $(437,689)$ | 10,448,785 | 89,208 | 10,537,993 |
| Depreciation | 6,312,629 | 119,583 | 6,432,212 | 0 | 6,432,212 | 0 | 6,432,212 |
| Amortizations | $(156,664)$ | 0 | $(156,664)$ |  | $(156,664)$ |  | $(156,664)$ |
|  | 967,922 | 13,207 | 981,129 | $(7,346)$ | 973,783 | 42,637 | 1,016,420 |
| Income Taxes: |  |  |  |  |  |  |  |
| State | $(129,026)$ | $(2,258)$ | $(131,284)$ | 38,039 | $(93,245)$ | 726,164 | 632,919 |
| Federal | 227,983 | $(4,015)$ | 223,968 | $(261,113)$ | $(37,145)$ | 1,373,976 | 1,336,831 |
| Amort of ITC and Excess DFIT | 0 | 0 | 0 |  | 0 |  | 0 |
| Total Expenses | 18,102,021 | 133,814 | 18,235,835 | $(668,109)$ | 17,567,726 | 2,231,985 | 19,799,711 |
| Net Inc. Available for Return | 5,355,164 | $(133,814)$ | 5,221,350 | 668,109 | 5,889,459 | 5,171,168 | 11,060,628 |
| Rate Base | 177,564,450 | 4,059,090 | 181,623,540 | 294,675 | 181,918,215 |  | 181,918,215 |
| Rate of Return | 3.016\% |  | 2.87\% |  |  |  | 6.08\% |
|  |  |  |  |  |  |  | 6.08\% |

(1) Company Main Brief

TABLE I(A)
Pennsylvania-American Water Company
RATE OF RETURN
R-2020-3019369, R-2020-3019371

## Wastewater CSS Scranton Operations

| Structure | Cost | After-Tax <br> Weighted Cost | Effective <br> Tax Rate Complement | Pre-Tax <br> Weighted Cost Rate |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 2.02\% |  |  |
| 39.44\% | 4.46\% | 1.76\% |  | 1.76\% |
| 10.14\% | 2.55\% | 0.26\% |  |  |
| 0.05\% | 8.80\% | 0.00\% | 0.711174 | 0.00\% |
| 50.37\% | 8.05\% | 4.06\% | 0.711174 | 5.71\% |
| 100.00\% |  | 6.08\% |  | 7.47\% |

Pre-Tax Interest Coverage 4.24
After-Tax Interest Coverage 3.45

TABLE I(B)
Pennsylvania-American Water Company
REVENUE FACTOR
R-2020-3019369, R-2020-3019371

## Wastewater CSS Scranton Operations

| 100\% | 1.00000000 |
| :---: | :---: |
| Less: |  |
| Uncollectible Accounts Factor (*) | 0.01204997 |
| PUC, OCA, OSBA Assessment Factors (*) | 0.00575925 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.00000000 |
|  | 0.9821908 |
| State Income Tax Rate (*) | 0.0998670 |
| Effective State Income Tax Rate | 0.0980885 |
| Factor After Local and State Taxes | 0.8841023 |
| Federal Income Tax Rate (*) | 0.2099230 |
| Effective Federal Income Tax Rate | 0.1855934 |
| Revenue Factor (100\% - Effective Tax Rates) | 0.6985089 |

(*) Company Main Brief

## Wastewater CSS Scranton Operations

| Adjustments | Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State income Tax | Federal Income Tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| RATE BASE: |  |  |  |  |  |  |  |
| CWC: |  |  |  |  |  |  |  |
| Int. \& Div. (Table IV) | (10,000) |  |  |  |  |  |  |
| Taxes (Table V) | 0 |  |  |  |  |  |  |
| O \& M (Table VI) | $(28,410)$ |  |  |  |  |  |  |
| Excess Accumulated Deferred Income Taxes | 333,086 |  |  |  |  |  |  |
| REVENUES: |  |  |  |  |  |  |  |
|  |  | 0 |  |  |  | 0 | 0 |
| EXPENSES: |  |  |  |  |  |  |  |
| Annual Performance Plan Expense |  |  | $(96,038)$ |  | $(7,346)$ | 10,328 | 19,542 |
| Capitalization Rate |  |  | $(334,573)$ |  |  | 33,424 | 63,241 |
| Annual Performance Plan - AWWSC |  |  | $(3,983)$ |  |  | 398 | 753 |
| Stock-Based Compensation Expense - AWWSC |  |  | $(3,641)$ |  |  | 364 | $688$ |
| Amortization of Outreach Consultant Costs |  |  | 546 |  |  | (55) | (103) |
| TAXES: |  |  |  |  |  |  |  |
| Excess Accumulated Deferred Income Tax Amortization |  |  |  |  |  |  | $(333,086)$ |
| Interest Synchronization <br> (Table III) |  |  |  |  |  | $(6,420)$ | $(12,148)$ |
| TOTALS | 294,676 | 0 | $(437,689)$ | 0 | (7,346) | 38,039 | (261,113) |

TABLE III
Pennsylvania-American Water Company INTEREST SYNCHRONIZATION R-2020-3019369, R-2020-3019371

| Wastewater CSS Scranton Operations |  | Amount \$ |
| :---: | :---: | :---: |
| Company Rate Base Claim | \$ | 181,623,540 |
| OCA Rate Base Adjustments |  | 294,675 |
| OCA Rate Base | \$ | 181,918,215 |
| Weighted Cost of Debt |  | 1.76\% |
| OCA Interest Expense | \$ | 3,201,761 |
| Company Claim (1) | \$ | 3,137,476 |
| Total OCA Adjustment | \$ | $(64,285)$ |
| Company Adjustment | \$ | - |
| Net OCA Interest Adjustment | \$ | $(64,285)$ |
| State Income Tax Rate |  | 9.99\% |
| State Income Tax Adjustment |  | $(6,420)$ |
| Net OCA Interest Adjustment |  | $(64,285)$ |
| State Income Tax Adjustment |  | $(6,420)$ |
| Net OCA Adjustment for F.I.T. |  | $(57,865)$ |
| Federal Income Tax Rate |  | 20.99\% |
| Federal Income Tax Adjustment |  | $(12,148)$ |

(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company CASH WORKING CAPITAL - Interest and Dividends R-2020-3019369, R-2020-3019371

## Wastewater CSS Scranton Operations

Accrued Interest

|  | Long-Term Debt | LT Debt - WW Specific | Preferred Stock Dividends |  |
| :---: | :---: | :---: | :---: | :---: |
| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 181,623,540 \\ \$ 294,675 \\ \hline \end{array}$ | $\begin{array}{r} \$ 181,623,540 \\ \$ 294,675 \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 181,623,540 \\ \$ 294675 \end{array}$ |
| OCA Rate Base Weighted Cost of Debt | $\begin{array}{r} \$ 181,918,215 \\ 1.76 \% \\ \hline \end{array}$ | $\begin{array}{r} \$ 181,918,215 \\ 0.26 \% \\ \hline \end{array}$ | OCA Rate Base <br> Weighted Cost Pref. Stock | $\begin{array}{r} \$ 181,918,215 \\ 0.00 \% \\ \hline \end{array}$ |
| OCA Annual Interest Exp. | \$3,201,761 | \$472,987 | OCA Preferred Dividends | \$0 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |
| Working Capital Adjustment |  |  |  |  |
| OCA Daily Interest Exp. | \$8,772 | \$1,296 | OCA Daily Dividends | \$0 |
| Net Lag Days | -41.7 | -41.7 | Net Lag Days | 4.5 |
| OCA Working Capital | (\$365,792) | $(\$ 54,043)$ |  | \$0 |
| Company Claim (1) | \$0 | \$0 | Company Claim (1) | \$0 |
| OCA Adjustment | (\$365,792) | (\$54,043) |  | \$0 |


| Total Interest \& Dividend Adj. | $(\$ 419,835)$ <br> Less: Company Claim (1) |
| :--- | ---: |
|  |  |
| OCA Adjustment | $(\$ 9,852)$ |

(1) Company Main Brief.

TABLE V
Pennsyivania-American Water Company CASH WORKING CAPITAL -TAXES R-2020-3019369, R-2020-3019371

(1) Company Main Brief

TABLE VI
Pennsylvania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE R-2020-3019369, R-2020-3019371

## Wastewater CSS Scranton Operation

| Description | Company Proforma F.T.Y. Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$125,315 | (\$7,625) | \$117,691 | 12.14 | \$1,428,766 |
| Chemicais | \$1,450,898 | \$0 | \$1,450,898 | 48.81 | \$70,818,313 |
| Group Insurance | \$849,157 | \$0 | \$849,157 | 10.92 | \$9,272,794 |
| insurance, Other | \$521,551 | \$0 | \$521,551 | -53.43 | (\$27,866,470) |
| Labor | \$4,905,473 | $(\$ 103,384)$ | \$4,802,089 | 12.14 | \$58,297,360 |
| Leased Equip./Rent | \$17,206 | \$0 | \$17,206 | 42.65 | \$733,836 |
| Leased Vehicles | \$328,934 | \$0 | \$328,934 | 39.23 | \$12,904,081 |
| Miscellaneous | \$1,001,510 | $(\$ 334,027)$ | \$667,484 | 31.01 | \$20,698,664 |
| Natural Gas | \$53,395 | \$0 | \$53,395 | 18.90 | \$1,009,166 |
| Power | \$392,644 | \$0 | \$392,644 | 24.97 | \$9,804,321 |
| Purchased Water | \$0 | \$0 | \$0 | 34.69 | \$0 |
| Telephone | \$55,286 | \$0 | \$55,286 | 8.71 | \$481,541 |
| Waste Disposal | \$953,470 | \$0 | \$953,470 | 45.65 | \$43,525,906 |
| Post Retirement Benefits | \$57,341 | \$0 | \$57,341 | 0.00 | \$0 |
| Pensions | \$194,373 | \$0 | \$194,373 | 13.14 | \$2,554,061 |
|  | \$10,906,553 | (\$445,035) | \$10,461,518 | 19.50 | \$203,662,339 |


| OCA Average Revenue Lag | 50.7 |  |
| :--- | ---: | ---: |
| Less: OCA Avg. Expense Lag | 19.5 |  |
| Net Difference | 31.2 | Days |
| OCA Pro forma |  |  |
| O \& M Expense per Day | $\$ 28,662$ |  |
| OCA CWC for O \& M | $\$ 894,913$ | 894,913 |
| Less: Company Claim (1) | $\$ 923,323$ |  |
| OCA Adjustment | (\$28,410) <br>  <br> (1) Company Main Brief |  |
|  |  | 31.2229693 |
|  |  | 31.2000000 |
|  |  | 0.02296925 |

TABLE I
Pennsylvania-American Water Company
INCOME SUMMARY
R-2020-3019369, R-2020-3019371

## Wastewater CSS McKeesport Operations

|  | PAWC Pro Forma Original Filing <br> Present Rates (1) | Company Adjustments (1) | PAWC Pro Forma Rebuttal Filing <br> Present Rates | OCA <br> Adjustments | OCA <br> Pro Forma <br> Present Rates | OCA <br> Revenue Increase | Total Allowable Revenues |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Operating Revenue | 12,369,057 | 0 | 12,369,057 | 0 | 12,369,057 | 14,099,332 | 26,468,389 |
| Expenses: |  |  |  |  |  |  |  |
| O \& M Expense | 6,945,160 | 5,487 | 6,950,647 | $(263,880)$ | 6,686,767 | 169,897 | 6,856,664 |
| Depreciation | 5,946,797 | $(27,552)$ | 5,919,245 | 0 | 5,919,245 | - | 5,919,245 |
| Amortizations | 301,857 | 2,231 | 304,088 |  | 304,088 |  | 304,088 |
| Taxes, Other | 573,586 | 6,956 | 580,542 | $(3,146)$ | 577,396 | 81,203 | 658,599 |
| Income Taxes: |  |  |  |  |  |  |  |
| State | $(721,886)$ | 5,849 | $(716,037)$ | 21,280 | $(694,757)$ | 1,382,981 | 688,224 |
| Federal | $(786,478)$ | 11,066 | $(775,412)$ | 40,264 | $(735,148)$ | 2,616,743 | 1,881,595 |
| Amort of ITC and Excess DFIT | 0 | 0 | 0 |  | 0 |  | 0 |
| Total Expenses | 12,259,036 | 4,037 | 12,263,073 | $(205,482)$ | 12,057,591 | 4,250,824 | 16,308,415 |
| Net Inc. Available for Return | 110,021 | $(4,037)$ | 105,984 | 205,482 | 311,466 | 9,848,508 | 10,159,974 |
| Rate Base | 167,005,729 | 118,981 | 167,124,710 | $(19,881)$ | 167,104,829 |  | 167,104,829 |
| Rate of Return | 0.066\% |  | 0.06\% |  |  |  | 6.08\% |

(1) Company Main Brief

TABLE I(A)
Pennsylvania-American Water Company
RATE OF RETURN
R-2020-3019369, R-2020-3019371
Wastewater CSS McKeesport Operations

|  |  | After-Tax | Effective | Pre-Tax |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Weighted | Tax Rate | Weighted |
| Structure | Cost | Cost | Complement | Cost Rate |


| Total Cost of Debt |  |  | $2.02 \%$ |  | $1.76 \%$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Long-term Debt | $39.44 \%$ | $4.46 \%$ | $1.76 \%$ |  |  |
| WW-Specific LTD | $10.14 \%$ | $2.55 \%$ | $0.26 \%$ | 0.711174 | $0.00 \%$ |
| Preferred Stock | $0.05 \%$ | $8.80 \%$ | $0.00 \%$ | 0.7111174 | $5.71 \%$ |
| Common Equity | $50.37 \%$ | $8.05 \%$ | $4.06 \%$ | 0.711174 |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

Pre-Tax Interest Coverage 4.24
After-Tax Interest Coverage $\quad 3.45$

TABLE I(B)
Pennsylvania-American Water Company
REVENUE FACTOR
R-2020-3019369, R-2020-3019371

## Wastewater CSS McKeesport Operations

| 100\% | 1.00000000 |
| :---: | :---: |
| Less: |  |
| Uncollectible Accounts Factor (*) | 0.01204999 |
| PUC, OCA, OSBA Assessment Factors (*) | 0.00575936 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.00000000 |
|  | 0.9821907 |
| State Income Tax Rate (*) | 0.0998670 |
| Effective State Income Tax Rate | 0.0980884 |
| Factor After Local and State Taxes | 0.8841022 |
| Federal Income Tax Rate (*) | 0.2099230 |
| Effective Federal Income Tax Rate | 0.1855934 |
| Revenue Factor (100\% - Effective Tax Rates) | 0.6985088 |

(*) Company Main Brief

## TABLE II

Pennsylvania-American Water Company
SUMMARY OF ADJUSTMENTS
R-2020-3019369, R-2020-3019371

## Wastewater CSS McKeesport Operations

| Adiustments | Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State income Tax | Federal Income Tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| RATE BASE: |  |  |  |  |  |  |  |
| CWC: |  |  |  |  |  |  |  |
| Int. \& Div. (Table IV) | 0 |  |  |  |  |  |  |
| Taxes (Table V) | 0 |  |  |  |  |  |  |
| O\&M (Table VI) | $(19,881)$ |  |  |  |  |  |  |
| REVENUES: |  |  |  |  |  |  |  |
|  |  | 0 |  |  |  | 0 | 0 |
| EXPENSES: |  |  |  |  |  |  |  |
| Annual Performance Plan Expense |  |  | $(41,135)$ |  | $(3,146)$ | 4,424 | 8,370 |
| Capitalization Rate |  |  | $(171,009)$ |  |  | 17,084 | 32,324 |
| Annual Performance Plan - AWWSC |  |  | $(27,180)$ |  |  | 2,715 | 5,138 |
| Stock-Based Compensation Expense - AWWSC |  |  | $(24,844)$ |  |  | 2,482 | 4,696 |
| Amortization of Outreach Consultant Costs |  |  | 288 |  |  | (29) | (54) |
| TAXES: |  |  |  |  |  |  |  |
| Interest Synchronization (Table III) |  |  |  |  |  | $(5,396)$ | $(10,210)$ |
| TOTALS | (19,881) | 0 | (263,880) | 0 | $(3,146)$ | 21,280 | 40,264 |

TABLE III
Pennsylvania-American Water Company INTEREST SYNCHRONIZATION R-2020-3019369, R-2020-3019371

| Wastewater CSS McKeesport Operations |  | Amount \$ |
| :---: | :---: | :---: |
| Company Rate Base Claim | \$ | 167,124,710 |
| OCA Rate Base Adjustments |  | $(19,881)$ |
| OCA Rate Base | \$ | 167,104,829 |
| Weighted Cost of Debt |  | 1.76\% |
| OCA Interest Expense | \$ | 2,941,045 |
| Company Claim (1) | \$ | 2,887,014 |
| Total OCA Adjustment | \$ | $(54,031)$ |
| Company Adjustment | \$ | - |
| Net OCA Interest Adjustment | \$ | $(54,031)$ |
| State Income Tax Rate |  | 9.99\% |
| State Income Tax Adjustment |  | $(5,396)$ |
| Net OCA Interest Adjustment |  | $(54,031)$ |
| State Income Tax Adjustment |  | $(5,396)$ |
| Net OCA Adjustment for F.I.T. |  | $(48,635)$ |
| Federal Income Tax Rate |  | 20.99\% |
| Federal Income Tax Adjustment |  | $(10,210)$ |

(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company CASH WORKING CAPITAL - Interest and Dividends

R-2020-3019369, R-2020-3019371

## Wastewater CSS McKeesport Operations

| Accrued Interest |  |  | Preferred Stock Dividends |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Long-Term Debt | LT Debt - WW Specific |  |  |
| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 167,124,710 \\ (\$ 19,881) \\ \hline \end{array}$ | $\begin{array}{r} \$ 167,124,710 \\ (\$ 19,881) \\ \hline \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 167,124,710 \\ (\$ 19,881) \\ \hline \end{array}$ |
| OCA Rate Base Weighted Cost of Debt | $\begin{array}{r} \$ 167,104,829 \\ 1.76 \% \\ \hline \end{array}$ | $\begin{array}{r} \$ 167,104,829 \\ 0.26 \% \\ \hline \end{array}$ | OCA Rate Base <br> Weighted Cost Pref. Stock | $\begin{array}{r} \$ 167,104,829 \\ 0.00 \% \\ \hline \end{array}$ |
| OCA Annual Interest Exp. | \$2,941,045 | \$434,473 | OCA Preferred Dividends | \$0 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |
| Working Capital Adjustment |  |  |  |  |
| OCA Daily Interest Exp. <br> Net Lag Days | $\begin{array}{r} \$ 8,058 \\ -41.7 \\ \hline \end{array}$ | $\begin{array}{r} \$ 1,190 \\ -41.7 \\ \hline \end{array}$ | OCA Daily Dividends Net Lag Days | $\begin{aligned} & \$ 0 \\ & 4.5 \end{aligned}$ |
| OCA Working Capital Company Claim (1) | $\begin{array}{r} (\$ 336,019) \\ \$ 0 \\ \hline \end{array}$ | $\begin{array}{r} (\$ 49,623) \\ \$ 0 \\ \hline \end{array}$ | Company Claim (1) | $\begin{aligned} & \$ 0 \\ & \$ 0 \end{aligned}$ |
| OCA Adjustment | (\$336,019) | $(\$ 49,623)$ |  | \$0 |

Total Interest \& Dividend Adj.
Less: Company Claim (1)
OCA Adjustment
Rounded to $\$ 1,000$
(\$385,642)
(\$385,593)
(\$49)
(1) Company Main Brief.

TABLE V
Pennsyivania-American Water Company CASH WORKING CAPITAL-TAXES R-2020-3019369, R-2020-3019371

|  | Company <br> Proforma <br>  <br>  <br> Tax Expense <br> Present <br> DescriptionRates$\quad$Adjustments |  |
| :---: | :---: | :---: |


| ALJ |  |
| :---: | :---: |
| Pro forma |  |
| Tax Expense |  |
| Present | AlJ |
| Rates | Allowance |


| ALJ |
| :---: |
| Adjusted |
| Taxes at |
| Present |
| Rates |


| Daily Expense $\quad$Net Lead/ <br> Lag DaysAccrued Tax <br> Adjustment |
| :--- |


| PUC Assessment | \$0 | \$0 | \$0 | \$0 | \$0 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Public Utility Realty | \$0 | \$0 | \$0 | \$0 | \$0 |
| Capital Stock Tax | \$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 |
| State Income Tax | \$0 | \$0 | \$0 | \$0 | \$0 |
| Federal Income Tax | \$0 | \$0 | \$0 | \$0 | \$0 |
|  | \$0 | \$0 | \$0 | \$0 | \$0 |


| $\$ 0.00$ | 0.00 | $\$ 0$ |
| :--- | :--- | :--- |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |
| $\$ 0.00$ | 0.00 | $\$ 0$ |


| ALJ Allowance | 0 |
| :--- | :--- |
| Company Claim (1) | 0 |
| ALJ Adjustment | 0 |

(1) Company Main Brief

TABLE VI
Pennsyivania-American Water Company CASH WORKING CAPITAL - O \& M EXPENSE R-2020-3019369, R-2020-3019371

## Wastewater CSS McKeesport Operations

| Description | Company Pro forma F.T.Y. <br> Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$855,058 | (\$52,024) | \$803,034 | 12.14 | \$9,748,836 |
| Chemicals | \$14,999 | \$0 | \$14,999 | 48.81 | \$732,111 |
| Group Insurance | \$464,322 | \$0 | \$464,322 | 10.92 | \$5,070,396 |
| Insurance, Other | \$538,525 | \$0 | \$538,525 | -53.43 | (\$28,773,391) |
| Labor | \$2,402,835 | (\$44,281) | \$2,358,555 | 12.14 | \$28,632,852 |
| Leased Equip./Rent | \$11,471 | \$0 | \$11,471 | 42.65 | \$489,238 |
| Leased Vehicles | \$76,772 | \$0 | \$76,772 | 39.23 | \$3,011,766 |
| Miscellaneous | \$1,014,556 | (\$170,721) | \$843,835 | 31.01 | \$26,167,311 |
| Natural Gas | \$34,387 | \$0 | \$34,387 | 18.90 | \$649,914 |
| Power | \$1,000,836 | \$0 | \$1,000,836 | 24.97 | \$24,990,875 |
| Purchased Water | \$0 | \$0 | \$0 | 34.69 | \$0 |
| Telephone | \$88,795 | \$0 | \$88,795 | 8.71 | \$773,404 |
| Waste Disposal | \$284,760 | \$0 | \$284,760 | 45.65 | \$12,999,294 |
| Post Retirement Benefits | \$40,192 | \$0 | \$40,192 | 0.00 | \$0 |
| Pensions | \$128,152 | \$0 | \$128,152 | 13.14 | \$1,683,917 |
|  | \$6,955,661 | (\$267,026) | \$6,688,635 | 12.90 | \$86,176,523 |


| OCA Average Revenue Lag | 50.7 |
| :--- | :---: |
| Less: OCA Avg. Expense Lag | 12.9 |
| Net Difference | 37.8 |
| OCA Pro forma |  |
| O \& M Expense per Day |  |
|  | $\$ 18,325$ |
| OCA CWC for O \& M | $\$ 692,851$ |
| Less: Company Claim (1) | $\$ 712,732$ |
| OCA Adjustment | $(\$ 19,881)$ |

(1) Company Main Brief

TABLE I
Pennsylvania-American Water Company
INCOME SUMMARY R-2020-3019369, R-2020-3019371

## Wastewater CSS Kane Operations

|  |  |  | Pro Forma |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pro Forma <br> Present Rates (1) | Company Adjustments (1) | Present Rates <br> (Revised) (1) | OCA <br> Adjustments | OCA <br> Pro Forma <br> Present Rates | R <br> Revenue Increase | Total Allowable Revenues |
|  | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Operating Revenue | 1,474,187 | 0 | 1,474,187 | 0 | 1,474,187 | 1,474,913 | 2,949,100 |
| Expenses: |  |  |  |  |  |  |  |
| O \& M Expense | 565,267 | 344 | 565,611 | 34 | 565,645 | 17,773 | 583,418 |
| Depreciation | 805,787 | 11,223 | 817,010 | 0 | 817,010 | 0 | 817,010 |
| Amortizations | 19,675 | $(2,005)$ | 17,670 |  | 17,670 |  | 17,670 |
| Taxes, Other | 64,427 | 831 | 65,258 | 0 | 65,258 | 8,495 | 73,753 |
| Income Taxes: |  |  |  |  |  |  |  |
| State | $(78,568)$ | 95 | $(78,473)$ | (635) | $(79,108)$ | 144,672 | 65,564 |
| Federal | $(65,887)$ | 180 | $(65,707)$ | $(1,202)$ | $(66,909)$ | 273,734 | 206,825 |
| Amort of ITC and Excess DFIT | 0 | 0 | 0 |  | 0 |  | 0 |
| Total Expenses | 1,310,701 | 10,668 | 1,321,369 | $(1,803)$ | 1,319,566 | 444,674 | 1,764,240 |
| Net Inc. Available for Return | 163,486 | $(10,668)$ | 152,818 | 1,803 | 154,621 | 1,030,239 | 1,184,860 |
| Rate Base | 19,169,938 | 318,884 | 19,488,822 | (992) | 19,487,830 |  | 19,487,830 |
| Rate of Return | 0.853\% |  | 0.78\% |  |  |  | 6.08\% |
|  |  |  |  |  |  |  | 6.08\% |

(1) Company Main Brief

TABLE I(A)
Pennsylvania-American Water Company
RATE OF RETURN
R-2020-3019369, R-2020-3019371

| Wastewater CSS Kane Operations |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Structure | Cost | After-Tax Weighted Cost | Effective Tax Rate Complement | Pre-Tax Weighted Cost Rate |
| Total Cost of Debt |  |  | 2.02\% |  |  |
| Long-term Debt | 39.44\% | 4.46\% | 1.76\% |  | 1.76\% |
| WW-Specific LTD | 10.14\% | 2.55\% | 0.26\% |  |  |
| Preferred Stock | 0.05\% | 8.80\% | 0.00\% | 0.711174 | 0.00\% |
| Common Equity | 50.37\% | 8.05\% | 4.06\% | 0.711174 | 5.71\% |
|  | 100.00\% |  | 6.08\% |  | 7.47\% |
| Pre-Tax Interest Coverage | 4.24 |  |  |  |  |
| After-Tax Interest Coverage | 3.45 |  |  |  |  |

TABLE I(B)
Pennsylvania-American Water Company REVENUE FACTOR R-2020-3019369, R-2020-3019371

## Wastewater CSS Kane Operations

| 100\% | 1.00000000 |
| :--- | ---: | ---: |
| Less: | 0.01204999 |
| Uncollectible Accounts Factor (*) | 0.00575973 |
| PUC, OCA, OSBA Assessment Factors ( ${ }^{*}$ ) | 0.00000000 |
| Gross Receipts Tax | 0.00000000 |
| Other Tax Factors | 0.9821903 |
|  |  |
| State Income Tax Rate (*) | 0.0998672 |
| Effective State Income Tax Rate | 0.0980886 |
| Factor After Local and State Taxes | 0.8841017 |
| Federal Income Tax Rate (*) | 0.2099227 |
| Effective Federal Income Tax Rate | 0.1855931 |

(*) Company Main Brief

TABLE II
Pennsylvania-American Water Company SUMMARY OF ADJUSTMENTS
R-2020-3019369, R-2020-3019371

## Wastewater CSS Kane Operations

Adiustments

RATE BASE:
CWC:
Int. \& Div. (Table IV)
Taxes (Table V)
O \& M (Table VI)

REVENUES:
EXPENSES:
Annual Performance Plan Expense
Capitalization Rate
Annual Performance Plan - AWWSC
Stock-Based Compensation Expense - AWWSC
Amortization of Outreach Consultant Costs TAXES:

Interest Synchronization
(Table III)
TOTALS
$(1,000)$
0
8

| Rate Base | Revenues | Expenses | Depreciation | Taxes-Other | State <br> Income Tax | Federal Income Tax |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$ | \$ | \$ | \$ | \$ | \$ | \$ |



TABLE III
Pennsylvania-American Water Company
INTEREST SYNCHRONIZATION
R-2020-3019369, R-2020-3019371

| Wastewater CSS Kane Operations |  | $\begin{gathered} \text { Amount } \\ \$ \end{gathered}$ |
| :---: | :---: | :---: |
| Company Rate Base Claim | \$ | 19,488,822 |
| ALJ Rate Base Adjustments |  | (992) |
| ALJ Rate Base | \$ | 19,487,830 |
| Weighted Cost of Debt |  | 1.76\% |
| ALJ Interest Expense | \$ | 342,986 |
| Company Claim (1) | \$ | 336,662 |
| Total ALJ Adjustment | \$ | $(6,324)$ |
| Company Adjustment | \$ | - |
| Net ALJ Interest Adjustment | \$ | $(6,324)$ |
| State Income Tax Rate |  | 9.99\% |
| State Income Tax Adjustment |  | (632) |
| Net ALJ Interest Adjustment |  | $(6,324)$ |
| State Income Tax Adjustment |  | (632) |
| Net ALJ Adjustment for F.I.T. |  | $(5,692)$ |
| Federal Income Tax Rate |  | 20.99\% |
| Federal Income Tax Adjustment |  | $(1,195)$ |

(1) Company Main Brief

TABLE IV
Pennsylvania-American Water Company CASH WORKING CAPITAL - Interest and Dividends

R-2020-3019369, R-2020-3019371

## Wastewater CSS Kane Operations

| Accrued Interest |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Long-Term Debt | LT Debt - WW Specific | Preferred Stock Dividends |  |
| Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 19,488,822 \\ (\$ 992) \\ \hline \end{array}$ | $\begin{array}{r} \$ 19,488,822 \\ (\$ 992) \\ \hline \end{array}$ | Company Rate Base Claim OCA Rate Base Adjustments | $\begin{array}{r} \$ 19,488,822 \\ (\$ 992) \\ \hline \end{array}$ |
| OCA Rate Base Weighted Cost of Debt | $\begin{array}{r} \$ 19,487,830 \\ 1.76 \% \\ \hline \end{array}$ | $\begin{array}{r} \$ 19,487,830 \\ 0.26 \% \\ \hline \end{array}$ | OCA Rate Base <br> Weighted Cost Pref. Stock | $\begin{array}{r} \$ 19,487,830 \\ 0.00 \% \\ \hline \end{array}$ |
| OCA Annual Interest Exp. | \$342,986 | \$50,668 | OCA Preferred Dividends | \$0 |
| Average Revenue Lag Days | 0.0 | 0.0 | Average Revenue Lag Days | 0.0 |
| Average Expense Lag Days | 0.0 | 0.0 | Average Expense Lag Days | 0.0 |
| Net Lag Days | -41.7 | 0.0 | Net Lag Days | 4.5 |

Working Capital Adjustment

| OCA Daily Interest Exp. Net Lag Days | $\begin{aligned} & \$ 940 \\ & -41.7 \\ & \hline \end{aligned}$ | $\begin{aligned} & \$ 139 \\ & -41.7 \\ & \hline \end{aligned}$ | OCA Daily Dividends Net Lag Days | $\begin{aligned} & \$ 0 \\ & 4.5 \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| OCA Working Capital | $(\$ 39,198)$ | (\$5,796) |  | \$0 |
| Company Claim (1) | \$0 | \$0 | Company Claim (1) | \$0 |
| OCA Adjustment | $(\$ 39,198)$ | $(\$ 5,796)$ |  | \$0 |


| Total Interest \& Dividend Adj. | $(\$ 44,994)$ <br> Less: Company Claim (1) |
| :--- | ---: |
| $(\$ 44,276)$ |  |
| OCA Adjustment | $(\$ 718)$ |
| Rounded to $\$ 1,000$ | $(\$ 1,000)$ |

(1) Company Main Brief.

TABLE V
Pennsylvania-American Water Company
CASH WORKING CAPITAL -TAXES
R-2020-3019369, R-2020-3019371

| Description | Company Proforma Tax Expense Present Rates | ALJ <br> Adjustments | ALJ <br> Pro forma Tax Expense Present Rates | ALJ <br> Allowance | ALJ Adjusted Taxes at Present Rates | Daily Expense | Net Lead/ Lag Days | Accrued Tax Adjustment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PUC Assessment | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Public Utility Realty | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Capital Stock Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | $\$ 0$ | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 |  | \$0 | \$0.00 | 0.00 | \$0 |
| State Income Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
| Federal Income Tax | \$0 | \$0 | \$0 | \$0 | \$0 | \$0.00 | 0.00 | \$0 |
|  | \$0 | \$0 | \$0 | \$0 | \$0 |  |  |  |
|  |  |  |  |  |  | ALJ Allowance |  | 0 |
|  |  |  |  |  |  | Company Claim (1) |  | 0 |
|  |  |  |  |  |  | ALJ Adjustment |  | 0 |

(1) Company Main Brief

TABLE VI
Pennsyivania-American Water Company
CASH WORKING CAPITAL - O \& M EXPENSE
R-2020-3019369, R-2020-3019371

## Wastewater CSS Kane Operations

| Description | Company Pro forma F.T.Y Expense | OCA <br> Adjustments | OCA <br> Pro forma Expenses | Lag Days | Lag Dollars |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Service Company | \$0 | \$0 | \$0 | 12.14 | \$0 |
| Chemicals | \$0 | \$0 | \$0 | 48.81 | \$0 |
| Group Insurance | \$0 | \$0 | \$0 | 10.92 | \$0 |
| Insurance, Other | \$0 | \$0 | \$0 | -53.43 | \$0 |
| Labor | \$12,057 | \$0 | \$12,057 | 12.14 | \$146,372 |
| Leased Equip./Rent | \$0 | \$0 | \$0 | 42.65 | \$0 |
| Leased Vehicles | \$0 | \$0 | \$0 | 39.23 | \$0 |
| Miscellaneous | \$543,965 | \$34 | \$543,999 | 31.01 | \$16,869,417 |
| Natural Gas | \$0 | \$0 | \$0 | 18.90 | \$0 |
| Power | \$0 | \$0 | \$0 | 24.97 | \$0 |
| Purchased Water | \$0 | \$0 | \$0 | 34.69 | \$0 |
| Telephone | \$0 | \$0 | \$0 | 8.71 | \$0 |
| Waste Disposal | \$0 | \$0 | \$0 | 45.65 | \$0 |
| Post Retirement Benefits | \$0 | \$0 | \$0 | 0.00 | \$0 |
| Pensions | \$0 | \$0 | \$0 | 13.14 | \$0 |
|  | \$556,022 | \$34 | \$556,056 | 30.60 | \$17,015,789 |


| OCA Average Revenue Lag | 50.7 |
| :--- | ---: |
| Less: OCA Avg. Expense Lag | 30.6 |
| Net Difference | 20.1 |
| OCA Pro forma | Days |
| O \& M Expense per Day | $\$ 1,523$ |
| OCA CWC for O \& M | $\$ 30,620$ |
| Less: Company Claim (1) | $\$ 30,612$ |
| OCA Adjustment | $\$ 8$ |

(1) Company Main Brief

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Pennsylvania American Water Company Interest Synchronization
Rate Year Ending December 31, 2022
Exhibit LA-8
Water Operations Excl. Steelton Water Operations Excl. Steelton
Schedule C-4
Docket Nos. R-2020-3019369 and R-2020-3019371
 Rate Year
Ending
$12 / 31 / 2022$
$(\mathrm{~A})$


[^56]\[

$$
\begin{aligned}
& \text { Per OCA - Sch. D, page } 1 \\
& \text { L1 x L2 }
\end{aligned}
$$
\]

$$
\begin{aligned}
& \text { L1 x L2 } \\
& \text { Note A } \\
& \text { L3 - L4 }
\end{aligned}
$$

$$
\begin{array}{lrl}
\$ & (574,417) & \mathrm{L} 5 \times \mathrm{L} 6 \\
\$ & 5,177,122 & \mathrm{~L} 5+\mathrm{L} 7 \\
& 20.99 \% & \\
\hline \$ & (1,086,855) & \mathrm{L} 8 \times \mathrm{L} 9 \\
\hline \$ & (1,661,272) & \mathrm{L} 7+\mathrm{L} 10
\end{array}
$$

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan


| Debt Porportion per Company | $43.82 \%$ |
| ---: | ---: |
| Cost of Long-Term Debt per Company | $4.37 \%$ |
|  | $1.91 \%$ |

Pennsylvania American Water Company Interest Synchronization
Rate Year Ending December 31, 2022


[^57]OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

[^58]OCA Table A．3：Average Rate Year 2022，Recommended Adjustments with Multiyear Rate Plan

[^59]Pennsylvania American Water Company Interest Synchronization
Rate Year Ending December 31, 2022


| Debt Porportion per Company | $39.53 \%$ |
| ---: | :--- | ---: |
| Cost of Long-Term Debt per Company | $4.37 \%$ |
|  | $=1.73 \%$ |

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

Pennsylvania American Water Company
Interest Synchronization
Rate Year Ending December 31, 2022

 6 Jo $L{ }^{28 \mathrm{e}}{ }_{d}$

| $\begin{aligned} & \text { Line } \\ & \text { No. } \\ & \hline \end{aligned}$ | Description |  |  |  | Rate Year Ending $12 / 31 / 2022$ | Reference |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | (A) |  |
| 1 | Adjusted Rate Base, per OCA | \$ | 181,623,540 | \$ | 187,247,054 | Schedule B , page 6 |
| 2 | Weighted Cost of Debt, per OCA |  | 1.73\% |  | 1.73\% | Per OCA - Sch. D, page 2 |
| 3 | Going-Level Interest Deduction for Tax Purposes |  |  | \$ | 3,239,374 | L1 x L2 |
| 4 | Interest Deduction per Company | \$ | 3,137,476 | \$ | 3,360,180 | Note A |
| 5 | Decrease in Deductible Interest |  |  | \$ | $(120,806)$ | L3-L4 |
| 6 | State Income Tax Rate |  |  |  | 9.99\% |  |
| 7 | Increase to State Income Tax |  |  | \$ | 12,065 | L5 x L6 |
| 8 | Federal Taxable Income |  |  | \$ | $(108,741)$ | L5 + L7 |
| 9 | Federal Income Tax Rate |  |  |  | 20.99\% |  |
| 10 | Increase to Federal Income Tax Expense |  |  | \$ | 22,828 | L8 x L9 |
| 11 | Overall Increase (Decrease) to Income Tax Expense |  |  | \$ | 34,894 | $\mathrm{L} 7+\mathrm{L} 10$ |
| Notes and Source: |  |  |  |  |  |  |

[^60]OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Pennsylvania American Water Company Interest Synchronization
Rate Year Ending December 31, 2022

| Pennsylvania American Water Company Interest Synchronization |  | Exhibit LA-8 <br> Wastewater CSS McKeesport Operations |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  | Schedule C-4 |
| Rate Year Ending December 31, 2022 |  | Docket Nos. R-2020-3019369 and R-2020-3019371 |  |  |  |  |
|  |  |  |  |  |  | Page 8 of 9 |
| Line <br> No. |  |  |  | Rate Year <br> Ending $12 / 31 / 2022$ |  |  |
|  |  |  |  |  |
|  |  | Reference |  |  |
|  |  | (A) |  |  |  |
| 1 | Adjusted Rate Base, per OCA |  |  | \$ | 167,124,710 | \$ | 165,494,500 | Schedule B , page 7 |
| 2 | Weighted Cost of Debt, per OCA |  |  |  | 1.73\% |  | 1.73\% | Per OCA - Sch. D, page 2 |
| 3 | Going-Level Interest Deduction for Tax Purposes |  |  | \$ | 2,863,055 | L1 x L2 |
| 4 | Interest Deduction per Company | \$ | 2,887,014 | \$ | 2,877,482 | Note A |
| 5 | Decrease in Deductible Interest |  |  | \$ | $(14,427)$ | L3-L4 |
| 6 | State Income Tax Rate |  |  |  | 9.99\% |  |
| 7 | Increase to State Income Tax |  |  | \$ | 1,441 | L5 x L6 |
| 8 | Federal Taxable Income |  |  | \$ | $(12,986)$ | $\mathrm{L} 5+\mathrm{L} 7$ |
| 9 | Federal Income Tax Rate |  |  |  | 20.99\% |  |
| 10 | Increase to Federal Income Tax Expense |  |  | \$ | 2,726 | L8 x L9 |
| 11 | Overall Increase (Decrease) to Income Tax Expense |  |  | \$ | 4,167 | $\mathrm{L} 7+\mathrm{L} 10$ |
| Notes and Source: |  |  |  |  |  |  |
| Note A: Company's "Rebuttal Model EOY 2021" Excel file, "WW CSS McKeesport" tab |  |  |  |  |  |  |

39.53\%

| 4.37\% |
| :--- |

Pennsylvania American Water Company Interest Synchronization
Rate Year Ending December 31, 2022

39.53\%
4.37\%
Pennsylvania American Water Company Salary and Wages Expense
Rate Year Ending December 31, 2022


* The Company's estimate of the amount of wages in 2022 subject to the $6.20 \%$ Social Security tax is $\$ 145,198$, which is based on a three-year average of historical actual. $\$ 145,198$, this adjustment to Payroll Tax expense could be modified accordingly.
OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Pennsylvania American Water Company
Salary and Wages Expense
Exhibit LA-8
Water Steelton Operations
OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Rate Year Ending December 31, 2022

| Rate Year Ending December 31, 2022 | Docket Nos. R-2020-3019369 and R-2020-3019371 |
| :--- | ---: | :--- |
| Page 2 of 7 |  |
| Revised |  |


$\mathrm{L} 3+\mathrm{L} 5$

Pennsylvania American Water Company
Salary and Wages Expense
Rate Year Ending December 31, 2022

Amounts below calculated using the data from Volume 4, Exhibit 3-B from PAWC's filing
Pennsylvania American Water Company
Salary and Wages Expense
Exhibit LA-8
Wastewater SSS Sadsbury Operations
Schedule C-5
R-2020-3019369 and R-2020-3019371
Page 4 of 7
Revised
OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Amounts below calculated using the data from Volume 4, Exhibit 3-B from PAWC's filing
Pennsylvania American Water Company
Salary and Wages Expense
Rate Year Ending December 31, 2022

Amounts below calculated using the data from Volume 4, Exhibit 3-B from PAWC's filing

 Non-Collective Total Salary $\quad$ Revised

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

Pennsylvania American Water Company Salary and Wages Expense

Rate Year Ending December 31, 2022


 | 젱 |
| :---: |
|  |
|  |

Vol. 4, Exhibit 3-B
Workpaper
L2-L1
Vol. 4, Exhibit 3-B


$$
11
$$



13 Total Adjustment to Payroll Tax Expense
6 OCA Adjustment to Salary and Wages Charged to Operating Expense
Capitalized Portion Not Charged to Operating Expense I. Salary and Wages - Non-Union Salary and Hourly Employees
Annualized Salary and Wages Per Company
$\xlongequal{\$ \quad(10,732)}$

Rate Year Ending December 31, 2022
I. Salary and Wages - Non-Union Salary and Hourly Employees
Salary and Wages Per OCA
OCA Adjustment to Total Salary and Wages
Capitalization Rate Percentage
Capitalized Portion Not Charged to Operating



 (4,43



Amounts below calculated using the data from Volume 4, Exhibit 3-B from PAWC's filing
10 Adjustment to Salary and Wages Charged to Operating Expense
Adjustment to FICA Medicare
II. Payroll Taxes

Adjustment to Salary and Wages Charged to Operating Expense FICA Social Security Rate Adjustment to FICA Social Security
$\wedge \infty$
Notes and Source:

$$
\begin{array}{lr}
\$ & (4,434) \\
& 6.20 \% \\
\hline \$ & (275) \\
\hline
\end{array}
$$

$$
\begin{array}{cr}
\$ & \begin{array}{c}
(4,434) \\
1.45 \%
\end{array}
\end{array} \begin{array}{ll}
\$ & \begin{array}{r}
(10,732) \\
1.45 \%
\end{array} \\
& (64)
\end{array}
$$

$$
\begin{array}{lr} 
& 1.45 \% \\
& (64) \\
& \$ \\
\end{array}
$$

$$
\$ \quad(821)
$$

* The Company's estimate of the amount of wages in 2022 subject to the $6.20 \%$ Social Security tax is $\$ 145,198$, which is based on a three-year average of historical actual. increases of the Social Security tax. To the extent that the salaries of certain individuals included in the adjustments listed are above the estimated FICA tax threshold $\$ 145,198$, this adjustment to Payroll Tax expense could be modified accordingly.
Pennsylvania American Water Company Salary and Wages Expense








 | $\stackrel{\circ}{8}$ |
| :---: |
|  |


 §
$\propto$




[^61]Pennsylvania American Water Company
Annual Performance Plan Expense
Rate Year Ending December 31, 2022

Amounts below calculated using the data from Volume 4, Exhibit 3-B from PAWC's filing

|  |  | Non-Collective <br> Bargaining <br> Unit Salary <br> $12 / 31 / 2022$ |  | Collective <br> Bargaining <br> Unit $12 / 31 / 2022$ |  | Non-Collective <br> Bargaining <br> Unit Hourly <br> $12 / 31 / 2022$ |  | $\begin{gathered} \text { Total } \\ \text { APP } \\ \text { Expense } \\ 12 / 31 / 2022 \\ \hline \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14 | APP Expense Per OCA Workpaper | \$ | 3,135,344 | \$ | 1,134,867 | \$ | 940,099 | \$ | 5,210,310 |
| 15 | OCA Recommended Disallowance Percentage* |  | 50\% |  | 50\% |  | 50\% |  |  |
| 16 | OCA Recommended APP Expense | \$ | 1,567,672 | \$ | 567,433 | \$ | 470,049 | \$ | 2,605,155 |

[^62]OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

Pennsylvania American Water Company Annual Performance Plan Expense
Exhibit LA-8
Water Steelton Operations
 Page 2 of 7
Revised


Amounts below calculated using the data from Volume 4, Exhibit 3-B from PAWC's filing
\(\left.$$
\begin{array}{cr} & \begin{array}{c}\text { Collective } \\
\text { Bargaining } \\
\text { Unit }\end{array}
$$ <br>

12/31/2022\end{array}\right]\)| $\$$ | 13,084 |
| :--- | ---: |
|  | $50 \%$ |
| $\$$ | 6,542 |

* See the Direct Testimony of OCA witness Ralph C. Smith
OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Pennsylvania American Water Company
Annual Performance Plan Expense
Rate Year Ending December 31, 2022
Description Exhibit LA-8
Wastewater SSS Excl. Sadsbury and Exeter Operations
Schedule C-6
Docket Nos. R-2020-3019369 and R-2020-3019371
Page 3 of 7

|  | Rate Year 2 |
| :---: | :---: |
|  |  |
| Non-Collective | Non-Collective | Total $\quad$ Revised




| \$ | 35,078 | \$ | 126,655 | \$ | 161,733 | Vol. 4, Exhibit 3-B see line 16 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$ | 17,438 | \$ | 62,965 | \$ | 80,403 |  |
| \$ | $(17,640)$ | \$ | $(63,690)$ | \$ | $(81,330)$ | L2-L1 |
|  | 17.07\% |  | 17.07\% |  |  | Vol. 4, Exhibit 3-B |
| \$ | 3,011 | \$ | 10,873 | \$ | 13,884 |  |
| \$ | $(14,629)$ | \$ | $(52,817)$ | \$ | $(67,446)$ | L3 + L5 |
| \$ | $(14,629)$ | \$ | $(52,817)$ | \$ | $(67,446)$ | Line 6 |
|  | 6.20\% |  | 6.20\% |  |  |  |
| \$ | (907) | \$ | $(3,275)$ | \$ | $(4,182)$ | L7x L8 |
| \$ | $(14,629)$ | \$ | $(52,817)$ | \$ | $(67,446)$ | Line 6 |
|  | 1.45\% |  | 1.45\% |  |  |  |
| \$ | (212) | \$ | (766) | \$ | (978) | L10 x L11 |
| \$ | $(1,119)$ | \$ | $(4,041)$ | \$ | $(5,160)$ | $\mathrm{L} 9+\mathrm{L} 12$ | $\xlongequal{\$ \quad(1,119)} \xlongequal{\$ \quad(4,041)} \xlongequal{\$ \quad(5,160)}$

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Pennsylvania American Water Company Exhibit LA-8 Annual Performance Plan Expense Wastewater SSS Sadsbury Operations Docket Nos. R-2020-3019369 and R-2020-3019371

Page 4 of 7
Revised Non-Collective Revised

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

Pennsylvania American Water Company
Annual Performance Plan Expense
Rate Year Ending December 31, 2022





 Rate Year 2 Revised
 L9 + L12 $\overline{\underline{S}}$

[^63]13 Total Adjustment to Payroll Tax Expense
Notes and Source:
Amounts below calculated using the data from Vo


## Annualized Performance Plan APP Expense Per Company

APP Expense Per OCA
OCA Adjustment to APP Expense
Capitalization Rate Percentage
Capitalization Rate Percentage
Capitalized Portion Not Charged to Operating Expense
OCA Adjustment to APP Expense charged to Operating Expense
II. Payroll Taxes FICA Social Security Rate

Adjustment to FICA Social Security
Adjustment to APP Expense Charged to Operating Expense
FICA Medicare Rate
Adjustment to FICA Medicare
Pennsylvania American Water Company
Annual Performance Plan Expense
Wastewater CSS Scranton Operations
OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Rate Year Ending December 31, 2022





[^64]${ }^{\wedge}$ The Company's estimate of the amount of wages in 2022 subject to the $6.20 \%$ Social Security tax is $\$ 145,198$, which is based on a three-year average of historical actual. increases of the Social Security tax. To the extent that the salaries of certain individuals included in the adjustments listed are above the estimated FICA tax threshold $\$ 145,198$, this adjustment to Payroll Tax expense could be modified accordingly.

[^65]Pennsylvania American Water Company Annual Performance Plan Expense
Pennsylvania American Water Company Exhibit LA-8 Wastewater CSS McKeesport Operations
 Page 7 of 7
Revised Revised

$\mathrm{L} 9+\mathrm{L} 12$ $\xlongequal{\$ \quad(1,282)} \xlongequal{\$ \quad(1,851)} \xlongequal{\$ \quad(144)} \xlongequal{\$}(3,277)$

| 10 | Adjustment to APP Expense Charged to Operating Expense | $\$$ |
| :--- | :--- | :--- |
| 11 | FICA Medicare Rate | $\$$ |
| 12 | Adjustment to FICA Medicare | $\$$ |
| 13 | Total Adjustment to Payroll Tax Expense | $\$$ |
|  |  |  | Non





| $\begin{array}{c}\text { Non-Collective } \\ \text { Bargaining } \\ \text { Unit Salary }\end{array}$ |  |
| :--- | ---: |
| 12/31/2022 |  |
| $\$$ | 39,954 |
|  | $50 \%$ |
| $\$$ | 19,977 |

* See the Direct Testimony of OCA witness Ralph C. Smith
OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Pennsylvania American Water Company Group Insurance
Rate Year Ending December 31, 2022

age 1 of 7
Revised











| $\$$ | $4,643,059$ |
| ---: | ---: |
|  | $-0.56 \%$ |
| $\$$ | $(26,168)$ |


| $\$$ | $(26,168)$ |
| :--- | ---: |
| $\$$ | $4,616,891$ |

$\begin{array}{ll}7 & \text { Group Insurance Expense Per Company } \\ 8 & \text { Percentage Difference Between OCA Recommended and PAWC Proposed Salaries and Wages } \\ 9 & \text { Reduction to Group Insurance Expense Proportional to OCA Recommended Salaries and Wages } \\ 10 & \text { Adjusted Group Insurance Expense Per OCA } \\ & \\ & \text { Difference between PAWC's Proposed and OCA's Recommended Salaries and Wages } \\ 11 & \begin{array}{l}\text { Salary and Wages per OCA } \\ 12\end{array} \\ \begin{array}{l}\text { Salary and Wages per Company } \\ 13\end{array} & \begin{array}{l}\text { Percentage Difference Between OCA Recommended and PAWC Proposed Salaries and Wages }\end{array}\end{array}$
OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Pennsylvania American Water Company Group Insurance
Exhibit LA-8
Water Steelton Operations
OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Rate Year Ending December 31, 2022

## Collective Bargaining <br> н! <br>  <br> $\xlongequal{\$ \quad(256)}$

Reference

Vol. 4, Exhibit 3-B
see line 10
L2 - L1
Vol. 4, Exhibit 3-B
Non-Collective
Bargaining

| Bargaining |
| :--- |
| Unit Salary |
| $12 / 31 / 2022$ |

$\$ \quad 108,473$



Amounts below calculated using the data from Volume 4, Exhibit 3-B from PAWCs
7 Group Insurance Expense Per Company Percentage Difference Between OCA Re
Percentage Difference Between OCA Recommended and PAWC Proposed Salaries and Wages 9 Reduction to Group Insurance Expense Proportional to OCA Recommended Salaries and Wages
Adjusted Group Insurance Expense Per OCA
Difference between PAWC's Proposed and OCA's Recommended Salaries and Wages
13 Percentage Difference Between OCA Recommended and PAWC Proposed Salaries and Wages
OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

| Pennsylvania American Water Company Group Insurance |  | Exhibit LA-8 <br> Wastewater SSS Excl. Sadsbury and Exeter Operations <br> Schedule C-7 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Rate Year Ending December 31, 2022 |  | Docket Nos. R-2020-3019369 and R-2020-3019371 |  |  |  |
|  |  | Page 3 of 7 |  |  |  |
|  |  |  |  |  |  |
|  |  | Non-Collective Bargaining | Non-Collective | Total |  |
|  |  | Unit Hourly <br> 12/31/2022 | Group InsuranceExpense$12 / 31 / 2022$ |  |
| Line |  |  |  | Unit Salary 12/31/2022 |  |
| No. | Description |  |  |  | Reference |
|  |  | (A) | (C) | (D) | - |
| Rate Year Ending December 31, 2022 |  |  |  |  |  |
| 1 | Group Insurance Expense Per Company | \$ 70,737 | \$ 505,536 | \$ 576,273 | Vol. 4, Exhibit 3-B <br> see line 10 <br> L2 - L1 <br> Vol. 4, Exhibit 3-B |
| 2 | Group Insurance Expense Per OCA | \$ 70,331 | \$ 502,951 | \$ 573,282 |  |
| 3 | OCA Adjustment to Group Insurance Expense | \$ (405) | \$$(2,585)$ <br>  | \$ $(2,991)$ |  |
| 4 | Capitalization Rate Percentage | 17.07\% |  |  |  |
| 5 | Capitalized Portion Not Charged to Operating Expense | \$ 69 | \$ 441 | \$ 510 |  |
| 6 | OCA Adjustment to Group Insurance Expense charged to Operating Expense | \$ (336) | \$ (2,144) | $\$(2,481)$ | $\mathrm{L} 3+\mathrm{L} 5$ |
| Notes and Source: |  |  |  |  |  |
| Amounts below calculated using the data from Volume 4, Exhibit 3-B from PAWC's filing |  |  |  |  |  |
|  |  | Non-Collective <br> Bargaining <br> Unit Salary <br> $12 / 31 / 2022$ | Non-Collective <br> Bargaining <br> Unit Hourly <br> $12 / 31 / 2022$ | Total <br> Group Insurance <br> Expense <br> $12 / 31 / 2022$ |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| 7 | Group Insurance Expense Per Company | \$ 70,737 | \$ 505,536 | \$ 576,273 |  |
| 8 | Percentage Difference Between OCA Recommended and PAWC Proposed Salaries and Wages | -0.57\% | -0.51\% |  |  |
| 9 | Reduction to Group Insurance Expense Proportional to OCA Recommended Salaries and Wages | \$ (405) | \$ $(2,585)$ | \$ $(2,991)$ |  |
| 10 | Adjusted Group Insurance Expense Per OCA | \$ 70,331 | \$ 502,951 | \$ 573,282 |  |
|  | Difference between PAWC's Proposed and OCA's Recommended Salaries and Wages | 2022 | 2022 |  |  |
|  |  | Non-Collective <br> Bargaining <br> Unit Salary | Non-Collective <br> Bargaining <br> Unit Hourly |  |  |
|  |  |  |  |  |  |
|  |  |  |  | Reference |  |
| 11 | Salary and Wages per OCA | \$ 348,761 | \$ 2,016,714 | Sch. C-5, p. 3, line2 |  |
| 12 | Salary and Wages per Company | \$ 350,771 | \$ 2,027,081 | Sch. C-5, p. 3, line1 |  |
| 13 | Percentage Difference Between OCA Recommended and PAWC Proposed Salaries and Wages | -0.57\% | -0.51\% |  |  |

Pennsylvania American Water Company Group Insurance

| pəs!ләу |  |
| :---: | :---: |
| Lょ๐ $\dagger$ วริ้ |  |
|  |  |
|  | L-つ गпрәчэS |
|  |  |
|  | $8-\forall 7$ ¢! $¢!$ ¢хВ |

Rate Year Ending December 31, 2022

| Non-Collective |  |
| :--- | ---: |
| Bargaining |  |
| Unit Hourly |  |
| 12/31/2022 |  |
| (A) |  |
|  |  |
| $\$$ | 4,189 |
| $\$$ | 4,167 |
| $\$$ | $(22)$ |
|  | $17.07 \%$ |
| $\$$ | 4 |
|  | $(18)$ |
| $\$$ |  |


| Non-Collective |  |
| :---: | ---: |
| Bargaining |  |
|  | Unit Salary |
| $12 / 31 / 2022$ |  |
| $\$$ | 4,189 |
|  | $-0.52 \%$ |
| $\$$ | $(22)$ |
|  | 4,167 |


|  | 2022 <br> Collective <br> Bargaining <br> Unit |
| :---: | :---: |
| $\$$ | 22,248 |
| $\$$ | 22,364 |
|  | $-0.52 \%$ |

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Rate Year Ending
Non-Collective

| Reference |
| :---: |
| Vol. 4, Exhibit 3-B |
| see line 10 |
| L2 - L1 |
| Vol. 4, Exhibit 3-B |

1
Pennsylvania American Water Company Group Insurance

Pennsylvania American Water Company Group Insurance

| Pennsylvania American Water Company | Exhibit LA-8 |
| :--- | ---: |
| Group Insurance | Wastewater CSS Scranton Operations |
| Schedule C-7 |  |
| Rate Year Ending December 31, 2022 | Docket Nos. R-2020-3019369 and R-2020-3019371 |

Page 6 of 7
Revised
Total Revised

 \(\left.$$
\begin{array}{cr} & \begin{array}{c}\text { Total } \\
\text { Group Insurance } \\
\text { Expense } \\
12 / 31 / 2022\end{array}
$$ <br>

\hline \& (D)\end{array}\right]\)| $\$$ | $1,087,192$ |
| :--- | ---: |
| $\$$ | $1,083,431$ |
| $\$$ | $(3,761)$ |
| $\$$ | 642 |
| $\$$ | $(3,119)$ |



 | Non-Collective |  |
| :--- | ---: |
| Bargaining |  |
| Unit Salary |  |
| 12/31/2022 |  |
| (A) |  |
| $\$$ | 152,396 |
| $\$$ | 151,523 |
| $\$$ | $(873)$ |
| $\$$ | $17.07 \%$ |
|  | 149 |
| $\$$ | $(724)$ |

## 









OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Pennsylvania American Water Company Group Insurance

Pennsylvania American Water Company
Pennsylvania American Water Company
401K, Defined Contribution Plan and Employee Stock Purchase Plan
Rate Year Ending December 31, 2022

| Pennsylvania American Water Company |  |  |  |  |  |  |  |  |  | Exhibit LA-8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 401K, Defined Contribution Plan and Employee Stock Purchase Plan |  | Water Operatons Excl. Steelton |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | Schedule C-8 |
| Rate Year Ending December 31, 2022 |  | Docket Nos. R-2020-3019369 and R-2020-3019371 |  |  |  |  |  |  |  |  |
|  |  | Non-Collective |  |  |  |  |  |  |  | Page 1 of 7 |
|  |  |  |  | Collective |  | Non-Collective |  | Revised |  |  |
|  |  | Bargaining |  | Bargaining |  | Bargaining |  |  |  |  |
| Line | Description | $\begin{aligned} & \text { Unit Salary } \\ & 12 / 31 / 2022 \\ & \hline \end{aligned}$ |  | $\begin{gathered} \text { Unit } \\ 12 / 31 / 2022 \\ \hline \end{gathered}$ |  | $\begin{aligned} & \text { Unit Hourly } \\ & 12 / 31 / 2022 \end{aligned}$ |  |  |  |  |
| No. |  |  |  | Total | Reference |  |  |
|  |  | (A) |  |  |  | (B) |  | (C) |  | (D) |  |  |
| I. 401K and Defined Contribution Plan |  |  |  |  |  |  |  |  |  |  |
| 1 | OCA Adjustment to Total 401K Expense | \$ | $(3,686)$ | \$ | $(4,806)$ | \$ | $(2,078)$ | \$ | $(10,569)$ | Line 11 |
| 2 | OCA Adjustment to Total Defined Contribution Expense | \$ | $(3,622)$ | \$ | $(5,767)$ | \$ | $(2,473)$ | \$ | $(11,862)$ | Line 15 |
| 3 | OCA Adjustment to Total 401 K and Defined Benefit Contribution Expense | \$ | $(7,308)$ | \$ | (10,572) | \$ | $(4,551)$ | \$ | $(22,431)$ |  |
| 4 | Capitalization Rate Percentage |  | 37.18\% |  | 37.18\% |  | 37.18\% |  |  | Vol. 4, Exhibit 3-B |
| 5 | Capitalized Portion Not Charged to Operating Expense | \$ | 2,717 | \$ | 3,931 | \$ | 1,692 | \$ | 4,409 | L3 x L4 |
| 6 | OCA Adjustment to 401K and Defined Contribution Plan Charged to Operating Expenses | \$ | $(4,591)$ | \$ | $(6,641)$ | \$ | $(2,859)$ | \$ | $(14,091)$ | L3 + L5 |
| II. Employee Stock Purchase Plan |  |  |  |  |  |  |  |  |  |  |
| 7 | OCA Adjustment to Employee Stock Purchase Plan | \$ | (393) | \$ | (249) | \$ | (112) | \$ | (754) | Line 19 |
|  | III. 401K, DCP and ESPP Expense |  |  |  |  |  |  |  |  |  |
| 8 | OCA Adjustment to 401K, DCP and ESPP Expense Charged to Operating Expense | \$ | $(4,984)$ | \$ | $(6,890)$ | \$ | $(2,970)$ | \$ | $(14,845)$ | L6 + L7 |



OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
$\begin{array}{lr}\text { Pennsylvania American Water Company } & \text { Exhibit LA-8 } \\ 401 \mathrm{~K}, \text { Defined Contribution Plan and Employee Stock Purchase Plan } & \text { Water Steelton Operations }\end{array}$
 Collective
Bargaining $\begin{array}{r}\text { Page } \begin{array}{l}\text { 2of } 7 \\ \text { Revised }\end{array} \\ \end{array}$

 $\xlongequal{\$ \quad(72)} \mathrm{L} 6+\mathrm{L} 7$


|  | Description |  |  | Reference |
| :---: | :---: | :---: | :---: | :---: |
|  | 401 K |  |  |  |
| 9 | 401 K Expense Per Company | \$ | 14,377 | Vol. 4, Exhibit 3-B |
| 10 | Percentage Difference Between OCA Recommended and PAWC Proposed Salaries and Wages |  | -0.38\% | Line 23 |
| 11 | Reduction to 401 K Expense Proportional to OCA Recommended Salaries and Wages | \$ | (54) | L9 x L10 |
| 12 | Adjusted 401K Insurance Expense Per OCA | $\stackrel{ }{\text { s }}$ | 14.323 | L9 + L11 |
|  | Defined Contribution Plan |  |  |  |
| 13 | Defined Contribution Plan Expense Per Company | \$ | 16,215 | Vol. 4, Exhibit 3-B |
| 14 | Percentage Difference Between OCA Recommended and PAWC Proposed Salaries and Wages |  | -0.38\% | Line 23 |
| 15 | Reduction to Defined Contribution Expense Proportional to OCA Recommended Salaries and Wages | \$ | (61) | L13x L14 |
| 16 | Adjusted Defined Contribution Plan Expense Per OCA | \$ | 16,154 | L13 + L15 |
|  | Employee Stock Purchase Plan |  |  |  |
| 17 | Employee Stock Purchase Plan Expense Per Company | \$ |  | Vol. 4, Exhibit 3-B |


| $\$$ | - | $\begin{array}{c}\text { Vol. 4, Exhibit 3-B } \\ \text { Line 23 } \\ \text { L17 x L18 }\end{array}$ |
| :--- | :---: | :---: |
| $\$$ | - | -0.38 |



2022
Collective
Bargaining
$\frac{\text { Reference }}{\substack{\text { Sch. }-5, \text { p. } 2 \text {, line2 } \\ \text { Sch. } C-5, ~ \\ \text { p. } 2, \text { line }}}$

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Pennsylvania American Water Company
401 K , Defined Contribution Plan and Employee Stock Purchase Plan
Rate Year Ending December 31, 2022
Wastewater SSS Excl. Sadsbury and Exeter Operations $\begin{array}{r}\text { Exhibit LA-8 }\end{array}$

 $\begin{array}{lr}\text { Dock } & \text { Page } 3 \text { of } 7 \\ \text { Revised }\end{array}$ Non-Collective Non-Collective Revised | Non-Collective |
| :---: |
| Bargaining |
| Unit Salary |
| $12 / 31 / 2022$ |



$\xlongequal{\$ \quad(80)} \xlongequal{\$ \quad(562)} \xlongequal{\$ \quad \text { (642) }}$
2022
Non-Collective
Bargaining

$\infty$
$\infty$
$\infty$
$\infty$
$\infty$
$n$







 $\|_{\infty}$





Line
No.
I. 401K and Defined Contribution Plan
OCA Adjustment to
OCA Adjustment to Total Defined Contribution Expense Capitalization Rate Percentage
Capitalized Portion Not Charged to Operating Expense
OCA Adjustment to 401 K and Defined Contribution Plan Charged to Operating Expenses
$\frac{\text { Notes and Source: }}{\text { Amounts below calculated using the data from Volume 4, Exhibit 3-B from PAWC's filing }}$

> II. Employee Stock Purchase Plan OCA Adjustment to Employee Stock Purchase Plan
III. 401K, DCP and ESPP Expense
8 OCA Adjustment to 401 K, DCP and ESPP Expense Charged to Operating Expense

|  |  |
| :--- | :--- |
|  |  |
| 9 | Description |
| 401 K |  |
| 401 K Expense |  |


12 Adjusted 401K Insurance Expense Per OCA
13 Defined Contribution Plan Expense Per Company
16 Adjusted Defined Contribution Plan Expense Per OCA
Employee Stock Purchase Plan
Employee Stock Purchase Plan Expense Per Company
Percentage Difference Between OCA Recommended and PAWC Proposed Salaries and Wages
Reduction to Employee Stock Purchase Plan Expense Proportional to OCA Recommended Salari
Difference between PAWC's Proposed and OCA's Recommended Salaries and Wages
Salary and Wages Per OCA
Salary and Wages Per Company
23 Percentage Difference Between OCA Recommended and PAWC Proposed Salaries and Wages

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan


OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Pennsylvania American Water Company
401 K , Defined Contribution Plan and Employee Stock Purchase Plan
Pennsylvania American Water Company $\quad$ Exhibit LA-8
Rate Year Ending December 31, 2022 $\begin{array}{lr} & \text { Docket Nos. R-2020-3019369 and R-2020-3019371 } \\ & \text { Page } 5 \text { of } 7 \\ \text { Non-Collective } \quad \text { Non-Collective } & \text { Revised }\end{array}$
 $\xlongequal{\$ \quad(71)} \xlongequal{\$ \quad(162)} \xlongequal{\$}$ $\begin{array}{cc}2022 & 2022 \\ \text { Non-Collective } & \text { Non-Collective } \\ \text { Bargaining } & \text { Bargaining } \\ \text { Unit Sala } & \text { Unit Hourly }\end{array}$








$\quad$ Description
9
401 K

401 K Expense Per Company

12 Adjusted 401 K Insurance Expense Per OCA
13 Defined Contribution Plan 14 Percentage Difference Between OCA Recommended an
16 Adjusted Defined Contribution Plan Expense Per OCA
Employee Stock Purchase Plan
Employee Stock Purchase Plan Expense Per Company
8 Percentage Difference Between OCA Recommended and PAWC Proposed Salaries and Wages
19 Reduction to Employee Stock Purchase Plan Expense Proportional to OCA Recommended Salaries and Wages
20 Adjusted Employee Stock Purchase Plan Expense Per OCA

## Difference between PAWC's Proposed and OCA's Recommended Salaries and Wages <br> Differe

[^66]OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Pennsylvania American Water Company
Pennsylvania American Water Company
401K, Defined Contribution Plan and Employee Stock Purchase Plan LA-8


$\begin{array}{lll}n & 9 & \hat{3} \\ + & 0 & + \\ 3 & 3 & 3 \\ 3 & 3\end{array}$

 $\xlongequal{\$ \quad(50)} \xlongequal{\$}$


$\xlongequal{\$ \quad(505)}$

 | Non-Collectiva |
| :---: |
| Bargaining |
| Unit Salary |
| $12 / 31 / 2022$ |
| (A) |

 $\xlongequal{\$ \quad(303)}$ |  |
| :---: |
| 2022 |
| Non-Collective |
| Bargaining |
| Unit Salary |





 $\qquad$

| $\stackrel{\text { जin }}{6}$ |  | $\bar{n}$ त N <br> $\leftrightarrow$ |  | $\left.\begin{array}{l\|} \frac{\pi}{n} \\ i n \\ n \\ \end{array} \right\rvert\,$ | $\left\|\begin{array}{cc} \overparen{\aleph} & \stackrel{\rightharpoonup}{c} \\ & \dot{n}^{\prime} \end{array}\right\|$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\left\|\begin{array}{ll}\underset{\sim}{c} & \stackrel{\rightharpoonup}{c} \\ & n \\ \infty & n\end{array}\right\|$ | $\left.\begin{array}{ll} 1 & \stackrel{a}{n} \\ & i \\ i \\ \infty & \\ & \end{array} \right\rvert\,$ |  |  |
|  |  |  | $\left\|\begin{array}{ll} 0 & 0 \\ 0 & - \\ 0 & - \\ \infty & \infty \end{array}\right\|$ |  |  |  |
|  |  |  |  | $$ |  |  |

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Pennsylvania American Water Company
401 K , Defined Contribution Plan and Employee Stock Purchase Plan
Rate Year Ending December 31, 2022
Wastewater CSS McKeesport Operations Schedule C-8
Docket Nos. R-2020-3019369 and R-2020-3019371


$n$
+
+
3
$\stackrel{\stackrel{\rightharpoonup}{3}}{3}$

| N |
| :--- |
| + |
| + |
|  |






| $*$ |
| :---: |
| $*$ |


$\xlongequal{\$ \quad(652)}$




$\xlongequal{\$ \quad(137)}$


-








$\xlongequal{\$ \quad 18,465} \xlongequal{\$ \quad 101,178}$

$\sim$
$\sim$
$\sim$
$\sim$






| $\$ \quad 138$ |
| :--- |


| 2022 |
| ---: |
| Non-Collective |
| Bargaining |
| Unit Salary |
| 351,718 |
| 353,746 |
| $-0.57 \%$ |




OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Pennsylvania American Water Company Capitalization Rate

| Pennsylvania American Water Company Capitalization Rate |  | Exhibit LA-8Water Operations Excl. SteeltonSchedule C-8A |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
| Rate Year Ending December 31, 2022 |  |  |  |  |
|  |  | Page 1 of 7 Revised |  |  |
|  |  |  |  |  |
| Line No. |  | 2022 |  |  |
|  | Description |  | Amount | Reference |
|  |  | (B) |  |  |
| OCA Adjusted Amounts |  |  |  |  |
| 1 | Salary and Wages |  | \$ 85,701,424 | Sch. C-5, page 1 |
| 2 | Annual Performance Plan |  | \$ 2,605,155 | Sch. C-6, page 1 |
| 3 | Group Insurance |  | \$ 16,478,588 | Sch. C-7, page 1 |
| 4 | 401K and Defined Contribution Plan |  | \$ 4,629,752 | Sch. C-8, page 1 |
| 5 | Transportation Expense |  | \$ 4,099,571 | Exh. 3-A, page 53 |
| 6 | Insurance Other Than Group |  | \$ 2,363,091 | Exh. 3-A, page 54 |
| 7 | Total |  | \$ 115,877,581 |  |
| 8 | Difference in Capitalization Rate |  | 1.67\% | Line 12 |
| 9 | Capitalized Portion Not Charged to Operating Expense |  | \$ (1,931,118) |  |

Notes and Source
Col. A: All amounts are PAWC except for Line 2, which OCA adjusted
Col. B: OCA adjusted amounts are shown on Line 4
Capitalization rates below from Volume 4, Exhibit 3-B from PAWC's filing
10 Three-Year Average Capitalization Rate Per PAWC 2019 Capitalization Rate Per OCA

PAWC Capitalization Rates
2017 Actual Capitalization Rate
2019 Actual Capitalization Rate


11
12

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

OCA Table A．3：Average Rate Year 2022，Recommended Adjustments with Multiyear Rate Plan

| Pennsylvania American Water Company Capitalization Rate |  |  |  | Exhibit LA－8 |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Wastewater SSS Excl．Sadsbury and Exeter Operations |  |  |
|  |  |  |  |  |
| Rate Year Ending December 31， 2022 |  | Docket Nos．R－ | R－2020－301936 | and R－2020－3019371 |
|  |  | Page 3 of 7 |  |  |
|  |  |  |  | Revised |
| Line |  | 2022 |  |  |
| No． | Description |  | Amount | Reference |
|  |  | （B） |  |  |
| OCA Adjusted Amounts |  |  |  |  |
| 1 | Salary and Wages | \＄ | 2，365，475 | Sch．C－5，page 3 |
| 2 | Annual Performance Plan |  | 80，403 | Sch．C－6，page 3 |
| 3 | Group Insurance |  | 573，282 | Sch．C－7，page 3 |
| 4 | 401 K and Defined Contribution Plan |  | 143，599 | Sch．C－8，page 3 |
| 5 | Transportation Expense | \＄ | 91，977 | Exh．3－A，page 159 |
| 6 | Insurance Other Than Group | \＄ | 144，560 | Exh．3－A，page 160 |
| 7 | Total |  | 3，399，295 |  |
| 8 | Difference in Capitalization Rate |  | 4．68\％ | Line 12 |
| 9 | Capitalized Portion Not Charged to Operating Expense |  | （158，942） |  |

Notes and Source
Col．A：All amounts are PAWC except for Line 2，which OCA adjusted
Capitalization rates below from Volume 4，Exhibit 3－B from PAWC＇s filing
10 Three－Year Average Capitalization Rate Per PAWC 4
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
PAWC Capitalization Rates
2017 Actual Capitalization Rate
2018 Actual Capitalization Rate

$\because=$
のコにも
OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

| Pennsylvania American Water Company Capitalization Rate |  | Wastewater SSS Sadsbury Operations |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  |  |  | Schedule C-8A |
| Rate Year Ending December 31, 2022 |  | Docket Nos. R-2020-3019369 | and R-2020-3019371 |
|  |  | Page 4 of 7 |  |
|  |  |  | Revised |
| Line |  | 2022 |  |
| No. | Description | Amount | Reference |
|  |  | (B) |  |
| OCA Adjusted Amounts |  |  |  |
| 1 | Salary and Wages | 22,248 | Sch. C-5, page 4 |
| 2 | Annual Performance Plan | 710 | Sch. C-6, page 4 |
| 3 | Group Insurance | \$ 4,167 | Sch. C-7, page 4 |
| 4 | 401 K and Defined Contribution Plan | 1,512 | Sch. C-8, page 4 |
| 5 | Transportation Expense | 5,231 | Exh. 3-A, page 203 |
| 6 | Insurance Other Than Group | \$ 4,985 | Exh. 3-A, page 204 |
| 7 | Total | 38,853 |  |
| 8 | Difference in Capitalization Rate | 4.68\% | Line 12 |
| 9 | Capitalized Portion Not Charged to Operating Expense | \$ (1,817) |  |
| Notes and Source |  |  |  |
| Col. A: All amounts are PAWC except for Line 2, which OCA adjusted |  |  |  |
| Col. B: OCA adjusted amounts are shown on Line 4 |  |  |  |
| Capitalization rates below from Volume 4, Exhibit 3-B from PAWC's filing |  |  |  |
|  |  | Wastewater |  |
|  |  | Capitalization |  |
|  |  | Rate |  |
| 10 | Three-Year Average Capitalization Rate Per PAWC | 17.07\% | Line 16 |
| 11 | 2019 Capitalization Rate Per OCA | 21.75\% |  |
| 12 | Difference in Capitalization Rate | 4.68\% | L11-L10 |
|  | PAWC Capitalization Rates |  |  |
| 13 | 2017 Actual Capitalization Rate | 13.52\% |  |
| 14 | 2018 Actual Capitalization Rate | 15.94\% |  |
| 15 | 2019 Actual Capitalization Rate | 21.75\% |  |
| 16 | Three-Year Average Capitalization Rate | 17.07\% |  |

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

| Pennsylvania American Water Company Capitalization Rate |  | Wastewater SSS Exeter Operations |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  |  |  | Schedule C-8A |
| Rate Year Ending December 31, 2022 |  | Docket Nos. R-2020-301936 | and R-2020-3019371 |
|  |  | Page 5 of 7 |  |
|  |  |  | Revised |
| Line |  | 2022 |  |
|  | Description | Amount | Reference |
| OCA Adjusted Amounts |  |  |  |
|  |  |  |  |  |  |
|  | Salary and Wages | 661,247 | Sch. C-5, page 5 |
| 2 | Annual Performance Plan | \$ 24,179 | Sch. C-6, page 5 |
| 3 | Group Insurance | 158,970 | Sch. C-7, page 5 |
| 4 | 401 K and Defined Contribution Plan | 51,604 | Sch. C-8, page 5 |
| 5 | Transportation Expense | 36,742 | Exh. 3-A, page 248 |
|  | Insurance Other Than Group | 54,279 | Exh. 3-A, page 249 |
| 7 | Total | 987,021 |  |
|  | Difference in Capitalization Rate | 4.68\% | Line 12 |
|  | Capitalized Portion Not Charged to Operating Expense | \$ (46,151) |  |
| Notes and Source |  |  |  |
|  |  |  |  |
|  |  |  |  |  |  |
| Capitalization rates below from Volume 4, Exhibit 3-B from PAWC's filing Wastewater |  |  |  |
|  |  |  |  |  |  |
|  |  | Capitalization |  |
|  |  | Rate |  |
| 10 | Three-Year Average Capitalization Rate Per PAWC | 17.07\% | Line 16 |
| 11 | 2019 Capitalization Rate Per OCA | 21.75\% |  |
| 12 | Difference in Capitalization Rate | 4.68\% | L11-L10 |
|  | PAWC Capitalization Rates |  |  |
| 13 | 2017 Actual Capitalization Rate | 13.52\% |  |
| 14 | 2018 Actual Capitalization Rate | 15.94\% |  |
| 15 | 2019 Actual Capitalization Rate | 21.75\% |  |
| 16 | Three-Year Average Capitalization Rate | 17.07\% |  |

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

Notes and Source
Col. A: All amounts are PAWC except for Line 2, which OCA adjusted
Capitalization rates below from Volume 4, Exhibit 3-B from PAWC's filing
$\begin{array}{ll}10 & \text { Three-Year Average Capitalization Rate Per PAWC } \\ 11 & \text { 2019 Capitalization Rate Per OCA } \\ 12 & \text { Difference in Capitalization Rate }\end{array}$
PAWC Capitalization Rates
2017 Actual Capitalization Rate
2018 Actual Capitalization Rate
2019 Actual Capitalization Rate
Three-Year Average Capitalization Rate
$\pm \backsim ゚$
OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Pennsylvania American Water Company Capitalization Rate

| Pennsylvania American Water Company Capitalization Rate |  | Exhibit LA-8Wastewater CSS McKeesport Operations |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  | Schedule C-8A |
| Rate Year Ending December 31, 2022 |  | Docket Nos. R-2020-3019369 and R-2020-3019371 Page 7 of 7 Revised |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Line |  | 2022 |  |  |
| No. | Description | Amount Reference |  |  |
|  |  | (B) |  |  |
| OCA Adjusted Amounts |  |  |  |  |
| 1 | Salary and Wages | \$ | 2,663,780 | Sch. C-5, page 7 |
| 2 | Annual Performance Plan | \$ | 51,120 | Sch. C-6, page 7 |
| 3 | Group Insurance | \$ | 591,682 | Sch. C-7, page 7 |
| 4 | 401 K and Defined Contribution Plan | \$ | 212,951 | Sch. C-8, page 7 |
| 5 | Transportation Expense | \$ | 94,376 | Exh. 3-A, page 345 |
| 6 | Insurance Other Than Group | \$ | 96,650 | Exh. 3-A, page 346 |
| 7 | Total | \$ | 3,710,559 |  |
| 8 | Capitalization Rate |  | 4.68\% | Line 12 |
| 9 | Capitalized Portion Not Charged to Operating Expense | \$ | $(173,496)$ |  |

Notes and Source
Col. A: All amounts are PAWC except for Line 2, which OCA adjusted
Capitalization rates below from Volume 4, Exhibit 3-B from PAWC's filing
$\begin{array}{ll}10 & \text { Three-Year Average Capitalization Rate Per PAWC } \\ 11 & \text { 2019 Capitalization Rate Per OCA } \\ 12 & \text { Difference in Capitalization Rate }\end{array}$
PAWC Capitalization Rates
2017 Actual Capitalization Rate
2018 Actual Capitalization Rate
2019 Actual Capitalization Rate

コに
OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

Pennsylvania American Water Company
Stock-Based Compensation Expense - American Water Works Service Company
Rate Year Ending December 31, 2022

| Pennsylvania American Water Company |  |  |  | Exhibit LA-8 <br> Schedule C-10 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stock-Based Compensation Expense - American Water Works Service Company |  |  |  |  |  |
|  |  | Docket Nos. R-2020-3019369 and R-2020-3019371 |  |  |  |
| Rate Year Ending December 31, 2022 |  | Page 1 of 1 |  |  |  |
| Description | Allocation | Projected Stock Options Charged from AWWSC | Projected <br> Restricted Stock Units Charged from AWWSC | Total <br> Stock-Based Compensation Charged from AWWSC |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  | (A) | (B) | (C) |  | (D) |
| Rate Year Ending December 31, 2022 |  |  |  |  |  |
| Water Operations Excluding Steelton | 97.26\% | (180) | $(1,693,666)$ | \$ | $(1,693,846)$ |
| Water Steelton Operations | 0.35\% | (1) | $(6,008)$ | \$ | $(6,009)$ |
| Wastewater SSS Excluding Sadsbury and Exeter Operations | 0.39\% | (1) | $(6,757)$ | \$ | $(6,758)$ |
| Wastewater SSS Sadsbury Operations | 0.05\% | (0) | (871) | \$ | (871) |
| Wastewater SSS Exeter Operations | 0.28\% | (1) | $(4,876)$ | \$ | $(4,877)$ |
| 6 Wastewater CSS Scranton Operations | 0.22\% | (0) | \$ $(3,744)$ | \$ | $(3,745)$ |
| 7 Wastewater CSS McKeesport Operations | 1.47\% | (3) | \$ $(25,547)$ | \$ | $(25,550)$ |
|  | 100.00\% | $\xlongequal{\$}$ (185) | \$ (1,741,469) | \$ | (1,741,654) |

Col. B: Amounts calculated using the amounts below from the response to I\&E-RE-46:

[^67]OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

| Pennsylvania American Water Company <br> Excess Accumulated Deferred Income Tax Amortization <br> Rate Year Ending December 31, 2022 |  |
| :--- | :--- | :--- | :--- |

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

Pennsylvania American Water Company
 Docket Nos. R-2020-3019369 and R-2020-3019371





| $\begin{aligned} & \text { Line } \\ & \text { No. } \end{aligned}$ | Item | OCA Proposed Amortization |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Amortization |  |  | Categorization Pursuant to Tax Normalization Rules (C) | Net Excess Accumulated Deferred Income Taxes (D) |  | 2018 Amortization <br> (E) | $\begin{gathered} 2019 \\ \text { Amortization } \end{gathered}$(F) |  | 2020 Amortization <br> (G) | $\begin{aligned} & \text { Subtotal Net } \\ & \text { EADIT at } \\ & \text { 12/31/2020 } \\ & (H)=\text { D-E-F-G } \end{aligned}$ | 2021 Amortization <br> (I) |  | 2022 Amortization <br> (J) |  |
| Plant Related from PowerTax |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Method/ Life | ARAM |  | Asset Life | Protected | \$ | 206,658,250 | \$ 2,344,452 | \$ | 2,847,516 | \$ 2,409,335 | \$ 199,056,946 | \$ | 2,327,941 | \$ | 2,013,191 |
| 2 | Cost of Removal | ARAM |  | Asset Life | Uncertain | \$ | 5,587,890 | \$ (104) | \$ | (0) | \$ | \$ 5,587,993 | \$ | - | \$ | - |
| 3 | Repairs | Straight-Line | 3 | Years | Unprotected | \$ | 140,081,147 | \$ 3,209,210 | \$ | 4,759,346 | \$ 4,739,009 | \$ 127,373,581 | \$ | 42,457,860 |  | 42,457,860 |
| 4 | Taxable CIAC | ARAM |  | Asset Life | Protected | \$ | $(3,371,573)$ | \$ $(233,870)$ | \$ | $(233,870)$ | \$ $(233,870)$ | \$ (2,669,963) |  | $(233,870)$ | \$ | $(233,870)$ |
| 5 | All Other Federal | ARAM |  | Asset Life | Uncertain | \$ | $(975,857)$ | \$ 235,686 | \$ | 100,915 | \$ 299,181 | \$ (1,611,638) | \$ | 302,834 | \$ | 329,012 |
| 6 | Federal Benefit of State | Straight-Line | 3 | Years | Unprotected | \$ | $(13,651,713)$ | \$ $(301,575)$ | \$ | $(455,891)$ | \$ $(448,728)$ | \$ (12,445,518) | \$ | $(4,148,506)$ |  | $(4,148,506)$ |
| 7 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8 | Sub-Total (UPIS) |  |  |  |  | \$ | 334,328,143 | \$ 5,253,799 | \$ | 7,018,016 | \$ 6,764,926 | \$ 315,291,401 |  | 40,706,260 |  | 40,417,687 |
| CWIP, CAC, and other Non-UPIS Plant items |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8 | Item | Amortization Method |  | Life |  |  |  |  |  |  |  |  |  |  |  |  |
| 9 | Plant Customer Advances | Straight-Line | 3 | Years | Unprotected | \$ | (10,382,270) | \$ $(163,152)$ | \$ | $(217,938)$ | \$ $(210,079)$ | \$ (9,791,101) | \$ | $(3,263,700)$ | \$ | (3,263,700) |
| 10 | Plant CWIP | Straight-Line | 3 | Years | Unprotected | \$ | 446,724 | \$ 7,020 | \$ | 9,377 | \$ 9,039 | \$ 421,287 |  | 140,429 | \$ | 140,429 |
| 11 | CIAC WIP | Straight-Line | 3 | Years | Unprotected | \$ | $(206,590)$ | \$ $(3,246)$ | \$ | $(4,337)$ | \$ (4,180) | \$ (194,827) |  | $(64,942)$ | \$ | $(64,942)$ |
| 12 | Plant 481 | Straight-Line | 3 | Years | Unprotected | \$ | 745,845 | \$ 11,721 | \$ | 15,656 | \$ 15,092 | \$ 703,376 |  | 234,459 | \$ | 234,459 |
| 13 | CAC Reserve | Straight-Line | 3 | Years | Unprotected | \$ | 1,031,707 | \$ 16,213 | \$ | 21,657 | \$ 20,876 | \$ 972,961 |  | 324,320 | \$ | 324,320 |
| 14 | Net Operating Loss Carryover | ARAM |  | Asset Life | Protected | \$ | $(3,780,416)$ | \$ $(59,407)$ | \$ | $(79,356)$ | \$ $(76,494)$ | \$ ( $3,565,158$ ) | \$ | $(76,722)$ | \$ | $(75,789)$ |
| 15 | Net Operating Loss Carryover | Straight-Line | 3 | Years | Unprotected | \$ | $(4,929,046)$ | \$ $(77,457)$ | \$ | $(103,468)$ | \$ (99,736) | \$ (4,648,384) |  | $(1,549,461)$ |  | $(1,549,461)$ |
| 16 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 17 | Sub-Total (Non-UPIS) |  |  |  |  | \$ | (17,074,045) | \$ (268,310) | \$ | $(358,408)$ | \$ (345,483) | \$ (16,101,844) |  | $(4,255,618)$ | \$ | (4,254,685) |
| 18 | Sub-Total Plant |  |  |  |  | \$ | 317,254,098 | \$ 4,985,489 | \$ | 6,659,608 | \$ 6,419,443 | \$ 299,189,557 |  | 36,450,643 |  | 36,163,002 |
| 19 | Non-Plant | Straight-Line | 3 | Years | Unprotected | \$ | $(1,394,184)$ | \$ (69,709) | \$ | $(69,709)$ | \$ (69,709) | \$ ( $1,185,057$ ) |  | $(395,019)$ |  | $(395,019)$ |
| 20 | $\underline{\text { Total }}$ |  |  |  |  | \$ | 315,859,914 | \$ 4,915,780 | \$ | 6,589,899 | \$ 6,349,734 | \$ 298,004,501 |  | 36,055,624 |  | 35,767,983 |
| 21 |  |  |  |  |  |  |  |  |  |  | Catch up |  |  | 5,951,804 | \$ | 5,951,804 |
| 22 |  |  |  |  |  |  |  |  |  |  | Total |  |  | 42,007,428 |  | 41,719,788 |

[^68]Pennsylvania American Water Company
Allocation of OCA EADIT Amortization Adjustment Among PAWC Utility Systems

| Pennsylvania American Water Company | Exhibit LA-8 |
| :--- | ---: |
| Allocation of OCA EADIT Amortization Adjustment Among PAWC Utility Systems | Schedule C-11 |
| Rate Year Ending December 31, 2022 | Docket Nos. R-2020-3019369 and R-2020-3019371 |

$$
\begin{aligned}
& \begin{array}{cc}
\begin{array}{c}
\text { Wastewater CSS } \\
\text { Scranton } \\
\text { Operations }
\end{array} \\
\hline & \text { (D) } \\
& 1.24 \% \\
\hline \hline \$ & (368,660) \\
\$ & 4,024 \\
\$ & - \\
\hline \$ & (364,636) \\
\hline & \\
\hline
\end{array} \\
& \begin{array}{cc}
\begin{array}{c}
\text { Wastewater SSS } \\
\text { Excl. Sadsbury and } \\
\text { Exeter Operations }
\end{array} \\
\hline & \text { (C) } \\
& 7.57 \% \\
\hline \hline & \\
\$ & (2,257,258) \\
\$ & 24,639 \\
\$ & - \\
\hline \$ & (2,232,619) \\
\hline \hline
\end{array}
\end{aligned}
$$

$$
\begin{aligned}
& \begin{array}{cc}
\begin{array}{c}
\text { OCA Adjustment } \\
\text { Total } \\
\text { Company }
\end{array} \\
\hline & \text { (A) } \\
& 100.00 \% \\
\hline \hline \$ & (29,802,730) \\
\$ & 325,310 \\
\$ & - \\
\hline \$ & (29,477,421) \\
\hline \hline
\end{array} \\
& \xlongequal{\$ \quad(3,364,787)}
\end{aligned}
$$

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

Exhibit LA-8
Water Operations Excl. Steelton
Schedule C-13
Docket Nos. R-2020-3019369 and R-2020-3019371
Page 1 of 7




[^69]| $\begin{aligned} & \text { Line } \\ & \text { No. } \end{aligned}$ | Description |
| :---: | :---: |
| 1 | Property Subject to Tax |
| 2 | Property Tax Rate |
| 3 | Property Tax Expense |

$\frac{\text { Notes and Source: }}{\text { Cols A and B: Company filing 3-A, page } 63}$


| Pennsylvania American Water Company |
| :--- |
| Property Tax Expense |

Rate Year Ending December 31, 2022

Exhibit LA-8 Wastewater SSS Excl. Sadsbury and Exeter Operations Schedule C-13
Docket Nos. R-2020-3019369 and R-2020-3019371 Page 3 of 7

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Page 4 of 7


Exhibit LA-8
Wastewater SSS Exeter Operations
Schedule C-13
Docket Nos. R-2020-3019369 and R-2020-3019371
Page 5 of 7
Cols A and B: Company filing 3-A, page 112

Exhibit LA-8
Wastewater CSS Scranton Operations Wastewater CSS Scranton Operations
Schedule C-13

Docket Nos. R-2020-3019369 and R-2020-3019371 | $n$ |
| :---: |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 |



$$
\begin{aligned}
& \text { Pennsylvania American Water Company } \\
& \text { Property Tax Expense } \\
& \text { Rate Year Ending December 31, } 2022
\end{aligned}
$$

OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan
Exhibit LA-8 Wastewater CSS McKeesport Operations

Page 7 of 7

$$
\begin{aligned}
& \frac{\text { Notes and Source: }}{\text { Cols A and B: Company filing 3-A, page } 112}
\end{aligned}
$$

## 






## 

 $\frac{2}{a}$ and


 anoul


















| $\$$ | 6,843 |
| :--- | ---: |
| $\$$ | $13,471,976$ |
| $\$$ | 112,013 |
| $\$$ | 416,789 |
| $\$$ | $5,704,191$ |
| $\$$ | 681,334 |
| $\$$ | $1,513,090$ |
| $\$$ | $2,560,030$ |
| $\$$ | $21,391,558$ |
| $\$$ | 425,000 |
| $\$$ | $1,134,429$ |
| $\$$ | $1,093,988$ |
| $\$$ | 300,000 |
| $\$$ | 234,968 |
| $\$$ | 22,624 |
| $\$$ | 75,000 |
| $\$$ | 403,532 |
| $\$$ | $49,547,366$ |









(C) $=$ AVG. $(\mathrm{A}, \mathrm{B})$

[^70]OCA Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan







Amortization of Net Salvage
$$
35 \quad \text { Total Utility Plant in Service }
$$
\[

$$
\begin{array}{ll}
303.30 & \text { Land and Land Rights - Colled } \\
303.40 & \text { Land and Land Rights - SPP } \\
303.50 & \text { Land and Land Rights - TDP }
\end{array}
$$
\]

$$
\begin{array}{ll}
\text { Depreciable Plant } \\
354.20 & \text { Structures and Improvements - Collection } \\
354.30 & \text { Structures and Improvements - SPP } \\
354.40 & \text { Structures and Improvements - TDP } \\
354.70 & \text { Structures and Improvements - General } \\
355.00 & \text { Power Generation Equipment } \\
360.10 & \text { Collection Sewers - Force Mains } \\
361.10 & \text { Collection Sewers - Gravity Mains } \\
361.20 & \text { Manholes } \\
363.00 & \text { Services } \\
364.00 & \text { Flow Measuring Devices } \\
365.00 & \text { Flow Measuring Installations } \\
370.00 & \text { Receiving Wells } \\
371.00 & \text { Pumping Equipment } \\
380.00 & \text { Treatment Equipment } \\
381.00 & \text { Plant Sewers } \\
382.00 & \text { Outfall Sewer Lines } \\
389.10 & \text { Other Plant and Miscellaneous Equipment - Intangibles } \\
389.60 & \text { Other Plant and Miscellaneous Equipment - CPS } \\
390.00 & \text { Office Furniture and Equipment } \\
391.00 & \text { Transportation Equipment } \\
392.00 & \text { Stores Equipment } \\
393.00 & \text { Tools, Shop and Garage Equipment } \\
394.00 & \text { Laboratory Equipment } \\
395.00 & \text { Power Operated Equipment } \\
396.00 & \text { Communication Equipment } \\
397.00 & \text { Miscellaneous Equipment } \\
398.00 & \text { Other Tangible Plant } \\
& \text { Total Depreciable Plant }
\end{array}
$$

Pennsylvania American Water Company
Depreciation Expense
Exhibit LA-8
Wastewater SSS Sadsbury Operations
Schedule C-14
Docket Nos. R-2020-3019369 and R-2020-3019371














$$
\begin{gathered}
\text { Average } \\
\text { Net Original } \\
\text { for } \\
2022 \\
\hline(\mathrm{C})=\text { AVG.(A,B) }
\end{gathered}
$$



$$
\underset{\sim}{\circ} \underset{\sim}{\sim} \underset{\sim}{\sim} \underset{\sim}{\sim} \underset{\sim}{\sim} \underset{\sim}{n} \underset{\sim}{n} \text { N }
$$






Notes and Source:
Cols. B, D \& E: Company witness Spanos, Exhibit No. 11-T 2022, Table 2 Estimated Survivor Curves, Original Cost, Book Reserve and Calculated Annual Depreciation Accruals Related to Utility Plant in Service at December 31, 2022











Per Company
Net Original

ふんおが Exhibit LA－8
Wastewater CSS Scranton Operations OCA Adjustment
to Depreciation Expense
$(\mathrm{G})=(\mathrm{F})-(\mathrm{D})$ Col．A：Company witness Spanos，Exhibit No．11－W 2021，Table 2 Estimated Survivor Curves，Original Cost，Book Reserve and Calculated Annual Depreciation Accruals Related to Utility Plant in Service at December 31， 2021
Cols．B，D \＆E：Company witness Spanos，Exhibit No．11－X 2022，Table 2 Estimated Survivor Curves，Original Cost，Book Reserve and Calculated Annual Depreciation Accruals Related to Utility Plant in Service at December 31， 2022 Wastewater CSS McKeesport Operations Schedule C-14
Docket Nos. R-2020-3019369 and R-2020-3019371 $\begin{array}{cc} & \text { Page } 7 \text { of } 8 \\ \text { Annual Accrual } & \\ \text { Per OCA } & \end{array}$ $\begin{array}{ccc}\text { Annual } & \text { Per OCA } \\ \text { Based on } & \text { OCA Adjustment } \\ \text { Accrual Rate, } & \text { Average } & \begin{array}{c}\text { to Depreciation } \\ \text { Percent }\end{array} \\ & \begin{array}{c}\text { Expense } \\ (\mathrm{F})=(\mathrm{C}) *(\mathrm{E})\end{array} & \end{array}$ $(\mathrm{F})=(\mathrm{C})^{*}(\mathrm{E}) \quad(\mathrm{G})=(\mathrm{F})-(\mathrm{D})$


 | Per Company |
| :---: |
| Annual Accrual |
| Amount Based on |
| $12 / 31 / 2022$ Plant |
| (D) |





 $\xlongequal{\$ \quad 375,129,478}$




Col. A: Company witness Spanos, Exhibit No. 11-AA 2021, Table 2 Estimated Survivor Curves, Original Cost, Book Reserve and Calculated Annual Depreciation Accruals Related to Utility Plant in Service at December 31, 2021 .
Cols. B, D \& E: Company witness Spanos, Exhibit No. 11-AB 2022, Table 2 Estimated Survivor Curves, Original Cost, Book Reserve and Calculated Annual Depreciation Accruals Related to Utility Plant in Service at December 31, 2022

Rate Year Ending December 31, 2022 Docket Nos. R-2020-3019369 and R-2020-3019371 Annual Accrual Page 8 of 8





 | Per Company |
| :---: |
| Annual Accrual |
| Amount Based on |
| $12 / 31 / 2022$ Plant |
| (D) |






OCA Adjustment
to Depreciation


| (t9\&) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  | \$ | +66 ${ }^{\text {¢ }}$ | \$ | S6. 1 |


| LIST OF APPENDICES TO OCA ABRIDGED MAIN BRIEF |  |
| :--- | :--- |
| Appendix A | A.1: OCA Rate Case Tables, Zero Increase <br> A.2: OCA Rate Case Tables, End of Rate Year 2021 <br> A.3: OCA Rate Case Tables, Average Rate Year 2022 |
| Appendix B | Proposed Findings of Fact - PUBLIC |
| Appendix C | Proposed Conclusions of Law and Ordering paragraphs |
| Appendix D | List of OCA-Sponsored Testimony and Exhibits admitted into the record |
| Appendix E | Summary of Public Input Hearing Testimony |
| Appendix F | Supplement to OCA Main Brief <br> I. Introduction and Overview <br> I.B. Procedural History |

## APPENDIX A

## OCA RATE CASE TABLES

Table A.1: Zero Increase
Table A.2: End of Rate Year 2021, Recommended Adjustments with No Multiyear Rate Plan
Table A.3: Average Rate Year 2022, Recommended Adjustments with Multiyear Rate Plan

## OCA PROPOSED FINDINGS OF FACT

## OVERALL POSITION ON RATE INCREASE

1. PAWC could continue operations, recover all of its expenses, and earn a profit with no revenue increase. OCA St. 1 at 28.
2. While perhaps not as much profit as PAWC would like but more than the OCA's accounting and financial experts recommend, the overall rate of return of $7.70 \%$ for water and $2.84 \%$ for wastewater without any change in rates is more than adequate. See OCA App. A.1, Table I Total Water and Table I Total Wastewater.
3. Most Pennsylvania businesses would be absolutely thrilled if they could pay all their bills (including various increases in expenses that may or may not occur next year), make all of their debt payments, and still have enough left over to earn a profit on their equity investment. OCA St. 1 at 28-29.
4. The Commission should not rely on essentially every aspect of the Company's projections PAWC's FPFTY projections and related assumptions which were developed before the pandemic emerged. OCA St. 1 at 29.
5. Interest rates have dropped to near zero, oil prices have plunged and consumer prices have barely changed. OCA St. 1 at 29.
6. If PAWC is concerned about operating revenues during this uncertain time and moving forward, PAWC could defer new construction projects that are not necessary to ensure the current provision of safe and reliable service to existing customers. OCA St. 1. at 30.
7. Some utilities are refinancing and issuing debt at historically low levels. OCA St. 1. at 30.
8. PAWC could file rate cases after the pandemic once the "dust settles" and reliable and complete evidence of the full effect of the pandemic will be available to determine just and reasonable rates. OCA St. 1. at 30.
9. There is precedent supporting the Commission's authority to determine that raising rates would not be just and reasonable during this time of extreme economic hardship for ratepayers. OCA St. 1 SR at 21-22.
10. The economic repercussions of the COVID-19 pandemic-to the extent yet known-are real and significant in PAWC's service territory and the OCA submits that the Commission must give great weight to the circumstances of consumers during these extraordinary times. OCA St. 1 at 14.
11. As of mid-July, the unemployment rates in the counties served in whole or in part by PAWC ranged from $8.8 \%$ in Centre County to $17.4 \%$ in Monroe County. OCA St. 1 at 14-15, Fig. 4, Sch. SJR-1.
12. In mid-August, the picture was not substantially better, with unemployment rates in the counties served in whole or in part by PAWC ranging from $6 \%$ to $13.1 \%$. Figure 4 updated at Sch. SJR-10-SR at 2.
13. As a consequence of the massive job losses across Pennsylvania, there were 30 times as many initial unemployment claims during the week ending March 21, 2020 and 33 times as many during the next week ending March 28, 2020 than the amount during the week ending March 7, 2020 as shown in shown in OCA St. 1 SR, Sch. SJR-10-SR at 1.
14. At the end of September, initial unemployment claims have declined since peaking in March at 400,000 claims in one week, but the level of initial unemployment claims in September were still about $50 \%$ higher than it was in February 2020. OCA St. 1 SR at 3.
15. During September, between 22,000 and 23,000 Pennsylvania workers filed initial unemployment claims each week. OCA St. 1 SR at 3.
16. In the space of 6.5 months (mi-March to the end of September), more than 39 percent of Pennsylvania's workforce filed an unemployment claim. OCA St. 1 SR at 3.
17. According to a survey conducted by the U.S. Census Bureau, roughly $50 \%$ of Pennsylvania households experienced wage loss from March 13, 2020 through July 21, 2020 as shown in Figure 5 below and while down a bit at the end of September, the number of households experiencing wage loss was still approximately $45 \%$. OCA St. 1 SR at 3; Sch. SJR-10-SR at 3, Figure 5 (Updated).
18. Only $60 \%$ of Pennsylvanians who lost income said they used their normal source of income to pay bills in the previous week. OCA St. 1 at 18.
19. About $26 \%$ of Pennsylvanians who lost income said they used unemployment benefits and $27 \%$ referred to the CARES Act stimulus payments. OCA St. 1 at 18. More people relied on credit card debt or loans (including loans from family or friends) ( $40 \%$ ) or money from savings or asset sales (35\%) than relied on short-term government benefits. OCA St. 1 at 18.
20. A recent survey conducted by the Electric Power Research Institute ("EPRI") found that about two-thirds of people who lost their jobs during the pandemic are concerned about being able to pay their energy bills. OCA St. 1 at 18-19.
21. More than $20 \%$ of the EPRI survey respondents reported that their energy bills were higher because of the pandemic. OCA St. 1 at 18-19.

## APPENDIX B - PUBLIC

22. The EPRI survey found that more than $25 \%$ of people who lost their jobs are planning to skip at least one utility bill payment, but a much lower percentage were planning to contact their utilities for assistance. OCA St. 1 at 18-19, Sch. SJR-5, pp. 3, 7, 12.
23. The economic repercussions of the pandemic are affecting minorities and individuals of lower income the most. OCA St. 1 at 17-18.
24. The lower a household's income, the greater the impact of the pandemic on income loss. OCA St. 1 at 17-18.
25. Households headed by a person who the Census Bureau categorizes as being Black or Hispanic are much more likely to have experienced an income loss -- and to expect additional income loss into mid-August -- than are households headed by a White, NonHispanic. OCA St. 1 at 17-18.
26. Water and wastewater rate increases in the PAWC service territory will not only increase the financial burden faced by customers experiencing job and wage loss due to the pandemic, but will likely increase that burden particularly on those individuals belonging to low-income and Black or Hispanic households. OCA St. 1 at 17-18.
27. As of September 28 only $50 \%$ of Pennsylvania households were able to use their regular source of income to pay their bills. OCA St. 1 SR at 20, SJR-10-SR, p. 8.(updated SJR4).
28. About $21 \%$ of Pennsylvania households cited unemployment benefits and $28 \%$ referred to the CARES Act stimulus payments as sources of income to pay their bills. OCA St. 1 SR at 20, SJR-10-SR, p. 8.(updated SJR-4).
29. More people had to rely on credit card debt or loans (including loans from family or friends) (39\%) or money from savings or asset sales (27\%) than relied on short-term government benefits. OCA St. 1 SR at 20, SJR-10-SR, p. 8.(updated SJR-4).
30. At the end of August, the Census Bureau's Small Business Pulse Survey for Pennsylvania. reported that $46 \%$ of Pennsylvania's small businesses expected it to take six months or more to return to a normal level of operations, with another $11 \%$ saying their business would never fully recover. OCA Statement 1, at 19-20.
31. In the week ending October 3, $44 \%$ of Pennsylvania's small businesses said they would take at least six months to recover. OCA St. 1 SR at 3; see also OCA St. 1 at 19-20.
32. Based on the data drawn from surveys and reports on the economic well-being of households and businesses both in PAWC's service territory and in Pennsylvania from the start of the pandemic, rates in PAWC's service territories not be raised at this time. OCA St. 1 at 4-5.

## APPENDIX B - PUBLIC

33. The economic hardships faced by customers in PAWC's service territories should not be added to by any increase in PAWC's rates at this time.
34. In February 2020, the last full month before the economic collapse, the Consumer Price Index (CPI) was 258.678. OCA St. 1 SR at 22
35. The CPI dropped to 256.389 or by $0.9 \%$, in April. OCA St. 1 SR at 22 .
36. In July, the CPI had increased to 259.101 or where it had been prior to the shut-down of segments of the economy in March. OCA St. 1 SR at 22.
37. The producer price index (PPI) measures the price suppliers are able to charge to businesses for goods and services used by the business in its retail products. OCA St. 1 at 22 .
38. The PPI has been recovering more slowly than the CPI, indicating that the economy is still far from having fully recovered. OCA St. 1 at 22.
39. The PPI was 118.6 in February 2020, fell to 116.6 , or by $1.7 \%$, in April 2020 and had "recovered" to 118.0 in July 2020, or $0.5 \%$ below the pre-pandemic level. OCA St. 1 at 22-23.
40. In September, the PPI was at 118.9, or 0.3\% higher than February 2020. OCA St. 1 at 23.
41. The CPI and PPI numbers show a return to near-February 2020 levels. OCA St. 1 at 23.
42. The Commission must focus on what rates are reasonable for consumers to pay under these extraordinary conditions. OCA St. 1 at 22.
43. There are many examples where utilities have either withdrawn or deferred filing rate increase requests to provide relief to their customers who are likely spending more time at home and/or experiencing some level of income loss during this pandemic. OCA St. 1 at 25-26.
44. Minnesota Power significantly reduced its requested rate increase and is refunding more than $\$ 12$ million to customers to help alleviate pandemic-related financial concerns. OCA St. 1 at 25-26.
45. California Water Service Co. is eliminating all scheduled rate increases during 2020. OCA St. 1 at 25-26.
46. Chelan County (Washington) Public Utility District is postponing previously approved increases in electric, water, and wastewater rates by six months to provide customers some relief during the pandemic. OCA St. 1 at 25-26.

## APPENDIX B - PUBLIC

47. The City of Austin (Texas) reduced its electricity rates by about $4 \%$, eliminated the residential price increment for usage in excess of 1,000 kilowatt-hours per month, and reduced rates for residential water and wastewater consumption by $10 \%$. OCA St. 1 at 25-26.
48. PEPCO, the electric utility serving the District of Columbia and surrounding areas, announced on June 1st that it would forego a $\$ 25$ million rate increase scheduled for this year in D.C., make a shareholder donation to its low-income assistance fund, and take other actions to assist customers during the pandemic. OCA St. 1 at 25-26.
49. A report by Moody's Investors Service expects similar delays in numerous electric, gas, and water utility rate proceedings throughout the U.S. as a way of providing some relief to consumers during the pandemic. OCA St. 1 at 25-26.
50. Minnesota Power significantly reduced its requested rate increase and is refunding more than $\$ 12$ million to customers to help alleviate pandemic-related financial concerns. OCA St. 1 at 25-26.
51. California Water Service Co. is eliminating all scheduled rate increases during 2020. OCA St. 1 at 25-26.
52. Philadelphia Water Department withdrew its pending request for increases in water, wastewater, and stormwater rates that would have become effective in September 2020 and September 2021. In a June 2020 filing, the utility cited "the on-going pandemic and the uncertainty over the anticipated duration of continuing emergency measures. OCA St. 1 at 25-26
53. PAWC would have enough revenue to continue safe and reliable operations if its rates were to remain unchanged. OCA St. 1 at 28 citing PAWC Exh. 3-A, pp. 1, 70.
54. In the historic test year (twelve months ending December 31, 2019), under its existing rates, PAWC had per books net income of $\$ 173.9$ million for water operations (excluding Steelton). This provided the Company with a return on common equity of approximately $8.69 \%$. OCA St. 1 at 28 citing PAWC Exh. 3-A, pp. 1, 70.
55. Even assuming some of PAWC's FPFTY projections are accurate, OCA Witness Ralph Smith concluded that PAWC had a revenue sufficiency for water of $\$ 68,333,994$ and a rate increase of $\$ 30,906,901$ for wastewater under traditional ratemaking, but that number remains speculative given the uncertainty of the projections and future operations. OCA St. 2SR at 5-6; OCA Exh. LA-6, Sch. A.
56. The current and projected ratepayer affordability of rates gives strong weight to the conclusion that granting PAWC's rate requests in this proceeding would unnecessarily harm ratepayers and not result in just and reasonable rates. OCA St. 1 at 30.

## APPENDIX B - PUBLIC

57. If the economic situation worsens significantly and cash flow becomes a concern for PAWC, the Company could preserve cash by deferring for several months certain construction projects, such as growth-related projects or longer-term system rehabilitation activities, which are not needed to ensure the current provision of safe and reliable service to existing customers. OCA St. 1 at 30.
58. Other large utilities have been taking advantage of the very low cost of debt and issuing 10 -year notes or bonds at what are historically low interest rates. OCA St. 1 at 30.
59. Low-cost, long-term financing can help provide cash flow needed to keep existing rates in effect throughout the pandemic without suffering significant economic harm. OCA St. 1 at 30 .
60. Recent headlines show a gas utility issuing debt at a $2.2 \%$ interest rate and a utility in the southern U.S. issuing debt at $1.75 \%$. OCA St. 1 at 30 , ftnote 38 and 39 .
61. PAWC's weighted cost of debt is in the range of $4.5 \%$. OCA St. 1 at 30 , at ftnote 40 ; PAWC Exh. 3-A, p. 70.
62. The OCA's calculations demonstrate that, at PAWC's current rates, it will still earn a $7.70 \%$ and $2.84 \%$ rate of return for water and wastewater, respectively. See OCA App. A.1, Table I Total Water and Table I Total Wastewater.
63. At its core, regulation is designed to protect utility consumers from what otherwise would be the unfettered power of a monopoly to set prices and the conditions of service." OCA St. 1 at 7.
64. Utility regulators should attempt to set rates within the "zone of reasonableness" which captures the interests of the ratepayers, the utility's investors, officers and employees, and local governments whose residents are served by the utility. OCA St. 1 at 8 .
65. Under normal conditions, there is often an area of overlap of interests between utility customers and the utility, including its investors. OCA St. 1 at 8.
66. Regulators are provided a range of rates that utility customers would be willing and able to pay for service and investors would consider a reasonable return on their investment. OCA St. 1 at 9 .
67. Under certain conditions the two ranges may not overlap-creating no "zone of reasonableness" at all. OCA St. 1 at 9-10.
68. When the two ranges do not overlap, regulators are tasked with setting rates outside of one of the ranges, or both. OCA St. 1 at 10 .
69. Under the above-described economic conditions faced by PAWC's customers brought on by the pandemic, the range of rates the customers would be willing and able to pay for
service has shifted away from the range of rates which would, in the eyes of the utility, provide a reasonable return on investment. OCA St. 1 at 10.
70. Utility regulators must recognize the economic environment in which utilities operate. OCA St. 1 SR at 21.
71. Utility's regulators' recognition of the economic environment in which utilities operate is supposed to be reflected not just in the authorized rate of return, but also in the ultimate rates determined to be just and reasonable. OCA St. 1 SR at 21.
72. Whether a rate is just and reasonable is a function not just of the utility's costs but also of the value and affordability of service to the customer. OCA St. 1 SR at 21.
73. Importantly, though, regulation is not designed to insulate the utility or its investors from normal market forces, technological improvements, or general economic conditions. OCA St. 1 at 7-8.
74. If market forces (such as technological change) result in significant reductions in the demand for service, then the utility may not be able to recover its costs. That is not a failure of regulation, but a natural evolution of the market -- businesses fail if they cannot keep up with changes in consumers' preferences or respond to technological innovations. OCA St. 1 at 7-8.
75. If economic conditions change such that rates become unaffordable to many customers, rates may need to be reduced in order to remain "just and reasonable from the perspective of customers. OCA St. 1 at 7-8.
76. PAWC's FPFTY projections in its filing submitted just weeks after the pandemic reached its service territory is another basis for PAWC's rate increases to be rejected. OCA St. 1 at 12 .
77. The Company filed this case on April 29, 2020, when its service area -- indeed the entire world -- was being devastated with the worst pandemic in a century. OCA St. 1 at 12
78. It takes months to prepare a rate filing, and PAWC prepared this case assuming "business as usual," there was nothing that compelled it to actually file the case. OCA St. 1 at 12.
79. Changes and uncertainties in FPFTY assumptions, including interest rates, inflation, and how much consumption for each customer classes and other elements that enter into the ratemaking process, could not be accurately projected in the months leading up to PAWC's April filing or relied on to make reasonable findings or conclusions in this proceeding.. OCA St. 1 at 27.
80. The use of the FPFTY is discretionary and, the Commission may, at its discretion, adjust the Company's rates on the basis of it FPFTY data evidencing the accuracy of its estimates. OCA St. 1 at 29-30.

## APPENDIX B - PUBLIC

81. The Commission cannot have any certainty about the appropriate, ongoing level of expenses, interest rates, consumption patterns, and the numerous other factors that affect the determination of an appropriate level of rates. OCA St. 1 at 29-30.
82. The Commission must focus on what rates are reasonable for consumers to pay under these extraordinary conditions. OCA St. 1 at 22.

## PAWC'S PROPOSED MULTI-YEAR RATE PLAN

83. PAWC has proposed to increase its water and wastewater rates in January 2021 by $\$ 92.4$ million ( $12.9 \%$ ) and by $\$ 46.2$ million ( $5.8 \%$ above the January 2021 level) in January 2022. OCA St. 1 at 32.
84. There are three factors that make a MYRP inappropriate in this case. OCA St. 1 at 33-35.
85. The first factor that makes a MYRP inappropriate in this case is that Pennsylvania is in the midst of the COVID-19 pandemic. OCA St. 1 at 33.
86. The pandemic affects nearly all aspects of daily life, there is uncertainty about how long it will last, and how long it will take the economy to recover. OCA St. 1 at 33.
87. There are serious doubts about the reliability of PAWC's projections for 2021 and 2022. OCA St. 1 at 33.
88. The second factor that makes a MYRP inappropriate in this case is that one of the stated purposes of a MYRP is to delay the filing of the next rate case, while providing benefits to customers. OCA St. 1 at 33.
89. The types of benefits a MYRP (or other alternative ratemaking might provide) were addressed by the Commission in a 2019 Policy Statement. OCA St. 1 at 33.
90. PAWC did not discuss any of the factors in the Commission's 2019 Policy Statement in its testimony. OCA St. 1 at 33.
91. The fourth factor listed in the Policy Statement regarding how the [alternative] "ratemaking mechanism and rate design limit or eliminate interclass and intraclass cost shifting." 52 Pa . Code § 69.3302(a)(4).
92. PAWC failed to propose a separate stormwater rate in the three service areas that have combined sewer systems which are systems that transport sanitary sewage and stormwater through the same pipes. OCA St. 1 at 34.
93. The three combined sewer systems are Kane, McKeesport, and Scranton. OCA St. 1 at 34.

## APPENDIX B - PUBLIC

94. PAWC does not currently charge any stormwater-related costs to properties that cause those costs to be incurred. OCA St. 1 at 34.
95. PAWC has all stormwater-related costs paid either through sewer rates or by water customers. OCA St. 1 at 34 .
96. To the extent that the MYRP would delay the next case, it would defer the implementation of separate stormwater rates. OCA St. 1 at 34.
97. In other jurisdictions, when a MYRP is used rates for the years beyond the test year are often based on specific cost increases like a contractual wage increases or specific capital plans. OCA St. 1 at 34.
98. In a MYRP, future rate levels are not set years in advance; but a process is established that allows the utility to update particular elements of its cost of service, and to prove that the increases actually occurred, before implementing a future rate increase. OCA St. 1 at 34.
99. PAWC's proposed MYRP process is that the Commission determine in this case what rates will be for 2022 and nothing can change that. OCA St. 1 at 35.
100. Under PAWC's proposed MYRP, it will not matter if the Company installs the plant it is projecting, whether costs increase or decrease, whether the Company reduces its capital costs by taking advantage of historically low interest rates, whether sales change, or anything else changes, before 2022. OCA St. 1 at 35.
101. No one can accurately forecast an entire revenue requirement two years in advance. OCA St. 1 at 35.
102. This lack of accuracy in forecasting two years in advance is exacerbated in the midst of the pandemic because the impact on water demand commodity prices, inflation, interest rates, or other components of the revenue requirement are unknown. OCA St. 1 at 35.
103. PAWC's filed case does not reflect the impact that the ongoing pandemic has had during 2020, and that it may continue to have during 2021 and 2022, (PAWC's Rate Years 1 and 2) on all aspects of the components of the revenue requirements. OCA St. 1 at 29.

## APPENDIX B - PUBLIC

## RATE OF RETURN

## Capital Structure

104. PAWC seeks an $8.02 \%$ overall rate of return, including a cost of equity of $10.80 \%$, and a cost of debt of $4.47 \%$. PAWC St. No. 13, Sch. 8.
105. The Company's $10.8 \%$ return on common equity includes a premium for management performance of at least 25 basis points. PAWC St. No. 13 at 76.
106. Mr. Rothschild uses a Discounted Cash Flow (DCF) analysis and a Capital Asset Pricing Model (CAPM) as a check. OCA St. 3 at 5.
107. His analysis demonstrates that under a business as usual approach for PAWC's water operations, the cost of common equity is $8.00 \%$, and the overall rate of return is $6.30 \%$, based upon a capital structure of $48.30 \%$ debt and $51.64 \%$ common equity. OCA St. 3 at 2-3.
108. For PAWC's wastewater operations, the OCA recommends a cost of common equity of $8.05 \%$, and an overall rate of return of $6.08 \%$, based upon a capital structure of $39.44 \%$ debt and $50.37 \%$ common equity. Id.
109. Mr. Rothschild's approach considers the financial hardships facing many PAWC consumers as a result of the COVID-19 pandemic. OCA St. 3 at 14-18.
110. The OCA recommends that PAWC receive no increase at this time to reflect the hardship and uncertainty faced by PAWC's customers; however, is this recommendation is not approved the resulting overall rates of return of $7.70 \%$ for water and $2.84 \%$ for wastewater, comprised of a $51.64 \%$ cost of common equity and $48.3 \%$ cost of debt, represent a fair rate of return that balances the interests of the its consumers and shareholders and would be in the public interest. App. A.1, Table I(A); App. A.1, Table I(A).
111. PAWC proposes using a capital structure of $56.06 \%$ common equity and $43.88 \%$ debt. PAWC St. 13 at 77.
112. The OCA disagrees with the use of this capital structure because the common equity ratio of PAWC's requested capital structure is significantly higher than the average of the seven regulated water utilities in the proxy group ( $51.6 \%$ ), and the common equity ratio of its parent, American Water Works (41.4\%). See Schedule ALR-5 at 5.
113. The Pennsylvania Superior Court has held that utilities that are wholly owned subsidiaries may require adjustments to their capital structure if debt or equity is disproportionately high. Riverton Consolidated Water Company v. Pa. P.U.C., 140 A.2d 114 at 121 (Pa. Super. 1958) (Riverton).

## APPENDIX B - PUBLIC

114. A utility is not entitled to have the cost of capital computed on an "ideal" capital structure, but rather, one which is fair, reasonable, and stable. Id. at 121-22.
115. PAWC is a wholly owned subsidiary of American Water Works Company (AWWC). PAWC St. No. 13-R at 1.
116. Similar to in Riverton, the Commission should adjust PAWC's proposed common equity ratio downward because it is significantly higher than that of its parent company and the average of similar water companies in the OCA's proxy group. Riverton at 121.
117. PAWC witness Bulkley bases her capital structure recommendation on the actual debt and equity ratios of the companies in her proxy group. See PAWC St. No. 13 at 4.
118. For PAWC's water operations for the rate year ending December 31, 2021, OCA witness Rothschild recommends a capital structure of $51.64 \%$ common equity and $48.30 \%$ debt based upon comparisons to the companies in the proxy group which utilize common equity ratios between $41.4 \%$ and $58.7 \%$. OCA St. 3 at 3 .
119. For PAWC's wastewater operations for the rate year ending December 31, 2021, Mr. Rothschild recommends a capital structure of $50.37 \%$ common equity and $39.44 \%$ debt. Id.

## Cost of Long-Term Debt

120. Ms. Bulkley proposed using a cost of long-term debt of $4.47 \%$ for the Year 1 ending December 31, 2021. PAWC St. 13 at 80.
121. The OCA does not object to the use of this rate and has used it in the OCA's analysis; however, Mr. Rothschild cautions that if a MRP were to be approved, PAWC should be required to update its cost of debt before Year 2 rates become effective because the projected debt cost rate could overstate the cost of debt during 2021 and 2022. OCA St. 3 at 13.

## Common Equity Cost Rate

122. Ms. Bulkley proposes a $10.80 \%$ cost of equity. PAWC St. 13 at 5-6.
123. Returns have not been as high as PAWC requests in recent years. OCA St. 3 at 12 .
124. The cost of capital is the return investors require to provide capital to PAWC based on current capital markets. OCA St. 3 at 28.
125. COVID-19 has made it more challenging to determine the current cost of capital because it has drastically increased the speed and intensity of capital market change. Id.
126. Instead of relying solely on historical data and analyst forecasts, Mr. Rothschild uses current market prices (e.g., stocks, bonds, options, etc.), which measure investors' expectations directly. Id.
127. PAWC witness Bulkley utilizes a non-market-based approach which relies on historical data and overstates the cost of equity. OCA St. 3SR at 3.
128. A cost of equity based on market prices is superior to a non-market-based approach for the following reasons: first, the cost of equity that PAWC has to pay investors is based on capital markets. OCA St. 3 at 29.
129. Interest rates remain at historically low levels after a persistent downtrend since the early 1980s. Id. at 29-30.
130. Interest rates may increase, but if the market expected interest rates to change then that would already be reflected in current prices. Id. at 30 .
131. Second, capital markets are unpredictable. It is nearly impossible to predict what the market is going to do in the short-term or long-term future; therefore, the cost of equity should be based on current capital markets which represent the most accurate source of investor expectations. Id.
132. Therefore, the cost of equity should be based on current capital markets which represent the most accurate source of investor expectations. OCA St. 3 at 29.
133. Mr. Rothschild included the following seven utility companies in the Water Proxy Group: 1) American States Water, 2) American Water Works, 3) Aqua America, 4) California Water Service Group, 5) Middlesex Water Company, 6) SJW Corp, and 7) York Water. OCA St. 3 at 30.
134. Ms. Bulkley's proxy group includes 13 publicly traded water and natural gas companies. PAWC St. No. 13 at 40, Figure 11.
135. Mr. Rothschild's proxy group represents a more accurate comparison group because all of the companies he included have significant water and wastewater operations. OCA St. 3 at 30 .
136. Seven of the 13 companies in Ms. Bulkley's proxy group are natural gas companies with potentially difference risk profiles and therefore a different cost of equity than PAWC. Id.
137. As explained further below, Ms. Bulkley's proxy group represents an inappropriate comparison group and should not be utilized. Id.
138. Ms. Bulkley acknowledges there is a trend towards consolidation in the utility industry, PAWC St. No. 13 at 40, which leads to volatility.

## APPENDIX B - PUBLIC

139. In that case, Philadelphia Suburban Water Company (PSWC) utilized a small electric company barometer group. Id.
140. The Commission found the Office of Trial Staff's argument concerning PSWC's use of an electric company barometer group as non-risk similar to PSWC to be valid and rejected PSWC's electric company barometer group. Id.
141. Instead, the Commission only focused on the water company barometer groups in its deliberations. Id. at 127.
142. Similarly, the Commission should reject PAWC's proxy group as is because it includes natural gas companies which are non-risk similar to PAWC. OCA St. 3 at 31.
143. Mr. Rothschild uses a constant growth form of the Discounted Cash Flow (DCF) method that determines growth based on the sustainable retention growth procedure and a nonconstant DCF method. Id.
144. Mr. Rothschild's constant growth form DCF analysis indicates a cost of equity range of between $7.84 \%$ and $7.96 \%$ for the Water Proxy Group. See Schedule ALR-3 at 1.
145. As these results use analysts' forecasts to derive sustainable growth, in part, and analysts' forecasts of dividend growth and book value growth in the non-constant form of the DCF method, the results should be considered conservatively high. Id.
146. This is because analysts' forecasts of such growth have been known to be overstated. Id.
147. The non-constant growth form of the DCF model determines the return on investment expected by investors based on an estimate of each separate annual cash flow the investor expects to receive. OCA St. 3 at 41.
148. For the purpose of this computation, Mr. Rothschild incorporated Value Line's detailed annual forecasts to arrive at the specific non-constant growth expectations that an investor who trusts Value Line would expect. Id.; Schedule ALR-3 at 3.
149. Ms. Bulkley utilizes an Expected Earnings analysis. PAWC St. 13 at 60-63.
150. She claims that Mr. Rothschild's DCF analysis does not rely on earnings growth rates. PAWC St. 13-R at 78-80.
151. As explained by Mr. Rothschild, even though the non-constant DCF model uses cash flow expectations as the valuation parameter, it still relies on earnings. OCA St. 3 at 4344.
152. The DCF model relies on an expectation of future cash flows. Id.
153. Future cash flows are derived from dividends during the time the stock is owned and capital gains from the sale of the stock. OCA St. 3 at 43-44.
154. Since earnings impact both dividends and stock price, the non-constant DCF model relies on earnings. Id.
155. In fact, a major strength of the DCF model is its recognition of the difference between earnings paid out as a dividend and earnings retained in the business. OCA St. 3 at 4344.
156. Mr. Rothschild's non-constant growth DCF method indicates a cost of equity of between $5.30 \%$ and $6.09 \%$. OCA St. 3 at 45.
157. Ms. Bulkley recommends that the Company be allowed a return on equity of $10.80 \%$ and an overall cost of capital of $8.02 \%$. PAWC St. No. 13 at 3.
158. She made this determination by applying her own version of the Discounted Cash Flow (DCF) Model, Risk Premium approach, and Capital Asset Pricing Model (CAPM) to a proxy group of 13 publicly traded water and natural gas utilities. PAWC St. No. 13 at 40, Figure 11.
159. She claims that it is appropriate to rely on several cost of equity models because investors and regulators are concerned that DCF results are not reasonable in current capital markets. PAWC St. No. 13 at 3.
160. Despite Ms. Bulkley's assertion, the Commission relies primarily on the use of the DCF analysis, and has done so for many years. See, e.g., Pa. P.U.C. v. City of Dubois, Docket No. R-2016-2554150, Order (March 28, 2017); Pa. P.U.C. v. UGI Utilities, Docket No. R-2017-2640058, Order (October 25, 2018); Pa. P.U.C. v. City of Lancaster - Bureau of Water, 2011 Pa. PUC LEXIS 1685 (2011); Pa. P.U.C. v. Emporium Water Co., 2008 Pa. PUC LEXIS 2076 (2006); Pa. P.U.C. v. York Water Co., 75 Pa. PUC 134, 156-69 (1991); Pa. P.U.C. v. Pennsylvania-American Water Co., 71 Pa. PUC 210, 279-82 (1989); Pa. P.U.C. v. The Peoples Natural Gas Co., 69 Pa. PUC 1, 167-68 (1989); Pa. P.U.C. v. Pennsylvania Power, 67 Pa. PUC 91, 164, 93 PUR4th 189, 266 (1988); Pa. P.U.C. v. National Fuel Gas Distribution Corp., 67 Pa. PUC 264, 332 (1988).
161. In its recent UGI-Electric decision, the Commission affirmed its primary reliance on the DCF method, stating that it has "found no reason to deviate from the use of this method in the instant case." Pa P.U.C. v. UGI Utilities, Inc. - Electric Div., Docket No. R-20172640058, et al., Order at 106 (Oct 25, 2018).
162. This Commission has stated that determining a fair rate of return is an exercise of informed judgment, based upon the facts of each case. Pa. P.U.C. v. Pennsylvania Power Co., 55 Pa. PUC 552, 579 (1982).
163. In PPL's 2012 and 2004 base rate case, the Commission reaffirmed its reliance upon the DCF method. Pa. P.U.C. v. PPL Electric Util. Corp., Docket No. R-2012-2290597, Order (Dec. 28, 2012); Pa. P.U.C. v. PPL Electric Util. Corp., 237 P.U.R.4th 419, 2004 Pa. PUC LEXIS 40.

## APPENDIX B - PUBLIC

164. The Commission additionally noted, however, that while it is not required, other methodologies can be used to check DCF results. PPL 2012 at 80.
165. Ms. Bulkley admits that "the Commission has traditionally relied primarily on the DCF method to estimate the cost of equity for regulated utilities." PAWC St. 13-R at 103.
166. However, she argues that a DCF-only approach should not be used in this case based upon one 2012 PPL Electric Utilities case. Pa. P.U.C. v. PPL Electric Utilities Corp., Docket No. R-2012-2290597, Opinion and Order at 77 (December 5, 2012).
167. In that case, the Commission recognized that market conditions were causing the DCF model to produce results that were much lower than other models such as the CAPM and Risk Premium. PAWC St. 13-R at 103-104; PPL at 77.
168. As explained by the OCA, market conditions are much different now, and likely will be into the foreseeable future because of the COVID-19 pandemic. OCA St. 13 at 16-18.
169. OCA witness Rubin emphasized that no one is able to project an entire revenue requirement two years from now, particularly where we do not know how the pandemic and its aftermath might affect each component of the revenue requirement. OCA St. 1 at 35.
170. Ms. Bulkley's $10.80 \%$ cost of equity and $8.02 \%$ cost of capital recommendations significantly overstate PAWC's market-based cost of equity. OCA St. 3 at 61.
171. If her recommendations are used to set rates, consumers will be considerably overcharged. Id.
172. Her cost of equity recommendation is excessive because it is based upon a flawed DCF model which utilizes inflated "projected" data instead of investor expectations as indicated by capital market data. OCA St. 3 at 82 .
173. Ms. Bulkley's approach is inconsistent with the principles she states in her testimony. OCA St. 3 at 62.
174. She states that the cost of equity is market-based, but when applying her approaches, she fails to use market data in key instances. OCA St. 3 at 62.
175. Two thirds of her CAPM results (4 of 6) are based on interest rate forecasts. Id.
176. Using these forecasts instead of market-based data adds over 150 basis points to two of her CAPM results. PAWC St. No. 13 at 11.
177. Ms. Bulkley correctly explains that the constant growth DCF method "assumes" a single growth rate in perpetuity and that "one must assume that the dividend payout ratio remains constant and that earnings per share, dividends per share, and book value per share all grow at the same constant rate." PAWC St. No. 13 at 50.

## APPENDIX B - PUBLIC

178. However, her DCF method, as applied, relies entirely on analysts' five-year EPS growth forecasts. Id. at Schedule 3.
179. The correct application of the DCF method requires that the dividend yield be computed properly and that the growth rate used be derived from what future sustainable growth in cash flow is anticipated by investors. OCA St. 3 at 63.
180. Major financial institutions such as J.P. Morgan Chase do not use a growth rate based on analyst 5-year EPS growth rates as Ms. Bulkley has done. Id.
181. Ms. Bulkley uses analyst five-year earnings per share growth without attempting to reconcile the retention rate used for computing growth with the retention rate she used to compute the dividend yield, which is analogous to failing to reconcile money withdrawn from your account with your future balance. Id. at 64 .
182. Mr. Rothschild implemented the Capital Asset Pricing Model (CAPM), as a check on the reasonableness of his DCF analysis. OCA St. 3 at 5.
183. To implement the CAPM, the appropriate values were determined for the three model inputs: Risk Free Rate, Beta, and Equity Risk Premium and discussed herein. OCA St. 3 at 47 .
184. It is generally preferable to use the market yield on short-term U.S. Treasury yields as the risk-free rate because these bonds have a beta close to zero. OCA St. 3 at 48 .
185. However, Mr. Rothschild chose to use a risk-free rate based on both long- and short-term treasury yields because investors expect short-term interest rates to increase. Id.
186. Based on short-term U.S. Treasury bills (3 months) as of July 31, 2020, Mr. Rothschild determined the short-term risk-free rate is $0.09 \%$. Id.
187. He determined the long-term risk-free rate to be $1.20 \%$ based on the yield of long-term U.S. Treasury bonds ( 30 years) as of July 31, 2020. Id.
188. Mr. Rothschild used two betas, a forward beta and a hybrid beta, since the cost of equity should be based on investor expectations. OCA St. 3 at 49.
189. The forward beta is based on forward-looking investor expectations of non-diversifiable risk, and the hybrid beta is based on both forward-looking investor expectations and historical return data. Id.
190. His option-implied betas were calculated by using publicly-available trading information for all the options for a given security (company or index) for a complete trading day. OCA St. 3 at 53.
191. Calculating option-implied betas requires (1) obtaining stock option data for that company and a market index, (2) filtering the stock option data, (3) calculating the option-implied volatility for the company and for the index, (4) calculating the option-

## APPENDIX B - PUBLIC

implied skewness for the company and for the index, and (5) calculating option-implied betas for the company based on implied volatility and skewness for the company and for the index. Id.
192. Mr. Rothschild used the same methodology used by the Chicago Board of Options Exchange (CBOE) in calculating the Volatility Index (VIX) and SKEW Index. Id.
193. His historical betas were calculated by following the methodology used by Value Line. Id. at 51-52.
194. The only major difference between Mr. Rothschild's calculations and Value Line's calculations is that Value Line uses the NYSE Composite Index and Mr. Rothschild used the S\&P 500 Index as the market index. Id. at 52.
195. Stock options are the right to buy or sell a stock at a specific price for a specified amount of time. Id.
196. A call option is the right to buy a stock at a specified exercise or strike price or before a maturity date, and a put option is the right to sell a stock at a specified exercise or strike price on or before a maturity date. Id.
197. The market prices of put options and call options provide information regarding the probability distribution of future stock prices expected by investors. OCA St. 3 at 50.
198. This information can be used to determine investors' return expectations including the relationship between the return expectations for individual Water Proxy Group companies and those for the overall market. Id.
199. Mr. Rothschild's equity risk premium is the expected return on the S\&P 500 minus the risk-free rate as described above. Id. at 56.
200. The implied volatility changes over time as investors' perception of risk changes. OCA St. 3 at 56.
201. For example, during a crisis such as the COVID-19 pandemic and its implications on the market, implied volatility generally increases as investors expect that stock market prices have a greater change of large swings compared to times when there is no crisis. Id.
202. Mr. Rothschild calculated his equity risk premium in two ways: a weighted risk premium which accounts for investors' expectations over the past three months, and a spot risk premium which is based on investors' expectations as of July 31, 2020. See OCA St. 3 at 56-58 (charts summarizing the results of the CAPM).
203. Ms. Bulkley considers an Empirical CAPM (ECAPM). PAWC St. 13-A at 54.
204. She claims that the ECAPM is necessary because academic research indicates that the risk return relationship is different than the one estimated by the CAPM. Id. at 59.

## APPENDIX B - PUBLIC

205. This method includes the same four components as the CAPM, but she applies a $75 \%$ weighting to the beta coefficient and the market risk premium portion of the equation and a $25 \%$ weighting to the market risk premium, without the beta coefficient impact. Id. at 58.
206. Mr. Rothschild does not agree with the results (mean: $10.76 \%-11.87 \%$ ) of Ms. Bulkley's CAPM analysis because they are not based on investor expectations. OCA St. 3 at 71.
207. She uses historical data and analyst forecasts instead of investor expectations as revealed by market data. Id.
208. Ms. Bulkley's use of historical and non-market-based data in her "forward-looking" CAPM analysis contradicts her statement that the cost of equity should rely on "marketbased data to quantify investor expectations." Id.
209. Additionally, the risk-free rate in Ms. Bulkley's CAPM is not appropriate because it is based primarily on economist published projections and not investors' expectations as indicated by current market yields. Id. at 72 .
210. Further, Ms. Bulkley's beta coefficients overstate the cost of equity. OCA St. 3 at 73.
211. Option implied betas indicate that investors expect water utility stock price movements to be less correlated with the overall market than before the pandemic. Id.
212. In January 2020, the average option implied beta of the 7 water companies in Mr. Rothschild's proxy group was under 0.40 ; in other words, investors expect water utility stocks to move less than half a percent for every percent the market moves. Id.
213. Mr. Rothschild states that the cost of equity should be based on investor expectations, including what they expect market conditions will be in the future. OCA St. 3SR at 43.
214. A market-based approach is superior to one based on "expert" forecasts, e.g., Blue Chip Financial Forecasts, for the following reasons. OCA St. 3 at 29-30.
215. First, the actual cost of equity PAWC will pay when it raises money will be determined by the market and not by financial publications. Id.
216. Second, evidence supports that predicting capital markets, e.g., interest rates, stock prices, is virtually impossible. Id.
217. It is almost impossible for Ms. Bulkley, or anyone, to determine what share prices will be in the future. OCA St. 3 at 30 .
218. PAWC's cost of equity should be based on the more measurable investor expectations as indicated by current market prices, not on opinions of analysts or equity experts. Id. at 43-44.

## APPENDIX B - PUBLIC

219. Further, stock price trends, interest rates, increasing credit spreads, volatility expectations, and the stability of water utilities even during the pandemic all affect the cost of equity in this case. OCA St. 3 at 16-28.
220. Ms. Bulkley claims that Mr. Rothschild focuses only on interest rates stating that "analysts who are only focused on interest rates and where the cost of debt has gone are missing the critical signs on the cost of equity." PAWC St. 13-RJ at 3.
221. In fact, Mr. Rothschild utilizes not only interest rates, but also investors' volatility, skew and variance expectations as indicated by stock options throughout his testimony. See OCA St. 3.
222. OCA witness Rubin recommends that the Commission reject PAWC's request for a multi-year rate plan. OCA St. 1 at 35.
223. If approved, the MRP could impact the risk of investing in PAWC and therefore its cost of equity. Id.
224. Second, there is a risk that this plan would lead to excessive earnings for PAWC and inflated customer rates. Id.
225. OCA witness Rubin recommended the Commission reject PAWC's request for a MRP because, among other reasons, the COVID-19 pandemic has significantly increased uncertainty about future economic conditions. OCA St. 1 at 29-30.
226. Because an MRP would expand forecasting time beyond the rate effective year (12 months) to two years, the accuracy of the forecasts may become compromised. OCA St. 3 at 76.
227. Mr. Rothschild states that utility companies generally have more information about variables that influence forecasting accuracy and are therefore in a better position to protect themselves from excessive losses than regulators are positioned to protect consumers from excessive rates. OCA St. 3 at 77.
228. If, however, the Commission approves PAWC's requested MRP, Mr. Rothschild recommends that the Commission implement consumer protection measures in the form of an earnings sharing mechanism. Id. at 75.
229. These measures are particularly important now because of increased uncertainty and concerns regarding consumers' ability to pay for basic living expenses, including utility bills. Id.
230. Section 1329 of the Code allows a public utility to utilize fair market valuation when acquiring water and wastewater systems that are owned by a municipality or authority. 66 Pa. C.S. § 1329 (Section 1329).
231. The Commission has stated that "Section 1329 helps mitigate the risk that a utility will not be able to fully recover its investment when water or wastewater assets are acquired

## APPENDIX B - PUBLIC

from a municipal or authority." Application of Aqua Pennsylvania Wastewater, Inc. Pursuant to Section 1102 and 1239 of the Public Utility Code for Approval of its Acquisition of the Wastewater System Assets of Limerick Township, Docket No. A-2017-2605434, Opinion and Order at 4 (November 8, 2017).
232. The passage of Section 1329 significantly reduces the risk that an investor-owned utility will be able to include the purchase price of a municipal water or wastewater system into rate base. OCA St. 3 at 78 .
233. In recognizing that fair market value legislation reduces investment risk, Ryan Wobbrock, a senior analyst at Moody's stated that "[w]hat is most important from a credit perspective is clarity surrounding the recoverability of the investment, and this legislation definitely helps provide that." Investor-owned utilities benefit as fair value legislation incentivizes system sales, Global Water Intelligence, December 2016.
234. PAWC's proposed Regionalization and Consolidation Surcharge would further reduce the risk of purchasing municipal systems by allowing them to earn a return on the purchase price before the next rate case. OCA St. 3 at 79.
235. OCA witness Rubin recommends that the Commission reject the proposed Regionalization and Consolidation Surcharge as contrary to the public interest and neither just nor reasonable. OCA St. 1 at 79.
236. In recognition of the risk-reducing influence of fair market value legislation, Mr. Rothschild recommends a cost of equity for PAWC of $8.00 \%$ which is below the midpoint of his cost of equity calculations for his Water Proxy Group ( $8.22 \%$ ). Id. at 80 .

## Business Risks and Management Performance

237. The COVID-19 pandemic presents unique circumstances and hardship for many PAWC customers, and PAWC should not be permitted to receive both an acquisition premium and an ROE enhancement at this time. OCA St. 3 at 81.
238. Mr. Rothschild recommends that the Commission consider the burden on consumers as a result of the pandemic. Id.
239. When the Commission approved a 25 basis point request for Aqua Pennsylvania, Pennsylvania was not experiencing the effects of a global pandemic. OCA St. 3 at 81 .
240. Second, PAWC should not be permitted to receive both an acquisition premium and an ROE enhancement regarding its acquisition of Delaware Sewer Company. Id.
241. Finally, Ms. Bulkley's cost of equity recommendation of $10.80 \%$ is not market-based which results in a cost of equity that is significantly above a market-based rate. Id.
242. Therefore, an allowed return on equity below Ms. Bulkley's range of ROE estimates $(10.0 \%-10.8 \%)$ should not be the criteria for any ROE enhancements. OCA St. 3 at 81.

## APPENDIX B - PUBLIC

## REGIONALIZATION AND CONSOLIDATION SURCHARGE

243. The Regionalization and Consolidation Surcharge (RCS or surcharge) would collect the "revenue deficiency" from Section 1329 acquisitions that have closed since the Company's last rate case. OCA St. 1 at 70-71.
244. The "revenue deficiency" is defined as the difference between the annual revenue requirement (return on the ratemaking rate base determined in the Section 1329 application, taxes, depreciation, and operation and maintenance expenses) and the revenue received from the acquired customers. OCA St. 1 at 70-71.
245. The surcharge would be revised each April. OCA St. 1 at 70-71.
246. The RCS would have a limit of no more than $5 \%$ of the revenues from existing water and wastewater customers, excluding public fire protection revenues and other surcharge revenues. OCA St. 1 at 70-71.
247. The maximum surcharge revenues are $\$ 38,850,794$. OCA St. 1 at 71 .
248. These surcharge revenues would be collected between rate cases from all existing PAWC customers. OCA St. 1 at 70.
249. Revenues would be collected from customers in the rate zones as follows:

| Rate Zone | Proposed Revenues <br> (Excluding Public Fire) |
| :---: | :---: |
| Main Water | $\$ 694,179,269$ |
| Steelton Water | 288,607 |
| Main Wastewater (WW) | $29,411,453$ |
| Exeter WW | $10,026,829$ |
| Sadsbury WW | 952,612 |
| Scranton WW | $26,075,165$ |
| McKeesport WW | $14,298,866$ |
| Kane WW | $1,783,086$ |
| Total revenue base | $\$ 777,015,887$ |
| x Maximum surcharge | $5.00 \%$ |
| = Max. surcharge revenues | $\$ 38,850,794$ |

OCA St. 1 at 72, Table 7.
250. The surcharge revenues of $\$ 38$ million are two times the $\$ 19.1$ million subsidy that PAWC proposes to collect from water Zone 1 customers for Section 1329 acquisitions (discussed in Section XIII, infra). OCA St. 1 at 71.

## APPENDIX B - PUBLIC

251. If the surcharge and the proposed subsidies are approved, PAWC would collect more than $\$ 57$ million per year ( $\$ 38$ million from the surcharge and $\$ 19.1$ million from the wastewater subsidies) to support Section 1329 acquisitions, which is $7.5 \%$ of its proposed revenue requirement. OCA St. 1 at 71.
252. The ratemaking process involves a matching of revenues, expenses, investment, return, customers, and consumption. OCA St. 1 at 72-73.
253. Automatic rate adjustments for specific expense or capital items break this relationship. OCA St. 1 at 72-73.
254. The matching principle involves a synchronous examination of the cost of service and sources of revenue, as well other considerations such as the quality of service and efficiency of management. OCA St. 1 at 72-73.
255. The synchronization of the cost of service as well as other considerations such as the quality of service and efficiency of management is the reason why a test year is used when a rate case is filed. OCA St. 1 at 72-73.
256. The use of automatic rate adjustment mechanisms for only certain aspects of the Company's revenue requirement violates the matching principle and helps to destroy the underlying relationship between utility rates and levels of cost and investment. OCA St. 1 at 73 .
257. The general rule is that automatic rate adjustments should be used only for significant volatile expenses that are outside of the utility's control. OCA St. 1 at 73.
258. If an expense is relatively stable, it does not need special ratemaking treatment. OCA St. 1 at 76.
259. The less volatility, the less it is necessary to establish a special rate adjustment between rate cases. OCA St. 1 at 76.
260. The utility's ability to control expenditures is an important consideration in determining whether an automatic adjustment clause should be adopted. OCA St. 1 at 74.
261. Automatic rate adjustments remove any incentive for the utility to be efficient. OCA St. 1 at 74 .
262. The ratemaking process is designed to foster management efficiency between rate cases. OCA St. 1 at 74.
263. A focus on achieving and maintaining efficiency is a pillar of informed ratemaking. OCA St. 1 at 74.

## APPENDIX B - PUBLIC

264. Automatic rate adjustments remove any incentive the utility has to achieve or maintain efficiencies. OCA St. 1 at 74.
265. Under automatic rate adjustment mechanisms, any change in the unit cost of the product, and any change in the amount of the product purchased, would flow directly to captive customers. OCA St. 1 at 74 .
266. Failure to obtain available efficiencies, or failure to protect existing efficiencies, can only lead to ever-increasing utility rates. OCA St. 1 at 74.
267. Other factors to consider in reviewing the proposed RCS include whether the cost is related to other expenditures that are not subject to the adjustment mechanism. OCA St. 1 at 75 .
268. An automatic adjustment clause could adversely impact the evaluation of technologies or processes that might improve efficiency and save costs. OCA St. 1 at 75.
269. An unreasonable trade-off occurs when one aspect of the cost is recognized automatically, but another aspect is not. OCA St. 1 at 75.
270. The RCS would recover costs that are within the Company's control (the amount and the timing). OCA St. 1 at 76.
271. There is a potential for significant trade-offs or efficiencies that come from the acquisition and those would not be captured in the surcharge. OCA St. 1 at 76.
272. The surcharge would be calculated using revenues from all existing water and wastewater customers. OCA St. 1 at 76.
273. The wastewater customers' rates are subsidized by existing water customers under Section 1311(c).
274. The underlying premise of Section 1329 is that acquisition prices will be based on an arms' length negotiations. OCA St. 1 at 78.
275. An arms' length negotiation requires a tension between the buyer and seller -- the buyer wants to pay as little as possible and the seller wants to receive as much as possible. OCA St. 1 at 78.
276. The arms' length negotiated price is a compromise between those two extremes. OCA St. 1 at 78.
277. In Section 1329 negotiations, there is no incentive for the buyer to pay as little as possible. OCA St. 1 at 78.

## APPENDIX B - PUBLIC

278. The profit motivation is for the buyer to pay as much as possible, subject only to the amount that can be justified by an appraisal. OCA St. 1 at 78.
279. There is no tension between the buyer and seller -- both want the price to be as high as can be justified by the appraisals. OCA St. 1 at 78.
280. The only potential check on the process is that the utility's investors bear the cost of supporting a portion of the purchase price until the conclusion of its next base rate case. OCA St. 1 at 78.
281. The proposed Regionalization and Consolidation Surcharge would remove even that modest check on the process. OCA St. 1 at 78.
282. Rather than investors paying to support a portion of the purchase price between rate cases (perhaps for a year or two), investors would be at risk for only a few months (between the time of closing and the end of the calendar year). OCA St. 1 at 78.
283. Under a Section 1329 acquisition, the return received by investors is based on the revenues received from the acquired customers between closing and the conclusion of the next rate case. OCA St. 1 SR at 14.
284. The existing customers do not provide any subsidies during the time between closing and the conclusion of the next rate case. OCA St. 1 SR at 14.
285. PAWC is not permitted to defer the return and its investors must bear the risk of putting capital to work between rate cases. OCA St. 1 SR at 14.
286. The surcharge would increase PAWC's revenues and existing customers' rates almost immediately upon closing which would provide a benefit to the investors and existing customers would be harmed. OCA St. 1 SR at 14.
287. The following example shows the effect of the proposed RCS:

| Table 1-S: Hypothetical Example Showing Effect of Proposed Regionalization and <br> Consolidation Surcharge on Existing Customers and Investors |  |  |  |  |
| :---: | ---: | ---: | ---: | ---: |
|  | Without Surcharge |  | With Surcharge |  |
| Year | Existing <br> Customers' <br> Revenues | Investors' <br> Return | Existing <br> Customers' <br> Revenues | Investors' <br> Return |
| 2021 | 0 | 25,000 | 45,000 | 70,000 |
| 2022 | 0 | 25,000 | 43,250 | 68,250 |
| 2023 | 0 | 25,000 | 41,544 | 66,544 |
| 2024 | 39,880 | 64,880 | 39,880 | 64,880 |
| 2025 | 38,258 | 63,258 | 38,258 | 63,258 |
| Total | $\mathbf{7 8 , 1 3 8}$ | $\mathbf{2 0 3 , 1 3 8}$ | $\mathbf{2 0 7 , 9 3 2}$ | $\mathbf{3 3 2 , 9 3 2}$ |

## APPENDIX B - PUBLIC

288. As a result of the surcharge, there is no reduction in future costs paid by PAWC's customers. OCA St. 1 SR at 16.
289. The surcharge enhances the return to PAWC's investors between closing and the next base rate case. OCA St. 1 SR at 16.

## RATE STRUCTURE AND RATE DESIGN

290. A COSS is an analysis that breaks down a utility's costs and investments into numerous categories, known as functions and classifications. OCA St. 1 at 35-36.
291. In a COSS, the classified costs are allocated among the utility's different classes of customers to estimate the cost of serving different types of customers. OCA St. 1 at 3536.
292. In a COSS, cost relationships are then used as a guide in two additional steps: (1) determining each class's share of the utility's revenue requirement, and (2) designing rates that reasonably reflect the reasons why costs are incurred to serve a class of customers. OCA St. 1 at 35-36.
293. PAWC prepared two water COSS (Water excluding Steelton and Rate Zone 5 (Steelton)). PAWC Exh. 12-B and PAWC Exh. 12-A. OCA St. 1 at 36.
294. PAWC prepared three sanitary sewer COSS (Exeter, Sadsbury, and sanitary sewer excluding Exeter and Sadsbury). PAWC Exhs. 12-D, 12-E, 12-C. OCA St. 1 at 36.
295. PAWC prepared three combined sewer COSS (Scranton, McKeesport, and Kane). PAWC Exhs. 12-F, 12-G, and 12-H.
296. Each COSS has separate schedules for Rate Year 1 (2021) and Rate Year 2 (2022). OCA St. 1 at 36.
297. For 2021, PAWC projects that it will have 612,000 residential customers in Zone 1, 1,700 customers in Zone 5 (Steelton) and 1,300 customers in four additional zones. OCA St. 1 at 79 .
298. All but 100 of those customers have meters that are 1-1/2-inch or smaller in diameter. OCA St. 1 at 79.
299. PAWC proposes to charge the same customer charge to residential customers with meter sizes of $1-1 / 2$ inches or smaller. OCA St. 1 at 80.
300. PAWC did not apply the same change in Zone 5; it is proposing higher customer charges for the residential customers with 1 -inch and 1-1/2-inch meters. OCA St. 1 at 81.

## APPENDIX B - PUBLIC

301. The customer charge proposal should be applied to Zone 5 which would eliminate possible concerns about rate discrimination and would facilitate the eventual consolidation with Zone 1. OCA St. 1 at 82.
302. The minimum allowance should be eliminated for residential customers with 1-inch and 1-1/2-inch meter sizes.
303. The minimum usage allowance for $5 / 8$-inch meters in Zone 5 should be reduced from 1,700 gallons per month to 1,000 gallons per month because it will start a transition to the eventual elimination of the minimum allowance. OCA St. 1 at 79, 83.
304. To ease the impact of a smaller minimum allowance in Rate Zone 5, the $40 \%$ increase proposed by PAWC to be divided between Rate year 1 and Rate year 2, should be used for the increase in 2021. OCA St. 1 at 84.
305. If the minimum allowance is reduced and the increase is used for 2021, the existing 5/8inch customer charge ( $\$ 14.78$ per month) should be kept at the current level and the volumetric rate be set at $\$ 1.000$ per 100 gallons for all residential usage. OCA St. 1 at 84-85.
306. PAWC's proposed Zone 1 customer charge of $\$ 18.00$ per month for a $5 / 8$-inch meter is higher than the direct customer-related cost for a $5 / 8$-inch meter, which is $\$ 17.06$. OCA St. 1 at 83 .
307. If the calculation of direct costs is adjusted to reflect the same charge for residential customers with meter sizes up to and including $1-1 / 2$-inch, and to recognize the reduced rates paid by low-income customers, the direct cost is approximately $\$ 17.72$ per month or about $9 \%$ higher than the currently effective charge of $\$ 16.25$ per month. OCA St. 1 at 83-84.
308. If the revenue requirement determined by the Commission is less than what the Company proposed, all Zone 1 charges should be scaled back proportionately. OCA St. 1 at 83-84.
309. PAWC has 10 different rate areas for wastewater service. OCA St. 1 at 86.
310. Current customer charges range from $\$ 7.50$ in Turbotville (Zone 8 ) to $\$ 30$ or more per month in Koppel, McKeesport, and Kane. OCA St. 1 at 86.
311. Some of the higher customer charges are coupled with a large minimum usage allowance. OCA St. 1 at 86.
312. PAWC also has a wastewater rate area where all customers receive flat-rate service at a cost of either $\$ 75.10$ or $\$ 54.60$ per month (Franklin Township) depending on the treatment used to serve the customer. OCA St. 1 at 86.

## APPENDIX B - PUBLIC

313. PAWC is guided by two main goals in setting wastewater rates: 1 ) complying with provisions of any commission orders or settlements for acquired systems, and 2) moving towards rate consolidation and the elimination of minimum usage allowances. OCA St. 1 at 86 .
314. Those goals should not be the only goals. OCA St. 1 at 87 .
315. Other goals to be considered include specific criteria that limit the costs transferred to Zone 1 water customers or that otherwise subsidize Section 1329 premiums paid by the Company. OCA St. 1 at 87 .
316. PAWC has given more weight to a provision in its Asset Purchase Agreement with Scranton than the Commission is required to give to that provision. OCA St. 1 at 87.
317. There are two instances where PAWC has proposed extremely large rate increases (more than $50 \%$ for many customers). OCA St. 1 at 87 .
318. Current rates in Zone 3 are a $\$ 19.50$ per month customer charge and a volumetric charge of $\$ 0.6173$ per 100 gallons. OCA St. 1 at 87 .
319. PAWC proposes no increase to the customer charge and a volumetric increase to $\$ 0.7212$ per 100 gallons, or $16.8 \%$. OCA St. 1 at 87 .
320. The increased revenues from residential wastewater customers, in Year 1, would be $\$ 1.17$ million, or $8.4 \%$ and the total increase in revenues would be $\$ 2.83$ million in Year 1. OCA St. 1 at 87.
321. The COSS for Scranton shows a total cost of service of $\$ 34.75$ million, while current rates produce $\$ 23.47$ million, or a shortfall of $\$ 11.3$ million. OCA St. 1 at 87 .
322. An increase of $50 \%$ would be needed to bring rates to cost of service. OCA St. 1 at 87 88.
323. PAWC's proposal would does not close the gap between costs and revenues and requires the remaining gap to be passed on to Zone 1 water customers. OCA St. 1 at 88.
324. The rate in Zone 3 should be increased by approximately $20 \%$. OCA St. 1 at 88 .
325. A $20 \%$ increase in the Zone 3 rate would increase revenues by $\$ 4.66$ million (compared to $\$ 2.76$ million under PAWC's proposal), which would reduce the Zone 1 water subsidy by $\$ 1.9$ million. OCA St. 1 at 88 .
326. Also important is that it would be a meaningful move towards cost of service which should make it feasible to have Zone 3 pay cost-based rates within the next two rate cases. OCA St. 1 at 88.

## APPENDIX B - PUBLIC

327. To ensure that the rates collect these additional revenues, Mr. Rubin recommends that the rates be increased across-the-board. OCA St. 1 at 89.
328. The current rates in Zone 4 are a $\$ 30.00$ per month customer charge and a volumetric charge of $\$ 0.6500$ per 100 gallons. OCA St. 1 at 89 .
329. PAWC proposes to decrease the customer charge to $\$ 11.00$ per month and increase the volumetric charge to $\$ 1.7631$ per 100 gallons. OCA St. 1 at 89 .
330. The increased revenues from residential wastewater customers, in Year 1, would be $\$ 44,867$, or $23.55 \%$. OCA St. 1 at 89 .
331. Under PAWC's proposal some residential customers would receive significant decreases while others would see increases of $50 \%$ or more. OCA St. 1 at 89 .
332. PAWC is proposing increases of $11 \%$ for other classes in Zone 4. OCA St. 1 at 90 .
333. Zone 6 has two service areas - McKeesport and Port Vue. OCA St. 1 at 91.
334. In McKeesport, for most residential customers, the current rates in Zone 6 are a $\$ 30.70$ per month customer charge (includes the first 2,000 gallons per month) and a volumetric charge (for flows over 2,000 gallons per month) of $\$ 1.275$ per 100 gallons. OCA St. 1 at 91.
335. PAWC proposes to eliminate the minimum usage allowance, reduce the customer charge to $\$ 11.00$ per month, and increase the volumetric charge to $\$ 1.7631$ per 100 gallons. OCA St. 1 at 91.
336. Most residential customers would have bills increase by less than $40 \%$ and very low usage customers would have their bill decline. OCA St. 1 at 91.
337. Port Vue customers are billed quarterly and the current rates are $\$ 58.05$ per quarter, which includes the first 4,000 gallons of water per quarter and a volumetric charge (for flows over 4,000 per quarter) of $\$ 0.995$ per 100 gallons. OCA St. 1 at 91 .
338. PAWC proposes to eliminate the minimum allowance and charge Port Vue customers the same as the McKeesport area customers, which would be an increase of approximately $70 \%$. OCA St. 1 at 91.
339. The Port Vue customer charge could be set at $\$ 11.00$ per month ( $\$ 33$ per quarter) and the minimum usage allowance be eliminated. OCA St. 1 at 93.
340. The increase to the volumetric charge could be limited to $40 \%$, or $\$ 1.393$ per 100 gallons. OCA St. 1 at 93.

## APPENDIX B - PUBLIC

341. These changes would ensure that no customer bill would increase by more than $46 \%$ (most bills would increase by $40 \%$ or less). OCA St. 1 at 93.
342. The resulting revenue shortfall is approximately $\$ 230,000$ which should be added to the water Zone 1 subsidy. OCA St. 1 at 94.
343. If the Commission reduces the proposed revenue requirements in rates zones that are being subsidized by water Zone 1 customers the reduction in the revenue requirement first reduce the water Zone 1 subsidy in proportion to the subsidy paid by each customer class under PAWC's proposal for Rate Year 1. OCA St. 1 at 94-95.
344. Any remaining reduction would be applied proportionally to the rates in the particular rate zone. OCA St. 1 at 94-95.
345. If the Commission reduces the water Zone 1 revenue requirement, then the reduction should be spread among customer classes in proportion to each class's cost of service under Mr. Rubin's COSS. OCA St. 1 at 94-95.
346. Any reduction for the residential class should be applied proportionally to both the customer charge and volumetric charge. OCA St. 1 at 94-95.
347. Under PAWC's proposed subsidies water Zone 1 customers would pay an additional $\$ 32,851,568$, or $4.9 \%$, to subsidize the wastewater rate zones. OCA St. 1 at 53.
348. This $\$ 32,851,568$ subsidy, related to seven wastewater acquisitions, is equivalent to $41 \%$ of the total increase proposed by PAWC in this case for water Zone 1 customers in Rate Year 1. OCA St. 1 at 53.
349. Zone 1 water customers are being asked to provide subsidies totaling $\$ 23.74$ million to the systems acquired under Section 1329. OCA St. 1 at 55.
350. That amount includes the entire revenue requirement associated with the increase in rate base caused by Section 1329 ( $\$ 19.91$ million), plus an additional $\$ 3.8$ million to subsidize operating costs in the acquired systems. OCA St. 1 at 55.
351. A combined sewer system provides both sanitary sewage service and stormwater removal through a single network of pipes. OCA St. 1 at 36.
352. Stormwater utility service is designed to safely, and in compliance with environmental regulations, remove stormwater flows (also known as runoff) from a service area's streets, rights of way, parking lots, roofs, sidewalks, and other impervious surfaces. OCA St. 1 at 40-41.
353. Unlike other utility services, stormwater flows are not subject to being separately metered, and they are not directly related to the consumption of another service that can be directly measured. OCA St. 1 at 40-41.

## APPENDIX B - PUBLIC

354. A significant portion of stormwater flows come from public streets and rights of way, known as right-of-way flows. OCA St. 1 at 41.
355. There are different methods to recover right-of-way-related costs, but the charge for that service is neither avoidable, controllable, nor caused by any individual customer. OCA St. 1 at 41.
356. The customer controls its wastewater production and disposal and collects wastewater produced in a building into a pipe (the service line) that connects to the utility's wastewater main. OCA St. 1 at 43-44.
357. Pipes lead from each property to the centralized wastewater treatment plant. OCA St. 1 at 43-44.
358. The wastewater treatment plant treats the wastewater. OCA St. 1 at 43-44.
359. Treated wastewater is discharged into a receiving water (lake, stream, river, etc). OCA St. 1 at 43-44.
360. Stormwater is generated by precipitation (rainfall and the melting of snow and ice) and a customer may have some limited ability to control some of the stormwater that is generated. OCA St. 1 at 43-44.
361. Stormwater is not initially contained in pipes; some stormwater falls on pervious, unfrozen ground that can absorb some (but usually not all) of the stormwater. Other stormwater falls on roofs, streets, sidewalks, frozen ground, and other largely impervious surfaces where the stormwater is not absorbed and flows downhill. OCA St. 1 at 43-44.
362. Stormwater is controlled by directing the flow of the runoff so that it does not create flooding on private property or public streets and highways. Stormwater control occurs by grading properties, parking lots, and driveways to control the flow of stormwater, designing streets to direct the flow of stormwater (which is one reason curbs are so important on urban streets). installing stormwater retention basins to reduce peak storm flows, maintaining streets to ensure a proper flows of stormwater (for example by cleaning streets, repairing curbs, and cleaning storm drains). OCA St. 1 at 43-44.
363. Stormwater enters storm drains that collect stormwater in a network of pipes and that may involve numerous facilities including catch basins, streets and curbs, storm drains, stormwater pipes (where there is a separate system), and CSO control facilities (in a combined stormwater-wastewater system). OCA St. 1 at 43-44.
364. If combined stormwater flows commingle with wastewater flows and are directed to a wastewater treatment plant. OCA St. 1 at 43-44.

## APPENDIX B - PUBLIC

365. If separate stormwater system, the stormwater is directly discharged to a body of water with little or no treatment. OCA St. 1 at 43-44.
366. The control of stormwater is done by the entity responsible for the property and that entity may be different from the entity that uses other utility services on the property or the property may not be an existing water or wastewater customer. OCA St. 1 at 43-44.
367. It is important that the entity responsible for stormwater control be responsible for stormwater costs associated with the property. OCA St. 1 at 43-44.
368. Assigning cost to those responsible will give an appropriate incentive to control stormwater flows from the property into the CSS. OCA St. 1 at 43-44.
369. In 2019, there were more than 1,700 communities and utilities that have separate fees or charges for stormwater service, including 27 in Pennsylvania. OCA St. 1 at 44.
370. The Pennsylvania communities who had established stormwater fees ranged in population size from 1,931 to $1,536,471$. OCA St. 1, Sch. SJR-8, W. Ky. Survey, Table A-1.
371. Most of the stormwater fees in the United States, and nearly all fees in Pennsylvania, are based on measuring impervious surface area of the property. OCA St. 1 at 44.
372. A typical or average residential area is calculated based on the impervious surface area for the properties and that Equivalent Residential Unit (ERU) is the basis for developing stormwater rates for larger, non-residential properties. OCA St. 1 at 44.
373. There may be fee reductions for properties that significantly control stormwater fees. OCA St. 1 at 43-44.
374. Using property characteristics, like impervious surface area, rather than water use, to allocate and collect stormwater costs is important because there are properties that contribute to stormwater flows but are not water or wastewater customers, e.g., parking lots or facilities, and some outdoor recreation facilities. OCA St. 1at 45.
375. There could be a significant number of stormwater only customers. OCA St. 1 at 45 .
376. PAWC allocates all stormwater-related costs in the same way that it allocated infiltration and inflow (I\&I) costs in a sanitary sewer system. OCA St. 1 at 45.
377. PAWC did not propose a separate rate for stormwater service in any rate area because it says that it has not been ordered to do so. OCA St. 1 at 45, 46.
378. The costs of controlling and treating stormwater are collected from sanitary wastewater customers, through customer and flow charges, and from water customers through the wastewater subsidy. OCA St. 1 at 46.

## APPENDIX B - PUBLIC

379. The Manual of Practice No. 27, Financing and Charges for Wastewater Systems published by the Water Environment Federation ("WEF Manual"). is the standard reference on cost-of-service studies, rate design, and other ratesetting topics for wastewater utilities. OCA St. 1 at 46.
380. PAWC relied on the third edition of the WEF manual published in 2004. OCA St. 1 at 46.
381. The fourth edition of the WEF manual, published in 2018, includes more information about allocating stormwater-related costs and how to collect those costs. OCA St. 1 at 46.
382. The 2018 edition has a new chapter on "Wet Weather Financing and Cost Recovery". OCA St. 1, Sch. SJR-9.
383. The WEF manual states that although cost recovery through sewer charges may provide for "administrative simplicity", that approach may affect equity of cost recovery because of the "limited correlation" between the volume of water usage (used to develop sewer charges) and the magnitude of a property's wet weather contribution. OCA St. 1 at 47-48 citing Sch. SJR-9, pp. 8 and 9 (WEF Manual pp. 189-190).
384. The WEF manual also points out the importance of providing property owners with an opportunity to reduce fees by reducing wet weather flows. OCA St. 1at 48.
385. A separate 2013 WEF manual addresses approaches to stormwater programs including how to develop fees or charges for stormwater service. OCA St. 1at 48 citing Water Environment Federation, User-Fee-Funded Stormwater Programs (2nd ed. 2013).
386. In the 2018 Western Kentucky survey, 19 of the 27 stormwater utilities in Pennsylvania use an ERU method based on impervious area or similar property characteristics. OCA St. 1 at 50, Sch. SJR-8, Table 1A.
387. The Commission has established separate rates and conditions for the provision of industrial wastewater service (requiring pretreatment and setting the costs of that service), as compared to domestic wastewater service, even though the flows are ultimately commingled in the same sewer mains." OCA St. 1 at 49.
388. The stormwater-related costs account for approximately $46 \%$ of the revenue requirement in three rate zones, or $\$ 31,148,927$ of the total $\$ 68,089,360$ in combined-sewer system revenue requirements. OCA St. 1 at 50.
389. PAWC has not done the work necessary to determine the impervious area of properties and has not identified stormwater-only customers. OCA St. 1 at 50.

## APPENDIX B - PUBLIC

390. Any attempt to modify those combined sewer rate zone rates would suffer from the same problems as the existing rates and could cause the rates to move further away from the cost of service. OCA St. 1 at 50.
391. The development of a stormwater fee to collect stormwater-related costs in the three CSS rate zones (Scranton, McKeesport, and Kane) is important to address the inequity that exists in the current rates and that would continue under PAWC's failure to address this issue. OCA St. 1 at 50.
392. Collecting stormwater costs based on water consumption or on a per-customer basis is grossly unfair, especially to tenants and smaller properties with little impervious surface area. OCA St. 1 at 50.
393. Failing to recognize that properties that are not wastewater customers (such as parking lots) can contribute significantly to stormwater flows makes the collection of stormwater costs through wastewater rates unduly discriminatory and grossly unreasonable. OCA St. 1 at 50 .

## LOW-INCOME CUSTOMER ASSISTANCE

## H2O Discount Program Design

394. The current program discounts the customer charge and the volumetric charge and is an across-the-board discount program for water and wastewater discounts, meaning that it is one-tier and the same amount regardless of usage. OCA St. 4 at 5-8.
395. Customers at different levels of Federal Poverty Level (FPL) receive the same discount. OCA St. 4 at 5-8.
396. PAWC has never assessed the affordability of the low-income bills after its existing across-the-board discount. OCA St. 4 at 7.
397. PAWC has never conducted a formal or informal needs assessment for low-income assistance programming in its service territory. OCA St. 4 at 7.
398. PAWC also has not evaluated its current program, informally or formally, through an internal evaluation or with an external, independent third party evaluation. OCA St. 4 at 7-8.
399. A Payment Coverage Ratio is a ratio of dollars of payments received divided by dollars of bills issued to customers. OCA St. 4 at 9 .
400. From January 2018 through March 2020, the average arrears of residential customers was $\$ 206$ while the average arrears of a low-income customer was $\$ 333$. OCA St. 4 at 11.
401. Timeliness of payments is another metric used to assess the effectiveness of the current BDP. OCA St. 4 at 11 .

## APPENDIX B - PUBLIC

402. Using PAWC's data for the time period from January 2018 through May 2020, there was only one month (April 2020 when more than half of the participants made a full and ontime payment. OCA St. 4 at 12.
403. Generally, between $43 \%$ and $46 \%$ of the participants made full and on-time payments. OCA St. 4 at 12.
404. The "Bills Behind" statistic assesses the timeliness of payments. OCA St. 4 at 12 .
405. The Bills Behind metric puts the level of arrearage in the numerator and the average bill in the denominator to assess how many bill payments were missed. OCA St. 4 at 12 .
406. PAWC's low-income customers are two more Bills Behind ( 5.85 in 2018 and 5.31 in 2019) than its residential customers in ( 3.15 in 2018 and 3.29 in 2019). OCA St. 4 at 12.
407. The third metric to measure the effectiveness of the PAWC BDP is the collection efforts that are required for PAWC to generate the payments it receives. OCA St. 4 at 14.
408. The number of nonpayment disconnections per 1,000 payments received and the number of nonpayment disconnections per $\$ 1,000$ in payments received, are collectively called the Collection Efficiency. OCA St. 4 at 14.
409. Generally, a lower number indicates that the utility is working less hard to generate payments. OCA St. 4 at 14.
410. PAWC performs more than four times more nonpayment disconnections for every $\$ 1,000$ in payments from its BDP participants than its total residential customers and about 3 times more disconnections for each 1,000 payments than it performs for its total residential customer population. OCA St. 1 at 15.
411. PAWC does not have information on the various income ranges (of Federal Poverty Guidelines or FPL) for the participants in its BDP. OCA St. 4 at 20-21.
412. The OCA has not recommended, and the Pennsylvania PUC has not yet prescribed, a specific percentage of income by which to define an "affordable" water and/or wastewater bill. OCA St. 4 at 20, n. 5 .
413. Water bill burdens range from $7 \%$ to more than $10 \%$ of income for customers below $50 \%$ of FPL and from $2 \%$ to more than $4 \%$ for customers between $125-150 \%$ of FPL. OCA St. 4 at 20; Table 5.
414. For a combined water/wastewater bill, the bill burden for all customers at $50 \%$ of FPL is $15 \%$ or more and ranges from more than $4 \%$ to more than $6 \%$ for customers at $125-150 \%$ of FPL. OCA St. 4 at 20; Table 5.
415. The proposed PAWC bill discount applied to these same FPL income ranges improves the affordability of water and combined water/wastewater bills but not for those at the lowest brackets of the FPL. OCA St. 4 at 22-24, Table 6.

## APPENDIX B - PUBLIC

416. A three-tier discount would be structured to yield bill burdens for service, whether water, combined water and wastewater, or wastewater only, that allow PAWC's low-income customers to see a "more sustainably payable bill burden." OCA St. 4 at 25.
417. The current wastewater discount is of the volumetric charge (20\%) and PAWC proposes to increase it to $30 \%$ as part of this case. OCA St. 4 at 43.
418. Addressing pre-existing arrearages is interrelated to providing bills that are sustainably payable. OCA St 4 at 30.
419. Customers do not make separate payments for current service and their arrearages. OCA St 4 at 30.
420. If the total bill is beyond a customer's ability to pay, the bill discount addresses the current service and the AMP can address the preexisting arrearages. OCA St 4 at 30 .
421. The average arrearage for enrolled customers (\$488) added to the current average annual water bill (\$612) means that customers would be charged an additional $\$ 41$ per month simply for the arrearage which would increase the average monthly bill by $80 \%$. OCA St. 4 at 30-31.

## Low-Income Customer Outreach, Data Collection and Reporting

422. PAWC enrolls a small fraction of its customers who are income-eligible for the BDP. OCA St. 4 at 44.
423. PAWC enrolls approximately 22,000 low-income customers each year. OCA St. 4 at 44, Table 11.
424. There are 119,859 eligible low-income customers (income below $150 \%$ of FPL). OCA St. 1 at 45.
425. PAWC has operated its low-income BDP for 29 years. OCA St. 1 at 45.
426. PAWC does not know the number of customers who are income-eligible but are not enrolled. OCA St. 4 at 51.
427. PAWC also does not attempt to target its outreach towards areas that might have more income-eligible customers. OCA St. 4 at 50.
428. A problem arises between the point at which a customer is found to be income-eligible for PAWC's BDP and the point at which a customer is enrolled in that program which results in customers not being enrolled, despite being identified as eligible. OCA St. 4 at 59-60, Sch. RDC-2.
429. There were 2,159 customers who were income-eligible but not enrolled for the period from January 2018 through April 2020. OCA St. 4 at 59-60, Sch. RDC-2.

## SERVICE QUALITY AND CUSTOMER SERVICE ISSUES

## Customer Performance Service Standards

430. PAWC does not have specific internal standards for many essential performance areas. OCA St. 5 at 25, 29-30.
431. OCA witness Alexander testified that this is a serious concern and unusual for a utility of the size of PAWC in Pennsylvania and an affiliate of a 16 -state parent company. OCA St. 5R at 2-3, 5-6.
432. PAWC has acquired many Pennsylvania water and wastewater systems in recent years so that increasing numbers of customers are dependent on this entity for essential services. Id.
433. The OCA recommends minimum performance standards for several aspects of customer service, including call center, leaks, main breaks, kept field appointments and response to complaints.
434. The OCA responds to PAWC's blanket objection to setting any customer service standards, based on the claim by PAWC witness Rod Nevirauskas that the Commission lacks authority to impose performance based standards in the context of a base rate case or request for a multi-year rate plan. PAWC St. 1-R at 60-61.
435. To the contrary, the Commission has broad authority to consider a utility's customer service and quality of service performance. 66 Pa . C.S. § 1501.
436. Section 1504 of the Public Utility Code provides: The commission may, after reasonable notice and hearing, upon its own motion or upon complaint: (1) Prescribe as to service and facilities, including the crossing of facilities, just and reasonable standards, classifications, regulations and practices to be furnished, imposed, observed and followed by any or all public utilities. 66 Pa . C.S. § 1504.
437. In the context of a base rate case, evaluation of the "efficiency, effectiveness, and adequacy of service" by the Commission is affirmatively required. 66 Pa . C.S. § 523(a).
438. Further, in its consideration whether to maintain existing rates or as a condition of any rate increase, the Commission has authority to order improvements to service. Pa. P.U.C. v. Pennsylvania Gas \& Water Co., 61 PaPUC 409, 415-16, 74 PUR4th 238, 244-45 (1986) (PG\&W 1986); $66 \mathrm{~Pa} . \mathrm{C} . \mathrm{S} . \S 1501$ (every public utility shall make all changes and improvements to service as shall be necessary to make such service adequate, efficient, safe and reasonable).
439. By way of example, in a Philadelphia Gas Works rate case, the Commission approved specific service quality and customer service performance standards similar to those recommended by the OCA in this proceeding. Pa. P.U.C. v. Philadelphia Gas Works, Docket No. R-00005654, Order at 33-34 (Nov. 22, 2000).

## APPENDIX B - PUBLIC

440. The Commission conditioned PGW's interim rate increase as follows: PGW must show improvement in its customer service functions and report on its progress to the Commission on a quarterly basis. Such reports should include: monthly call center access reports for customer service and collection call centers (to include average speed of answer, average abandonment time, number of abandoned calls, average delay in queue and the percentage of calls answered); monthly customer dispute reports (to include the number of customer disputes filed, the number and percentage of disputes responded to in under thirty days, and the average response time); the number and percentage of residential bills which PGW failed to render during the relevant billing cycles; the number and percentage of residential meters for which PGW has failed to obtain actual or customer supplied readings during the prior six months; and, monthly reports showing the number and percentage of missed customer service appointments. Id.
441. The Commission has also approved specific service quality and customer service performance standards in the context of merger and acquisition proceedings. OCA St. 5 at 25 .
442. In determining what is a reasonable performance level to which PAWC should be held, OCA witness Alexander compared PAWC's performance to that of other major Pennsylvania utilities. OCA St. 5 at 7, 10, 23, 27-30.
443. The OCA recommends that PAWC be required to submit quarterly reports regarding its performance in the customer service areas addressed by the standards. The OCA submits that Commission should open an investigation if the reports show a persistent failure to meet reasonable performance standards. OCA St. 5Sr at 6-7.
444. The OCA opposes a multi-year rate request, however, if Commission accepts the request, the OCA recommends that the MYRP should include penalties for non-compliance with the customer service performance standards. OCA St. 5 at 26.
445. The Company's proposal to automatically increase rates in the second year, without a review of its customer service performance, carries the risk that customer service quality will deteriorate because the utility has "a two-year time frame to exercise its discretion to alter internal expenditures and without a check on whether it is improving or even maintaining service quality performance." OCA St. 5 at 24-25.
446. Ms. Alexander explained that this risk is even more heightened (1) because PAWC does not have internal performance standards for many essential programs and (2) due to the impact of COVID-19 on customers' ability to pay their bills at current or higher proposed rates. Id.
447. As such, penalty provisions are warranted to ensure that PAWC is improving service quality performance while increased rates under the MYRP are in effect. OCA St. 5 at 26.
448. Ensuring that the utility's distribution system is operating to prevent loss of service and to respond promptly to correct leaks and disruptions is an essential duty of any water utility.

## APPENDIX B -PUBLIC

66 Pa. C.S. § 1501 (service "shall be reasonably continuous and without unreasonable interruptions or delay"); 52 Pa . Code § 65.20 ("Leak detection. A system of leak detection should be utilized on a regular basis, with leaks being repaired as expeditiously and economically as possible"); OCA St. 5 at 9.
449. OCA witness Alexander raised a concern that PAWC does not currently track the response time for leaks, i.e. the amount of time from the utility becoming aware of the incident until the repair is completed. OCA St. 5 at 9; PAWC St. 2R at 4.
450. PAWC witness William Andrew Clarkson objected to applying the same standard to all types of leaks because some are not addressed as quickly, such as breaks that do not result in an outage and leaks on customer-owned service lines that are not the Company's responsibility to repair. PAWC St. 18R at 4-5.
451. Consistent with that information, the OCA recommends that PAWC begin to track leak information for breaks that disrupt service and, based on that data, propose a performance standard within 60 days of the entry of the Commission's final Order in this proceeding. OCA St. 5 at 30.
452. PAWC does track "main breaks" or larger service outages and documents that its replacement strategy has resulted in a reduction in the statewide main break frequency rate from 0.37 main breaks per mile in 2009 to an average of 0.19 main breaks per mile in 2019. OCA St. 5 at 9; OCA Exh. BA-3 (PAWC response to OCA-I-001, Att. 6).
453. This data also shows that main break rates in Pittsburgh are significantly higher than PAWC's statewide average. Id.
454. The OCA recommends using PAWC's actual statewide main break frequency rate for 2019, of 0.19 main breaks per mile, as the standard for future performance. Id.
455. The OCA also recommends using PAWC's 2019 level of performance as the standard for keeping appointments. OCA St. 5 at 9 .
456. The Company reported that it met $98 \%$ of its customer field appointments in 2019 and has an internal goal to maintain this level of performance. Id. (citing PAWC Response to OCA-I-001, Att. 4 and 5.
457. OCA witness Alexander agreed that a $98 \%$ standard is reasonable and typical of major utilities. Id.
458. PAWC witness Clarkson objected to setting minimum performance standards for leaks, outages, or appointments on the grounds that there are no "industry" standards or regulatory requirements. PAWC Statement No. 2R.
459. The specific performance standards that the OCA recommended are based on the Company's own historical performance. OCA St. 5R at 12.

## APPENDIX B - PUBLIC

460. PAWC witness Bruce Aiton provided updated data on the frequency of main breaks showing a decrease in their frequency, both system-wide and in the Pittsburgh system, which is further indication that the standard for main break rates proposed by the OCA is reasonable and achievable. PAWC St. 3R at 29.
461. The OCA also recommends establishing a performance standard for PAWC's billing accuracy and timeliness of resolving billing inquiries. OCA St. 5 at 30.
462. PAWC already tracks certain billing performance metrics, such as "out of balance invoices," "customer billing inquiries," and "account resolution follow-up." OCA St. 5 at 18-19.
463. Based on review of the data provided, OCA witness Alexander observed that PAWC's "baseline" appears to set a target for $90 \%$ to $95 \%$ of these customer contacts and concerns to be resolved in less than 20 days. OCA St. 5 at 18-19.
464. During the last two years, the Company generally met or exceeded that baseline. Id.
465. Accordingly, the OCA recommends that PAWC should be required to continue its objective to resolve $90 \%$ of its billing inquiries within 20 days. Id. at 30 .
466. Adopting this standard, like the standards recommended above, is an appropriate and reasonable measure to help ensure that the Company maintains existing quality of service with regard to the accuracy of its billing and resolution of customer billing inquiries. Id.

## Call Centers

467. PAWC relies on customer call centers as the main method by which customers can communicate individually with PAWC. OCA St. 5 at 6-7.
468. PAWC provided combined, monthly data for its four call centers from January 2018 through April 2020, which OCA witness Alexander used to calculate annual average results for three key indicators of performance including percent of calls answered within 60 seconds, abandonment rate, and average speed of answer. Id. at 7; OCA Exh. BA-2.
469. As discussed by Ms. Alexander, the data shows extremely poor performance in PAWC's ability to answer calls in a timely manner and avoid a significant abandonment rate (the percentage of calls in the queue to be answered by a customer service representative that are abandoned due to a long wait time). OCA St. 5 at 7.
470. The data supports the following conclusions: the 2018 results are not reasonable and significantly below what is tolerated at other Pennsylvania utilities; the 2019 results show improvement but are still below best practices; and the 2020 results reflect a very poor performance in January with some improvement due in part to the reduced volume of calls evident in April associated with the COVID-19 pandemic and the moratorium on termination of service. OCA St. 5 at 7-8.

## APPENDIX B - PUBLIC

471. In addition, the monthly results reflect a dramatic swing in call center performance that is masked in the annual averages. OCA St. 5 at 8.
472. For example, although the average abandonment rate for 2019 and 2020 was roughly $6.0 \%$, in certain months during 2019 and 2020, the abandonment rate ranged from $9 \%$ to $12 \%$. Id.
473. While the average speed of answer has significantly improved from 6:40 (minutes) in 2018 to approximately 2:30 in 2019 and 2020, the monthly results indicate an ongoing difficulty in meeting a reasonable target performance on a routine basis. Id.
474. In certain months, the speed of answer was over 4 and 5 minutes. OCA St. 5 at 8 .
475. Ms. Alexander determined that the key variable in call center performance is the volume of calls and the number of available call center representatives on hand to answer the calls, such that PAWC can improve performance with better prediction of call volume and ensuring adequate, trained personnel are available to respond to call volume at predicted high call volume days and times. Id.
476. Currently, PAWC does not have any specific performance metrics or targets for its call center performance. OCA St. 5 at 8, n. 8 .
477. Ms. Alexander recommended that PAWC should be required to take steps to improve the monthly performance of its call center and, specifically, to bring its performance in line with other Pennsylvania utilities. Id. at 7, 30.
478. Specifically, the OCA recommends that PAWC's call centers should establish the following performance standards: (1) an average time of answer of 60 seconds or less and (2) a call abandonment rate of less than $4 \%$. Id. at 30 .
479. PAWC objects to these standards on the basis that it considers its current performance to be satisfactory and it should not be compared with gas and electric utilities. PAWC St. 18 R at 5-10.
480. PAWC witness Pallas contends that the Company's call center performance was worse in 2018 and generally, in winter months, due to unusually high levels of calls relating to winter weather and higher than normal incidence of main breaks. Id. at 6,9 .
481. Mr. Pallas also points to the impact of its interactive voice response (IVR) system on answer time and abandonment rates. PAWC St. 18R at 6-8.
482. Finally, Mr. Pallas asserts that general customers' satisfaction is a better measure of performance than specific metrics. Id. at 10-11.
483. The OCA addresses the insufficiency of the Company's one question survey in Section XV.D., infra.

## APPENDIX B - PUBLIC

484. OCA witness Alexander explained why Mr. Pallas' excuses for actual performance as measured by standard industry practices and methodologies should be rejected. OCA St. 5 R at 14-15.
485. First, high levels of calls should not impact call center performance because the stated advantage of having call centers employed by third-party agencies located in Kentucky and Tennessee is that those customer service representatives (CSRs) "are available to take customer calls during high call volume periods or when CSRs at the Illinois or Florida call centers are unavailable due to weather events." PAWC St. 18R at 4; OCA St. 5 R at 15.
486. Second, with regard to abandonment rates, Ms. Alexander disagreed with Mr. Pallas's suggestion on page 6 of his rebuttal, that the option to speak with a representative by accepting a future call back should not be considered an "abandoned" call or that the option mitigates the failure to promptly answer the call. OCA St. 5R at 14.
487. The call is "abandoned" when the customer abandons their attempt to wait in the queue to speak with a customer service representative. Id.
488. Third, OCA witness Alexander acknowledged PAWC's improved call center performance in 2019, however, "that improvement did not achieve results that are more typical of Pennsylvania gas and electric utilities with far fewer resources for handling calls compared to PAWC." OCA St. 5R at 15.
489. The OCA's recommended performance standards are reasonable and clearly achievable because they reflect actual performance by other Pennsylvania utilities. OCA St. 5R at 14-15.
490. As summarized by Ms. Alexander: While the 2019 performance improved compared to 2018, the wide swings in performance and the generally below average performance in all areas over this time period should be corrected. Customers who call in any month should be provided with reasonable customer service. OCA St. 5R at 3 .
491. PAWC's call centers located in Kentucky and Tennessee are operated by third parties under contract with American Water Works Service Company (AWWSC). PAWC St. 18 R at 1-2.
492. Representatives from the two third-party call centers make outbound calls to customers who have received a termination notice for nonpayment or other legal reasons, to seek payment or resolution of the cause of the notice. OCA St. 5R at 13, 16.
493. These two call centers make a significant percentage of their outbound calls to Pennsylvania customers: $65 \%$ for the Kentucky call center and $35 \%$ for the Tennessee call center. Id. at 16 (citing PAWC Response to OCA-XXIII-13).

## APPENDIX B - PUBLIC

494. OCA witness Alexander raised a concern whether these representatives are adequately trained and supervised to provide all of the Pennsylvania-specific rights and remedies to customers when discussing how to respond to a termination notice. OCA St. 5R at 16.
495. Her concern is based on the realistic and reasonable difficulty in properly supervising over 200 customer service representatives, in four different call centers that serve 16 different states and handle calls for thousands of customers on a daily basis, particularly in light of BCS's findings of verified complaints and those with infractions. Id. at 16; OCA St. 5 at 13.
496. To address that concern, the OCA recommends that PAWC be required to conduct regular audits of the third-party call centers to ensure that the rights and remedies available to Pennsylvania residential customers pursuant to Chapter 56 are affirmatively offered and presented when making contact with such customers who have received a termination notice. OCA St. 5SR at 17.
497. The results of such audits should be reported to BCS as part of the quarterly customer complaint analysis that the OCA recommends, which is addressed in Section XV.C.1, below. Id.
498. In OCA witness Alexander's direct testimony, she raised several concerns regarding the training materials provided to call center employees interacting with Pennsylvania customers. OCA St. 5 at 14-16.
499. In response, PAWC witness Pallas testified that the Company has developed new script modules called "MyWater V2" that the Company anticipates rolling out in November 2020. PAWC St. 18R at 14.
500. Mr. Pallas indicates that the new modules will provide Pennsylvania-specific scripts for customer service representatives. Id.
501. This upcoming reform is likely to be an important development and may resolve the OCA's concerns regarding the content and adequacy of the current training materials. OCA St. 5R at 18.
502. The OCA recommends that PAWC be required to provide these proposed script modules to the stakeholders prior to their implementation, to accommodate a review of these instructions and scripts to ensure compliance with Chapter 56 and PAWC's commitments to offer its low-income program to customers with payment difficulties. Id.

## Customer Complaints

503. A review of the 2019 calendar year data for PAWC in the UCARE Report showed $15 \%$ of residential customer complaints were "justified." OCA St. 5 at 10.
504. A review of the 2019 calendar year data for PAWC in the UCARE Report showed $24 \%$ of the payment arrangement requests were "justified." OCA St. 5 at 10.

## APPENDIX B - PUBLIC

505. OCA witness Alexander testified that the data demonstrated PAWC's failure to apply the proper policies in handling the customer's interaction prior to the customer's informal appeal to BCS. OCA St. 5 at 10.
506. A review of the 2019 calendar year data for PAWC in the UCARE Report showed that PAWC's percentage of payment arrangement appeals was the highest of any Pennsylvania water utility. OCA St. 5 at 10-11.
507. BCS recorded 62 (of which 61 related to Chapter 56 of the Commission's regulations) verified "infractions" based on its analysis of PAWC informal customer complaints filed with BCS in 2019. OCA St. 5 at 10-11.
508. The data showed repeated instances of PAWC threatening termination prior to resolution of a dispute. OCA St. 5 at 10-11.
509. In 2018-2019 timeframe, PAWC implemented process changes that achieved PAWC's internal target to reduce customer complaints informally appealed to BCS by $10 \%$ in 2019. OCA St. 5 at 13 (citing PAWC Response to OCA-I-001).
510. PAWC relies on identifying "red flags" to ensure that call center representatives are providing proper information and offering the required consumer protections to Pennsylvania customers. OCA St. 5 at 13-14.
511. The OCA recommends that PAWC be required to submit a quarterly analysis to BCS of its complaint trends, which identifies the underlying root cause of the disputes and complaints and documents the steps taken to respond to this analysis. OCA St. 5 at 28.
512. The root cause analysis performed should review why the customer's communication with PAWC resulted in a dispute and how the PAWC customer service representative handled the initial communication, as well as the evaluation of the PAWC training materials and the integration of PAWC's field and maintenance staff for investigations of leaks and billing issues. OCA St. 5 at 12.
513. Based on PAWC's existing reporting - BCS found that PAWC failed to apply the proper policies in handing the customer's interaction in $15 \%$ of customer complaints and $24 \%$ of payment arrangement requests, or that the percentage of PAWC's payment arrangement appeals was the highest of any Pennsylvania water utility. OCA St. 5SR at 8.
514. A public utility must make a full and prompt investigation of complaints made by the Commission or others, including customers, relating to service or facilities and keep these records for at least five years. 52 Pa . Code § 65.3 (Complaints); OCA St. 6 at 10.
515. The written records of these complaints must show the name and address of the complainant, the date and character of the complaint and the final disposition of the complaint. Id.

## APPENDIX B -PUBLIC

516. PAWC agreed to add the additional 10 categories for water systems and 6 categories for wastewater systems recommended by Mr. Fought to those it will use for its customer logs beginning with complaints received on and after January 2, 2021. PAWC St. 17R at 15.
517. PAWC should provide the logs in live Excel format. OCA St. 6 at 13.
518. PAWC's customer logs should include information about the final disposition of the complaint. Id.
519. This request is expressly required by Section 65.3 of the Commission's regulations. 52 Pa. Code § 65.3 (utility complaint records should include "the final disposition of the complaint").

## Customer Satisfaction Surveys

520. Currently, PAWC measures customer satisfaction with its performance by asking customers whether they are "overall satisfied with American Water" and about the "overall performance" by the customer service representative. OCA St. 5 at 18.
521. The actual results of these one-time questions shows a significant deterioration in 2020 (to date) compared to 2019 with regard to satisfaction with the call center representative's handling of the call and overall with American Water. OCA St. 5SR at 9.
522. The current survey questions are insufficient because they do not obtain more detailed information concerning the customer's review of the actual recent transaction. OCA St. 5 at 18 .
523. OCA witness Alexander noted that BCS has approved survey instruments for major Pennsylvania electric and gas utilities, which obtain information from customers about their experience in reaching the utility, using the automated phone system and interacting with the customer representative, in addition to their overall satisfaction. OCA St. 5 at 18.
524. The OCA recommends that PAWC develop routine customer satisfaction surveys consistent with those approved by BCS for other major utilities. OCA St. 5 at 18; OCA St. 5SR at 9-10.
525. PAWC's existing one or two questions are not an adequate measurement of its customers' satisfaction with their interactions with PAWC. OCA St. 5 at 18.

## Training on Termination of Service

526. OCA witness Alexander identified two concerns regarding the instructions and training provided to PAWC's field personnel for this personal contact prior to termination. OCA St. 5 at 17-18; OCA St. 5SR at 10-11.

## APPENDIX B - PUBLIC

527. PAWC witness Dean accepted Ms. Alexander's recommendation to enhance and expand PAWC's training of its field representatives to include scenarios and written instructions when there is an allegation of pending dispute or complaint, or allegation relating to domestic abuse. PAWC St. 17R at 14; OCA St. 5SR at 10-11.
528. The second concern is that PAWC does not train personnel to detect conditions that would result in danger or harm to those at the residence if water service is terminated at that time. OCA St. 5 at 18.
529. This issue has serious consequences for vulnerable customers whose health or safety depends on water service (and home heating, where water is required by the heating system). Id. at 18; OCA St. 5SR at 10-11.
530. The employee may observe potential situations where it may be appropriate, even if not mandated, to halt the termination process. OCA St 5SR at 10-11.
531. The OCA recommends that PAWC modify its training materials to expressly include the instruction that when field representatives "encounter circumstances not specifically identified in the law or PUC regulation, they are instructed to contact their supervisor and/or business performance team members before terminating service." OCA St. 5SR at 11.
532. Where field personnel observe an unusual condition at the premises which raises a question whether termination at that time may adversely impact the health and safety of the occupants of the dwelling, or the safety of PAWC's employee or the public, the training materials should explicitly empower the employee to use their discretion to withdraw and seek guidance from management before terminating service. OCA St. 5SR at 11 .

## Pressure Surveys and Pressures

533. The Commission requires utilities to maintain normal operating pressures of no more than 125 pounds per square inch gauge (p.s.i.g.) at the main, with limited exceptions. 52 Pa. Code § 65.6(a).
534. PAWC witness Aiton stated that the Company tries to design its distribution systems to maintain pressures at less than 125 p.s.i.g., but there are circumstances that necessitate higher pressures; for example, to serve high elevation areas without otherwise unnecessary booster pump stations that would add capital costs and maintenance costs. PAWC St. No. 3R at 10.
535. Mr. Aiton recognized that higher pressures may lead to higher damage claims and more lost water due to leaks, and stated that the Company reviews its individual systems during its Comprehensive Planning Study reviews to see where it can reduce pressures. Id. at 10-11.

## APPENDIX B - PUBLIC

536. In order to protect customer service lines and inside plumbing, where normal operating pressures exceed 125 p.s.i.g. at the main, OCA witness Fought recommended the Company should either reduce pressures in the mains to less than 125 p.s.i.g. or provide pressure reducing valves approved for water supply with the applicable pressure to customers. OCA St. 6 at 6 .
537. PAWC objected to this recommendation on the basis that it is not necessary for PAWC to furnish and install pressure reducing valves because the Company's tariff puts that burden on customers. Section 4.7 of the Company's water tariff states that the customer is required to provide for the installation and maintenance of a pressure regulator on their service line. PAWC St. 3R at 8-11; OCA St. 6SR at 10 .
538. Section 4.7 requires the customer to install the pressure regulator on the inlet side of the meter. OCA St. 6SR at 11.
539. Mr. Fought explained that if, as in many instances, the pressure regulator is installed inside the building it will protect the meter and the interior plumbing from high pressures. OCA St. 6 SR at 11.
540. This does not, however, protect the customer's service line between the curb box and the building from the higher pressures. OCA St. 6SR at 11.
541. Thus, the OCA recommends that, if PAWC elects to provide higher than 125 p.s.i.g. static pressure to some customers in order to serve other customers, the Company should either (1) provide a pressure reducer protecting the customer's service line or (2) provide an insurance policy covering repair or replacement of the service line. Id.
542. As Mr. Fought explained: "If this approach was implemented, the cost of protecting service lines with pressures over 125 psi would be taken into account in deciding the most economical way to provide service to higher ground elevations." Id.

## Main Extensions

543. OCA witness Fought recommended a main extension for Area 1 in the area of 51 Ullom Road, Washington County. OCA St. 6 at 7.
544. PAWC has made two previous main extensions to the area as a result of the settlements in the prior 2013 and 2017 base rate proceedings. OCA St. 6-SR at 14.
545. The Area 1 impacted potential consumer, Robert Teagarden, testified at the August 18, 2020, 6 p.m. Public Input Hearing in this proceeding. Tr. 197-198.
546. Mr. Teagarden and his neighbor down the road lost their wells approximately 5 years ago. Tr. 197-198; OCA St. 6 at 7.
547. Mr. Teagarden put a camera down his well and discovered the water was gone. OCA St. 6-SR at 13-14.

## APPENDIX B - PUBLIC

548. Mr. Teagarden put in a 1,500-gallon concrete tank in my yard and currently has water hauled in since that time. Tr. 197; OCA St. 6 at 7.
549. Company witness Aiton estimates that the proposed cost to extend service to Area 1 is $\$ 225,000$.PAWC St. 3-R at 13.
550. OCA witness Fought recommended a main extension in the area of Campbell Road and Old Steubenville Pike in Bulger, Pa. (Area 2). OCA St. 6 at 7.
551. The Area 2 customers believe that their well water was adversely affected by a fracking incident that is currently the subject of a grand jury investigation by the Office of Attorney General. OCA St. 6 at 7.
552. The Area 2 household at Old Steubenville Pike has had many illnesses possibly due to environmental reasons and possibly due to the contamination of their well. OCA St. 6 at 7.
553. The Area 2 household at Old Steubenville Pike does not believe that their water is potable due to the fracking incident. OCA St. 6 at 7.
554. The Area 2 household at Old Steubenville Pike only uses the well water for household purposes and do not use the water for drinking or cooking. OCA St. 6 at 7.
555. At times, the Area 2 household at Old Steubenville Pike smells sulphur when they run the water. OCA St. 6 at 7 .
556. The Area 2 household at Old Steubenville Pike claims staining of their toilets with a pinkish-orange color, and that a pinkish plastic like substance accumulates in the back of commode. OCA St. 6 at 7.
557. The Area 2 household at Old Steubenville Pike also claims that they have had damage to their washing machine due to the water and that their whites have become dingy as a result of the water. OCA St. 6 at 7-8.
558. As part of the settlement of PAWC's 2017 base rate proceeding, PAWC provided service to a neighbor at 121 Campbell Road. OCA St. 6 at 8.
559. Witness Aiton claims that the cost of an extension to Old Steubenville Road would be $\$ 235,000$. PAWC St. 3R at 12-13.
560. PAWC's service territory includes a nearby customer who received a main extension as a result of the 2017 base rate proceeding, and based upon Mr. Aiton's testimony, it appears that the Campbell Road property in Area 2 is within the Company's service territory. OCA St. 6SR at 15.
561. Additional potential customers may be located within the Company's service territory. OCA St. 6SR at 15.

## APPENDIX B - PUBLIC

562. In Surrebuttal Testimony, OCA witness Fought testified that it is his understanding that PAWC had an agreement with Robinson Township to install 4,250 feet of water main to provide service to nine customers along the Steubenville Pike. OCA St. 6-SR at
563. In Surrebuttal Testimony, OCA witness Fought testified that it is his understanding that the agreement was cancelled after new Township Supervisors were elected. OCA St. 6SR at 16.
564. OCA witness Fought testified that if that 4,250 feet of main were installed, it could now serve 9812 Old Steubenville Pike and another potential 20 customers in the area along or nearby that main. OCA St. 6SR at 15-16.
565. OCA witness Fought also recommended a main extension to the Area 2 household located on Campbell Road, Bulger, Pa. which is adjacent to the 121 Campbell Road property that received a main extension as a result of PAWC's last base rate proceeding. OCA St. 6 at 8.
566. The Area 2 Campbell Road household seeks two taps, one for the farm and one for the house. OCA St. 6 at 8.
567. The Area 2 Campbell Road household claims that the water quality in their well changed five years ago. OCA St. 6 at 8 .
568. The Area 2 Campbell Road household claims that their water was previously, crystal clear and now they sometimes have a white swirl in their water that eventually settles. OCA St. 6 at 8.
569. The Area 2 Campbell Road household also claims that sometimes smell a sulphur odor from the water and their toilets have been stained an orange color. OCA St. 6 at 8.
570. The Area 2 Campbell Road household continued to consume the well water until July of 2020. OCA St. 6 at 8.
571. Three of the four Area 2 Campbell Road household members have serious kidney and adrenal gland health issues, including their 12 year old daughter, and they attribute the health issues to consumption of the water over the last five year. OCA St. 6 at 8.
572. The water has also impacted the animals and livestock at the Area 2 Campbell Road household. OCA St. 6 at 8.
573. The Area 2 Campbell Road household had several kittens that have had to be put down due to kidney failure. OCA St. 6 at 8.
574. The Area 2 Campbell Road household's calves that consume the well water have not flourished and have started to atrophy. OCA St. 6 at 8.
575. When the Area 2 Campbell Road household moved the calves to another field not fed by the well water, the calves have rebounded. OCA St. 6 at 8.

## APPENDIX B - PUBLIC

576. Company witness Aiton testified that an extension to serve Campbell Road would cost an estimated $\$ 205,000$. PAWC St. 3-R at 13.
577. The Settlement of the 2017 base rate proceeding included an extension to 121 Campbell Road. OCA St. 6 at 9.
578. The customers in Area 2 have alleged serious health consequences due to the lack of potable water. OCA St. 6SR at 17.

## Sewage Backups

579. Based on information provided by PAWC, two wastewater customers in Dunmore, PA registered informal complaints. OCA St. 6 at 12; PAWC St. 2R at 30-33.

580. OCA witness Fought generally addressed sewers backing up into basements in areas served by combined sewers. OCA St. 6SR at 5.
581. He explained that a combined sewer system collects surface runoff and sewage water in a shared system. Id.
582. PAWC has acquired some combined sewer systems for which they are in the process of implementing Long Term Control Plans (LTCP) for reducing the amount of Combined Sewer Overflows (CSO) in compliance with the federal Clean Water Act. OCA St. 6SR at 6.
583. One procedure for reducing CSOs is to reduce the peak flows so that existing downstream pipes do not overflow, by delaying flows (by providing storage), or rerouting flows. OCA St. 6SR at 6.

## OCA PROPOSED CONCLUSIONS OF LAW

1. Pennsylvania-American Water Co. is a public utility as defined in Section 102 of the Public Utility Code. 66 Pa. C.S. § 102.
2. The Commission has jurisdiction over the parties and the subject matter of this proceeding. 66 Pa . C.S. § 101, et seq.
3. The utility requesting the rate increase has the burden of establishing the justness and reasonableness of every element of its requested rate increase. 66 Pa. C.S. §§ 315(a), 1301; Lower Frederick Twp. v. Pa. PUC, 48 Commw. 222, 226-27 (1980).
4. PAWC has the burden of proving that the rate involved is just and reasonable. $66 \mathrm{~Pa} . \mathrm{C} . \mathrm{S}$. §§ 315(a), 1301, and 1308(e).
5. The Commission has broad authority to consider a utility's customer service and quality of service and is required to evaluate the "efficiency, effectiveness and adequacy of service" in reviewing existing and proposed rates. 66 Pa . C.S. §§ 523(a), 1501.
6. The Commission has authority to prescribe just and reasonable standards and practices to be furnished by a utility and to require changes and improvements, as necessary to make such service and facilities adequate, efficient, safe and reasonable. 66 Pa. C.S. §§ 1501, 1504.
7. As a consequence of the COVID-19 pandemic's impact on the health and economy of the Commonwealth and the world, many of the Fully Projected Future Test Year projections for Year 1 (2021) and Year 2 (2022) included in PAWC's filing cannot be found to be just and reasonable.
8. As a result of the COVID-19 pandemic, it cannot be found to be just or reasonable to impose any rate increase at this time when unemployment numbers are close to record highs and the economic effects of the pandemic will not be fully known for some time.
9. If, in the alternative, the Commission deems it necessary to review PAWC's rate increase under traditional ratemaking provisions, the revenue increase shall be limited to a onetime decrease of one-time revenue decrease of $\$ 68,333,991$ for water operations and $\$$ 30,906, 732 million rate increase for wastewater.

The Company has not met its burden of proving the proposed multiyear rate plan will produce just and reasonable rates.
10. PAWC has not met its burden of proving the proposed tracker for Pension and Other Post Employment Benefit expenses will produce just and reasonable rates.
11. PAWC has not met its burden of proving the proposed Regional Consolidation Surcharge will produce just and reasonable rates.
12. PAWC has not met its burden of proving that the rates, rules and regulations in its existing and proposed tariffs are just and reasonable.
13. Under PAWC's tariff, main extensions may be provided to customers without a CIAC where there is a substantial public need, and the public health and safety may be compromised without access to a public water supply. Pennsylvania-American Water

Company Water Tariff, Supplement No. 2 to Tariff Water Pa. PUC No. 5, First Revised Tariff Page No. 89 (effective Jan. 1, 2018).
14. Subject to Commission approval, PAWC could apply for a certificate of public convenience under Sections 1102(a) and 1103(a) of the Public Utility Code to extend its service territory to serve new main extension customers located outside of its existing service territory. 66 Pa . C.S. §§ 1102(a), 1103(a).
15. Since PAWC is already a certificated public utility in Pennsylvania, the Commission may apply the standard of "continuing fitness to serve" to the application. Blue Bird Coach Lines, Inc., 72 Pa. P.U.C. 262 (1990); Re V.I.P. Travel Servs., Inc., 56 Pa. P.U.C. 625, 631 (1982).

## OCA PROPOSED ORDERING PARAGRAPHS

It is hereby ORDERED THAT:
16. Pennsylvania-American Water Co. shall not place into effect the rates, rules and regulations contained in Supplement Nos. 19 (water) or 16 (wastewater), which have been found to be unjust, unreasonable and, therefore, unlawful.
17. In light of the impact of the COVID-19 pandemic, Pennsylvania-American Water Co. shall not be authorized to file tariffs, tariff supplements, or tariff revisions containing rates, provisions, rules and regulations, consistent with the findings herein, to produce any revenue increase.
18. If in the alternative, Pennsylvania-American Water Co. is permitted to increase its base rate revenues under traditional ratemaking provisions, Pennsylvania-American Water Co. shall be authorized to file tariffs, tariff supplement, or tariff revisions limited to a onetime revenue decrease of $\$ 68,333,991$ for water operations and $\$ 30,906,732$ million rate increase for wastewater.
19. Pennsylvania-American Water Co. shall amortize the unprotected EADIT over a threeyear period.
20. Pennsylvania-American Water Co. shall no later than six months after a final order in this proceeding, present an Arrearage Management Plan to the Commission for review and approval. The AMP should be designed through a multi-party stakeholder consultative process, with BCS specifically invited to participate as a stakeholder.
21. Pennsylvania-American Water Co. shall be directed to budget $\$ 50,000$ to hire an expert consultant to develop, within twelve months of a final order in this proceeding, a grassroots, boots-on-the-ground outreach plan for its low-income bill discount that relies on community-based "trusted messengers" to help identify and enroll eligible customers in its bill discount. The outreach program should be directed to explicitly identify how it implements each of the principles set forth below: (1) using the community as a "boots-on-the-ground" means of identifying and engaging the hard-to-reach population; (2) going to the community (reaching them "where they live, work, shop, play and pray")

## APPENDIX C

rather than making the community come to you; and (3) relying on grassroots "trusted messengers" from within the community. PAWC's new outreach plan should reflect focused consumer education and outreach efforts, tailored to the demographics of its individual service territory. The plan should, in particular, identify efforts to educate and enroll eligible and interested customers at or below $50 \%$ of the Federal Poverty Level.
22. Pennsylvania-American Water Co. shall PAWC identify the 2,159 low-income customers who were found to be eligible for its low-income bill discount between January 2018 and April 2020 (or an updated number as of the date of a final order in this proceeding) and, without further action on the part of the customer, enroll those customers in the bill discount to the extent they remain PAWC customers. Moreover, PAWC should retroactively provide these customers who applied for the discount, been found to be eligible, and nonetheless were not enrolled, with benefits retroactive to the month in which they were found to be eligible. To the extent that customers are found to have had service disconnected, they should be reconnected without cost and enrolled in the bill discount.
23. Pennsylvania-American Water Co. shall delete the following language both from its water and from its wastewater tariffs: "To remain eligible for this rate, such customer must continually make timely payments on the discounted bills."
24. Pennsylvania-American Water Co. shall meet the performance standards as set forth above and as reflected in OCA Statement 6.
25. Pennsylvania-American Water Co. shall be required to conduct regular audits of the third-party call centers to ensure that the rights and remedies available to Pennsylvania residential customers pursuant to Chapter 56 are affirmatively offered and presented when making contact with such customers who have received a termination notice. The results of such audits should be reported to BCS as part of the quarterly customer complaint analysis that the OCA recommends.
26. Pennsylvania-American Water Co. shall be required to provide these proposed script modules to the stakeholders prior to their implementation, to accommodate a review of these instructions and scripts to ensure compliance with Chapter 56 and PAWC's commitments to offer its low-income program to customers with payment difficulties.
27. Pennsylvania-American Water Co. shall provide the customer complaint logs in live Excel format and include information about the final disposition of the complaint.
28. Pennsylvania-American Water Co. shall develop routine customer satisfaction surveys consistent with those approved by BCS for other major utilities.
29. Pennsylvania-American Water Co. shall modify its training of its call center employees and field personnel consistent with the recommendations made by OCA.
30. Pennsylvania-American Water Co. shall, if PAWC elects to provide higher than 125 p.s.i.g. static pressure to some customers in order to serve other customers, either (1) provide a pressure reducer protecting the customer's service line or (2) provide an insurance policy covering repair or replacement of the service line.
31. Pennsylvania-American Water Co. shall provide main extensions under Tariff Rule 27.1 (F) to two areas as set forth in OCA's testimony.

## APPENDIX C

32. Pennsylvania-American Water Co. shall file detailed calculations with its tariff filing, which shall demonstrate to this Commission's satisfaction that the filed rates comply with the proof of revenue, in the form and manner customarily filed in support of compliance tariffs.
33. Pennsylvania-American Water Co. shall comply with all directives, conclusions and recommendations contained in this Commission's Opinion and Order that are not the subject of individual ordering paragraphs as fully as if they were the subject of specific ordering paragraphs.
34. Pennsylvania-American Water Co. shall allocate the authorized increase in operating revenues to each customer class and rate schedule within each class in the manner set forth in this Order.
35. The Complaints filed by the various parties to this proceeding at Docket Numbers R-2020-3019369 and R-2020-3019371 are granted in part and denied in part, to the extent consistent with this Commission's Opinion and Order.

DATE: $\qquad$

## LIST OF OCA-SPONSORED TESTIMONY AND EXHIBITS ADMITTED INTO THE RECORD

## OCA Statement 1, Direct Testimony of Scott J. Rubin

Appendix A: Curriculum vitae
Schedule SJR-1: Pandemic-related data for counties served by PAWC
Schedule SJR-2: Excerpt from Board of Governors of the Federal Reserve System, Report on the Economic Well-Being of U.S. Households in 2019, Featuring Supplemental Data from April 2020 (released May 14, 2020)
Schedule SJR-3: Experienced loss of employment income since mid-March, and expected income loss in the next four weeks, Pennsylvania households by selected characteristics, as of the week ending July 21, 2020
Schedule SJR-4: How Pennsylvania households who lost employment income since mid-March paid their bills in the past 7 days, as of the week ending July 21, 2020
Schedule SJR-5: Impact of COVID-19 on Consumer Energy Use \& Outlook: Results of EPRI National Survey (April 29, 2020)
Schedule SJR-6: Water COSS: Allocation of late payment fees based on actual 2019
Schedule SJR-7: Water COSS: Allocation of Citizens Acquisition CIAC and CAC
Schedule SJR-8: Results of OCA Proposed Changes in Water COSS Before Subsidies
Schedule SJR-9: Excerpt from Water Environment Federation Manual of Practice No. 27, Financing and Charges for Wastewater Systems (4 ${ }^{\text {th }}$ edition)

Copies of Interrogatory Answers Referenced in the Testimony

OCA-04-005
OCA-04-018
OCA-04-025
OCA-07-001

OCA-08-003
OCA-08-004
OCA-08-006
OCA-08-009

OCA-08-010
OCA-08-012
I\&E-RS-16-D
I\&E-RS-23-D

## OCA Statement 1SR, Surrebuttal Testimony of Scott J. Rubin

Schedule SJR-10-SR: Updated pandemic-related figures and tables

OCA Statement 2, Direct Testimony of Ralph C. Smith - Confidential and Public Versions
Attachment RCS-1: Background and Qualifications
$\begin{array}{ll}\text { Exhibit LA-1: } & \begin{array}{l}\text { Schedules showing Revenue Requirement, Rate Base, Net Operating Income and } \\ \text { Adjustments for the Water and Wastewater utility operations }\end{array} \\ \text { Exhibit LA-2: } & \begin{array}{l}\text { Schedules Showing Recommended Adjustments }\end{array}\end{array}$

## APPENDIX D

| Exhibit LA-3: | Selected Non-Confidential Documents Referenced in the Testimony and Exhibits <br> LA-1 and LA-2 |
| :--- | :--- |
| Exhibit LA-4: | Selected Confidential Documents Referenced in the Testimony and Exhibits <br> LA-1 and LA-2 |
| Exhibit LA-5: | American Water Works, Inc. Form 10-K for the period ending December 31, <br> 2019 |
| OCA Statement 2SR, Surrebuttal Testimony of Ralph C. Smith - Confidential and Public Versions |  |
| Exhibit LA-6: | Revised Revenue Requirement Summary Schedules showing Revenue <br> Requirement, Rate Base, Net Operating Income, Cost of Capital, and <br> Summarized Adjustments for the Water and Wastewater Utility Operations <br> Relating to FPFTY 2021 on a Year-End Basis |
| Exhibit LA-7: | Schedules Showing Recommended Adjustments Relating to FPFTY 2021 on a <br> Year-End Basis |
| Exhibit LA-8: | Schedules showing Recommended and/or Corrected Adjustments Relating to <br> Rate Year 2022 on an Average Basis |
| Exhibit LA-9: | Present Value Analysis Applied to PAWC's JRW-3 Presentation re Unprotected <br> EADIT amortization |
| Exhibit LA-10: | Federal Reserve Statistical Release Consumer Credit August 2020 - released <br> 10/7/2020 |
|  |  |

## OCA Statement 3, Direct Testimony of Aaron L. Rothschild

Appendix A: Resume of Aaron L. Rothschild
Appendix B: Testifying Experience of Aaron L. Rothschild
Schedule ALR-1: $\quad$ Cost of Capital - Water and Wastewater 2021 and 2022
Schedule ALR-2: Cost of Equity
Schedule ALR-3: Discounted Cash Flow - Indicated Cost of Equity
Schedule ALR-4: Capital Asset Pricing Model - Indicated Cost of Equity
Schedule ALR-5: Water Proxy Group
Exhibit 1: Value Line Water Utility Industry Report - July 10, 2020

OCA Statement 3SR, Surrebuttal Testimony of Aaron L. Rothschild
Schedule ALR-SR4: Capital Asset Pricing Model - Working Papers

## OCA Statement 4, Direct Testimony of Roger D. Colton

Schedule RDC-1: Collections Efficiency
Schedule RDC-2: PAWC Income Eligibility Determinations and Enrollment

## APPENDIX D

Appendix A: Colton Vitae

OCA Statement 4SR, Surrebuttal Testimony of Roger D. Colton
Schedule RDC-1SR: PAWC Response to OCA-05-002

OCA Statement 5, Direct Testimony of Barbara R. Alexander - Confidential and Public Versions
Exhibit BA-1: Curriculum Vitae
Exhibit BA-2: PAWC Customer Call Center Data and Calculation of the Annual Average
Results
Exhibit BA-3: PAWC Response to OCA-01-001, Attachment 6
Exhibit BA-4: "How to Construct a Service Quality Index in Performance-Based Ratemaking", The Electricity Journal, April, 1996

OCA Statement 5SR, Surrebuttal Testimony of Barbara R. Alexander - Confidential and Public Versions

OCA Statement 6, Direct Testimony of Terry L. Fought
Appendix A: Background \& Qualifications
Exhibit TLF-1: Listing of Complaints Received by PAWC Water System

OCA Statement 6SR, Surrebuttal Testimony of Terry L. Fought - Confidential and Public Versions

## OCA Hearing Exhibit 1

List of OCA Sponsored Testimony and Exhibits Admitted into the Record

## OCA Cross Examination Exhibit 1

Comparison of the Revenue Requirement Impact of Varied EADIT Amortization Periods at OCA ROE

## OCA Cross Examination Exhibit 2

Comparison of the Revenue Requirement Impact of Varied EADIT Amortization Periods at Higher ROE

## APPENDIX E

## SUMMARY OF PUBLIC INPUT HEARING TESTIMONY

1. Pennsylvania State Senator Judith Schwank testified that she was concerned over the fact that rate increase requests by Pennsylvania-American Water Company "seem to have become a biennial ritual." Tr. 82. She also expressed being "very disturbed" that proceedings discussing "significant water and wastewater rate increases" were taking place "in the middle of an economic catastrophe caused by COVID-19." Tr. 82-83. Senator Schwank testified that she is "quite sure that in this environment, few if any ratepayers can afford any rate increase request." Tr. 83.
2. Dennis Gore testified that he is worried he will not be able to afford to pay the proposed rate increase. Tr. 93. Mr. Gore is retired and is already finding it difficult to survive off of his "limited" income, which consists of Social Security benefits. Tr. 93.
3. Stephen Sutter objected to the Company's proposed rate increase, testifying that the water provided by Pennsylvania-American Water Company to his home smelled and had an "awful taste." Tr. 99. He also testified that the Company tested the water multiple times and did not inform Mr. Sutter of any issues with it. Tr. 99. However, because the smell and the taste continued to be an issue, Mr. Sutter began buying bottled water and bagged ice. Tr. 100-02.
4. John Papalia, the Director of Chamber Operations with the Warren County Chamber of Business and Industry, testified that Pennsylvania-American Water Company "has been a key partner . . . in Warren County" and has "supported a number of different initiatives . . . ." Tr. 113.
5. John Norton objected to the Company's proposed rate increase, testifying that " $[\mathrm{i}] \mathrm{n}$ these difficult times when many have lost their jobs and many smaller businesses are struggling to survive, it is inappropriate to grant unfair and excessive increases to PennsylvaniaAmerican Water Company." Tr. 121.
6. Roseanne Milazzo, testifying on behalf of West Norriton Township, requested that the PUC "deny any increase in rates because water rates have become not just unreasonable, but exorbitant." Tr. 150. Ms. Milazzo testified that "[t]he company and its investors can afford to forego any rate increase, especially in this time of economic difficulty and COVID-19 pandemic." Tr. 157. Ms. Milazzo also stated that the Company's rates are "already too expensive" and that "West Norriton residents should not be forced to subsidize this giant company's growth, especially when we need to pay for maintenance and upgrades of our own [sewer] system." Tr. 152, 156. Ms. Milazzo further stated that "West Norriton residents have complained to [her] of a vile, chlorine smell of their water. Some, including resident Amy Gallagher, are afraid to drink it." Tr. 155.
7. Sheila McMillen, whom relies on disability benefits for income, objected to the Company's proposed rate increase. Tr. 163. Ms. McMillen testified that her family of three is already doing "everything possible" to lower their water bills, including flushing their toilet less frequently, using bottled water, and doing laundry elsewhere. Tr. 163.

## APPENDIX E

However, they are still receiving high water bills. Tr. 163. When asked whether she was enrolled in the Company's low income assistance program (Help to Others Program), Ms. McMillen testified that she was, but that because of an increase in taxes, the price remains virtually unchanged. Tr. 166.
8. Leroy James Watters, III, a veteran of the Pennsylvania National Guard whom retired from Verizon in 2003, objected to the Company's proposed rate increase. Tr. 171-72. Mr. Watters testified that "Pennsylvania-American Water Company does nothing to protect and improve the natural resource it draws its product from." Tr. 172.
9. Paula Mercuri objected to the Company's proposed rate increase, testifying that the Company should rescind their request for a rate increase because of COVID-19. Tr. 187. Ms. Mercuri stated that her water bill is already "very high" and that while she held two part-time jobs before COVID-19, she is currently unemployed and "afraid to go back to work" because of her age. Tr. 188.
10. Robert Teagarden called into the hearing to complain about not having a public water connection to his home. Tr. 197-98.
11. Maureen Madden, representative of the 115 legislative district in Monroe County, testified that "as best as I can figure out this rate increase is going to cost my constituents approximately $\$ 15$ a month more in their water bill." Tr . 228. Representative Madden added that even before COVID-19, "a $\$ 15$ a month increase was going to be a lot" for her constituents to bear. Tr. 228. Representative Madden asked that the increase be spread over more than two years. Tr. 229.
12. Mary Sally, testifying as an employee of Dollar Energy Fund, stated that the Company has partnered with Dollar Energy Fund to establish the Help to Others Program to provide assistance for consumers who struggle to pay their monthly water bills. Tr. 233.
13. Chad Yurisic, testifying on behalf of the City of Warren, stated that the Company "is proposing to combine the revenue requirements for their drinking water systems and wastewater systems." Tr. 237. Mr. Yurisic added that because the City "owns and operates their own wastewater treatment plan," the Company "is proposing to charge city residents for a service that the city provides and not the water company." Tr. 237-38. Mr. Yurisic also testified that the Company's additional regionalization and consolidation surcharge should be delayed because of the "economic conditions resulting from the COVID-19 pandemic." Tr. 238.
14. Donna Kaczmarek complained about her high monthly bill and the Company's lack of transparency in how her rates are calculated. Tr. 242. Ms. Kaczmarek testified that she has a well on her property which produces the water that her household uses, but pays a monthly bill for her household's wastewater. Tr. 243.
15. Robin Romanelli expressed her confusion as to why her water bill has doubled in the last several months, even though she "downsized to a much smaller home" and her two

## APPENDIX E

daughters moved out. Tr. 246. Further, Ms. Romanelli testified that her water "comes out of the faucet like foam for the first 30 seconds" and "smells like rotten eggs." Tr. 247.
16. Johnie Perryman testified the following: the "increase in water prices is putting me back in the hole deeper than I want to get into. Right now I cut off my cable television because I don't want to pay that bill. I don't have long distance on my phone I don't know how I can cut back any further for paying this increase in the water bill." Tr. 256-57.
17. Jay Walker, a community organizer for Clean Air Council, testified that everyone he spoke to in Clairton was "shocked to hear how large" the increase in water rates would be. Tr. 260. Mr. Walker also testified that only one of the residents he spoke to "was properly notified about the rate increase and none of them knew about the Pennsylvania Utility Commission hearings." Tr. 260-61. Mr. Walker added that the poverty rate in Clairton is $28.2 \%$. Tr. 261.
18. Pennsylvania State Representative Austin Davis objected to the Company's proposed rate increase, expressing his concern over the Company's "willingness to push for this increase . . . while our Commonwealth and its residents currently face financial hardships many of us have never seen before." Tr. 289.
19. Jeanne Hoffman objected to the Company's proposed rate increase, expressing her frustration at the frequency of rate increases. Tr. 319-20.
20. Linda Nitch, an employee at the Lawrence County Regional Chamber of Commerce, testified in favor of the Company's rate increase, arguing that "the investment that is occurring as a result of PA-American Water receiving their funding and being able to invest these dollars is helpful to us." Tr. 322-24.
21. Becky Boyle read a letter authored by Senator Lindsay Williams in which she objected to the Company's proposed rate increase. Tr. 405. Senator Williams' letter stated that while she would "strenuously object to raising rates for the average customer, nearly 20 percent over the course of two years in ordinary times, Allegheny County residents are not living in ordinary times," referring to the effects of the COVID-19 pandemic. Tr. 405.
22. James Mascioli complained about his and his mothers' water service, the condition of roads, and proposed a method for apportioning increases. Tr. 410-12.
23. James Torakeo objected to the Company's proposed rate increase. Tr. 419. Mr. Torakeo argued that the size of the rate increases proposed are unreasonable, the rate increases have not been communicated with sufficient clarity to customers, and that the rate increases proposed are unjust and discriminatory in nature. Tr. 419. Mr. Torakeo further argued that the rate increases in their current format are not consistent with sound public policy and that other options exist to fund capital improvements. Tr. 419.
24. Frederick Bickerton objected to the Company's proposed rate increase, calling it "ridiculous." Tr. 429. He also stated that "[t]he elderly and the poor in this area cannot afford" the increase. Tr. 429.

## APPENDIX E

25. Betty Ramseur objected to the Company's proposed rate increase, stating that "[w]e are in the midst of a pandemic and because I'm a nurse, hand washing is really important to me. Tr. 432. Not only hand washing, but you got to do clean and double clean every day just to keep the germs at bay." Tr. 432. Ms. Ramseur further added that it is "ridiculous for them to request approximately $\$ 350$ a year . . . I j just feel the amount is way too high. And I know I'm on a pension. The pension does not increase." Tr. 432.
26. Kim Meacham objected to the Company's proposed rate increase, stating that a rate increase would be "greatly difficult" for her. Tr. 435. Ms. Meacham further stated that she has been a resident at her home for 35 years and is now retired and "on a fixed income." Tr. 435.
27. James Lentz, testifying on behalf of the Lower Providence Fire Department, stated that the Company has a good working relationship with the fire department. Tr. 441.
28. Jessica Benham objected to the Company's proposed rate increase, citing the effects of the COVID-19 pandemic. Tr. 444.
29. Nicholas Letta, an employee of Pennsylvania-American Water and a union representative for the Utility Workers United Association, objected to the Company's proposed rate increase. Tr. 473. Mr. Letta testified as follows: "I feel like the proposed base rate increase . . . discriminately affects our most disadvantaged customers, which are those with either fixed incomes, low-income or - and indeed, they have no income. The pandemic has also affected these folks from the same group most. And at this time, I feel like this form of rate increase cannot be allowed to happen." Tr. 473. Mr. Letta also testified about noticing "a change in the Company" since it went public "from one that was customer-driven to one that now seems to be profit-driven." Tr. 473. Further, Mr. Letta expressed concerns over slow responses to emergencies and bad hydrants. Tr. 47374.
30. Kimberly Haymans-Geisler objected to the Company's proposed rate increase. Tr. 490. Ms. Haymans-Geisler expressed concern over the financial effects of COVID-19 and the "uncertainly about how new company revenues enabled by the rate increase will translate into greatly needed infrastructure upgrades across West Norriton Township." Tr. 491-92. Ms. Haymans-Geisler elaborated by stating that her "uncertainty about needed infrastructure upgrades was dramatically highlighted by a water main break on February 22nd, 2018, directly in front of my own driveway" which caused water to flow continuously for about 90 minutes. Tr. 493. Ms. Haymans-Geisler added that permanent repairs did not occur for over eight months after the incident. Tr. 492.

## APPENDIX F

## SUPPLEMENT TO OCA MAIN BRIEF

## Section I. INTRODUCTION AND OVERVIEW

## Section I.B. Procedural History

## I. INTRODUCTION AND OVERVIEW

On April 29, 2020, Pennsylvania-American Water Company (PAWC or the Company) filed Supplement No. 19 to Tariff Water - PA P.U.C. No 5 and Supplement No. 19 to Tariff Wastewater - PA P.U.C. No. 16 to become effective June 28, 2020. Through these filings, PAWC requests that the Commission approve multiyear rate increases to its water and wastewater rates pursuant to Section 1308(d), 66 Pa . C.S. § 1308(d). PAWC's tariffs propose to increase the Company's total annual operating revenues by approximately $\$ 138.6$ million over a two-year period: $\$ 92.4$ million in 2021 or $12.9 \%$ over the amount of annual revenues at present rates and $\$ 46.2$ million in 2022 or $5.8 \%$ over the amount of annual revenues at present rates. The effective date of the proposed rates is January 28, 2021.

Due to the unprecedented impact of COVID-19 on the people and businesses of the Commonwealth, the Office of Consumer Advocates recommends that no rate increase be authorized at this time for either water or wastewater operations. If that recommendation is not adopted, the OCA recommends that PAWC's multiyear rate plan (MYRP) be rejected and that rates be set using the end of year 2021 FPFTY. Using the 2021 FPFTY, the OCA's analyses show that the Company would need a water revenue reduction of $\$ 68,333,944$ and would need an increase of no more than $\$ 30,906,901$ in wastewater revenues. App. A.2, OCA Table I, for each of the revenue requirements. If the Commission considers the MYRP, the OCA has provided recommended water and wastewater revenue requirements for Year 1 (2021) and Year 2 (2022),

## APPENDIX F

which are calculated on an average basis for Year 2. For water revenue requirements, the OCA has identified a revenue decrease of $\$ 91.22$ million for Year 1 , and a revenue decrease of roughly $\$ 128.817$ million for Year 2. OCA Exh. LA-1, at 5, 7. For wastewater revenue requirements, OCA calculated a revenue increase of roughly $\$ 26.805$ million for Year 1, and a revenue decrease of $\$ 16.572$ million for Year 2. OCA Exh. LA-1 at 6,8 . The OCA also recommends that the Commission utilize a Fully Projected Future Test Year (FPFTY) 2021 on a year-end basis and reject the Company's multiyear rate plan (MYRP) at this time.

As discussed in greater detail below, the OCA has proposed adjustments to the Company's proposed capital structures for water and wastewater, cost of equity; the average test year approach to the 2022 rate year as a second rate year in a multiyear rate plan; rate base adjustments to the Excess Accumulated Deferred Income Taxes and the associated amortization expense adjustment; revenue adjustments related to the declining residential and commercial consumption and changes in revenues due to changes in the number of customers; and net operating income items, including changes in power and chemical costs, salaries and wages expenses, the Annual Incentive Plan and Stock Based Compensation (including the Service Company costs), group insurance expenses, 401K Defined Contribution Plan and Employee Stock Purchase Plan, capitalization rate, property tax expense, and depreciation expense. These adjustments result in the OCA's recommended revenue requirements for water and wastewater. The OCA also proposes adjustments to the Company's cost of service studies and proposed allocation of water and wastewater revenues, including the Company's proposed shift of wastewater revenue requirement to water customers.

The Office of Consumer Advocate (OCA) hereby submits this Main Brief regarding the water and wastewater rate increases proposed by Pennsylvania-American Water Company (PAWC or Company).

## APPENDIX F

## B. History of the Proceeding

PAWC serves customers located in 36 counties across Pennsylvania. As of December 31, 2019, the Company provides water service to approximately 665,829 customers in portions of Adams, Allegheny, Armstrong, Beaver, Berks, Bucks, Butler, Centre, Chester, Clarion, Clearfield, Clinton, Columbia, Cumberland, Dauphin, Fayette, Indiana, Jefferson, Lackawanna, Lancaster, Lawrence, Lebanon, Luzerne, McKean, Monroe, Montgomery, Northampton, Northumberland, Pike, Schuylkill, Susquehanna, Union, Warren, Washington, Wayne, Wyoming, and York Counties. The Company also provides wastewater service to approximately 74,354 customers in portions of Adams, Allegheny, Beaver, Berks, Chester, Clarion, Cumberland, Lackawanna, McKean, Monroe, Northumberland, Pike, Washington, and York Counties.

On May 7, 2020, the OCA filed its Formal Complaint and Public Statement at Docket Nos. C-2020-3019751 and C-2020-3019754, and on the same date, the Bureau of Investigation and Enforcement (I\&E) filed its Notice of Appearance. On May 11, 2020, the Office of Small Business Advocate (OSBA) filed its Formal Complaint and Public Statement at Docket Nos. C-20203019767 and C-2020-3019772. Petitions to Intervene were filed by the Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA), Commission on Economic Opportunity (CEO), AK Steel Corporation (AK Steel), and Pennsylvania-American Water Large Users Group (PAWLUG). Rate Protests were filed by Pennsylvania State Representative Austin Davis and Pennsylvania Senator Judith L. Schwank. Formal Complaints have been filed by 49 consumers, including active Formal Complainants, Jan K. Vroman, Mr. and Mrs. Gerald S. Lepre, Jr., Charles and Jennifer Spryn, and Jessica and Jeffrey LaBarge. Formal Complaints have also been filed by East Norriton Township and West Norriton Township.

## APPENDIX F

Pursuant to the Commission's Order entered May 21, 2020, the Commission suspended Tariff Supplement No. 19 to Tariff Water - PA P.U.C. No 5 and Supplement No. 19 to Tariff Wastewater - PA P.U.C. No. 16 until January 28, 2021, pursuant to Section 1308(d) of the Public Utility Code, 66 Pa. C.S. § 1308(d), and initiated an investigation into the lawfulness, justness, and reasonableness of the rates, rules, and regulations proposed in the proposed Supplements and existing rates. Subsequently, the matter was assigned to Administrative Law Judge (ALJ) Conrad A. Johnson.

On May 28, 2020, the OCA filed an Expedited Motion for an Extension of the Statutory Period of PAWC's base rate proceeding asserting that a 45 day extension of the statutory suspension was necessary to meet the mounting challenges from the COVID-19 pandemic. On June 1, 2020, the Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA) filed an Answer in Support of OCA's Motion for Extension, and on June 4, 2020, I\&E also filed an Answer in Support of OCA's Motion for Extension.

On June 4, 2020, a Prehearing Conference was held, and Motion for Extension was addressed. The Motion for Extension was addressed by Chief Administrative Law Judge (CALJ) Charles E. Rainey, Jr. Also, on June 4, 2020, Chief ALJ Rainey issued the Order Granting the Office of Consumer Advocate's Expedited Motion for an Extension of the Statutory Suspension Period of Pennsylvania-American Water Company's Base Rate Proceeding, which was issued to the Parties on June 4, 2020. Chief ALJ Rainey's Order suspended the proposed rate increase until March 15, 2021. On June 15, 2020, a Prehearing Order was issued. On June 26, 2020, ALJ Johnson issued the First Interim Order Granting Respondent's Request for Protective Order.

On June 24, 2020, PAWC filed its Petition seeking reversal of the June 4, 2020 Order of Chief ALJ Rainey. On July 6, 2020, the OCA and I\&E filed Answers to the Petition. On July 8,

## APPENDIX F

2020, CAUSE-PA filed an Answer to the Petition, and the OSBA filed an Answer to the Petition on July 14, 2020. On August 20, 2020, the Commission issued its Order affirming the Chief ALJ's decision to grant the request for the additional forty-five days. The Commission, however, stated:

Because we are only authorizing the extension or suspension of deadlines and not of substantive rights, failure to meet the seven-month deadline would result in the proposed rates going into effect by operation of law. Therefore, we find that PAWC is entitled to the appropriate rate relief in accordance with Section 1308(d) of the Code immediately following the end of the original statutory rate suspension period, which, in this case, is January 28, 2021.

Additionally, we shall reserve the following issues to be addressed at the appropriate stages in this proceeding for final adjudication: (1) the appropriate rate recovery immediately following the end of the Section 1308(d) suspension period until the date the final rates are approved in a final Commission order and take effect in the utility's compliance tariff filing; and (2) the appropriate mechanism for implementing such rate recovery. We shall direct the Parties to address the foregoing rate recovery issues at the appropriate stages in this proceeding and direct the OALJ to fully address the issues and provide a recommended disposition thereof in the Recommended Decision.

Extension Order at 20-21.
On August 18, 25, 26, and 27, 2020 at 1:00 p.m. and 6:00 p.m. Video/Telephonic Public
Input Hearings were held, at which approximately 30 customers testified.

On September 8, 2020, the OCA served the Direct Testimony of its witnesses: Scott J.

Rubin, ${ }^{1}$ Ralph C. Smith (Public and Confidential), ${ }^{2}$ Aaron L. Rothschild, ${ }^{3}$ Roger D. Colton, ${ }^{4}$

Barbara R. Alexander (Public and Confidential), ${ }^{5}$ and Terry L. Fought. ${ }^{6}$ On October 20, 2020, the
OCA served the Surrebuttal Testimony of its witnesses: Ralph C. Smith (Public and Confidential),

Scott J. Rubin, Aaron L. Rothschild, Roger D. Colton, Barbara R. Alexander (Public and

Confidential), and Terry L. Fought (Public and Confidential).
On October 23, 2020, a Second Prehearing Conference was held to address procedural
issues.
${ }^{1}$ Mr. Rubin is an independent attorney and public utility industry consultant who has testified as an expert witness before utility commissions and courts in twenty states and the District of Columbia and province of Nova Scotia. Since 1984, Mr. Rubin has provided legal and consulting services to a variety of parties interested in public utility regulatory proceedings. A complete description of Mr. Rubin's qualifications is provided in OCA Statement 1, Appendix A.
${ }^{2}$ Mr. Smith is a Certified Public Accountant, attorney, and Senior Regulatory Consultant at Larkin \& Associates, PLLC. Most of Mr. Smith's 39 years of work experience has involved utility regulation, and Mr. Smith has previously testified before this Commission, as well as 38 other state utility commissions, federal courts, and the Federal Energy Regulatory Commission. A complete description of Mr. Smith's qualifications is provided in OCA Statement 2, Appendix A.
${ }^{3}$ Mr. Rothschild is a financial consultant specializing in cost of capital issues in utility regulation. He has 22 years of experience providing utility financial analysis. Mr. Rothschild has applied his expertise and testified in numerous proceedings before the Pennsylvania Public Utility Commission, over twenty other state public service commissions, and the Federal Energy Regulatory Commission. A complete description of Mr. Rothschild's qualifications is provided in OCA Statement 3, Appendix A.
${ }^{4}$ Mr. Colton is a Principal of Fisher Sheehan \& Colton, Public Finance and General Economics in Belmont, Massachusetts. He provides technical assistance to public utilities and primarily works on low income utility issues. Mr. Colton has devoted his professional career to helping public utilities, community-based organizations and state and local governments design, implement and evaluate energy assistance programs to help low income households better afford their home energy bills. He has been involved with the development of the vast majority of ratepayerfunded affordability programs in the nation. A more complete description of Mr. Colton's education and experience is provided in OCA Statement 4, Appendix A.
${ }^{5}$ Ms. Barbara R. Alexander is a Consumer Affairs Consultant who runs her own consulting practice, Barbara Alexander Consulting LLC. She received her Bachelor of Arts degree from the University of Michigan and her J.D. from the University Of Maine School Of Law. Ms. Alexander's professional experiences and qualifications are provided in OCA Statement 5, Exhibit BA-1.
${ }^{6} \mathrm{Mr}$. Fought is a consulting engineer with more than forty years' experience as a civil engineer. Mr. Fought is a registered Professional Engineer in Pennsylvania, New Jersey and Virginia and is a Professional Land Surveyor in Pennsylvania. Mr. Fought has prepared studies related to, and designed, water supply, treatment, transmission, distribution and storage for private and municipal wastewater agencies. He has also served as a consultant to the OCA for numerous water and sewer matters since 1984. Mr. Fought's background and qualifications are attached to OCA Statement 6 as Appendix A.

## APPENDIX F

Evidentiary Hearings were held telephonically on October 27 and 28, 2020. At the Evidentiary Hearing, the Company entered pre-filed rejoinder testimony for two witnesses and orally entered its rejoinder testimony for five witnesses into the record and were cross-examined.


[^0]:    ${ }^{1}$ ALJ Johnson agreed to consider a request for additional time to submit the response to the Exhibits filed on November 6, 2020, if the OCA determines that additional time is needed.
    ${ }^{2} 66$ Pa. C.S. § 315(a).

[^1]:    ${ }^{3}$ Lower Frederick Twp. v. Pa. P.U.C., 48 Pa. Commw. 222, 226-27, 409 A.2d 505, 507 (1980) (citations omitted) (Lower Frederick); see also Brockway Glass v. Pa. P.U.C., 63 Pa. Commw. 238, 437 A.2d 1067 (1981).
    ${ }^{4}$ Burleson v. Pa. P.U.C., 461 A.2d 1234, 1236 (Pa. 1983).
    ${ }^{5}$ Lansberry v. Pa. P.U.C., 578 A.2d 600, 602 (Pa. Commw. 1990).
    ${ }^{6}$ Id.
    ${ }^{7}$ See, e.g., Berner v. Pa. P.U.C., 382 Pa. 622, 116 A.2d 738 (1955).
    ${ }^{8}$ Berner, 382 Pa. at 631, 116 A.2d at 744.
    ${ }^{9}$ Pa. P.U.C. v. Equitable Gas Co., 57 PaPUC 423, 471 (1983). See also University of Pennsylvania v. Pa. P.U.C., 86 Pa. Commw. 410, 485 A.2d 1217 (1984); Pa. P.U.C. v. PPL Elec. Util. Corp., 237 PUR4th 419 (PaPUC 2004).

[^2]:    ${ }^{10} \mathrm{~Pa}$. P.U.C. v. City of Bethlehem, 2011 Pa. PUC LEXIS 190, *11.

[^3]:    ${ }^{11}$ The OCA's revenue requirement recommendations, absent any consideration of the pandemic or shift of any water or wastewater revenue requirement, result in an overall sufficiency of $(\$ 70,274,184)$ for water operations excluding Steelton and a revenue deficiency of $\$ 1,940,190$ for Water-Steelton. The OCA's recommendation for wastewater is a total increase of $\$ 30,906,732$ for all wastewater divisions. See OCA Appendix A.2, Table I, for each of the revenue requirements.

[^4]:    ${ }^{12}$ In rebuttal, PAWC witness Cawley cited consumer price data from July to rebut Mr. Rubin's statement that businesses are not able to sustainably increase their prices. PAWC St. 14-R at 26-27. Mr. Rubin explained that the figures cited by Mr. Cawley regarding the all-urban Consumer Price Index (CPI) need to be put in perspective. In February 2020, the last full month before the economic collapse, the CPI was 258.678 . It dropped to 256.389 or by $0.9 \%$, in April. OCA St. 1 SR at 22. In July, it had increased to 259.101 or where it had been prior to the shut-down of segments of the economy in March. Mr. Cawley also referred to a $0.6 \%$ increase in the producer price index (PPI) in July. Mr. Rubin explained that the PPI measures the price suppliers are able to charge to businesses for goods and services used by the business in its retail products. OCA St. 1 at 22. Mr. Rubin noted that the PPI has been recovering more slowly than the CPI, indicating "that the economy is still far from having fully recovered." Id. Further, the PPI was 118.6 in February 2020, fell to 116.6 , or by $1.7 \%$, in April 2020 and had "recovered" to 118.0 in July 2020, or $0.5 \%$ below the pre-pandemic level. Id. at 22-23. In September, the PPI was at 118.9 , or $0.3 \%$ higher than February 2020. Id. at 23. The OCA submits that the CPI and PPI numbers show a return to near-February 2020 levels, but disagree that these numbers, alone or reviewed in context with the data presented by Mr. Rubin, reflect an economic recovery.

[^5]:    ${ }^{13}$ In further support of his recommendation against the rate increases requested by PAWC, Mr. Rubin also cites many examples where utilities have either withdrawn or deferred filing rate increase requests to provide relief to their customers who are likely spending more time at home and/or experiencing some level of income loss during this pandemic. OCA St. 1 at 25-26. Other public utilities, including some in Pennsylvania, have recognized the increased hardships that would be placed on their customers if they were to charge higher rates at the time. Mr. Rubin provides some examples in his testimony:

    - Minnesota Power significantly reduced its requested rate increase and is refunding more than $\$ 12$ million to customers to help alleviate pandemic-related financial concerns.
    - California Water Service Co. is eliminating all scheduled rate increases during 2020.
    - Chelan County (Washington) Public Utility District is postponing previously approved increases in electric, water, and wastewater rates by six months to provide customers some relief during the pandemic.
    - The City of Austin (Texas) reduced its electricity rates by about $4 \%$, eliminated the residential price increment for usage in excess of 1,000 kilowatt-hours per month, and reduced rates for residential water and wastewater consumption by $10 \%$.
    - PEPCO, the electric utility serving the District of Columbia and surrounding areas, announced on June 1st that it would forego a $\$ 25$ million rate increase scheduled for this year in D.C., make a shareholder donation to its low-income assistance fund, and take other actions to assist customers during the pandemic.
    - A report by Moody's Investors Service expects similar delays in numerous electric, gas, and water utility rate proceedings throughout the U.S. as a way of providing some relief to consumers during the pandemic.
    - Most recently, Philadelphia Water Department withdrew its pending request for increases in water, wastewater, and stormwater rates that would have become effective in September 2020 and September 2021.

[^6]:    In a June 2020 filing, the utility cited "the on-going pandemic and the uncertainty over the anticipated duration of continuing emergency measures.
    Id. (footnotes omitted).

[^7]:    ${ }^{14} \mathrm{Mr}$. Rubin noted that he had seen recent headlines for a gas utility issuing debt at a $2.2 \%$ interest rate and a utility in the southern U.S. issuing debt at $1.75 \%$. OCA St. 1 at 30 , n. 38 and 39. PAWC's weighted cost of debt is in the range of $4.5 \%$. Id. at n. 40; PAWC Exh. 3-A, p. 70.

[^8]:    ${ }^{15}$ Id., 232 Mass at 317, 122 N.E. at 401 (emphases added; quoting Missouri, Kansas \& Topeka Railway Co. v. Interstate Commerce Comm'n, 164 Fed. 645 (1908)).

[^9]:    ${ }^{16}$ Lower Frederick, 48 Pa. Commw. at 222, 409 A.2d at 507.
    ${ }^{17}$ Hope, 320 U.S. at 586.

[^10]:    ${ }^{18}$ Mr. Rubin noted that Mr. Cawley was a member of the Commission in 1985 and voted in favor of the order. OCA St. 1 SR at 23.

[^11]:    ${ }^{19}$ Section 66 Pa . C.S. § 315(e) provides:
    Whenever a utility utilizes a future test year or a fully projected future test year in any rate proceeding and such future test year or a fully projected test year forms a substantive basis for the final rate determination of

[^12]:    the commission, the utility shall provide, as specified by the commission in its final order, appropriate data evidencing the accuracy of the estimates contained in the future test year or a fully projected future test year, and the commission may after reasonable notice and hearing, in its discretion, adjust the utility's rates on the basis of such data.
    66 Pa. C.S. § 315(e) (emphasis added).

[^13]:    ${ }^{20}$ PAWC has failed to meet its burden of proof to support its request for a multiyear rate plan, as indicated in part, by its failure to address the Policy Statement.
    ${ }^{21}$ Mr. Rubin, acknowledging that there are benefits and detriments to delaying a rate case, explained why it is not in the public interest to delay PAWC's next case. Id. at 33-34. He based his conclusion on the fourth factor listed in the Policy Statement regarding how the [alternative] "ratemaking mechanism and rate design limit or eliminate interclass and intraclass cost shifting." 52 Pa . Code $\S 69.3302(\mathrm{a})(4)$. PAWC failed to propose a separate stormwater rate in the three service areas that have combined sewer systems which are systems that transport sanitary sewage and stormwater through the same pipes (Kane, McKeesport and Scranton). OCA St. 1 at 34. As discussed in Section XII.F, infra, Mr. Rubin finds that "it is neither just nor reasonable for PAWC to not charge any stormwater-related costs to properties that cause those costs to be incurred and to instead have all of those costs paid either through sewer rates or by water customers." OCA St. 1 at 34 . He explained that this inequity should not be perpetuated and to the extent that the MYRP would delay the next case, it would defer the implementation of separate stormwater rates that would relieve water and wastewater customers of some of this "unreasonable burden". Id.

[^14]:    ${ }^{22}$ If granted, PAWC's proposal would be the first multiyear rate plan in Pennsylvania approved by the Commission. OCA St. 2SR at 42.

[^15]:    ${ }^{23}$ Allowing end-of-year rate base to be utilized in the context of multiyear rate plans means greater inaccuracy and speculation for all aspects of the revenue requirement. If utilities propose MYRPs of longer duration, it would further exacerbate that problem because the rates set at the end of the rate case (beginning of Rate Year 1) for multiple rate years in the future would have no basis in reality. "Where the utility's rate base is growing significantly, as is the case with PAWC, the distortion in the measurement of results for the applicable period being used as the FPFTY in an MRP can become quite large." OCA St. 2 at 22. Construction budgets change over time for a variety of reasons and projecting that far into the future - without any review of earnings, reports, or criteria - is not reasonable.

[^16]:    ${ }^{24}$ In a related argument, Mr. Nevirauskas claims that, using an average-test year for rate base would mean the Company "would have to be able to implement a DSIC by the fourth quarter of 2022, just to begin recovering the costs associated with the portion of its Rate Year 2 plant additions not included in the average (mid-year) rate base..." and argues this is not contemplated by the Commission's Supplemental Implementation Order. PAWC St. 1R at 34 (citing Implementation of Act 11 of 2012, Docket No. M-2012-2293611, Order (Sept. 21, 2016)). The Supplemental Implementation Order does not address multiyear rate plans (or whether average or end of year test years are utilized in a MYRP) and was entered almost two years before the Public Utility Code was amended to address the use of a MYRP. OCA St. 2SR at 43-44; 66 Pa. C.S. § 1330 (effective Aug. 28, 2018). As OCA witness Smith aptly stated: "using a DSIC start date to drive the rate base in a base rate case is like having the 'tail wagging the dog.' The utility's rate base is set in a base rate case. Then the DSIC starting point can be adjusted accordingly." OCA St. 2SR at 44.

[^17]:    ${ }^{25}$ As discussed below, PAWC's affiliates in other states have recently been denied rate recovery of their incentive compensation programs, both partially and completely. Kentucky Public Serv. Comm'n, Electronic Application of Kentucky-American Water Co. for an Adjustment of Rates, 2019 Ky. PUC LEXIS 663, *66-71 (June 27, 2019) (denying recovery of 50 percent of APP expense and 100 percent of LTPP for Kentucky-American Water Co.) (KAWC 2019); Application of California-American Water Co. for Authorization to Increase its Revenues for Water Service, 2018 Cal. PUC LEXIS 628, *118-19 (Dec. 20, 2018) (reducing California-American Water Co.'s APP request by 50\%) (CalAm 2018).

[^18]:    ${ }^{26}$ Application of California-American Water Co., 2018 Cal. PUC LEXIS 628, *194-197 (Cal. P.U.C. Dec. 20, 2018);
    In Re: Tennessee American Water Co.'s Response to the Commission's Investigation on the Impact of Federal Tax Reform on the Public Utility Revenue Requirements, 2020 Tenn. PUC LEXIS 101, *4-10 (Aug. 3, 2020); Proceeding on Motion of the Commission on Changes in Law that May Affect Rates, 2018 N.Y. PUC LEXIS 393 *82-84 (Aug. 9, 2018); In the Matter of the Petition of New Jersey-American Water Co., Inc., with Calculation of Rates Under the Tax Cuts and Jobs Act of 2017, Docket Nos. AX18010001, WR 18030233 at 3 (N.J. Bd. of Pub. Util., Oct. 28, 2020).
    ${ }^{27}$ OCA witness Smith testified as follows, on page 10 of OCA Statement 2SR:
    The PAWC rebuttal presentation on Exhibit JRW-3 is not a valid analysis because it utterly fails to recognize or incorporate consideration of the time value of money. PAWC's presentation has essentially assumed a zero discount rate (i.e., that there is no time value of money). PAWC's presentation fails to recognize or account for the time value of money to customers during any year in the 40 -year period covered by its presentation. PAWC's presentation essentially assumes that each dollar in 2021 has the exact same value as a dollar in remote years extending out through 2060. Failure to consider the time value of money is therefore a fatal flaw in PAWC's presentation. Only by erroneously assuming that there is no time value of money applicable to its customers is PAWC able to produce the amounts claimed in its rebuttal testimony in Exhibit JRW-3.
    ${ }^{28}$ As a frame of reference, the Federal Reserve recently reports a personal loan interest rate of $9.34 \%$, credit card borrowing rates of $14.58 \%$ for all accounts, and $16.43 \%$ for accounts that are assessed interest. See OCA Exh. LA-10; OCA St. 2SR at 17.

[^19]:    ${ }^{29}$ In recent cases in which OCA witness Rothschild testified, water utilities in South Carolina and California, including PAWC's affiliate, were authorized equity cost rates of $7.46 \%, 8.90 \%$, and $9.20 \%$. OCA St. 3 at 12-13.

[^20]:    ${ }^{30}$ See, e.g., Pa. P.U.C. v. City of Dubois, Docket No. R-2016-2554150, Order (Mar. 28, 2017); Pa. P.U.C. v. UGI Utilities, Docket No. R-2017-2640058, Order (Oct. 25, 2018); Pa. P.U.C. v. City of Lancaster - Bureau of Water, 2011 Pa. PUC LEXIS 1685 (2011); Pa. P.U.C. v. Emporium Water Co., 2008 Pa. PUC LEXIS 2076 (2006); EWC 2001, 95 Pa. PUC at 201, 208 PUR4th at 512; Pa. P.U.C. v. York Water Co., 75 Pa. PUC 134, 156-69 (1991); Pa. P.U.C. v. Philadelphia Suburban Water Co., 71 Pa. PUC 593, 631-32 (1989); Pa. P.U.C. v. Pennsylvania-American Water Co., 71 Pa. PUC 210, 279-82 (1989); Pa. P.U.C. v. The Peoples Natural Gas Co., 69 Pa. PUC 1, 167-68 (1989); Pa. P.U.C. v. Pennsylvania Power, 67 Pa. PUC 91, 164, 93 PUR4th 189, 266 (1988); Pa. P.U.C. v. National Fuel Gas Dist. Corp., 67 Pa. PUC 264, 332 (1988).
    ${ }^{31}$ Pa. P.U.C. v. Pennsylvania-American Water Co., 99 Pa. PUC 38, 42 (2004), aff'd on other grounds, Popowsky v. Pa. P.U.C., 868 A.2d 606 (Pa. Commw. Ct. 2004); accord Pa. P.U.C. v. Aqua Pa, Inc., 99 Pa. PUC 204, 233 (2004).
    ${ }^{32}$ Pa. P.U.C. v. UGI Utilities, Inc. - Electric Div., Docket No. R-2017-2640058, Order at 106 (Oct 25, 2018).
    ${ }^{33}$ Pa. P.U.C. v. Pennsylvania Power Co., 55 Pa. PUC 552, 579 (1982).

[^21]:    ${ }^{34}$ Id. at 579.
    ${ }^{35}$ Pa. P.U.C. v. PPL Electric Util. Corp., Docket No. R-2012-2290597, Order (Dec. 28, 2012) (PPL 2012); Pa. P.U.C. v. PPL Electric Util. Corp., 237 PUR4th 419 (PaPUC 2004).
    ${ }^{36}$ PPL 2012 at 80.
    ${ }^{37}$ PPL 2012 at 81.

[^22]:    ${ }^{38}$ OCA St. 3 at 78-79 (citing "Investor-owned utilities benefit as fair value legislation incentivizes system sales," Global Water Intelligence (Dec. 2016)). PAWC's proposed Regionalization and Consolidation Surcharge would further reduce the risk of purchasing municipal systems by allowing them to earn a return on the purchase price before the next rate case. OCA St. 3 at 79. OCA witness Rubin recommends that the Commission reject the proposed Regionalization and Consolidation Surcharge as contrary to the public interest and neither just nor reasonable. OCA St. 1 at 79.

[^23]:    ${ }^{39}$ PAWC's proposed surcharge is calculated using the revenue requirement associated with the ratemaking rate base determined in the Section 1329 proceeding. Under its proposal, rates would be raised for existing customers using that revenue requirement. The OCA submits that the use of the revenue requirement through the surcharge would contravene the specific requirement of Section 1329(d)(5).
    ${ }^{40}$ Acquired customers can be charged the Distribution System Improvement Charge upon approval of the Commission. 66 Pa. C.S. § 1329(d)(4).

[^24]:    ${ }^{41}$ See Pennsylvania Indus. Energy Coalition v. Pa. P.U.C., 653 A.2d 1336, 1350 (Pa. Commw. Ct. 1995) (PIEC); National Fuel Gas Dist. Corp v. Pa. P.U.C., 76 Pa. Commw. 102, 147, 464 A.2d 546, 567 (1983) (NFG 1983); Philadelphia Elec. Co. v. Pa. P.U.C., 93 Pa. Commw. 410, 422, 502 A.2d 722, 727-28 (1985) (PECO); Popowsky v. Pa. P.U.C., 683 A.2d 958 (Pa. Cmwlth. 1996) (Popowsky).
    ${ }^{42}$ Other factors to consider include whether the cost is related to other expenditures that are not subject to the adjustment mechanism. OCA St. 1 at 75. An automatic adjustment clause could adversely impact the evaluation of technologies or processes that might improve efficiency and save costs. Id. Mr. Rubin explained that the "unreasonable trade-off occurs when one aspect of the cost is recognized automatically, but another aspect is not." Id.

[^25]:    ${ }^{43}$ See PIEC at 1350; NFG 1983, 76 Pa. Commw. 102 at 147, 464 A.2d 546 at 567 (holding that the consideration of expense and revenue items in isolation could result in confiscatory rates); PECO, 93 Pa. Commw. at $422,502 \mathrm{~A} .2 \mathrm{~d}$ at 727-28 (holding that there should be no line-by-line examination of items in a rate case); Popowsky at 958.

[^26]:    ${ }^{44}$ Mr. Rubin's analysis focused on Rate Year 1 (2021) for ease of presentation but changes would need to be made to the 2022 study if rates are set based on PAWC's proposed MYRP. OCA St. 1 at 37. His review of the COSS did not consider any subsidies to or from other rate areas because those issues are addressed infra.

[^27]:    ${ }^{45}$ Docket No. A-2019-3006880, Joint Petition for Approval of Settlement of All Issues, II 25.

[^28]:    ${ }^{46}$ If the reduction is to the water Zone 1 revenue requirement, then the reduction should be spread among customer classes in proportion to each class's cost of service under Mr. Rubin's COSS. OCA St. 1 at 94 . He recommended that any reduction for the residential class be applied proportionally to both the customer charge and volumetric charge. Id. ${ }^{47}$ The Steelton water subsidy of $\$ 1,776,829$, shown on Table 2, will be discussed infra.

[^29]:    ${ }^{48}$ Pa. P.U.C. v. Pennsylvania-American Water Co., Docket No. R-2013-2355276, Order (Dec. 19, 2013) https://www.puc.pa.gov/pcdocs/1262225.docx; Pa. P.U.C. v. Pennsylvania-American Water Co., 2017 Pa. PUC LEXIS 249 (Dec. 7, 2017).

[^30]:    ${ }^{49}$ The revenue requirement associated with the Steelton water acquisition is not included in this figure and is discussed infra.

[^31]:    ${ }^{50}$ The Commission could choose from a wide range of options when implementing Section 1311(c) that might not be consistent with well-established regulatory principles. OCA St. 1 at 57.

[^32]:    ${ }^{51} \mathrm{Mr}$. Rubin explained that some older combined systems are not sized large enough to handle the combined flows, which results in "combined sewer overflows" (CSO) "that divert some of the combined flow before it reaches the wastewater treatment plant and directly discharges untreated wastewater and stormwater to the receiving water. One of the important clean-water initiatives of the past two decades is to greatly reduce or entirely eliminate the use of CSOs."
    ${ }^{52} \mathrm{Mr}$. Rubin provided the examples of a tenant in a residence or a retail location who might be responsible for the water and wastewater bills but the tenant has no control over how the property handles stormwater control like gutters, parking lot and sidewalk runoff. OCA St. 1 at 43.

[^33]:    ${ }^{53}$ Every year, Western Kentucky University conducts a survey of stormwater fees and charges. The survey is publicly available. OCA St. 1 at 44 (citing C. Warren Campbell, Western Kentucky University Stormwater Utility Survey 2019 (hereafter "W. Ky. Survey")).
    https://digitalcommons.wku.edu/cgi/viewcontent.cgi?article=1000\&context=seas_faculty_pubs.

[^34]:    ${ }^{54}$ The WEF Manual is the standard reference on cost-of-service studies, rate design, and other ratesetting topics for wastewater utilities. OCA St. 1 at 46.

[^35]:    ${ }^{55}$ From Schedule D of each COSS, PAWC Exhibits 12-F, 12-G, and 12-H.
    ${ }^{56}$ One exception is the Port Vue rate areas of McKeesport that is discussed infra.

[^36]:    ${ }^{57}$ The OCA has not recommended, and the Pennsylvania PUC has not yet prescribed, a specific percentage of income by which to define an "affordable" water and/or wastewater bill. OCA St. 4 at 20, n. 5.

[^37]:    ${ }^{58}$ For customers with income between $50 \%$ and $100 \%$ of Poverty, nearly three-of-ten ( $27 \%$ ) have water burdens exceeding $4 \%$ of income, while nearly $100 \%$ ( $99.2 \%$ ) of customers with income between $50 \%$ and $100 \%$ of Poverty have water burdens between $6 \%$ and $9 \%$ of income (with the remainder having burdens exceeding $9 \%$ of income.
    ${ }^{59} \mathrm{Mr}$. Colton also recommends that PAWC establish an arrearage management program (AMP) to address existing arrearages that most customers in its BDP have when they enroll and to address arrearages that future participants may have when they enroll. OCA St. 4 at 29-39. According to Mr. Colton, addressing pre-existing arrearages is interrelated to providing bills that are sustainably payable. Id. at 30. As he noted, customers do not make separate payments for current service and their arrearages. If the total bill is beyond a customer's ability to pay, the bill discount addresses

[^38]:    the current service and the AMP can address the preexisting arrearages. That is why an arrearage management program is a key component, along with a better BDP, to addressing bills that are sustainably payable.

    From January 2018 to March 2020, 10,317 customers were enrolled in the BDP. OCA St. 4 at 29. Of those, 7,254 ( $70.3 \%$ ) had preprogram arrears at the time of enrollment that brought $\$ 3,539,956$ of preprogram arrears into the program. Id. That is an average of $\$ 488$ per customer. That average appears to be increasing. For the 12 months ending December 2018 the average was $\$ 481$ and for the 12 months ending December 2019, the average was $\$ 516$. Id. ${ }^{60} \mathrm{Mr}$. Colton estimated this number by multiplying PAWC's residential customers in each zip code by the percentage of the population at various poverty ranges in each zip code. OCA St. 4 at 44. This BCS-prescribed process is used for Pennsylvania's energy utilities as well. Id.
    ${ }^{61} \mathrm{Mr}$. Colton also looked at the percentage of PAWC customers who would be income-eligible by zip codes in the PAWC territory and found that there are zip codes that have no income-eligible customers enrolled in the BDP, while even the zip codes with higher percentage of enrollments still have a large amount of income-eligible customers who are not enrolled. OCA St. 4 at 46-49, Table 12.

[^39]:    ${ }^{62} 66$ Pa. C.S. § 1501.
    ${ }^{63} 66$ Pa. C.S. § 523(a).

[^40]:    ${ }^{64}$ Pa. P.U.C. v. Philadelphia Gas Works, Docket No. R-00005654, Order at 33-34 (Nov. 22, 2000).
    ${ }^{65}$ OCA St. 5 at 25; see, e.g., Application of Aqua America, Inc., Aqua Pennsylvania, Inc., and Aqua Pennsylvania Wastewater, Inc., Docket Nos. A-2018-3006061, A-2018-3006062, A-2018-3006063, Order at 151-54 (Jan. 24, 2020); Joint Application of T.W. Phillips Gas and Oil Co., Docket No. A-2010-2210326, Order (May 23, 2011).

[^41]:    ${ }^{66}$ The literature applicable to alternative rate plans specifically recognizes the potential for deterioration of or lack of improvement in customer service under multiyear rate plans. For example, Ms. Alexander published a seminal article on the need for a service quality index to accompany multiyear rate plans, providing an example of a recently adopted price cap plan with a service quality index applicable to Central Maine Power Company in Maine in 1996. OCA Exh. BA-4 (Electricity Journal (Apr. 1996)). More recent research articles have confirmed the reasonableness of including service quality performance standards for multiyear rate plans. OCA St. 5 at 26 (citing Costello, Ken, Multi-Year Rate Plans and the Public Interest, NRRI (Oct. 2016) at 21. https://pubs.naruc.org/pub/FA86999D-D03F-2858-7228A6353560E5B9).
    ${ }^{67}$ The OCA has also opposed PAWC's request for approval of a multiyear rate plan. If the Commission determines to approve the request, however, the OCA recommends that the MYRP should include penalties for non-compliance with the customer service performance standards. The Company's proposal to automatically increase rates in the second year, without a review of its customer service performance, carries the risk that customer service quality will deteriorate because the utility has "a two-year time frame to exercise its discretion to alter internal expenditures and without a check on whether it is improving or even maintaining service quality performance." OCA St. 5 at 24-25.

[^42]:    ${ }^{68}$ PAWC has four call centers that handle calls from Pennsylvania customers as well as customers in 15 other states, which are managed by American Water Works Service Company (AWWSC) and located in Illinois, Florida, Kentucky and Tennessee. OCA St. 5 at 6-7, 13 (citing PAWC St. 18R at 1-2). The staffing for these offices totals 284 representatives, from 41 in Tennessee to 99 in Kentucky.

[^43]:    ${ }^{69}$ PAWC's other two call centers, located in Illinois and Florida, are staffed by AWWSC employees. PAWC St. 18R at 1-2.

[^44]:    ${ }^{70} \mathrm{http}: / / \mathrm{www} . p u c . s t a t e . p a . u s / f i l i n g$ resources/consumer_activities_report evaluation.aspx.
    ${ }^{71}$ PAWC receives a variety of complaints, the most voluminous being "disputes" registered directly with the utility. OCA St. 5 at 9-10. If the customers is dissatisfied with PAWC's response, the dispute may be elevated to an informal complaint resolved by the Commission's BCS or, by virtue of making a formal filing, to a formal complaint handled by the Commission. Id.
    ${ }^{72}$ Utility Consumer Activities Report and Evaluation Report for Quarters 1-4 (2019) at 11-13 (Q4 2019 UCARE Report). This report is available at (https://www.puc.pa.gov/General/publications_reports/pdf/UCARE_2019-4Q.pdf).
    ${ }^{73}$ Q4 2019 UCARE Report at 12, 18 ("Justified Consumer Complaints - A consumer complaint case where, prior to BCS intervention, the company did not comply with Commission Orders, policies, regulations, reports, Secretarial Letters, tariffs or guidelines when the consumer brought the complaint to the company's attention. The justified consumer complaint rate equals the number of justified consumer complaints for each 1,000 residential customers").
    ${ }^{74}$ Q4 2019 UCARE Report at 13.
    ${ }^{75}$ Id. at 17, 18 ("Infraction - A misapplication or infringement of a Commission regulation, particularly the standards and billing practices for residential utility service").

[^45]:    ${ }^{76}$ These are neither formal complaints filed with the PUC nor informal complaints filed with the BCS.
    ${ }^{77}$ The satisfaction rating with the call center decreased from $95 \%$ in 2019 to $69 \%$ in 2020 (through September 18) and the satisfaction rating with American Water overall decreased from $86 \%$ to $70 \%$ in 2020 (through September 18). OCA St. 5SR at 9, n. 8 (citing PAWC Response to OCA-XXIII-7).

[^46]:    ${ }^{78}$ The BCS customer satisfaction surveys for electric and gas utilities are described and presented in the annual Customer Service Performance Reports available at
    http://www.puc.state.pa.us/filing resources/customer_service_performance_reports.aspx. The report for 2019, for example, discusses the common survey process, questions and results on pages 18 to 26.
    https://www.puc.pa.gov/media/1187/customer-service-report2019.pdf. Reports are posted for the past 20 years and indicate the same questions related to customer satisfaction have been utilized since 2002.

[^47]:    ${ }^{79}$ Pennsylvania-American Water Co. Water Tariff, Supplement No. 2 to Tariff Water Pa. PUC No. 5, First Revised Tariff Page No. 89 (effective Jan. 1, 2018).

[^48]:    ${ }^{80}$ See Pennsylvania-American Water Company Water Tariff, Supplement No. 2 to Tariff Water Pa. PUC No. 5, First Revised Tariff Page No. 89 (effective January 1, 2018); Pa. P.U.C. v. Pennsylvania-American Water Co., Docket No. R-2013-2355276, Order (Dec. 19, 2013); Pa. P.U.C. v. Pennsylvania-American Water Co., Docket No. R-20172595853 (Dec. 7, 2017).

[^49]:    ${ }^{81}$ Blue Bird Coach Lines, Inc., 72 PaPUC 262 (1990); Re V.I.P. Travel Servs., Inc., 56 PaPUC 625, 631 (1982).

[^50]:    ${ }^{82}$ Supplement No. 19 to Tariff Water - Pa. P.U.C. No. 5 at 64-65 (modifying the language to Rule 15, Liability of Company and eliminating Rules 15.1-15.3); Supplement No. 19 to Tariff Wastewater - Pa. P.U.C. No. 16 at 35, 52 (modifying the language to Rule Q, Liability of Company and eliminating Rules Q,1-Q.3).
    ${ }^{83}$ A tariff may limit a utility's liability for interruption or cessation of service due to negligence but only in narrowlydefined circumstances. See Tariff Provisions that Limit the Liability of Utilities for Injury or Damage as a Result of Negligence or Intentional Torts, Policy Statement, 29 Pa. Bull. 2147-2149 (Nov. 19, 1998); DeFrancesco v. West Penn Water Co, 329 Pa. Superior Ct. 508, 478 A.2d 1295 (1984) (DeFrancesco); Behrend v. Bell, 242 Pa. Super. Ct. 47, 363 A.2d 1752 (1976), vacated on other grounds, 473 Pa. 320, 374 A.2d 536 (1977) (Behrend); OCA St. 5 at 22-23.

[^51]:    ${ }^{84}$ Supplement No. 19 to Tariff Water-PA P.U.C. No. 5 at 64 (emphasis added). While the OCA's argument focuses on the proposed revisions to PAWC's water tariff, the discussion is also applicable to PAWC's wastewater tariff provisions.

[^52]:    ${ }^{85} \mathrm{http}$ ://gasmngmt.ugi.com/ELEC/doc/tariff/EStariff6.pdf (Tariff Page 7); http://gasmngmt.ugi.com/UGIU/doc/tariff/GSTariff7.pdf (Tariff Page 25).

[^53]:    (1) Company Main Brief.

[^54]:    (1) Company Main Brief

[^55]:    (1) Company Main Brief.

[^56]:    Notes and Source:
    Note A: Company's "Rebuttal Model EOY 2021" Excel file, "Water Excluding Steelton

    > Debt Porportion per Company $\quad 43.82 \%$
    > $\begin{aligned} \text { Cost of Long-Term Debt per Company } & 4.37 \% \\ & \text { Weighted Cost of Debt }\end{aligned}$

[^57]:    39.53\%
    

    Debt Porportion per Company
    Cost of Long-Term Debt per Company
    Weighted Cost of Debt

[^58]:    6 よ๐ $\varsigma$ əธิ⿺辶

    ## Pennsylvania American Water Company Interest Synchronization <br> Rate Year Ending December 31， 2022

    

    $$
    2 \text { Weighted Cost of Debt, per OCA }
    $$

    Going-Level Interest Deduction for Tax Purposes
    Interest Deduction per Company
    Decrease in Deductible Interest

    Exhibit LA－8
    Wastewater SSS Sadsbury Operations Schedule C－4
    Docket Nos．R－2020－3019369 and R－2020－3019371

    $$
    \begin{array}{ll}
    \$ & (193) \\
    \hline \$ & (296) \\
    \hline \hline
    \end{array}
    $$

    

    $$
    1 \quad \text { Adjusted Rate Base, per OCA }
    $$

    $$
    \begin{aligned}
    & \text { Schedule B , page } 4 \\
    & \text { Per OCA - Sch. D, page } 2
    \end{aligned}
    $$

    $$
    \begin{aligned}
    & \text { L1 x L2 } \\
    & \text { Note A } \\
    & \text { L3 - L4 }
    \end{aligned}
    $$

    $$
    \begin{aligned}
    & \mathrm{L}-\mathrm{L} 4 \\
    & \mathrm{~L} 5 \times \mathrm{L} 6 \\
    & \mathrm{~L} 5+\mathrm{L} 7
    \end{aligned}
    $$

    $$
    \begin{aligned}
    & \text { L8 x L9 } \\
    & \text { L7 + L10 }
    \end{aligned}
    $$

[^59]:    Notes and Source：
    Notes A：Company＇s
    Note A：Company＇s＂Rebuttal Model EOY 2021＂Excel file，＂WW SSS Sadsbury＂tab

    | Debt Porportion per Company | $39.53 \%$ |
    | ---: | ---: |
    | Cost of Long－Term Debt per Company | $4.37 \%$ |
    |  | $1.73 \%$ |
    | Weighted Cost of Debt |  |

[^60]:    Note A: Company's "Rebuttal Model EOY 2021" Excel file, "WW CSS Scranton" tab

[^61]:    Amounts below calculated using the data from Volume 4, Exhibit 3-B from PAWC's filing

[^62]:    $\$ 145,198$, this adjustment to Payroll Tax expense could be modified accordingly.

    * See the Direct Testimony of OCA witness Ralph C. Smith

[^63]:    Notes and Source:
    Amounts below calculated using the data from Volume 4, Exhibit 3-B from PAWC's filing
    APP Expense Per OCA Workpaper
    OCA Recommended Disallowance Percentage* OCA Recommended APP Expense

    さに

    * See the Direct Testimony of OCA witness Ralph C. Smith

[^64]:    Amounts below calculated using the data from Volume 4, Exhibit 3-B from PAWC's filing
    

[^65]:    * See the Direct Testimony of OCA witness Ralph C. Smith

[^66]:    Percentage Difference Between OCA Recommended and PAWC Proposed Salaries and Wages
    Salary and Wages Per OCA
    Salary and Wages Per OCA
    ニส๙

[^67]:    Rate Year Ending December 31, 2021 Projected Stock Options Expense
    en Charged from AWWSC
    Rate Year Ending December 31, 2022 Projected Stock Options Expense

    Projected Restricted Stock Units
    13 Total Stock-Based Compensation Charged from AWWSC

[^68]:    Columns I and J: PAWC-proposed amounts used for protected EADIT. Three-year straight-line amortization used for unprotected balances; amortization is applied to $12 / 31 / 2020$ EADIT amounts for 2021 and 2022 amortizations
    Lines 14,15 and 19, columns D-G: Amounts from PAWC Rebuttal Exhibit JRW-1-R, page 2

[^69]:    Pennsylvania American Water Company Property Tax Expense

    Rate Year Ending December 31, 2022

[^70]:    Col. A: Company witness Spanos, Exhibit No. 11-G 2021, Table 2 Estimated Survivor Curves, Original Cost, Book Reserve and Calculated Annual Depreciation Accruals Related to Utility Plant in Service at December 31, 2021
    Cols. B, D \& E: Company witness Spanos, Exhibit No. 11-H 2022, Table 2 Estimated Survivor Curves, Original Cost, Book Reserve and Calculated Annual Depreciation Accruals Related to Utility Plant in Service at December 31, 2022

