

**DIRECT TESTIMONY  
OF  
JOHN R. COX**

**WITH REGARD TO  
PENNSYLVANIA AMERICAN WATER  
NORTHEAST WASTEWATER OPERATIONS**

**CLAIMED  
RATE BASE,  
DEPRECIATION & AMORTIZATIONS,  
O&M EXPENSES  
(EXCLUDING LABOR / LABOR RELATED)  
AND  
TAXES, OTHER THAN INCOME**

**DOCKET NO. R-2010-2166214**

**DATE: April 23, 2010**

1 **I. INTRODUCTION**

2 **1. Q. What is your name and business address?**

3 **A.** My name is John R. Cox. My business address is 800 West Hersheypark Drive,  
4 Hershey, Pennsylvania 17033.

5 **2. Q. By whom are you employed and in what capacity?**

6 **A.** I am employed by Pennsylvania American Water (“PAW” or the “Company”) as  
7 Manager of Rates and Regulations.

8 **3. Q. Please summarize your educational background and professional experience.**

9 **A.** I am a 1985 graduate of Shippensburg University of Pennsylvania with a Bachelor  
10 of Science degree in Business Administration, with a major in accounting. In  
11 1999, I received my Masters Degree in Business Management from Lebanon  
12 Valley College. I have also completed the continuing education program  
13 sponsored by the National Association of Regulatory Utility Commissioners  
14 (NARUC) and the University of Utah.

15 I have been employed by American Water Works Service Company or  
16 Pennsylvania American Water since June 1986. From 1986 through June 1988 I  
17 served as a staff accountant in the Accounting Department. In July 1988 I was  
18 transferred to the Rate Department and in July 1989 I was promoted to Senior  
19 Rate Analyst. In 1991 I was promoted to accounting supervisor and held that  
20 position until December 2000 when I was promoted to Fleet and Materials  
21 Management Superintendent. In July 2004 I was promoted to the position of

1 Senior Financial Analyst assigned to the Finance Department. In 2007, I was  
2 promoted to my current position of Manager of Rates and Regulations.

3 **4. Q. What are your duties as Manager of Rates and Regulation?**

4 **A.** My duties include the preparation and presentation of rate applications for PAW.  
5 In addition, I am responsible for certain aspects of the financial, budgeting and  
6 regulatory compliance functions of the company.

7 **5. Q. Have you previously submitted testimony before the Pennsylvania Public  
8 Utility Commission?**

9 **A.** Yes. I have previously presented testimony on accounting and rate matters before  
10 this Commission. I have also prepared water rate applications presented before  
11 the Maryland Public Service Commission and the Virginia State Corporation  
12 Commission.

13 **6. Q. What is the purpose of your testimony?**

14 **A.** The purpose of my testimony is to explain the portions of Exhibit No. 3-A that I  
15 am sponsoring, which relate to the Company's claims for rate base, depreciation  
16 expense, certain operating expenses and taxes other than income taxes.

1 **II. RATE BASE**

2 **7. Q. What is the Company's rate base claim in this proceeding?**

3 **A.** The Company's claim is \$10,785,006, which reflects its projected rate base as of  
4 December 31, 2010, and is shown on page 10 of Exhibit No. 3-A.

5 **8. Q. What are the elements of the Company's rate base claim?**

6 **A.** Rate base consists of several elements. The first and largest element is the  
7 depreciated original cost of net plant in service. To this amount three items are  
8 added: materials and supplies, cash working capital and accrued taxes net of  
9 prepaid taxes. Two items are deducted: a net offset against cash working capital  
10 requirements for accrued interest and preferred dividends prior to payout and  
11 deferred taxes.

12 **9. Q. Please explain how the depreciated original cost of net plant at December 31,**  
13 **2010 was determined.**

14 **A.** Net plant is total plant in service less contributions-in-aid-of-construction  
15 ("CIAC") and customer advances for construction ("CAC"). Depreciated original  
16 cost is original cost less accrued depreciation. The original cost of net utility plant  
17 in service at December 31, 2010 is the amount recorded in PAW's plant accounts  
18 at December 31, 2009 plus projected additions net of retirements, less CIAC and  
19 CAC. The original cost of plant in service at December 31, 2009 and the original  
20 cost of claimed additions and retirements, shown by detailed plant account, are set  
21 forth in Exhibit No. 3-A, page 11. Mr. Kaufman discusses the more significant

1 plant additions in his testimony. The accrued depreciation at December 31, 2010  
2 related to net plant in service was determined by the Company's depreciation  
3 consultant, John J. Spanos, and is shown in Exhibit No. 3-A at page 10, line 9.

4 **10. Q. Do the continuing property records, as maintained by the Company,**  
5 **accurately reflect additions and retirements to plant?**

6 **A.** Yes, they do.

7 **11. Q. Are the data shown on the Company's continuing property records an**  
8 **accurate basis for developing the original cost of property?**

9 **A.** Yes, they are.

10 **12. Q. Has the Company made any adjustments to its historic test year end CIAC**  
11 **and CAC balances?**

12 **A.** No, the Company does not anticipate any additional CIAC or CAC in the future  
13 test year.

14 **13. Q. Please explain the addition to rate base for materials and supplies.**

15 **A.** In accordance with procedures approved by the Commission, the Company's  
16 materials and supplies claim was determined by averaging the monthly balances  
17 of the materials and supplies account for the thirteen months ended December 31,  
18 2009. The calculation of the materials and supplies allowance is shown on page  
19 12 of Exhibit No. 3-A.

1 14. Q. **Please explain the Company's claim for cash working capital.**

2 A. The cash working capital requirement is calculated by multiplying the net lag days  
3 (revenue lag days less expense lag days) by the average operating expenses per  
4 day (total operating expenses / 365 days). All calculations have been made to one  
5 decimal place. In accordance with Commission policy, uncollectible accounts  
6 expense was subtracted from total operating expenses before making the  
7 calculation. The calculation of the gross cash working capital requirement is  
8 shown in Exhibit No. 3-A at page 13.

9 15. Q. **Please describe how the revenue and expense lags were determined.**

10 A. Revenue and expense lags were determined by a lead-lag study. The revenue lag  
11 consists of three components: (1) the lag from the midpoint of the service period  
12 to the end of the service period, i.e., the meter-read date; (2) the time required for  
13 bill preparation and mailing, and (3) the lag in receipt of payment. The first  
14 component is calculated as follows: the number of days in 2009 is first divided by  
15 the customer billings per year of 12. That figure is divided by 2 to determine the  
16 interval from the midpoint to the end of the service period. The final result of  
17 15.2 days is the service period lag.

18 The second component is billing lag. The billing lag of 4 days used for this  
19 calculation was approved in the final Order in the Company's rate proceeding at  
20 Docket No. R-932670.

1 The third component, however, requires a further calculation to determine the  
2 average length of time that revenues are outstanding before payment. This  
3 calculation was performed as follows: (1) daily accounts receivable balances for  
4 the twelve months ended December 31, 2009 were summed and the total divided  
5 by number of days in 2009 to determine the average accounts receivable balance  
6 per day; (2) the Company's total revenue from water and wastewater sales for the  
7 twelve months ended December 31, 2009 was divided by the number of days in  
8 2009 to determine the average revenue billed per day; and (3) the average  
9 accounts receivable balance per day was divided by the average revenue billed per  
10 day. The result of the division in (3), above, yields the number of days on average  
11 that billed revenue was outstanding prior to receipt of payment. This is a standard  
12 calculation that is used by other water utilities in Pennsylvania. The detailed  
13 calculations of the 50.5 revenue lag days appear in the response to Question No.  
14 FR V. 8 of the Company's Standard Filing Requirements.

15 The expense lag was based upon a comprehensive lag study submitted in the  
16 Company's 2009 water rate filing, at Docket No. R-2009-2097323. Using  
17 procedures that had been approved by the Commission in prior proceedings and  
18 data obtained from the Company's centralized accounts payable system, samples  
19 of expense vouchers for each category of expense were analyzed to determine the  
20 lag between the receipt of goods or services and the applicable payment due date.  
21 A summary of the expense lags by category is shown on page 14 of Exhibit No. 3-  
22 A. The revenue lag based on total Company sales and the expense lag days from

1 the Company's 2009 water rate case are appropriate for calculating CWC in this  
2 case.

3 **16. Q. Please explain the addition to rate base for accrued and prepaid taxes.**

4 **A.** This addition to rate base reflects the fact that, on balance, taxes are paid in  
5 advance. The lead/lag in payment of Pennsylvania corporate net income tax is  
6 based on four equal payments throughout the year. The federal income tax was  
7 based upon statutory payment schedules. The General Assessment tax and  
8 property tax were calculated based upon actual payment dates in 2009 and page 16  
9 of Exhibit No. 3-A sets forth the calculation of the lead/lag days for all of the  
10 aforementioned taxes. The net lead/lag days for each tax are then applied to the  
11 pro forma tax amounts, as shown on page 15 of Exhibit No. 3-A, to calculate the  
12 overall working capital effect which, in this instance, is positive. Thus, the  
13 average net lead in payment of these taxes constitutes an addition to cash working  
14 capital requirements and, therefore, is reflected as a rate base addition.

15 **17. Q. Please explain the items that were deducted from rate base.**

16 **A.** The first deduction, which offsets cash working capital requirements, relates to  
17 the average net lag in payment of interest on long-term debt and dividends on  
18 preferred stock. It was calculated using procedures previously approved by the  
19 Commission and is set forth in Exhibit No. 3-A on page 17.

20 The second deduction from rate base is for accumulated deferred taxes related to  
21 the normalization of the federal income tax effect of the Company's use of the

1 Accelerated Cost Recovery System for post-1980 vintages of public utility  
2 property and the Modified Accelerated Cost Recovery System for post 1986  
3 vintages of public utility property. Page 18 of Exhibit No. 3-A shows the balance  
4 of deferred income taxes at December 31, 2009 and as projected at December 31,  
5 2010. The Company does not maintain separate deferred tax accounts for the  
6 wastewater operations. The deferred taxes were calculated on a stand-alone basis,  
7 based on the difference between book and tax depreciation applicable to the  
8 Northeast wastewater operations. The results of these calculations are detailed in  
9 response to Question No. FR IV. 4 of the Company's Standard Filing  
10 Requirements.

11 **18. Q. Did the Company consider the effect of bonus depreciation in computing its**  
12 **balance of deferred taxes?**

13 **A.** Yes, for both 2008 and 2009 the effects of bonus depreciation were considered in  
14 developing the Company's claim for deferred taxes. The tax effect of bonus  
15 depreciation results in a commensurate reduction in the Company's rate base  
16 claim.

17 **19. Q. Do the adjustments explained above constitute all of the adjustments**  
18 **necessary to establish the Company's rate base?**

19 **A.** Yes, they do.

1                                   **III. DEPRECIATION & AMORTIZATION EXPENSE**

2 **20. Q. Have adjustments been made to annual depreciation expense?**

3           **A.** Yes. Adjustments to booked amounts were made to reflect the annual  
4 depreciation accrual for the Company's plant in service as of December 31, 2010.  
5 The annual accrual was determined largely on a Straight-Line Average Remaining  
6 Life basis. The adjustments to reflect the annual accrual for depreciation related to  
7 plant in service at December 31, 2010 are shown in Exhibit No. 3-A at page 32  
8 and, as noted previously, are explained and sponsored by Mr. Spanos.

9                                   **IV. OPERATING AND MAINTENANCE EXPENSES**  
10                                   **(EXCLUDING LABOR / LABOR RELATED)**

11 **21. Q. Please explain the development of pro forma operating and maintenance**  
12 **(O&M) expenses as set forth in Exhibit No. 3-A.**

13           **A.** Pro forma Operating and Maintenance (“O&M”) expenses have been developed  
14 in a manner consistent with previous rate filings. In general, booked data for the  
15 historic test year were used as a starting point and were then adjusted to reflect the  
16 effects of changes which will occur by or shortly after December 31, 2010. The  
17 development of pro forma O&M expenses begins on pages 19 and 20 of Exhibit  
18 No. 3-A with a two-page summary by account. The first column of the summary  
19 shows the per books amounts for the HTY ended December 31, 2009. The second  
20 column shows the pro forma expenses for the HTY including ratemaking  
21 adjustments. The third column shows pro forma expenses for the FTY ending

1 December 31, 2010 as adjusted for ratemaking purposes. All adjustments made in  
2 developing pro forma expenses are summarized on page 21 of Exhibit No. 3-A.  
3 Following the summary page, on separate pages, are the details of each specific  
4 adjustment.

5 **22. Q. Please explain the Company's claim for chemical expense.**

6 **A.** PAW utilizes various chemicals in the wastewater treatment process. In order to  
7 secure the best available pricing, the Company participates in the American Water  
8 competitive bidding process to establish unit price contracts for the chemical  
9 requirements at its various treatment facilities throughout the state. The  
10 adjustment annualizes chemical costs based on historic test year usage, adjusted  
11 for known changes. The adjustment is summarized on page 25 of Exhibit No. 3-  
12 A and additional supporting work papers are included in Exhibit No. 3-B.

13 **23. Q. Please explain the purchased power expense adjustment.**

14 **A.** The Company's adjustment for purchased power expense reflects the application  
15 of power rates to be in effect as of the end of the Future Test Year ("FTY"). The  
16 Met-Ed rate increase of 8.3% that became effective June 2009 was applied to  
17 January through May test year expenses levels to arrive at a pro forma power  
18 expense claimed by the Company. The adjustment is summarized on page 26 of  
19 Exhibit No. 3-A. Supporting workpapers are contained in Exhibit No. 3-B.

1 **24. Q. Please describe the adjustment to waste disposal expense.**

2 **A.** The development of the Company's adjustment for waste disposal expense  
3 reflects the application of actual contract rates to be in effect as of the end of the  
4 FTY adjusted for known changes in quantity. The Company was able to acquire  
5 favorable pricing for 2010 and these reduced rates have been reflected in the  
6 adjustment which is summarized on page 30 of Exhibit No. 3-A. Supporting  
7 work papers detailing the method used are contained in Exhibit No. 3-B

8 **25. Q. Please explain the Company's claim for leased vehicle expense.**

9 **A.** The Company will begin purchasing vehicles in 2010. The adjustment for leased  
10 vehicle expense shown on page 27 of Exhibit No. 3-A, reflects this change in  
11 policy and eliminates the lease expense associated with the vehicle being  
12 replaced. The Company's FTY expense claim is based on the remaining vehicle's  
13 lease cost at December 31, 2010. Detailed supporting calculations are provided in  
14 Exhibit No. 3-B.

15 **26. Q. Please explain the pro forma adjustment for regulatory / rate case expense.**

16 **A.** The Company's adjustment for regulatory/rate case expense is shown on Page 28  
17 of Exhibit No. 3-A. The adjustment shows the development of the estimated costs  
18 of this rate case. The Company proposes to recover the estimated costs for the  
19 preparation and litigation of this case over a 24 month period, which is the  
20 expected interval between rate filings.

1 27. Q. Please explain the adjustment for inflation shown on page 29 of Exhibit No.  
2 3-A.

3 A. This adjustment is made to reflect the effect of inflation on those HTY expenses  
4 that were not otherwise adjusted. The adjustment is based upon the average of the  
5 quarterly forecasted change in GDP for all four quarters of 2010 that was obtained  
6 from the Blue Chip Financial Forecasts. Details for this adjustment are contained  
7 in Exhibit No. 3-B.

8 28. Q. Please explain the Company's claim for uncollectible accounts expense.

9 A. Page 31 of Exhibit No. 3-A shows the Company's claim developed by applying  
10 the three year average ratio of net write-offs to FTY levels of wastewater sales  
11 revenue. Write-offs associated with customers charged under the availability rate  
12 were excluded in determining the three year average.

13 V. TAXES OTHER THAN INCOME TAXES

14 29. Q. Please explain the adjustment for General Assessments on page 34 of Exhibit  
15 No. 3-A.

16 A. The General Assessments are imposed on regulated utilities to provide funding for  
17 the Commission, the OCA and the OSBA. The General Assessment rates are  
18 applied to a tax base consisting of revenue from wastewater sales. To calculate  
19 pro forma General Assessments, the current assessment rates were applied to a tax  
20 base consisting of pro forma sales revenue under present and proposed rates. The  
21 Company will update this adjustment with the new rates once they are available.

1 30. Q. Please explain the Company's claim for Property Tax shown on page 35 of  
2 Exhibit No. 3-A.

3 A. The Company recently completed a major upgrade to the Saw Creek wastewater  
4 treatment plant in Lehman Pike and will complete an upgrade to the Blue  
5 Mountain wastewater treatment plant in 2010. To calculate the pro forma  
6 property tax claim for this case, the current county, school and borough tax rates  
7 were applied to 25 percent of the market value of the new plants (structure  
8 accounts only). The per book property tax amount was then subtracted to arrive at  
9 the pro forma adjustment.

10 31. Q. Does this conclude your testimony at this time?

11 A. Yes, it does.