

# Part 3: Income statement, revenues, and expenses (OPEX)

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MICHIGAN STATE UNIVERSITY

### 3.0 Utility, enterprise, or investment basis: private and some public

$$RR = r_a (RB) + O\&M + D + T$$

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here*

where:

RR = total test year (annualized) revenue requirements

$r_a$  = authorized (not guaranteed) rate of return to compensate debt holders and equity shareholders

RB = rate base (original cost of invested utility plant in service net of accumulated depreciation and adjustments)

O&M = operation & maintenance expenses, including administrative & general

D = depreciation and amortization expense

T = taxes other than income and income tax expense

Cost-based rates and revenue sufficiency are a function of both the numerator and denominator:

Revenue requirements (RR)  
Estimated sales (billing determinants)

## 3.0 Topics

1. Income statement overview
2. Operating revenues
3. Revenues by customer class
4. Operating expenses
5. Operation and maintenance
6. Personnel-related expenses
7. Disallowed expenses
8. Depreciation expense
9. Income and other taxes
10. Cost-adjustment mechanisms (trackers)
11. System improvement charges
12. Financial auditing for ratemaking
13. Management auditing
14. Rate-case adjustments
15. Ratemaking scenarios

# 3.1 Income statement

## 400. COMPARATIVE INCOME STATEMENT REVENUES AND EXPENSES

Line No.	Account Number and Title (a)	Schedule No. (c)	Balance End of Year (d)	Balance Previous Year (e)	Increase/Decrease (f)
1	400.0 Operating Revenues	401	47,277,356	47,558,771	(281,415)
2					
3	UTILITY OPERATING EXPENSES		XXX	XXX	XXX
4	401.0 Operating Expenses		17,479,046	16,789,256	689,790
5	403.0 Depreciation Expense		6,968,013	6,735,295	232,718
6	406.0 Amortization of Utility Plant Acquisition Adjustment	417	(48,022)	(48,022)	
7	407.1 Amortization of Limited Term Plant	417			
8	407.2 Amortization of Property Losses	417			
9	407.3 Amortization of Other Utility Plant	417			
10	407.4 Amortization of Regulatory Assets				
11	408.0 Taxes Other Than Income	418	1,118,933	1,111,100	7,833
12	409.10 Federal Income Taxes, Utility Operating Income	419	1,815,781	1,377,633	438,148
13	409.11 State Income Taxes, Utility Operating Income	419	772,697	897,136	(124,439)
14	409.12 Local Income Taxes, Utility Operating Income				
15	410.0 Deferred Income Tax	420			
16	410.10 Federal	420	224,156	2,504,297	(2,280,141)
17	410.11 State	420	(118,824)	9,176	(128,000)
18	Total Deferred Income Tax	420	105,332	2,513,473	(2,408,141)
19	411.1 Provision for Deferred Income Taxes - Credit, Utility Operating Income	421			
20	Tax Credits				
21	412.1 Investment Tax Credit, Deferred to Future Periods, Utility Operating Income				
22	412.2 Investment Tax Credits, Restored to Operating Income, Utility Operating Income		(39,247)	(39,220)	(27)
23	Total Tax Credits		(39,247)	(39,220)	(27)
24	TOTAL UTILITY OPERATING EXPENSES		28,172,533	29,336,651	(1,164,118)
25					
26	NET UTILITY OPERATING INCOME (LOSS)		19,104,823	18,222,120	882,703
27					
28	OTHER OPERATING INCOME (LOSS)		XXX	XXX	XXX
29	413.0 Income from Utility Plant Leased to Others				
30	414.0 Gains (Losses) from Disposition of Utility Property				
31	TOTAL OTHER OPERATING INCOME (LOSS)				
32					
33	NON-OPERATING INCOME		XXX	XXX	XXX
34	415.0 Revenues from Merchandising, Jobbing and Contract Work				
35	419.0 Interest & Dividend Income		120,565	113,217	7,348
36	420.0 Allowance for Funds Used During Construction (AFUDC)		215,747	846,571	(630,824)
37	421.0 Non-Utility Income		26,655	25,575	1,080
38	TOTAL NON-OPERATING INCOME		362,967	985,363	(622,396)
39					
40	NON-OPERATING DEDUCTIONS		XXX	XXX	XXX
41	408.2 Taxes Other Than Income, Other Income and Deductions				
42	409.2 Income Taxes, Other Income and Deductions				
43	416.0 Costs & Expenses of Merchandising, Jobbing and Contract Work				
44	426.0 Miscellaneous Non-Utility Expenses		(226,612)	(604,419)	377,807
45	TOTAL NON-OPERATING INCOME & DEDUCTIONS		136,355	380,944	(244,589)
46					
47	INTEREST EXPENSE		XXX	XXX	XXX
48	427.0 Interest Expense		5,364,429	5,203,846	160,583
49	428.0 Amortization of Debt Discount & Expenses		133,072	133,071	1
50	429.0 Amortization of Premium on Debt		11,339	11,339	
51	TOTAL INTEREST EXPENSE		5,508,840	5,348,256	160,584
52					
53	EXTRAORDINARY ITEMS		XXX	XXX	XXX
54	433.0 Income				
55	434.0 Deductions				
56	409.3 Income Taxes				
57	409.4 Other				
58	TOTAL EXTRAORDINARY ITEMS				
59	NET INCOME (LOSS)		13,732,338	13,254,808	477,530

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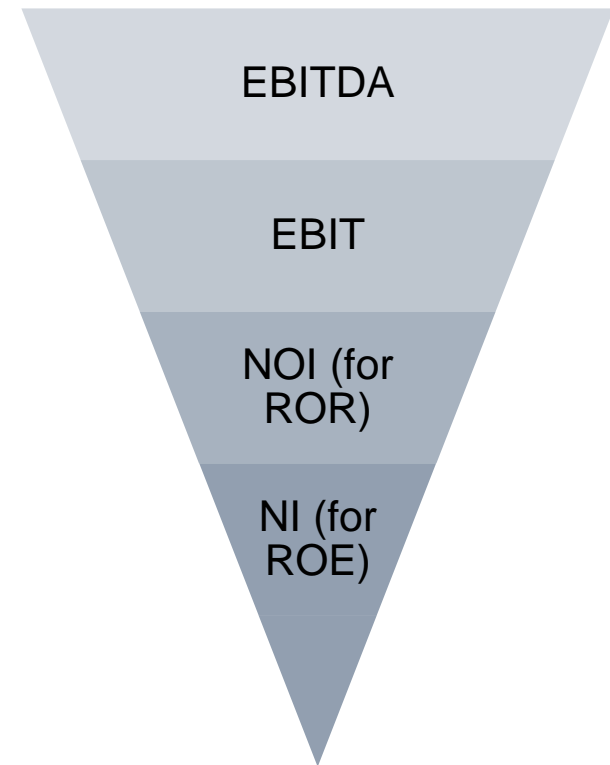
# 3.1 Income statement comparison

## 16-Income statement comparison

Line no.	Acct.	Sched.	Item	YORK	Non-Private
1	400.00	401	UTILITY OPERATING REVENUE	47,277,356	38,515,399
2					
3	401.00	407	UTILITY OPERATING EXPENSE (O&M)	17,479,046	17,479,046
4					
5			DEPRECIATION AND AMORTIZATION		
6	403.00		Depreciation Expense	6,968,013	6,968,013
7	406.00	417	Amortization of Utility Plant Acquisition Adjustment	(48,022)	(48,022)
8			>Depreciation and Amortization	6,919,991	6,919,991
9					
10			TAXES		
11	408.00	419	Taxes Other Than Income	1,118,933	
12	409.10	419	Federal Income Taxes, Utility Operating Income	1,815,781	
13	409.11	419	State Income Taxes, Utility Operating Income	772,697	
			Payment in Lieu of Taxes		895,146
14			>Tax Expense	3,707,411	895,146
15					
16			DEFERRED INCOME TAXES		
17	410.10	420	Federal Deferred Income Tax	224,156	
18	410.11	420	State Deferred Income Tax	(118,824)	
19			>Total Deferred Income Tax	105,332	
20					
21	412.20		TOTAL TAX CREDITS (ITC)	(39,247)	
22					
23			>Total Utility Operating Expenses	28,172,533	25,294,183
24					
25			NET UTILITY OPERATING INCOME (NOI)	19,104,823	13,221,216
26					
27			NON-OPERATING INCOME AND DEDUCTIONS		
28	419.00		Interest & Dividend Income	120,565	
29	420.00		Allowance for Funds Used During Construction (AFUDC)	215,747	
30	421.00		Non-Utility Income	26,655	
31			>Total Non-Operating Income and Deductions	362,967	
32	426.00		Miscellaneous Non-Utility Expenses	(226,612)	
33			>Total Non-Operating Income and Deductions	136,355	
34					
35			INTEREST EXPENSE		
37			Principal Payments		1,762,829
36	427.00		Interest Expense	5,364,429	8,814,144
38	428.00		Amortization of Debt Discount and Expenses	133,072	
39	429.00		Amortization of Premium Debt	11,339	
40			>Total Interest Expense	5,508,840	8,814,144
41					
42			NET INCOME (LOSS)	13,732,338	
43			>Total Non-Operating Income and Deductions	136,355	
44			>Net Income (net of non-operating)*	13,595,983	4,407,072
45					
46			FUND BALANCE		2,644,243

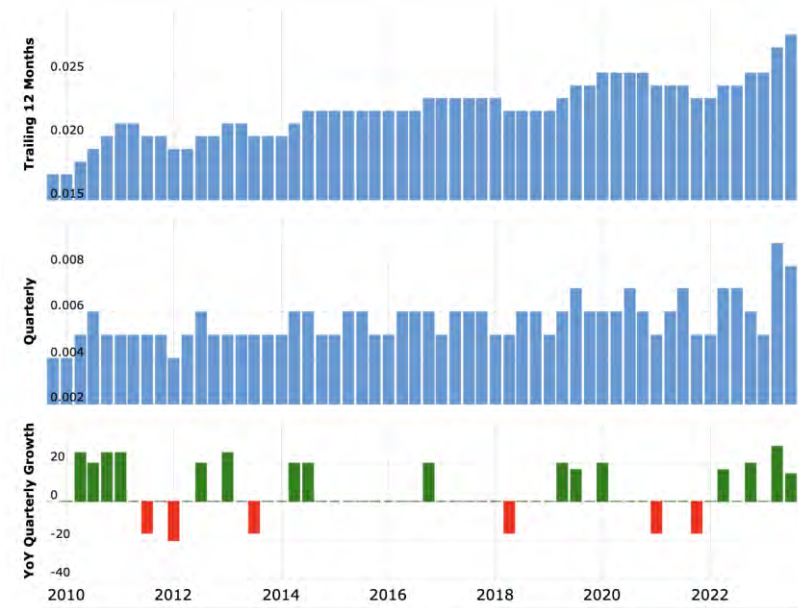
## 3.1 Measuring income

- **Net operating income (earnings) before interest, taxes, depreciation, and amortization (EBITDA)**
  - ▶ EBITDA = Operating revenues from services - operating expenses (O&M and A&G) and taxes other than income taxes (treated as OPEX)
  - ▶ Reflects the income from the primary operations of the company before certain expenditures
  - ▶ May be established by the debt service coverage ratio (DSCR) for non-private utilities not using RBROR
- **Net operating income (earnings) before interest and income taxes (EBIT)**
  - ▶  $\text{EBIT} = \text{EBITDA} - \text{depreciation and amortization expense}$
  - ▶ Reflects the income from the primary operations of the company, net of certain expenditures



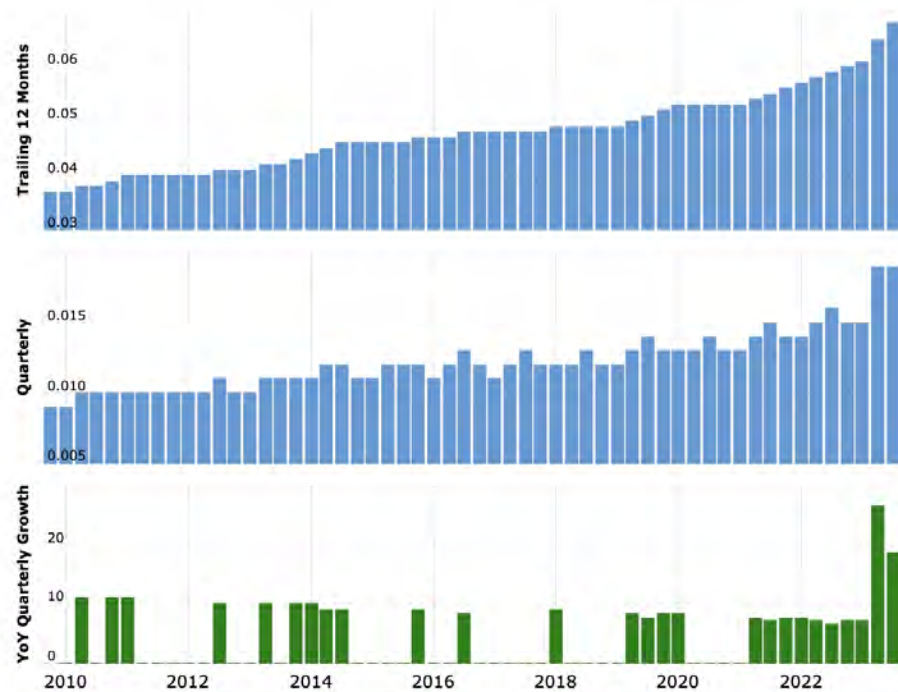
## 3.1 Net operating income and net income

- **Net operating income (NOI) before interest**
  - ▶  $\text{NOI} = \text{EBIT} - \text{income taxes}$
  - ▶ Reflects net income after the effect of income taxes, which is available to debt holders and equity shareholders
  - ▶  $\text{Net operating income} / \text{rate base} = \text{overall rate of return (ROR)}$
  - ▶ Defines the line ("above & below") - investors are funded from below the line (see Part 4)
  
- **Net income (NI) after interest and income taxes**
  - ▶  $\text{NI} = \text{NOI} - \text{other deductions and interest (cost of debt)} + \text{other income net of taxes on other income}$
  - ▶ Reflects the profit or loss from all operations, which is available to equity shareholders as distributions or retained earnings for the year
  - ▶  $\text{Net income} / \text{shareholder equity} = \text{return on equity (ROE)}$  - defines shareholder return (see Part 4)

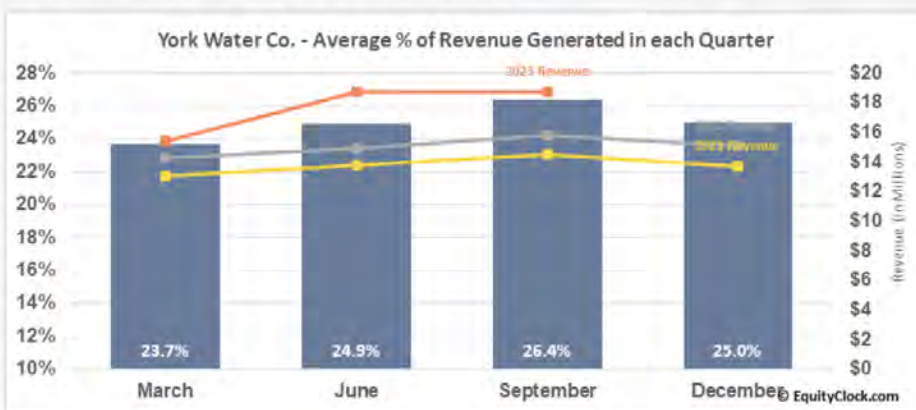




## 3.1 York: operating revenues over time and seasonality



**% of Revenue Generated in Each Quarter**





## 3.2 Operating revenues

- Water Sales Accounts (USoA, 1996)
  - 460. Unmetered Water Revenue
  - 461. Metered Water Revenue
    - 461.1 Metered Sales to Residential Customers
    - 461.2 Metered Sales to Commercial Customers
    - 461.3 Metered Sales to Industrial Customers
    - 461.4 Metered Sales to Public Authorities
    - 461.5 Metered Sales to Multiple Family Dwellings
  - 462. Fire Protection Revenue
    - 462.1 Public Fire Protection
    - 462.2 Private Fire Protection
  - 464. Other Sales to Public Authorities
  - 465. Sales to Irrigation Customers
  - 466. Sales for Resale
  - 467. Interdepartmental Sales
- Other Water Revenues Accounts (USoA, 1996)
  - 469. Guaranteed Revenues
  - 470. Forfeited Discounts
  - 471. Miscellaneous Service Revenues
  - 472. Rents from Water Property
  - 473. Interdepartmental Rents
  - 474. Other Water Revenues

## 3.2 Operating revenues

### 17-Operating revenues

Line no.	Acct.	Item	2018	2017	2016
1		WATER SALES REVENUE			
2	460.0	Unmetered Water Revenue	0	0	0
3	461.0	Metered Water Revenue			
4	461.1	Residential	31,302,819	30,347,447	29,759,907
5	461.2	Commercial	7,931,984	7,895,910	8,026,540
6	461.3	Industrial	3,965,115	3,775,791	3,791,449
7	461.4	Public	734,936	715,031	724,206
8	461.5	Multiple Family Dwellings	0	0	0
9	461.6	Other	0	0	0
10		>Total Metered Water Revenue	43,934,854	42,734,179	42,302,102
11					
12	462.1	Public Fire Protection	1,309,854	1,302,774	1,286,392
13	462.2	Private Fire Protection	1,723,656	1,665,328	1,638,122
14		Other Sales to Public (Special Contracts)			
15					
16		TOTAL WATER SALES	46,968,364	45,702,281	45,226,616
17					
18		OTHER WATER REVENUES			
19	466.0	Sales for Resale (Wholesale)	1,177,463	1,151,030	1,206,587
20	467.0	Interdepartmental Sales			
21	470.0	Forfeited Discounts			
22	471.0	Miscellaneous Service Revenues	87,163	81,207	79,282
23	472.0	Rents from Water Property	506,965	472,033	481,486
24	473.0	Interdepartmental Rents			
25	474.0	Other Water Revenues*	(1,462,599)	152,220	196,847
26		>Total Other Water Revenues	308,992	1,856,490	1,964,202
27					
28		TOTAL WATER SALES AND OTHER REVENUES	47,277,356	47,558,771	47,190,818

## 3.2 Non-operating revenues

- Non-operating (non-utility) income and deductions
  - ▶ Reported on the income statement
  - ▶ Excluded from net income for ratemaking and returns
- Non-operating activities (NRCAM, 2003)
  - ▶ Part of the general rate case investigation is to review the utility's cost allocation procedures and associated financial results to ensure that unregulated costs are properly allocated to unregulated (non-operating) accounts.
  - ▶ The auditor will also want to look for “incidental” uses of regulated plant to determine whether a proper assignment of costs has been determined
- Other utility services
  - ▶ May be converged (electricity and gas, power and water)
  - ▶ Water utilities may provide wastewater and stormwater management services
  - ▶ Separate systems of accounts & reports are filed with regulators for separate operations

CLASS A, B and C WASTEWATER COMPANY  
PUC ANNUAL REPORT  
OF

Utility Code  
A-230087

Company: \_\_\_\_\_  
THE YORK WATER COMPANY

Address: \_\_\_\_\_  
130 EAST MARKET ST., YORK, PA 17401

TO THE  
PENNSYLVANIA  
PUBLIC UTILITY COMMISSION

For the Year Ended December 31, 2018

Telephone Number 717-845-3601

Fax Number 717-718-3090

E-Mail [matthewp@yorkwater.com](mailto:matthewp@yorkwater.com)

Officer to whom correspondence  
concerning this report should be addressed:

Matthew Poff  
Chief Financial Officer

130 East Market St., York, PA 17401

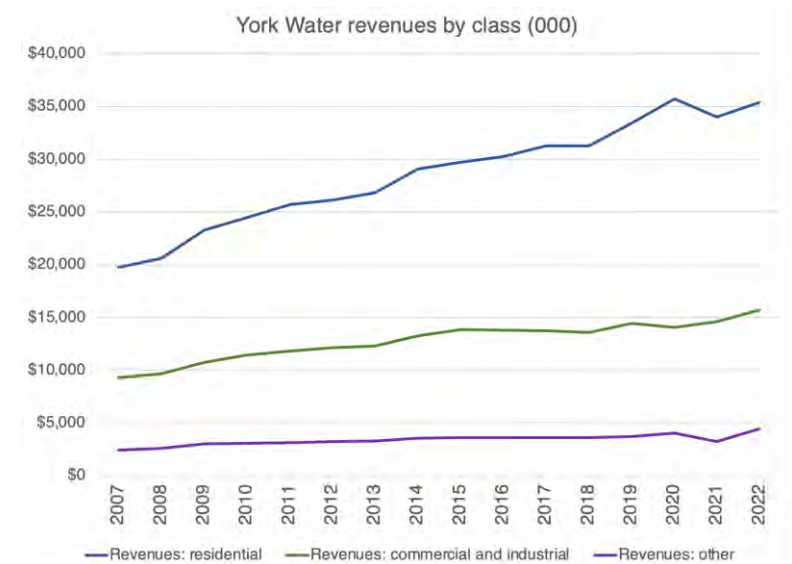
**Q. Why are non-operating activities segregated on the income statement?**

## 3.2 Poll: Customer classes

- Which of the following is *not* a customer class?
  - A. Public authorities
  - B. Irrigation users
  - C. Power generators
  - D. Private fire protection

### 3.3 Revenues by customer class

- Utility revenues
  - ▶ Privately owned utilities depend mainly on revenues related to sales (rates and charges)
  - ▶ Non-private utilities may have additional revenues from taxes, special fees, and grants
- Sales revenues are reported according to customer classes (see also, Part 5)
  - ▶ Groups of customers that have similar patterns of usage and cost characteristics
  - ▶ Some small utilities may serve only a few classes
  - ▶ Advanced metering methods may lead to new classification schemes
- Major customer classes
  - ▶ Residential
    - Single-family
    - Multi-family
  - ▶ Nonresidential
    - Commercial
    - Industrial
    - Wholesale
    - Agricultural and irrigation
    - Mining
    - Public and private fire protection (water)
    - Public authorities and special use (e.g., street lighting in electricity)



### 3.3 York: sales and other revenues

#### 401. OPERATING REVENUES SUPPORTING SCHEDULE - Account No. 400.0

This schedule should include a breakdown of the accounts that constitute the ending balance in Account No. 400.0 - Operating Revenues.

Line No.	Account Number and Title (a)	Schedule No. (b)	Balance End of Year (c)	Balance Previous Year (d)	Increase/ Decrease (e)
1	WATER SALES REVENUE				
2	460.0 Unmetered Water Revenue				
3	460.1 Residential				
4	460.2 Commercial				
5	460.3 Industrial				
6	460.4 Public				
7	460.5 Other				
8					
9	Total Unmetered Water Revenue				
10					
11	461.0 Metered Water Revenue				
12	461.1 Residential		31,302,819	30,347,447	955,372
13	461.2 Commercial		7,931,984	7,895,910	36,074
14	461.3 Industrial		3,965,115	3,775,791	189,324
15	461.4 Public		734,936	715,031	19,905
16	461.5 Multiple Family Dwellings				
17	461.6 Other				
18					
19	Total Metered Water Revenue		43,934,854	42,734,179	1,200,675
20					
21	462.1 Public Fire Protection		1,309,854	1,302,774	7,080
22	462.2 Private Fire Protection		1,723,656	1,665,328	58,328
23	464.0 Other Sales to Public (Special Contracts)	404			
24					
25					
26	TOTAL WATER SALES <sup>1</sup>		46,968,364	45,702,281	1,266,083
27					
28	OTHER WATER REVENUES				
29					
30	466.0 Sales for Resale	405	1,177,463	1,151,030	26,433
31	467.0 Interdepartmental Sales				
32	470.0 Forfeited Discounts				
33	471.0 Miscellaneous Service Revenues		87,163	81,207	5,956
34	472 Rents from Water Property		506,965	472,033	34,932
35	473 Interdepartmental Rents				
36	474 Other Water Revenues	406	(1,462,599)	152,220	(1,614,819)
37					
38	TOTAL OTHER WATER REVENUES		308,992	1,856,490	(1,547,498)
39					
40	TOTAL WATER SALES & OTHER REVENUES		47,277,356	47,558,771	(281,415)

<sup>1</sup> This line -- Total Water Sales -- is to be entered in, and should match up with, Section 2 of the Revised Annual Assessment Report (Form GAO-18).

## 3.3 York: customers and gallons sold

### 402. OPERATING REVENUES SUPPORTING SCHEDULE - CUSTOMER DATA

Customers should be reported on the basis of number of meters, (except where multiple customers have one meter) plus number of flat rate accounts. Where separate meter readings are added for billing purposes, one customer shall be counted for each group of meters so added.

Line No.	Customer Classes (a)	Customers End of Current Year (b)	Customers End of Previous Year (c)
1	Unmetered Sales	XXX	XXX
2	Residential		
3	Commercial		
4	Industrial		
5	Public		
6	Other		
7	Public Fire		
8	Private Fire		
9	Total Unmetered Sales		
10			
11	Metered Sales	XXX	XXX
12	Residential	61,835	61,231
13	Commercial	4,280	4,263
14	Industrial	299	304
15	Public	255	251
16	Multiple Family Dwellings		
17	Other		
18	Private Fire	1,073	1,061
19	Public Fire	223	205
20	Sales for Resale	4	4
21	Total Metered Sales	67,969	67,319

### 403. OPERATING REVENUES SUPPORTING SCHEDULE - GALLONS SOLD

- Report below the gallons sold for the current year and the previous year for each customer class.
- How the quantities of water sold to unmetered flat-rate customers were determined should be explained in a footnote.

Line No.	Account (a)	Gallons Sold Current Year (000 omitted) (b)	Gallons Sold Previous Year (000 omitted) (c)
1			
2	Unmetered Sales	XXX	XXX
3	Residential		
4	Commercial		
5	Industrial		
6	Public		
7	Other		
8	Public Fire		
9	Private Fire		
10	Total Unmetered Sales		
11			
12	Metered Sales	XXX	XXX
13	Residential	2,875,801	2,859,857
14	Commercial	1,497,438	1,535,229
15	Industrial	947,300	907,934
16	Public	152,764	154,474
17	Multiple Family Dwellings		
18	Other		
19	Public Fire		
20	Private Fire	7,242	14,090
21	Sales for Resale	208,293	212,217
22	Total Metered Sales	5,688,838	5,683,801
23			
24	Interdepartmental Sales		
25			
26	Total Water Sales	5,688,838	5,683,801



### 3.3 York: sales for resale (wholesale sales)

#### 405. SALES FOR RESALE SUPPORTING SCHEDULE - Account No. 466.0

1. Designate by asterisk in Column (a) purchases which are affiliated with respondent.
2. The entries on Lines 1 to 8 under Columns (h) to (s) must correspond to the entries on the same lines under Columns (a) to (g). The totals of Columns (h) to (s), inclusive, must agree with respective quantities reported in Column (e).

Line No.	Name of Purchaser (a)	Point of Delivery (b)	Service* Capacity (c)	Pressure @ Point of Delivery (d)	Quantity of Water Sold (1,000-Gal.) (e)	Revenues \$ (f)	Revenue \$ Per (1,000-Gal.) (g)
1	Bulk Water Sales	1801 Mt. Rose Avenue York, PA 17403	3" Turbo	65 psi	11,053	91,786	8.30
2	New Freedom Borough	50 Washington Road	6" Tru-Flow	80 psi	11,188	79,355	7.09
3	Glen Rock Water Authority	Church Street	6" Turbo	60 psi	60,620	241,784	3.99
4	Dover Township	Bull Road	4" Tru-Flow	117 psi	78,192	527,159	6.74
5	Stewartstown Borough	Rt. 851 at Deller Road	3" Turbo	130 psi	47,240	237,379	5.02
6							
7							
8							
Totals				TOTALS	208,293	1,177,463	5.65

\* Size of meter from which delivery is made.

#### MONTHLY SALES IN 1,000-GAL BY PURCHASER

Line No.	January (h)	February (i)	March (j)	April (k)	May (l)	June (m)	July (n)	August (o)	September (p)	October (q)	November (r)	December (s)
1	21	39	26	644	2,619	2,989	1,886	1,112	724	704	236	53
2	999	900	930	931	900	960	945	966	932	900	900	925
3	6,710	4,410	4,540	4,580	4,480	5,050	4,940	5,070	5,560	4,900	4,840	5,540
4	7,785	6,000	6,708	6,000	7,580	6,267	6,546	6,000	6,152	6,000	7,150	6,004
5	4,320	3,420	3,730	3,690	3,220	3,890	3,950	4,320	4,750	4,000	3,940	4,010
6												
7												
8												
Totals	19,835	14,769	15,934	15,845	18,799	19,156	18,267	17,468	18,118	16,504	17,066	16,532

## 3.3 York: other revenues

### 406. OTHER WATER REVENUES SUPPORTING SCHEDULE - Account No. 474.0

Provide a breakdown of Other Water Revenues - Account No. 474.0 not shown in any other revenue account.

Line No.	Description (a)	Amounts (b)
1	Collection Services Revenue	54,303
2	Billing Services Revenue	63,475
3	Service Line Forfeitures	5,700
4	Paz Metals	14,639
5	Darrah's Auto & Salvage	1,128
6	Miscellaneous	807
7	Flushing Revenue Offset	(2,796)
8	Revenue Offset-Tax Rate Change	(1,599,855)
9		
10		
11		
12		
13		
14		
15		
16		
17	TOTALS	(1,462,599)

## 3.4 Operating expenses

- Operating expenses
  - Expenses incurred or reasonably expected to incur during the rate year
    - Operation and maintenance (O&M) expenses
    - Administrative and general (A&G) expenses
    - Taxes other than income as adjusted
- Expenses result in a charge against current income
  - Cash outlay (cash basis) or incurred expense (accrual basis)
  - Subject to audit for ratemaking purposes
  - O&M expenditures are allocated functionally
- Deferred expenses
  - Expenses a company has already incurred but have been deferred for ratemaking to allow recovery in later periods
  - Utility normally requires authorization from regulators to defer costs to a later period
  - ASC 980 (FASB 71) allows deferral of the expense for GAAP purposes as long as there is a reasonable expectation that the amount deferred will be recovered in future rates
- Extraordinarily large expenses may be “capitalized” with regulatory approval
  - For example, York is capitalizing tank painting (see Schedule 422-1)

## 3.4 Operating expenses by function

### 409. WATER OPERATION AND MAINTENANCE EXPENSE ACCOUNTS (ALLOCATION)

Line No.	Account Number and Title (a)	Totals from Schedule 407 (b)	Sources of Supply And Expenses - Operations (c)	Sources of Supply And Expenses - Maintenance (d)	Water Treatment Expenses Operations (e)	Water Treatment Expenses Maintenance (f)	Transmission And Distribution Operations (g)	Transmission And Distribution Maintenance (h)	Customer Accounts Expenses (i)	Administrative And General Expenses (j)
1	<b>Salaries and Wages</b>	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
2	601.0 Employees	6,221,091	153,262	210,770	860,231	182,504	1,525,204	796,829	971,187	1,521,104
3	603.0 Officers, Directors, and Majority Stockholders	285,211								285,211
4	Total Salaries and Wages *	6,506,302	153,262	210,770	860,231	182,504	1,525,204	796,829	971,187	1,806,315
5	<b>Contractual Service</b>	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
6	631.0 Engineering **									
7	632.0 Accounting **	262,792								262,792
8	633.0 Legal **	82,610								82,610
9	634.0 Management Fees **									
10	635.0 Contract Services Testing	27,082			27,082					
11	636.0 Other - Maintenance **	1,813,808	1,432	100,363	147,696	145,091	734	1,140,314	33,833	244,345
12	Total Contractual Service	2,186,292	1,432	100,363	174,778	145,091	734	1,140,314	33,833	589,747
13	<b>Miscellaneous Expense</b>	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
14	675.3 Communications Service	152,748	24,105		22,462		70,331		4,587	31,263
15	675.12 Travel***	13,091	938		1,485		4,505		80	6,083
16										
17										
18	Total Miscellaneous Expenses	165,839	25,043		23,947		74,836		4,667	37,346
19	TOTALS	8,858,433	179,737	311,133	1,058,956	327,595	1,600,774	1,937,143	1,009,687	2,433,408

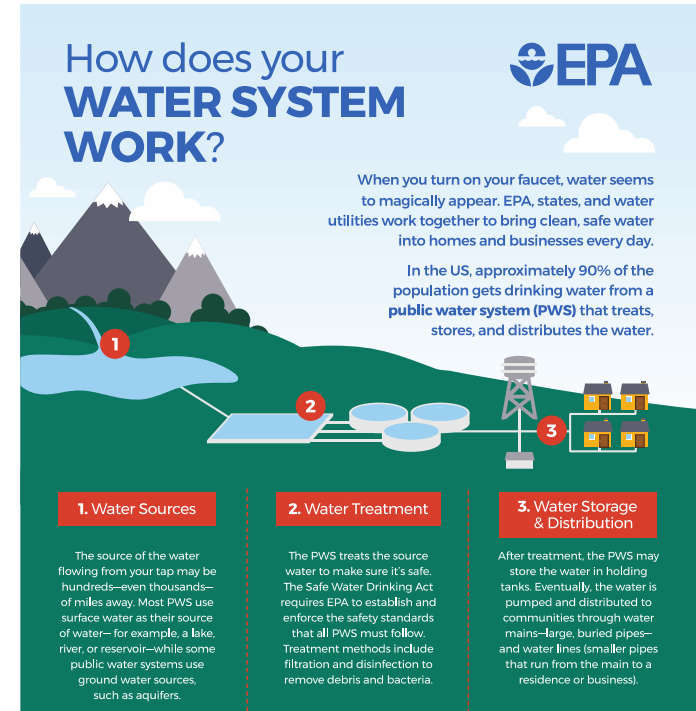
\* For breakdown see Schedule 410

\*\* For breakdowns see Schedules 411-A and 411-B

\*\*\* For breakdown see Schedule 416

## 3.5 Operation and maintenance

- Water system functions have similarities and differences from those of other utilities
- Functional operations of the water system (USoA, 1996)
  - ▶ Source of supply and pumping expenses – operations and maintenance
  - ▶ Water treatment expenses – operations and maintenance
  - ▶ Transmission and distribution expenses – operations and maintenance
  - ▶ Customer accounts expenses
  - ▶ Administrative and general expenses
- Allocation of costs by account across functions creates a detailed matrix
  - ▶ Functionalization is also relevant to cost allocation (see Part 5)



## 3.5 Operation and maintenance accounts (USoA, 1996)

601. Sales and Wages – Employees	636. Contractual Services – Other
603. Sales and Wages – Officers, Directors, and Majority Stockholders	641. Rental of Building/Real Property
604. Employee Pensions and Benefits	642. Rental of Equipment
610. Purchased Water	650. Transportation Expenses
615. Purchased Power	656. Insurance – Vehicle
616. Fuel for Power Production	657. Insurance – General Liability
618. Chemicals	658. Insurance – Workman's Compensation
620. Materials and Supplies	659. Insurance – Other
631. Contractual Services – Engineering	660. Advertising Expenses
632. Contractual Services – Accounting	666. Regulatory Commission Expenses – Amortization of Rate Case Expense
633. Contractual Services – Legal	667. Regulatory Commission Expenses – Other
634. Contractual Services – Management Fees	668. Water Resource Conservation Expense
635. Contractual Services – Testing	670. Bad Debt Expense
	675. Miscellaneous Expenses

## 3.5 Operation and maintenance subaccounts (USoA, 1996)

Acct. No.	Account Title	Source of Supply & Expense Operations	Source of Supply & Expense Maintenance	Water Treatment Expenses Operations	Water Treatment Expenses – Maint.
601.	Salaries and Wages - Employees	601.1	601.2	601.3	601.4
603.	Salaries and Wages – Officers, Directors, and Majority Stockholders	603.1	603.2	603.3	603.4
604.	Employee Pensions and Benefits	604.1	604.2	604.3	604.4
610.	Purchased Water	310.1	XXXXXX	XXXXXX	XXXXXX
615.	Purchased Power	615.1	XXXXXX	615.3	XXXXXX
616.	Fuel for Power Production	616.1	XXXXXX	616.3	XXXXXX
618.	Chemicals	618.1	618.2	618.3	618.4
620.	Materials and Supplies	620.1	620.2	620.3	620.4
631.	Contractual Services – Eng.	631.1	631.2	631.3	631.4
632.	Contractual Services – Acct.	632.1	632.2	632.3	632.4
633.	Contractual Services – Legal	633.1	633.2	633.3	633.4
634.	Contractual Services – Management Fees	634.1	634.2	634.3	634.4
635.	Contractual Services - Testing	635.1	635.2	635.3	635.4
636.	Contractual Services – Other	636.1	636.2	636.3	636.4
641.	Rental of Building / Real Property	641.1	641.2	641.3	641.4
642.	Rental of Equipment	642.1	642.2	642.3	642.4
650.	Transportation Expenses	650.1	650.2	650.3	650.4
656.	Insurance – Vehicle	656.1	656.2	656.3	656.4
657.	Insurance – General Liability	657.1	657.2	657.3	657.4
658.	Insurance – Workman's Compensation	658.1	658.2	658.3	658.4
659.	Insurance – Other	659.1	659.2	659.3	659.4
660.	Advertising Expense	XXXXXX	XXXXXX	XXXXXX	XXXXXX
666.	Regulatory Commission Expense – Amortization	XXXXXX	XXXXXX	XXXXXX	XXXXXX
667.	Regulatory Commission Expense – Other	667.1	667.2	667.3	667.4
668.	Water Resource Conservation Expense	668.1	XXXXXX	XXXXXX	XXXXXX
670.	Bad Debt Expense	XXXXXX	XXXXXX	XXXXXX	XXXXXX
675.	Miscellaneous Expense	675.1	675.2	675.3	675.4

Acct. No.	Account Title	Trans. & Distribution Expenses - Operations	Trans. & Distribution Expense Maintenance	Customer Accounts Expenses	Admin. & General Expenses
601.	Salaries and Wages - Employees	601.5	601.6	601.7	601.8
603.	Salaries and Wages – Officers, Directors, and Majority Stockholders	603.5	603.6	603.7	603.8
604.	Employee Pensions and Benefits	604.5	604.6	604.7	604.8
610.	Purchased Water	XXXXXX	XXXXXX	XXXXXX	XXXXXX
615.	Purchased Power	615.5	XXXXXX	615.7	615.8
616.	Fuel for Power Production	616.5	XXXXXX	616.7	616.8
618.	Chemicals	618.5	618.6	XXXXXX	XXXXXX
620.	Materials and Supplies	620.5	620.6	620.7	620.8
631.	Contractual Services – Eng.	631.5	631.6	631.7	631.8
632.	Contractual Services – Acct.	632.5	632.6	632.7	632.8
633.	Contractual Services – Legal	633.5	633.6	633.7	633.8
634.	Contractual Services – Management Fees	634.5	634.6	634.7	634.8
635.	Contractual Services - Testing	635.5	635.6	635.7	635.8
636.	Contractual Services – Other	636.5	636.6	636.7	636.8
641.	Rental of Building / Real Property	641.5	641.6	641.7	641.8
642.	Rental of Equipment	642.5	642.6	642.7	642.8
650.	Transportation Expenses	650.5	650.6	650.7	650.8
656.	Insurance – Vehicle	656.5	656.6	656.7	656.8
657.	Insurance – General Liability	657.5	657.6	657.7	657.8
658.	Insurance – Workman's Compensation	658.5	658.6	658.7	658.8
659.	Insurance – Other	659.5	659.6	659.7	659.8
660.	Advertising Expense	XXXXXX	XXXXXX	XXXXXX	660.8
666.	Regulatory Commission Expense – Amortization	XXXXXX	XXXXXX	XXXXXX	666.8
667.	Regulatory Commission Expense – Other	667.5	667.6	667.7	667.8
668.	Water Resource Conservation Expense	XXXXXX	XXXXXX	XXXXXX	XXXXXX
670.	Bad Debt Expense	XXXXXX	XXXXXX	670.7	XXXXXX
675.	Miscellaneous Expense	675.5	675.6	675.7	675.8



## 3.5 Operation and maintenance (O&M) expenses

### 407. WATER OPERATION AND MAINTENANCE EXPENSE ACCOUNTS

Line No.	Account Number and Title (a)	Schedule No. (b)	Amount of Operating Expenses		
			Current Year (c)	Previous Year (d)	Increase (Decrease) (e)
1	<b>Salaries and Wages</b>		XXX	XXX	XXX
2	601.0 Employees	409	6,221,091	6,071,907	149,184
3	603.0 Officers, Directors and Majority Stockholders	409	285,211	279,851	5,360
4	Total Salaries and Wages		6,506,302	6,351,758	154,544
5	604.0 Employee Pensions and Benefits	409-A	1,622,138	1,708,358	(86,220)
6	610.0 Purchased Water	408			
7	615.0 Purchased Power		1,078,891	1,015,290	63,601
8	616.0 Fuel for Power Production		23,840	26,254	(2,414)
9	618.0 Chemicals		535,188	491,958	43,230
10	620.0 Materials and Supplies		773,452	662,096	111,356
11	<b>Contractual Services</b>		XXX	XXX	XXX
12	631.0 Engineering	411-A			
13	632.0 Accounting	411-A	262,792	186,875	75,917
14	633.0 Legal	411-A	82,610	131,745	(49,135)
15	634.0 Management Fees	411-B			
16	635.0 Testing	411-B	27,082	31,638	(4,556)
17	636.0 Other - Maintenance	411-B	1,813,808	1,544,044	269,764
18	Total Contractual Services		2,186,292	1,894,302	291,990
19	641.0 Rental of Building/Real Property				
20	642.0 Rental of Equipment		8,143		8,143
21	650.0 Transportation Expenses		571,024	507,872	63,152
22	<b>Insurance</b>		XXX	XXX	XXX
23	656.0 Vehicle		31,846	34,724	(2,878)
24	657.0 General Liability		408,384	373,647	34,737
25	658.0 Workman's Compensation		110,238	139,193	(28,955)
26	659.0 Other		261,122	239,929	21,193
27	Total Insurance		811,590	787,493	24,097
28	660.0 Advertising Expense - Other than Conservation	412			
29	666.0 Regulatory Commission Expenses-Amort. of Rate Case Expense				
30	667.0 Regulatory Commission Expenses-Other				
31	668.0 Water Resource Conservation Expense		1,250	3,000	(1,750)
32	670.0 Bad Debt Expense		250,884	290,897	(40,013)
33	<b>Miscellaneous Expenses</b>		XXX	XXX	XXX
34	675.0 Miscellaneous Other	413	1,306,469	1,365,629	(59,160)
35	675.1 Membership Dues		72,560	71,090	1,470
36	675.2 Registration Fees for Conventions & Meetings of Industry	414	5,140	6,290	(1,150)
37	675.3 Communication Services		152,748	145,137	7,611
38	675.4 Trustee Fees and Bank Charges		607,919	591,457	16,462
39	675.5 Stockholders Expenses		219,978	191,663	28,315
40	675.6 Office Expenses and Utilities		113,740	65,312	48,428
41	675.7 Uniforms		10,927	10,479	448
42	675.8 Director's Fees and Expenses		292,942	281,390	11,552
43	675.9 Mailing		302,856	300,904	1,952
44	675.10 Subscriptions		1,374	1,210	164
45	675.11 Write off of expenditures for preliminary surveys, plans, investigations etc., included in Account 183.0 - Preliminary Survey and Investigation Charges, relative to projects which have been abandoned.				
46	675.12 Travel	416	13,091	10,803	2,288
47	675.13 Education	415	10,308	8,614	1,694
48	675.14 Charitable Contributions				
49	Total Miscellaneous Expenses		3,110,052	3,049,978	60,074
50	Total Water Operation and Maintenance Expense Accounts		17,479,046	16,789,256	689,790

## 3.6 Personnel-related expenses

- Personnel

- ▶ 601. Salaries and Wages - Employees

- Compensation (salaries, bonuses and other consideration of services) paid or accrued to employees of the utility company for work related to operation and maintenance of that utility. This account shall not include the salaries and wages of officers, directors or majority stockholders of the utility company.

- ▶ 603. Salaries and Wages - Officers, Directors and Majority Stockholders

- Compensation (salaries, bonuses and other consideration for services) paid or accrued to officers, directors or majority stockholders of the utility company.

- ▶ 604. Employee Pensions and Benefits

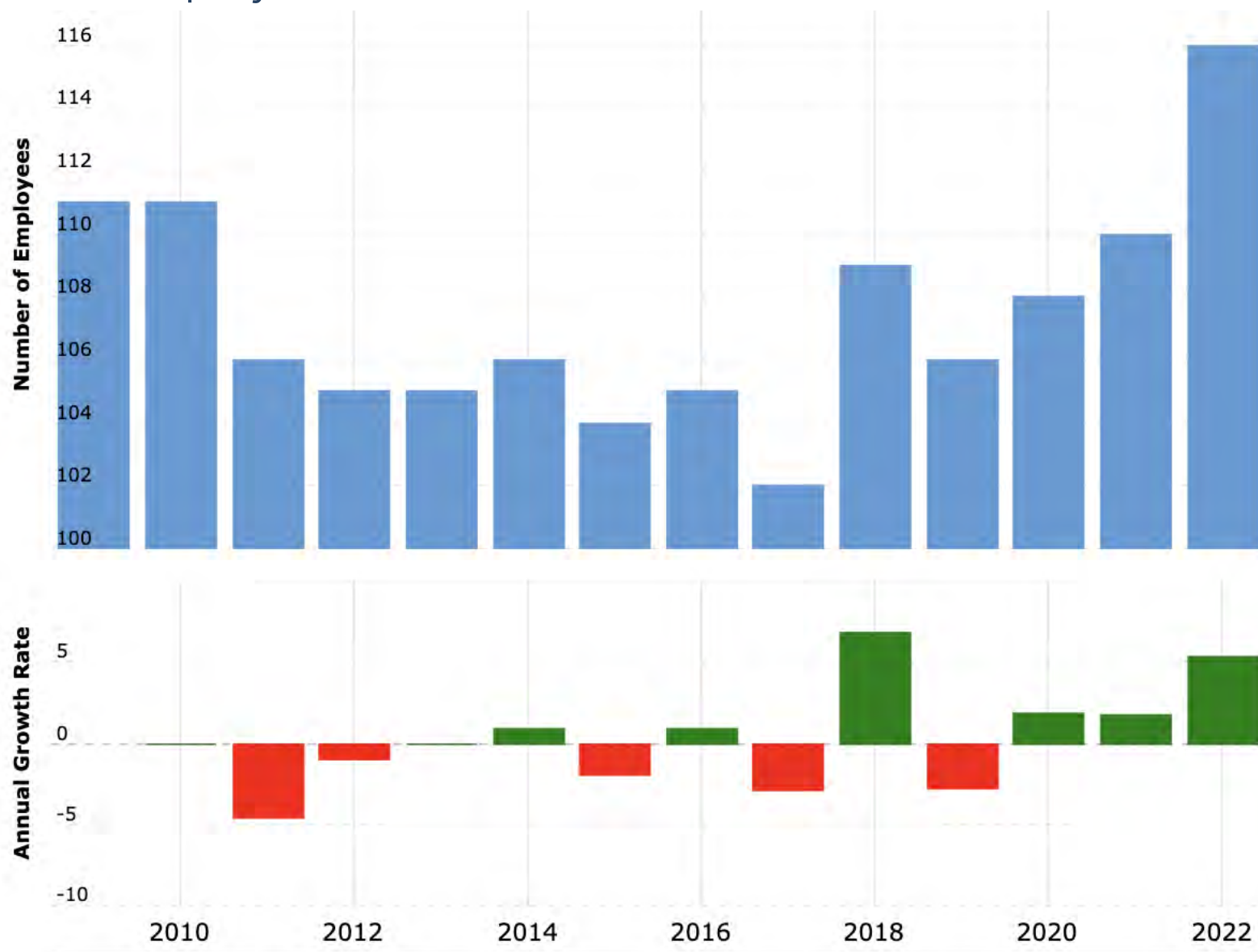
- All accruals under employee pension plans to which the utility has irrevocably committed such funds, and payments for employee accident, sickness, hospital and death benefits or insurance therefor. Include also expenses for medical, educational, or recreational activities of employees.

- Executive compensation

- ▶ Salaries and other compensation, including performance incentives (caps?)
  - ▶ Transparency in reporting and oversight and for comparative purposes
  - ▶ Allocation between shareholders and ratepayers

**Q. Should regulators allow recovery of performance incentives for utility executives?**

### 3.6 York: employment trend



## 3.6 Executive compensation (salary.com)

For its 2022 fiscal year, YORK WATER CO, listed the following executives on its annual proxy statement to the SEC. [View as table](#)

<div> <div>Equity</div> <div>Cash Compensation</div> <div>Other</div> </div>	
NAME AND TITLE	TOTAL COMPENSATION
<b>Joseph T. Hand</b> President, Chief Executive Officer	\$437,771 
<b>Matthew E. Poff CPA</b> Chief Financial Officer	\$297,920 
<b>Mark A. Wheeler</b> Chief Operating Officer	\$306,030 

### The York Water Company



<div> <div>Equity</div> <div>Cash Compensation</div> <div>Other</div> </div>	
NAME AND TITLE	TOTAL COMPENSATION
<b>Christopher H. Franklin</b> President and Chief Executive Officer, Director	\$4,569,047 
<b>Christopher P. Luning</b> EVP and General Counsel	\$1,219,734 
<b>Richard S. Fox</b> EVP and Chief Operating Officer	\$1,539,693 
<b>Daniel J. Schuller</b> EVP and Chief Financial Officer Principal Financial Officer	\$1,553,899 

## 3.6 Poll: executive compensation

- Should regulators cap recoverable utility executive pay?
  - A. Yes
  - B. No
  - C. Not sure

## 3.6 York: director compensation

### 103. DIRECTORS

1. Provide the following information on each director of the respondent who held office at any time during the year. Include in column (a) abbreviated titles of the directors who are officers of respondent.
2. Designate by an asterisk names of members of Executive Committee, and by double asterisk the Chairman of the Executive Committee.

Line No.	Directors Name and Title (a)	Principal Business Address					Term Began (g)	Term Expires (h)	Meetings Attended (i)	Fees Paid (j)
		Street Address (b)	City (c)	State (d)	Zip (e)	Telephone (f)				
1	George W. Hodges, Chm **	130 East Market Street	York	PA	17401	(717)845-3601	5/7/2018	5/3/2021	9	35,748
2	George Hay Kain III	130 East Market Street	York	PA	17401	(717)845-3601	5/7/2018	5/3/2021	9	28,788
3	Michael W. Gang, Esq. *	130 East Market Street	York	PA	17401	(717)845-3601	5/7/2018	5/3/2021	9	30,208
4	Ernest J. Waters *	130 East Market Street	York	PA	17401	(717)845-3601	5/1/2017	5/4/2020	15	34,868
5	Jeffrey R. Hines, Pres/CEO *	130 East Market Street	York	PA	17401	(717)845-3601	5/7/2018	5/3/2021	9	0
6	Steven R. Rasmussen, CPA	130 East Market Street	York	PA	17401	(717)845-3601	5/2/2016	5/6/2019	13	35,988
7	Robert P. Newcomer *	130 East Market Street	York	PA	17401	(717)845-3601	5/1/2017	5/4/2020	14	33,478
8	Jody L. Keller, SPHR	130 East Market Street	York	PA	17401	(717)845-3601	5/2/2016	5/6/2019	9	28,788
9	Erin C. McGlaughlin	130 East Market Street	York	PA	17401	(717)845-3601	5/1/2017	5/4/2020	13	32,588
10	James H. Cawley, Esq. *	130 East Market Street	York	PA	17401	(717)845-3601	10/3/2016	5/6/2019	11	30,818
11										
12										
13										
14										
15										

\* Executive Committee

\*\* Chairman of Executive Committee

## 3.6 Contractual services

### 411-A. CONTRACTUAL SERVICES SUPPORTING SCHEDULE

Account Nos. 631.0, 632.0 and 633.0

Provide a breakdown of **Engineering Expense** - Account No. 631.0.

Line No.	Description of Project (a)	Expense (b)
1	NONE	
2		
3		
4		
5		
6		
7	TOTAL	

Provide a breakdown of **Accounting Expense** - Account No. 632.0.

Line No.	Type of Service (a)	Expense (b)
1	Auditing Fees	180,937
2	Internal Control Services	48,300
3	Tax Services	14,150
4	Other	19,405
5		
6		
7	TOTAL	262,792

Provide a breakdown of **Legal Expense** - Account No. 633.0.

Line No.	Description of Service (a)	Expense (b)
1	General	1,975
2	Employee/Labor Related	36,254
3	Customer Related	2,856
4	Lead Disclosure	11,293
5	SEC Compliance	9,960
6	Regulatory Compliance	20,272
7	TOTAL	82,610



## 3.6 York: payroll and pension contributions 604

### ■ ISSUE ¶33. Recovery of pension contribution costs.

- ▶ Settlement rates will be presumed to provide for recovery of a cash contribution to pensions in the amount of \$2,300,000. York commits to deposit such amount into its pension trust on an annual basis during the rate period, provided that such deposit does not exceed the deductibility limits under the Internal Revenue Code.

#### 410. EMPLOYEE AND PAYROLL STATISTICS

- Show hereunder the details called for concerning the number of officers and employees at the beginning and end of the year, and the aggregate salaries and wages for the year.
- The data shall be itemized according to the department payroll classification maintained by Respondent at the end of the year (such as, for example, executive, accounting, treasury, engineering, etc).

Line No.	Payroll Classification (a)	Number Beginning of Year (b)	Number End of Year (c)	Aggregate Salaries and Wages for the Year (d)
1	Main Office (Customer Service, Accounting, IT, Billing, Meter Reading, Human Resources, Executive)	37	36	2,777,502
2				
3				
4	Distribution (Purchasing, Engineering, Operations, Construction, Maps, Materials and Supplies)	42	47	2,322,033
5				
6				
7	Pumping Station (Maintenance and Grounds)	15	14	546,536
8				
9	Filter Plant (Water Treatment)	8	9	860,231
10				
11				
12				
13				
14				
15				
16				
17				
18				
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31				
32				
33				
34				
35				
36				
37				
38				
39				
40		102	106	6,506,302

#### 409-A. EMPLOYEE PENSIONS AND BENEFITS SUPPORTING SCHEDULE Account No. 604.0

This schedule should include a breakdown of the accounts that constitute the ending balance in Account No. 604.0 - Employee Pensions and Benefits.

Line No.	Benefit Type (a)	Employees (c)	Total Expenses for	
			Current Year (d)	Prior Year (e)
1	Pension	176	236,355	230,189
2	Life Insurance	105	11,260	11,370
3	Health Insurance	91	979,200	1,120,892
4	Dental	94		
5	Eye Care	95		
6	Prescriptions	91		
7	Employee Recognition		5,694	6,573
8	Physicals		2,392	4,333
9	Tuition Assistance	13	53,338	12,932
10	Death Benefits		(9,655)	16,825
11	Other Post Employee Benefits			
12	401K	101	289,057	268,991
13	Employee Stock Option Program	76		
14	Others (Specify)		54,497	36,253
15	TOTALS	842	1,622,138	1,708,358

## 3.6 Personnel travel expenses

### 416. TRAVEL EXPENSE SUPPORTING SCHEDULE - Account No. 675.12

Provide a breakdown of Travel Expense - Account No. 675.12

Line No.	Event (a)	Travel Expenses (b)	Lodging Expenses (c)	Meal Expenses (d)	Entertainment Expenses (e)	Total Expense (f)
1	AWWA Conference			735		735
2	EGSA Power School	980	522	87		1,589
3	NAWC Events	692	1,271			1,963
4	WWAOP Conference		1,530			1,530
5	Employee Interviews			33		33
6	Miscellaneous Employee Meals			4,470		4,470
7	Miscellaneous Employee Parking, Mileage, Tolls	2,771				2,771
8						
9						
10						
11						
12						
13						
14						
15						
16	TOTALS	4,443	3,323	5,325		13,091

## 3.7 Allowances and disallowances

- Expenditures considered necessary, prudent, economical are generally allowed
  - ▶ Including costs associated with compliance with other policies (e.g., environmental)
  - ▶ Disallowances are costs that cannot be recovered from ratepayers and may be characterized as nonutility expenses
  - ▶ Disallowances are used to impose regulatory discipline on the monopoly
  - ▶ Boards of directors may also want to review spending in certain areas
- Common full or partial disallowances ("other people's money")
  - ▶ Imprudent or excessive operating expenses (always)
  - ▶ Fines, penalties, liabilities, and legal defense (may depend on culpability)
  - ▶ Advertising and “loyalty-building” expenses (except public service announcements)
  - ▶ Political and lobbying expenses (IRS, 26 U.S.C. §162) – even if rationalized
  - ▶ Association dues connected to political purposes (campaigns, lobbying)
  - ▶ Charitable contributions (typically) – even if rationalized and especially if political
  - ▶ Research and development by utility or industry organizations (sometimes)
  - ▶ Life insurance on officers and employees where utility is beneficiary
  - ▶ Executive compensation or bonuses (sometimes at some levels)

**Q. How much did York spend on advertising, charity, and R&D?**

### 3.7 Disallowed (non-utility) expenses (USoA, 1996) ⓘ

- 426. Miscellaneous Nonutility Expenses
- This account shall contain all expenses other than expenses of utility operations and interest expense...
  - ▶ Expenses disallowed in a proceeding before the Commission
  - ▶ Amortization of an Acquisition Adjustment not approved by the Commission
  - ▶ Depreciation associated with plant not used and useful in the public service
  - ▶ Depreciation of Nonutility Plant
  - ▶ Imprudent expenses
  - ▶ Donations for charitable, social or community welfare purposes
  - ▶ Life insurance on officers and employees where utility is beneficiary (net premiums less increase in cash surrender value of policies)
  - ▶ Penalties or fines for violations of statutes pertaining to regulation

## 3.7 Disallowed (non-utility) expenses (continued) ⓘ

- ▶ Expenditures for the purpose of:
  - a. Influencing public opinion with respect to the election or appointment of public officials, or the adoption, repeal, revocation or modification of referenda, legislation or ordinances.
  - b. Influencing public opinion with respect to obtaining approval, modification or revocation of franchises.
  - c. Influencing the decisions of public officials not including such expenditures which are directly related to appearances before regulatory or other governmental bodies in connection with the utility's existing or proposed operations.
- ▶ Loss relating to investments in securities written-off or written-down.
- ▶ Loss on sale of investments.
- ▶ Loss on reacquisition, resale or retirement of utility 's debt securities.
- ▶ Preliminary survey and investigation expenses related to abandoned projects, when not written-off to the appropriate operating expense account.
- ▶ Golf club dues, social club dues and service club dues (Kiwanis, Rotary, etc.) house charges and items of a similar nature whether such expenditures are made directly by the utility or indirectly by payment or reimbursement to associated companies, officers, or other employees, or by any other direct or indirect means.

## 3.8 Depreciation expense

- Depreciation expense is included in revenue requirements
  - A non-cash expense for the systematic “return of” investment to shareholders
  - Brings revenue to the utility without an outlay (expenditure)
  - Cash is paid upfront at the time of a long-term capital investment - must be recovered
  - Depreciation provides cash flow for use at the utility's discretion, including reinvestment
- Depreciation vs. amortization expenses
  - Depreciation is used to systematically spread cost over the useful life of plant assets, and also serves intergenerational equity goals (temporal cost allocation)
  - Amortization is comparable but applies to intangible non-plant assets that have value over time (e.g., computer software, regulatory assets, water rights) – also used for policy purposes
- Cash flow from depreciation can be reinvested in capital projects
  - Utilities are not obligated to reinvest depreciation expense – but it may be retained
  - Should not be used to forestall rate increases needed to cover operating expense
  - Current customers are not obligated to build reserves for replacement
- Two common methods of depreciation
  - Straight-line (same amount each period)
  - Accelerated (more amounts in earlier periods)
- Expense must be synchronized with rate base components
  - Accumulated depreciation is recorded on the balance sheet (see Part 2)

## 3.8 Depreciation expense for water

- 403. Depreciation Expenses (USoA, 1996)
  - ▶ A. This account shall be charged with depreciation credited to account 108 - Accumulated Depreciation of Water Plant and credited with amortization debited to account 272 - Accumulated Amortization of Contributions in Aid of Construction. Depreciation shall be accrued on a straight-line remaining life basis or straight-line basis, as required by the Commission.
  - ▶ A single composite depreciation rate may be used if approval from the Commission is obtained

Q. Why are utilities entitled to a return of and on investment?



## 3.8 Recording depreciation expense for CIAC (water)

- Accounting treatment at year 10 for a 20-year asset (straight-line method)

BALANCE SHEET Utility plant and CIAC (end of period)	All investor- supplied capital	Some CIAC	Rate base impact of no amort. credit
101. Utility plant in service	100,000	100,000	100,000
108. Accumulated depreciation	(50,000)	(50,000)	(50,000)
Net utility plant	50,000	50,000	50,000
271. Contributions in aid of construction	0	(20,000)	(20,000)
272. Accumulated amortization of CIAC	0	10,000	0
Net rate base	50,000	40,000	30,000
INCOME STATEMENT Utility operating accounts (annual period)			
403. Depreciation expense (dr)	5,000	5,000	5,000
407. Amortization expense (cr)	0	(1,000)	0
Net depreciation expense	5,000	4,000	5,000

## 3.8 Recording depreciation expense for CIAC (water)

- Accounting treatment at year 20 for a 20-year asset

BALANCE SHEET Utility plant and CIAC (end of period)	All investor- supplied capital	Some CIAC	Rate base impact of no amort. credit
101. Utility plant in service	100,000	100,000	100,000
108. Accumulated depreciation	(100,000)	(100,000)	(100,000)
Net utility plant	0	0	0
271. Contributions in aid of construction	0	(20,000)	(20,000)
272. Accumulated amortization of CIAC	0	20,000	0
Net rate base	0	0	?
INCOME STATEMENT Utility operating accounts (annual period)			
403. Depreciation expense (dr)	5,000	5,000	5,000
407. Amortization expense (cr)	0	(1,000)	0
Net depreciation expense	5,000	4,000	5,000

## 3.9 Income and other taxes

### ■ Types of taxes

- ▶ Federal and state income taxes
- ▶ Federal, state, and local payroll taxes (company's share)
- ▶ Local property taxes and franchise fees

### ■ Ratemaking

- ▶ Ratepayers pay utility's revenue-based income and other taxes
- ▶ Revenues to be collected from ratepayers are "grossed up" using "conversion factors" (see Part 4)
- ▶ To recognize the effect of income taxes (and changes to other items) on revenue requirements and earnings
- ▶ Conversion factor =
  - $1 / (1 - \text{tax rate})$

		OTHER THAN INCOME AND INCOME TAXES DURING YEAR						
Line No.	Kind of Tax (See Instruction 5) (a)	BALANCE AT BEGINNING OF YEAR (b)	BY DEBIT OR CREDIT TO ACCOUNT (c)	BY DEBIT OR CREDIT TO OTHER ACCOUNTS				TOTAL ACCRUALS, AMORTIZATIONS AND DEFERRALS (H)
				ACCT. NO. (d)	AMOUNT DEBIT (e)	ACCT. NO. (f)	AMOUNT CREDIT (g)	
2	Taxes Other Than Income-Account (408)							
3	Utility Reg. Assessment Fees Acct (408.10)		256,492					256,492
4	Property Taxes Acct (408.11)		339,539					339,539
5	Payroll Taxes Acct (408.12)		589,224					589,224
6	Other Taxes and Licenses Acct (408.13)		(66,322)					(66,322)
7	Other Than Inc., Other Inc. and Dist. Acct (408.2)							
8								
9								
10	Total - Taxes Other Than Income							1,118,933
11								
12	Income Taxes Acct (409)							
13	Fed. Inc. Taxes, Util. Oper. Inc. Acct (409.10)		1,815,781					1,815,781
14	State Inc. Taxes, Util. Oper. Inc. Acct (409.11)		772,697					772,697
15	Local Inc. Taxes, Util. Oper. Inc. Acct (409.12)							
16	Inc. Taxes, Other Inc. and Dist. Acct (409.20)							
17	Inc. Taxes, Extraordinary Items Acct (409.30)							
18	Other Income Taxes (specify)							
19								
20	Total - Income Taxes							2,588,478
21								
22	Deferred Income Taxes Acct (410)							
23	Def. Fed. Inc. Taxes Acct (410.10)		224,156					224,156
24	Def. State Inc. Taxes Acct (410.11)		(118,824)					(118,824)
25	Def. Local Inc. Taxes Acct (410.12)							
26	Other Deferred Taxes Acct (410.20)							
27								
28	Total - Deferred Income Taxes							105,332
29								
30	Deferred Inc. Taxes Credit Acct (411)							
31								
32								
33								
34								
35	Investment Tax Credits Acct (412)		(39,247)					(39,247)
36								
37								
38								

## 3.9 Reconciliation of net income based on taxes

- Reconciliation and synchronization
  - Deferred income taxes
  - Depreciation
  - Tax-deductible interest expense
- Net income will differ for regulatory and tax purposes
  - Must be reconciled
  - Shown on a schedule in the annual report to regulators
- See IRS Schedule M for reconciliation

### 422-1. RECONCILIATION OF NET INCOME SHOWN ON SCHEDULE 400 WITH FEDERAL NORMAL TAX NET INCOME (Continued)

Line No.	Particulars (a)	Amount (b)
1	<b>Net Income for the year per Schedule 400</b>	13,732,338
2	Adjustments made to determine taxable income*	
3		
4	Current and Deferred Income Taxes	2,654,563
5	Debt Amortization	43,951
6	Nondeductible Holiday/Vacation	3,598
7	Nondeductible Lobbying	23,274
8	Nondeductible Meals/Entertainment	5,148
9	Nondeductible Postretirement Benefits	(27,193)
10	Prepaid Expenses	(31,987)
11	Deferred Compensation	(89,641)
12	Stock Based Compensation	21,437
13	Tax Exempt Interest	(105,259)
14	Deferred Rate Case Expense, Service Life Study, and Service Line Replacements	(413,607)
15	Depreciation	633,469
16	Amortization of Acquisition Adjustments	(48,022)
17	Cost of Removal	(1,929,800)
18	Dividends of Domestic Corporations	(7,653)
19	Prior Year State Tax Adjustment	(33,015)
20	State Tax Provision	(739,682)
21	Capitalized Expenses for Tank Painting	(443,361)
22	Tax Repair Expenditures	(6,534,332)
23	Nondeductible Penalties	1,788
24	Revenue Reserve	1,599,855
25	Charitable Contributions Carryover	(204,156)
26		
27		
28		
29		
30		
31		
32		
33	<b>Net additions to or deductions from amount shown on Line 1</b>	<b>(5,620,625)</b>
34		
35	<b>Federal surtax net income</b> (surtax \$1,703,460 at applicable rate of tax of 21%)	8,111,713

\* List additional income items first, followed by additional deductions.

## 3.9 Income and other taxes ⓘ

- 408. Taxes Other Than Income (USoA, 1996)
  - ▶ A. These accounts shall include the amount of ad valorem, gross revenue or gross receipts taxes, regulatory agency general assessments for purposes of public utility regulation, state unemployment insurance, franchise taxes, federal excise taxes, social security taxes, and all other taxes assessed by federal state, county, municipal, or other local governmental authorities, except income taxes.
- 409. Income Taxes (USoA, 1996)
  - ▶ A. These accounts shall include the amounts of local, state and federal income taxes on income properly accruable during the period covered by the income statement to meet the actual liability for such taxes. Concurrent credits for the tax accruals shall be made to account 236 - Accrued Taxes, and as the exact amounts of taxes become known, the current tax accruals shall be adjusted by charges or credits to these accounts unless such adjustments are properly included in account 439 - Adjustments to Retained Earnings, so that these accounts as nearly as can be ascertained shall include the actual taxes payable by the utility (See Accounting Instruction 8 for prior period adjustments).
- 410. Provision for Deferred Income Taxes (USoA, 1996)
  - ▶ A. Accounts 410.10, 410.11, 410.12 and 410.20 shall be debited and accounts 281, 282, or 283 Accumulated Deferred Income Taxes - Accelerated Amortization, Liberalized Depreciation, or Other, shall be credited with amounts equal to any current deferrals of taxes on income or any allocations of deferred taxes originating in prior periods, as provided by the texts of accounts 190, 281, 282, and 283. No credit amounts appropriately includible in account 411.10- or 411.20 shall be netted against entries required to be made to these accounts.

## 3.9 Income-tax timing differences

- Timing differences
  - ▶ A type of temporary difference between tax and book recording of costs (asset or expense)
  - ▶ A difference between book income and tax income that originates in one period and reverses (or turns around) in one or more later periods
  - ▶ Relevant to normalization
- Effects of timing differences
  - ▶ Some reduce income taxes that would otherwise be payable currently
  - ▶ Some increase income taxes that would otherwise be payable in the future
- Different depreciation rates
  - ▶ Affect what is expensed and when, and thus net income

### Journal entry for comprehensive inter-period tax allocation (normalization)

Debit	Credit
Income tax expense: \$10,000	Income tax payable: \$5,000
	Deferred income tax: \$5,000

## 3.9 Income tax normalization

- Income tax normalization – “comprehensive inter-period income-tax allocation”
  - ▶ An accounting method used in ratemaking to address the effects on income taxes of timing differences in expenses or revenues
  - ▶ Accumulated deferred income taxes are recorded as a liability on the balance sheet (see Part 2)
- Tax normalization for public utilities (FERC, 18 CFR § 35.24)
  - ▶ “Tax normalization means computing the income tax component as if the amounts of timing difference transactions recognized in each period for ratemaking purposes were also recognized in the same amount in each such period for income tax purposes.”
  - ▶ Timing differences arise when expenses or revenues are recognized for income tax purposes differ from when they are recognized for ratemaking purposes – but the eventual totals received and paid will be equal
- Tax policies may also affect or constrain regulatory accounting treatment
  - ▶ Federal Internal Revenue Code (1954) allowed accelerated depreciation which led to flow-through accounting for ratemaking
  - ▶ Flow-through accounting recognizes income tax expense for ratemaking equal to the income taxes paid
  - ▶ Tax Reform Act of 1969 limited flow-through of the tax benefits from depreciation-related tax expenses
  - ▶ Economic Recovery Tax Act of 1981 ended flow-through of the tax benefits of depreciation-related tax expenses

## 3.9 Income tax normalization

		Tax basis	Regulatory basis (rates)	
			Flow through (past practice)	Normalization (current practice)
1	Revenues	\$1,000,000	\$1,000,000	\$1,000,000
2	Expenses	(\$600,000)	(\$600,000)	(\$600,000)
3	Depreciation	(\$200,000)	(\$100,000)	(\$100,000)
4	Interest	(\$100,000)	(\$100,000)	(\$100,000)
5	Taxable income	\$100,000	\$200,000	\$200,000
6	Income tax expense (21%)	<b>(\$21,000)</b>	<b>(\$21,000)</b>	<b>(\$42,000)</b>
7	Net income	\$79,000	\$179,000	\$158,000
8	Deferred income tax (liability)		\$0	<b>\$21,000</b>



## 3.9 Tax issues in the case

- ISSUE ¶29. Refund of Federal Tax Adjustment Credit (FTAC) pursuant to the 2018 TCJA
  - ▶ York will provide a refund to customers of \$2.12 via a reconcilable surcharge mechanism (“FTAC”) over a one-year period... This amount includes interest of \$119,051... The refund amount will be provided entirely to water customers. The provision of this credit to customers will be subject to audit to ensure that York has returned the full amount of the credit to customers... A credit value of 4.29% will apply to all charges except the DSIC during the period 3/1/19 through 2/29/20 to pass the 1/1/18 through 2/28/2019 revenue requirement change created by the TCJA to customers.
- ISSUE ¶32. Tax benefit from catch-up deduction on tangible property
  - ▶ York will amortize the benefit of the catch-up deduction permitted under the IRS’s tangible property regulations over a fifteen-year period commencing with the effective date of rates in this proceeding. The benefit totals \$1.3 mil. in Pennsylvania income taxes and \$2.6 mil. in federal income taxes. This amortization results in an annual reduction of \$259,150 to York’s claimed income tax expense. The amortization shall be without interest and without deduction of the unamortized balance from rate base. The amortization is subject to adjustment in future cases, in the event the IRS determines York is not entitled to the full amount of the catch-up deduction.
- ISSUE ¶42. Reporting of deferred income taxes
  - ▶ In future base rate proceedings, York will present separately amounts related to deferred taxes associated with accelerated depreciation and deferred taxes associated with excess accumulated deferred income tax and continue to reflect each category as a reduction to rate base in future filings.

## 3.9 Federal tax adjustment

- Federal tax reform in 2018 lowered the corporate tax rate from 35% to 21%
  - ▶ For York, this resulted in a tax adjustment credit of \$2,117,143, which translated to a 4.29% credit value applicable to rates

**The York Water Company  
York, Pennsylvania**

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Water-Pa. P.U.C. No. 14  
Original Page No. 69**

### **17. Federal Tax Adjustment Credit (FTAC)**

#### **Federal Tax Adjustment Credit (FTAC)**

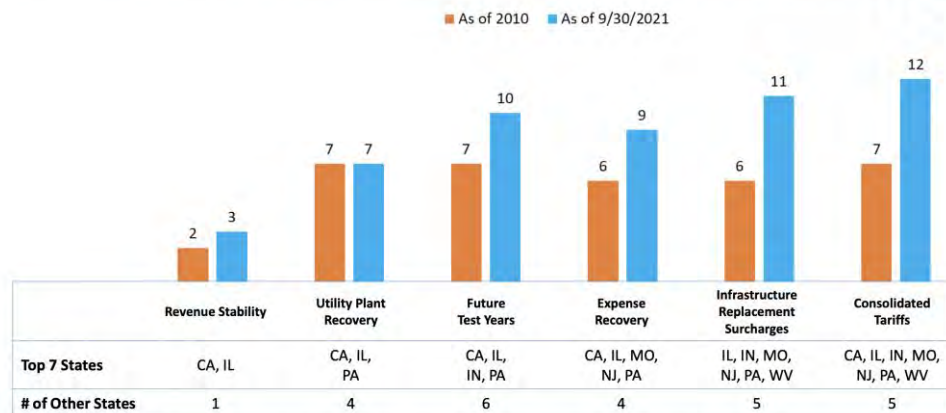
The FTAC will refund the difference in revenue requirement created by the Tax Cuts and Jobs Act (TCJA) plus interest. The amount to be returned shall be \$2,117,143. A credit value of 4.29% will apply to all charges except the DSIC during the period March 1, 2019 through February 29, 2020 to pass the January 1, 2018 through February 28, 2019 revenue requirement change created by the TCJA to customers.

After the twelve-month period elapses, the Company will prepare a reconciliation of the difference between the calculated refund of \$2,117,143 and the actual amount credited to customers by the FTAC as applied. Any such difference will be refunded/recouped over an additional one-month period commencing April 1, 2020.

## 3.10 Cost-adjustment mechanisms

- Known as cost trackers, riders, and surcharges for adjusting rates to costs
  - Provided for by approved tariff “clauses” – separate from base rates
  - Allow adjustments to customer rates when the actual costs incurred depart from a baseline amount determined in a rate case
  - Must be carefully reviewed and reconciled (not “automatic” and no “mechanization”)
- Meant to prevent financial hardship and earnings erosion between rate cases
  - Considered “credit positive” by rating agencies for credit (debt, bonds)

### Constructive Regulatory Mechanisms Across Our Footprint

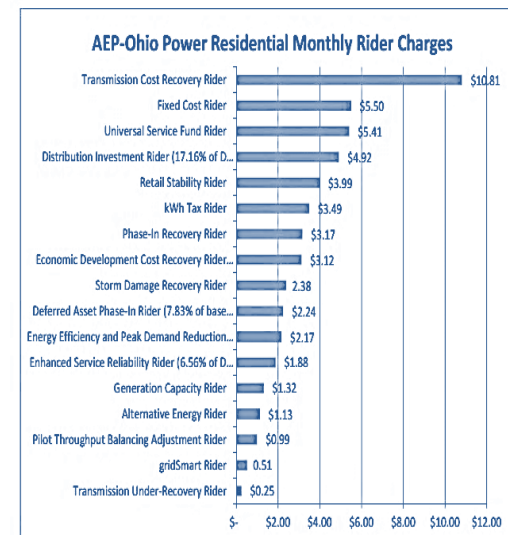
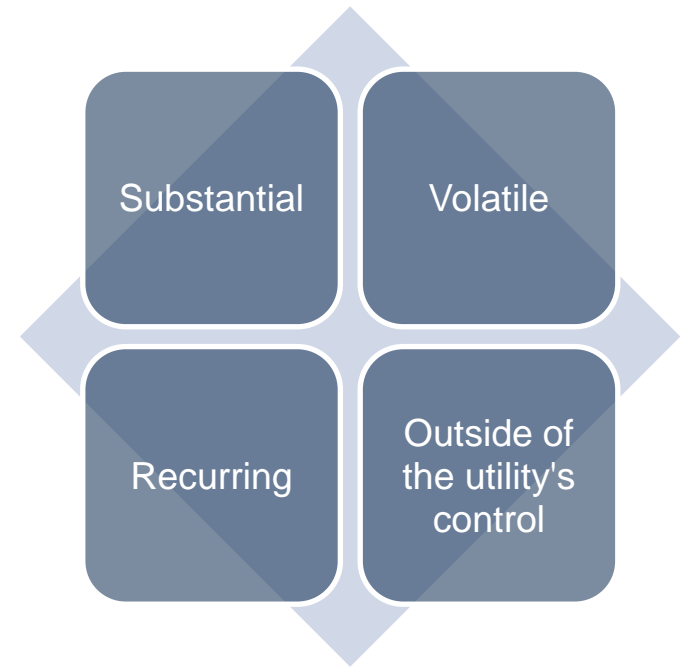


2022-2026 Capital Plan  
(average)



### 3.10 Cost-adjustment mechanisms

- Originally applied only to variable operating costs meeting four criteria
  - Substantial, recurring, volatile, and largely outside of utility's control
- Types of costs that may be tracked
  - Fuel or energy cost adjusters
  - New operating systems or plant
  - Regularized infrastructure replacement
  - Bad debt (uncollectible)
  - Taxes and property valuation
  - Special programs (e.g., efficiency)
  - Regulatory compliance costs
- Expanded or proposed to include
  - Capital-related costs that do not meet the criteria
  - Rapidly rising costs (undermining incentives)
- Can be used to provide specific incentives to accelerate spending (FERC adders, DSIC)



## 3.10 State tax surcharge in the tariff

- ISSUE ¶34. State Tax Adjustment Surcharge (STAS)
  - In accordance with the provisions of 52 Pa. Code §69.55, the STAS for York shall be established at 0% effective with the effective date of settlement rates in this proceeding.

### Exhibit A STATE TAX ADJUSTMENT PROCEDURE

*BY THE COMMISSION, March 10, 1970:*

By enactments at the end of 1969 and during February of 1970, the Legislature has retroactively increased the rates of three types of taxes paid by public utilities, and has imposed a new tax upon real estate of public utilities, as follows:

	<i>Former Rates</i>	<i>Present Rates</i>	<i>Increase</i>
Capital Stock Tax ...	6 Mills	7 Mills	1 Mill
Corporate Net Income Tax ...	7.5%	12%	4.5%
Gross Receipts Tax ...	20 Mills	45 Mills	25 Mills
Realty Tax ...	None	30 Mills	30 Mills

It should be noted here that the increase of 25 mills in the gross receipts tax, which will produce the greatest tax revenues, was enacted as a temporary tax effective for the period January 1, 1970 to September 1, 1971. Prescribed assessment procedures for the realty tax may cause the relative effective rate for each utility to fluctuate in subsequent years. It is also possible that predicted tax reform may modify or eliminate these recent tax increases.

Public utilities under our jurisdiction are subject to regulation, which permits them to recover, in the form of rates, their legitimate costs, plus a fair return which compensates investors for the use of the funds they have provided for the construction of utility facilities.

The new and increased taxes constitute a legitimate cost, and, unless compensated for, will reduce the return of public utilities at a time when many of them, particularly the electric and telephone groups, are engaged in unprecedented construction programs in order to assure adequate facilities for service to customers. These large construction programs must be financed by attracting funds from investors; and such attraction will be difficult in many instances, and impossible in others, if the returns of the public utilities are permitted to decline appreciably as a result of these increases in taxes. Unless relief is granted, there could be serious deterioration of service to the public.

## 3.10 Rationales and concerns

### ■ Rationales

- ▶ Reduces rate case frequency and expense, and regulatory deferrals (“lag”)
- ▶ Lowers risk and thus cost of debt to utilities (with possible efficiency offsets)
- ▶ Prevents both shortfalls and windfall revenues to utilities
- ▶ Mitigates rate shock through gradualism in rate adjustments
- ▶ Consistent with economic price signals based on the cost of service
- ▶ May be needed to address urgent issues (pipeline safety)

### ■ Concerns

- ▶ Undermines disciplinary effect of lag – upside and downside risk “cuts both ways”
- ▶ Rate-case savings may be limited – and at cost of efficient performance
- ▶ Overuse that shifts cost or revenue risks from shareholders to ratepayers
- ▶ Asymmetrical and unidirectional (matching principle) focusing only on negative
- ▶ Neglects dynamic and interrelated revenue and expenditure effects
- ▶ Narrows scope of review (single-issue ratemaking)
- ▶ Automates recovery and limits review of prudence and efficiency
- ▶ Distorts CAPEX vs. OPEX incentives and deployment based on recovery
- ▶ Weakens incentives for strategic planning and optimization
- ▶ Masks rate increases over time

## 3.11 System improvement charges

- Pennsylvania's distribution system improvement charge (DSIC)
- A system improvement charge appears as a surcharge on customer bills
  - ▶ The surcharge amount is expressed as a percentage
  - ▶ Applied to the total amount billed to customers under the company's otherwise applicable rates and charges, excluding amounts billed for public fire protection service and the State Tax Adjustment Surcharge
- Consumer protections are built into system improvement charges
  - ▶ A cap on the rate – currently at 5%
  - ▶ An annual reconciliation of recoverable costs and revenues associated with the charge by the PUC pursuant to hearing in accordance with the Public Utility Code
  - ▶ PUC audits to make certain the money is spent on DSIC-eligible projects
  - ▶ A reset to zero if the company's quarterly or annual earnings reports – subject to review by the PUC – show that the company earnings are exceeding the allowable rate of return used to calculate fixed costs under the system improvement charge
  - ▶ A reset to zero as of the effective date of new base rates that provide prospective recovery of annual costs that had been recovered under the charge
  - ▶ Customer-notice requirements of changes in the system improvement charge
  - ▶ Source: [http://www.puc.state.pa.us/general/consumer\\_ed/pdf/dsic\\_fs.pdf](http://www.puc.state.pa.us/general/consumer_ed/pdf/dsic_fs.pdf)



## 3.11 York: DSIC statement for 2018

THE YORK WATER COMPANY  
DISTRIBUTION SYSTEM IMPROVEMENT CHARGE  
STATEMENT OF OVER/UNDER COLLECTIONS  
(1307e) Y/E December 31, 2018

Period	Current Cost Rate	Fixed Costs of Eligible Plant Additions	DSIC Surcharge Collected	Over/Under Collections	Interest Rate	No. of Months Until Recovery	Interest Amount
January 2018	4.40000%	156,774	163,940	7,166	5.00%	21	627
February	4.40000%	156,774	154,692	-2,082	5.00%	20	-174
March	4.40000%	156,774	148,199	-8,575	5.25%	19	-713
April	3.98000%	151,855	146,461	-5,394	5.50%	18	-445
May	3.98000%	151,855	147,133	-4,722	5.50%	17	-368
June	3.98000%	151,855	166,911	15,056	5.50%	16	1,104
July	4.46000%	171,455	176,447	4,992	5.50%	15	343
August	4.46000%	171,455	174,648	3,193	5.50%	14	205
September	4.46000%	171,455	184,354	12,899	5.50%	13	769
October	5.00000%	188,318	180,212	-8,106	5.50%	12	-446
November	5.00000%	188,318	180,624	-7,694	5.50%	11	-388
December	5.00000%	188,318	186,619	-1,699	5.75%	10	-81
		<u>2,005,206</u>	<u>2,010,241</u>	<u>5,035</u>			<u>433</u>



## 3.11 DSIC in the rate case

- ISSUE ¶35. Distribution System Improvement Charge (DSIC) set to 0% for the rate year
  - ▶ The water DSIC for York shall be established at 0% of billed revenues effective with the effective date of Settlement Rates. The DSIC shall remain at 0% of billed revenues until the later of: (i) the end of the FPFTY; or (ii) the quarter following the point in time at which York's total eligible account balances, net of plant funded with customer advances and contributions, exceed the levels projected by York as of 2/29/20.

**The York Water Company**  
**York, Pennsylvania**

**Supplement No. 130**  
**to**  
**Water-Pa. P.U.C. No. 14**  
**Sixty-fifth Revised Page No. 66**  
**Canceling**  
**Sixty-fourth Revised Page No. 66**

### **15. Distribution System Improvement Charge (DSIC)**

- 15.1 In addition to the charges provided in this tariff, a distribution system improvement charge of (0.18%) will apply to all charges for service on or after August 1, 2018. (D)  
 (C)

## 3.11 DSIC in the rate case

- ISSUE ¶36. Distribution System Improvement Charge (DSIC) return on equity
  - For purposes of calculating its DSIC, York shall use the equity return rate for water utilities contained in the PUC's most recent Quarterly Earnings Report (QER).
- ISSUE ¶37. Distribution System Improvement Charge (DSIC) income tax effect
  - The treatment of federal and state income tax deductions in calculating DSIC charges are current on appeal before the Commonwealth Court in McCloskey v. Pennsylvania PUC ("McCloskey"). York will not contest the right of a party to raise issues regarding... the treatment of federal and state income tax deductions in calculating DSIC charges by filing a complaint against York's first quarterly DSIC charge filed after the resolution of McCloskey or by filing a pleading to initiate a generic proceeding.

Q. What are some of the arguments in favor or against using a DSIC?

## 3.12 Financial auditing for ratemaking

- Rate case auditors review the utility's filed data and related documentation
  - Audits and workpapers form the basis of staff witness testimony
  - Focus is on "material" (impactful) matters – although “symbolic” issues may be important and precedential in regulation
  - Audits also consider actual results for previously projected costs
- Regulatory auditing presumes compliance vs. violations in financial reporting
  - Regulatory auditors can rely on the work of certified independent (CPA) auditors for some (non-regulatory policy) issues
  - Under unusual circumstances, regulatory auditors may find fraudulent (illegal) activity, which calls for a regulatory response whether or not material
- Regulatory auditors focus on prudence and reasonableness
  - Aim is overall accuracy of reporting rather than precision (e.g., .00000123)
  - Trends, benchmarks, and comparable systems are used to screen for anomalies
  - Staff capacity and expertise are needed for implementation and enforcement
- Special audits complement ratemaking audits
  - Reconciliation audits for cost-adjustment (tracker) mechanisms
  - Audits of large projects, bidding processes, multistate companies, affiliate transactions

### 3.12 Records reviewed by auditors (NRCAM, 2003)

- Affiliate agreements for inter-affiliate transactions
- Audit committee minutes
- Billing records (registers, etc.)
- Board of directors minutes
- Chart of accounts and accounts manual
- Construction work orders
- Construction budgets
- Continuing property records
- Depreciation studies
- External independent audit reports and workpapers (including exceptions to auditor recommendations)
- Franchise fee records (collection and payment)
- General ledger and subsidiary ledgers
- Income tax returns (including form 1120)
- Internal audit reports and workpapers
- Invoices
- Lead-lag studies
- List of property units
- Monthly or quarterly operating/financial reports
- Monthly or quarterly trial balances
- Organizational charts (including parent company and internal structures)
- Payroll records
- Property tax statements
- Risk committee minutes and documentation
- Sample of customer bills (to verify rates and information)

## 3.12 Audit preliminaries (NRCAM, 2003)

- Determining the scope and purpose and focusing the audit
- Understanding the utility's accounting system
- Analyzing historical financial and operating data
- Reviewing federal regulatory reports, shareholder reports, and SEC filings
- Reviewing SEC audit reports, federal utility audit reports, and other audit reports
- Reviewing prior orders of one's own jurisdiction
- Reviewing prior audit reports and prior workpapers
- Reviewing external and internal audit reports and workpapers
- Contacting other states about common cases or common issues
- Coordinating with complaint personnel and commission engineers
- Determining the appropriateness ("staleness") of the test year
- Checking schedules and supporting documents for mathematical accuracy

## 3.12 Audit scope and focus

- Confirmation of reported financial statements
  - Allocation of costs between regulated and non-regulated business segments
- Validating data completeness, correctness, and consistency
  - Verification and documentation of “known and measurable” expenditures
  - Identification of interrelated and “missing” items, and errors in calculations
- Matching (synchronizing) revenues and expenditures for the test period
  - Incurrence of costs inside or outside of test year period
  - Assessment of nonrecurring expenses due to abnormal or catastrophic events
- Material matters affecting returns (e.g., one basis point or .01%)
  - Reflection of significant changes in cost (increases and decreases)
  - Economically relevant items, such as wages, pensions, depreciation
- Matters of policy and principle – even if otherwise nonmaterial
  - Consistency with commission policies, rules, and prior orders
  - Assessment of prudence and efficiency in capital and operating expenditures
  - Politically sensitive items, such as political activities and executive compensation

**Q. What are some examples of material and nonmaterial matters?**

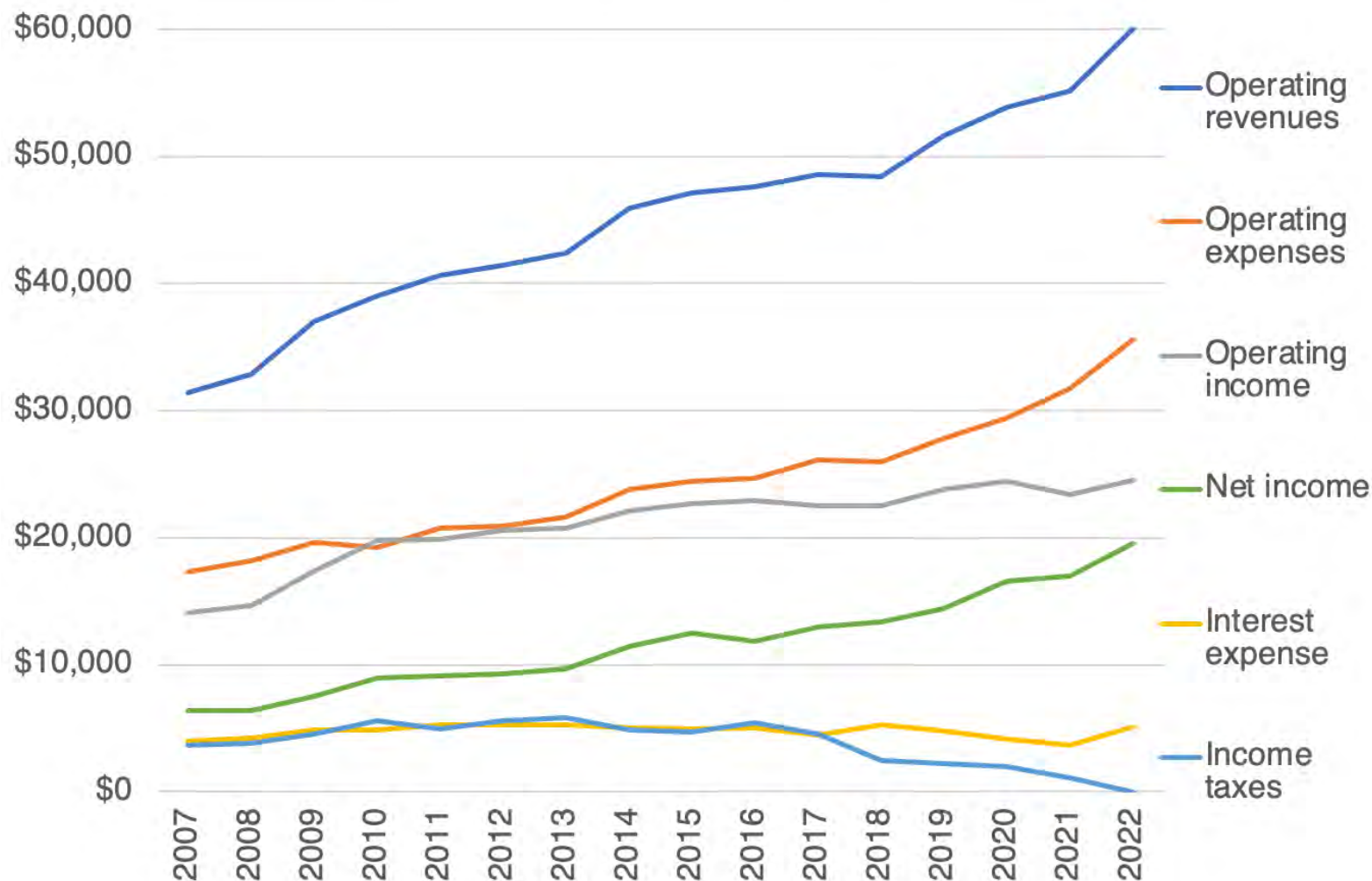
## 3.12 Trend analysis

- Historical data analysis is used to assess trends and anomalies
  - Rate base components, categories of revenue, categories of expense, sales units, number of customers and employees, operational data
  - Three to five years of data and 12 months of data from test year
  - Performance assessment over time – self-benchmarking
- Data come from annual reports, trial balances, etc.
  - Auditors look for relevant trends (e.g., declining sales) and variances
- Consideration is given to
  - Large investments (major plant additions or retirements)
  - Seasonal expenses
  - Anomalies in expenses

Q. What do York's trend data reveal?

### 3.12 Trend analysis of major items (consolidated 10-k data)

York Water financial trends (000)





### 3.13 Poll: regulatory audits

- Which of the following are *not* used in a regulatory audit?
  - A. General ledgers and trial balances
  - B. Rates and charges of other local utilities
  - C. Annual reports, income tax returns, and sales tax returns
  - D. SEC 10K reports and proxy statements

### 3.13 Management auditing (NRRI, 1979)

- A management audit is best viewed as a diagnostic examination
  - ▶ Identifies both areas that are well managed and areas for improvement
- Three-party audit (commission, auditor, and utility)
  - ▶ Establishes a tension between the auditor and company that did not normally exist in the company-initiated audit
- Commission-ordered management audits have a public audience
  - ▶ A commission-ordered management audit is defined as a study conducted of the effectiveness and efficiency of operation of a regulated utility
  - ▶ These studies may be conducted by commission staff or by a team of independent, outside, management experts
  - ▶ Commission-ordered management audits represent an attempt to provide comprehensive information to the commission and to the concerned consumer about the efficiency of a regulated utility company

## 3.13 York: management efficiency audit (2014)

### ■ Background

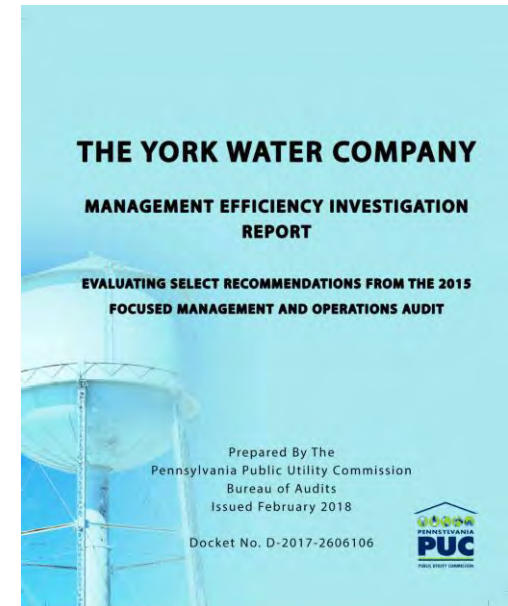
- ▶ On April 15, 2014, the Management Audit Staff of the PA PUC initiated a Focused Management and Operations Audit of York
- ▶ Based on a review, the PUC's auditor selected to conduct a Management Efficiency Investigation (MEI) of York: progress in implementing 15 of the original 16 recommendations

### ■ Objective and scope

- ▶ Objective of this MEI was to review and evaluate York's efforts to implement certain recommendations included in the audit.
- ▶ Evaluation was limited to York's efforts in implementing the prior recommendations regarding:
  - Financial management
  - Water operations
  - Emergency preparedness
  - Materials management
  - Customer service
  - Human resources
- ▶ Auditors also reviewed York's compliance with PUC regulations regarding physical security, cyber security, emergency response, and business continuity plans

### ■ Approach

- ▶ Analysis of records, interviews, and site visits



## 3.13 Notable improvements made

- Auditors found that York had made the following improvements
  - ▶ Implemented an automated customer call answering system that provides improved call reporting metrics
  - ▶ Added accounting safeguards to prevent possible cross subsidization between the Water Service Line Protection Program (WSLPP) and regulated utility service
  - ▶ Reduced billing lag from a range of 5.6 to 9.5 days to arrange of 5 to 6 days
  - ▶ Updated its Drought Contingency Plan
  - ▶ Developed manuals to document damage prevention practices and distribution valve inspections
  - ▶ Documented meter testing policies and procedures and electronically maintains meter records
  - ▶ Completed a customer satisfaction survey in 2015
  - ▶ Updated its human resources policies and procedures
  - ▶ Eliminated a manual and redundant time sheet data entry process

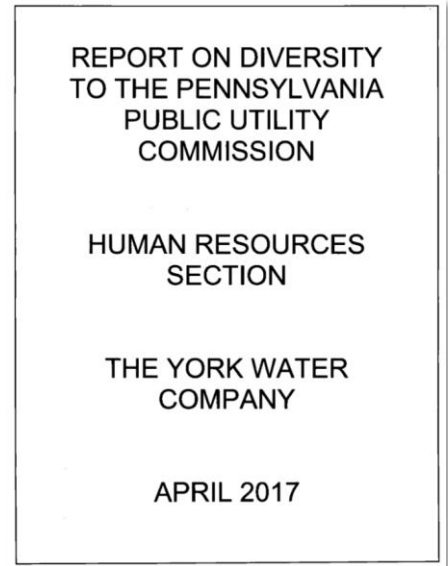
## 3.13 Notable improvements needed

- Auditors noted that York still needed to
  - ▶ Update the Emergency Response Plan and review it annually
  - ▶ Add contact information for law enforcement and national security related agencies' cyber teams to the Cybersecurity Plan
  - ▶ Implement physical security and safety improvements at the company's facilities
  - ▶ Strive to reduce or eliminate manual aspects of the inventory reordering process
  - ▶ Evaluate and document the cost and benefits of integrating emergency stock within the Inventory Management System

**Q. What are some management issues facing utilities today?**

### 3.13 York: report on diversity (2017)

- Work environment policies in place
  - ▶ Workforce diversity
  - ▶ Harassment
  - ▶ Procurement
  - ▶ Public affairs
  - ▶ Code of conduct
- Employee strategies identified in the mission statement
  - ▶ Provide a safe, challenging and rewarding work environment
  - ▶ Foster work force diversity
  - ▶ Actively encourage teamwork
  - ▶ Support and encourage employees to further their education and enhance their skills
  - ▶ Be sensitive to employee's roles and needs as family members
  - ▶ Support all employees in the development of their skills
  - ▶ Encourage and foster communication among all employees
  - ▶ Empower employees to make recommendations they think will improve the operational effectiveness and efficiency of the Company
  - ▶ Encourage employees to volunteer for projects and causes which enhance the community



### 3.13 York: workforce diversification (2017)

- York exceeds in some areas
  - Minority employment
    - Officials and administrators
    - Office and clerical
    - Skilled craft workers
  - Female employment
    - Office and clerical workers
    - Skilled craft workers
- York falls short in some areas
  - Minority employment
    - Professionals
    - Technicians
  - Female employment
    - Professionals
    - Technicians
    - Service and maintenance workers
    - Office administrators

Chart 3

**WORKFORCE DIVERSITY STATUS REPORT  
THE YORK WATER COMPANY  
DECEMBER 2016  
FULL-TIME WORKFORCE STATED AS PERCENT**

	Total Workforce				Female
	Black	SSO	White	Total	
A. Officials and Administrators	3.9%	3.9%	92.3%	100%	11.5%
B. Professionals	0%	20%	80%	100%	40%
C. Technicians	0%	0%	100%	100%	0%
D. Protective Service Workers	0%	0%	0%	0%	0%
E. Para-professionals	0%	0%	0%	0%	0%
F. Office and Clerical	13%	21.8%	65.2%	100%	91.3%
G. Skilled Craft Workers	9.1%	13.6%	77.3%	100%	11.4%
H. Service and Maintenance	0%	0%	100%	100%	0%
Total	7.7%	12.5%	79.8%	100%	29.8%

Chart 4

	York Water	York County Experienced Civilian Labor Force
Total Workforce	104	
White Workforce	83 (79.8%)	90.85%
Black Workforce	8 (7.7%)	4.11%
SSO Workforce	13 (12.5%)	5.03%
Female	31 (29.8%)	47.49%

## 3.14 Rate-case adjustments

- Inside test-period adjustments
  - ▶ Pro forma or attritional – forward-looking (prospective) based on known, measurable, and acceptable according to regulatory policy (prudence, used and useful, etc.)
  - ▶ Annualization spreads revenues or expenses affecting only a portion of the test year
  - ▶ Normalization adjusts for anomalies in the test year to smooth the data
- Outside test-period adjustments
  - ▶ Remove transactions that belong outside of the test year
  - ▶ Include transactions that belong in the test year
- Restatement or accounting adjustments
  - ▶ Correct or adjust test year income statement for misclassifications, errors, or restatements to regulatory accounting
- Reconciliation of GAAP or tax basis to regulatory basis
  - ▶ Small water companies may provide financials for rate-making purposes that are maintained by their tax accountant on a tax basis of accounting

**Q. How do adjustments differ from restatements?**



## 3.14 Rate-case adjustments (continued)

- Ratemaking policy adjustments
  - Remove expenses classified as not belonging to the regulatory entity
  - Remove expenses that, by their nature, are not allowed for ratemaking
- Return attrition (or “erosion”)
  - Adjustment to counteract the tendency of utility returns to erode over time due to:
    - Inflationary pressures, where operating costs are increasing faster than revenues
    - Aggressive infrastructure growth or replacement program, where capital costs are increasing faster than recovery through embedded depreciation expense
- Demand attrition (or “suppression”)
  - Accounts for declining customer usage based on technical efficiency gains – as well as changes in the national or regional economy and elasticity effects
- Caution about moving averages
  - Trends can be volatile but stationary or nonstationary
  - For nonstationary trends, moving averages may not be accurate (Part 5)

## 3.14 Summary of adjustments

### Revenue-related

- Revenues
  - Growth or conservation impacts
  - Weather
  - Annualize recent rate increases
  - Tracker revenues
  - Unbilled revenues
- Adjustments to customers by class
  - Economic forecasts
- Adjustments to customer usage by class
- End-use forecasting (various methods)
  - Attrition adjustments based on usage efficiency
- Weather normalization

### Expense-related

- Staffing levels
- Position vacancies
- Payroll and pensions
- Benefits
- Incentive compensation

- Wage increases
- Employee counts
- Overtime
- Insurance
- Advertising
- Political lobbying
- Charitable contributions
- Research and development

### Multifaceted adjustments

- Plant
  - Depreciation
  - Accumulated depreciation
  - Accumulated deferred income taxes
  - Property taxes
  - Interest synchronization
  - Income taxes
- Labor
  - Payroll taxes
  - Income taxes

## 3.14 Adjustments in the COVID-19 context

- COVID-19-related expenses and cost recovery
  - ▶ Personal protective equipment (PPE), sanitizing, technology for employee telework
  - ▶ Amortization of deferred expenses from prior period – creation of regulatory asset
  - ▶ Attempted recovery of foregone revenues from sales or fees – including late fees
- Adjustments to revenues and expenses
  - ▶ Removal of non-recurring pandemic effects not expected to affect the rate year
- Challenge for cost allocation and rates
  - ▶ Divergence of actual costs and sales by class from models
  - ▶ Interclass allocation and potential cross-subsidies
  - ▶ Economic impact on business and households affecting ability to pay

### 3.14 Poll: ratemaking adjustments

- In reviewing a utility's independently audited expenses for normal operations, the regulatory auditor focuses on
  - A. Rechecking calculations on the utility's tax returns
  - B. Tracing each expense item to the general ledger
  - C. Contacting vendors to confirm invoice amounts
  - D. Normalizing expense changes for the test-year rates

## 3.14 Exercise: payroll expense

Monthly payroll	Historical test year expense: 5% increase effective in Nov.	Co. states it "expects" another 6% increase effective in Nov.	Adjustment to historical test year	Restated expense for test year
Jan	\$400,000	\$420,000	\$20,000	\$420,000
Feb	\$400,000	\$420,000	\$20,000	\$420,000
Mar	\$400,000	\$420,000	\$20,000	\$420,000
Apr	\$400,000	\$420,000	\$20,000	\$420,000
May	\$400,000	\$420,000	\$20,000	\$420,000
Jun	\$400,000	\$420,000	\$20,000	\$420,000
Jul	\$400,000	\$420,000	\$20,000	\$420,000
Aug	\$400,000	\$420,000	\$20,000	\$420,000
Sep	\$400,000	\$420,000	\$	\$
Oct	\$400,000	\$420,000	\$	\$
Nov	\$420,000	\$445,000	\$	\$
Dec	\$420,000	\$445,000	\$	\$
Stated annualized expense	\$4,840,000	\$5,090,000	\$	\$

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May	\$400,000	\$420,000	\$20,000	\$420,000
Jun	\$400,000	\$420,000	\$20,000	\$420,000
Jul	\$400,000	\$420,000	\$20,000	\$420,000
Aug	\$400,000	\$420,000	\$20,000	\$420,000
Sep	\$400,000	\$420,000	\$20,000	\$420,000
Oct	\$400,000	\$420,000	\$20,000	\$420,000
Nov	\$420,000	\$445,000	\$ 0	\$420,000
Dec	\$420,000	\$445,000	\$ 0	\$420,000
Stated annualized expense	\$4,840,000	\$5,090,000	\$200,000	\$5,040,000

## 3.14 Exercise: insurance expense

Monthly payroll	Notes on insurance expense	Historical test year expense	Adjustment to historical test year		Restated expense for test year
Jan	General, property, auto, & liability monthly premiums: \$12,000	$\$12,000 + \$3,000 = \$15,000$	(\$3,000)	\$0	\$12,000
Feb		\$15,000	(\$3,000)	\$0	\$12,000
Mar		\$15,000	(\$3,000)	\$0	\$12,000
Apr	Key personnel: \$3,000	$\$15,000 - \$2,500 = \$12,500$	(\$3,000)	\$2,500	\$12,000
May	Vandalism insurance cash payout in April: \$2,500 (restatement)	\$15,000	(\$3,000)	\$0	\$12,000
Jun		\$15,000	(\$3,000)	\$0	\$12,000
Jul	General, property, auto, & liability premium will increase by 4% in July of rate year, as documented (known and measurable)	\$15,000	(\$3,000)	?	?
Aug		\$15,000	(\$3,000)	?	?
Sep		\$15,000	(\$3,000)	?	?
Oct		\$15,000	(\$3,000)	?	?
Nov		\$15,000	(\$3,000)	?	?
Dec		\$15,000	(\$3,000)	?	?
Stated annualized expense		\$177,250	(\$36,000)	?	?

## 3.14 Exercise: insurance expense

Monthly payroll	Notes on insurance expense	Historical test year expense	Adjustment to historical test year		Restated expense for test year
Jan	General, property, auto, & liability monthly premiums: \$12,000	$\$12,000 + \$3,000 = \$15,000$	(\$3,000)	\$0	\$12,000
Feb		\$15,000	(\$3,000)	\$0	\$12,000
Mar		\$15,000	(\$3,000)	\$0	\$12,000
Apr	Key personnel: \$3,000	$\$15,000 - \$2,500 = \$12,500$	(\$3,000)	\$2,500	\$12,000
May	Vandalism insurance cash payout in April: \$2,500 (restatement)	\$15,000	(\$3,000)	\$0	\$12,000
Jun		\$15,000	(\$3,000)	\$0	\$12,000
Jul	General, property, auto, & liability premium will increase by 4% in July of rate year, as documented (known and measurable)	\$15,000	(\$3,000)	\$480	\$12,480
Aug		\$15,000	(\$3,000)	\$480	\$12,480
Sep		\$15,000	(\$3,000)	\$480	\$12,480
Oct		\$15,000	(\$3,000)	\$480	\$12,480
Nov		\$15,000	(\$3,000)	\$480	\$12,480
Dec		\$15,000	(\$3,000)	\$480	\$12,480
Stated annualized expense		\$177,250	(\$36,000)	\$5,380	\$146,880



## 3.15 Ratemaking scenarios

1. A utility incurs lobbying expenses related to legislation specifying favorable ratemaking treatment of acquisitions; industry consolidation is a priority of the state and the commission.
2. A utility funds through association dues a national campaign to promote the "value of water" to the public and build support for rate increases needed for infrastructure investment.
3. A utility incurs substantial legal fees related to acquiring water rights that it claims are needed to provide service but is unsuccessful.
4. A utility is fined for environmental contamination caused by illegal dumping near a water supply source, about which it was unaware.
5. A utility files a rate case including a wage increase for employees, supported by a budget document.
6. A utility provides executive bonuses based on meeting profit goals in the form of equity shares in the company at a discounted rate, recoverable from rates.