

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

PETITION OF AQUA INDIANA, INC. PURSUANT TO IC)
8-1-2-42.7 AND 170 IAC 1-5 FOR AUTHORITY TO)
INCREASE THE MONTHLY RECURRING RATES AND)
CHARGES CURRENTLY CHARGED AND)
COLLECTED BY ITS ABOITE WASTEWATER)
DIVISION FOR WASTEWATER UTILITY SERVICES)
PROVIDED IN PORTIONS OF ALLEN, HUNTINGTON)
AND WHITLEY COUNTIES; ESTABLISH A NON-)
RECURRING SYSTEM DEVELOPMENT CHARGE TO)
BE CHARGED AND COLLECTED BY THE ABOITE)
WASTEWATER DIVISION AND IMPLEMENT NEW)
RATE SCHEDULES REFLECTING THE RATES AND)
CHARGES APPROVED IN THIS CAUSE)

CAUSE NO. 44752

TESTIMONY OF

MARGARET A. STULL – PUBLIC’S EXHIBIT NO. 1

ON BEHALF OF THE

INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

JUNE 24, 2016

Respectfully submitted,



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TESTIMONY OF OUCC WITNESS MARGARET A. STULL
CAUSE NO. 44752
AQUA INDIANA, INC. – ABOITE WASTEWATER DIVISION

I. INTRODUCTION

1 **Q: Please state your name and business address.**

2 A: My name is Margaret A. Stull, and my business address is 115 W. Washington St.,
3 Suite 1500 South, Indianapolis, Indiana 46204.

4 **Q: By whom are you employed and in what capacity?**

5 A: I am employed by the Indiana Office of Utility Consumer Counselor (“OUCC”) as
6 a Senior Utility Analyst in the Water/Wastewater Division. My qualifications are
7 set forth in Appendix A to this testimony.

8 **Q: What is the purpose of your testimony?**

9 A: I discuss the overall results of the OUCC’s analysis of Aqua Indiana, Inc. – Aboite
10 Wastewater Division’s (hereinafter referred to as “Aqua”, “Aboite” or “Petitioner”)
11 proposed 25.00%¹ two phase revenue increase. The OUCC’s analysis determined
12 that an overall revenue increase of 13.15% (15.64% increase in customer rates) is
13 sufficient to allow Petitioner the opportunity to earn a fair return on its investment.

14 I present the OUCC’s proposed revenue requirement and accounting
15 schedules and discuss Petitioner’s proposal to phase-in its rate increase in this
16 Cause. I discuss and support various adjustments to Petitioner’s rate base, operating

¹ Although Petitioner’s filing supported a 29.29% total revenue increase, it only requested a 25.0% increase (Testimony of Bobby Estep, Schedule A-1, lines 22 and 25).

1 expenses, and taxes, including the OUCC's proposal to amortize contributions-in-
2 aid of construction.

3 I explain that the revenues to be paid by the City of Fort Wayne for
4 wastewater treatment may not fully recover the incremental costs of the Midwest
5 Wastewater Treatment Plant expansion and propose that the Commission deny any
6 request to recover excess costs from existing ratepayers. I also discuss the OUCC's
7 rate design proposal to reduce the rates charged to unmetered customers.

8 I also discuss the OUCC's acceptance of Petitioner's request for approval
9 of a \$1,300 system development charge. Finally, I address various non-recurring
10 tariff issues identified by the OUCC including new customer and reconnection fees.

11 **Q: What are the drivers of Petitioner's proposed rate increase in this Cause?**

12 A: Based on my analysis and review of Petitioner's proposed revenue requirement
13 compared with that approved in its last rate case (Cause No. 43874), the primary
14 drivers are Petitioner's increased investment in utility plant since its last rate case,
15 increased operating expenses, and increased depreciation expense. These increased
16 costs are partially offset by wholesale wastewater treatment revenues from the City
17 of Fort Wayne.

18 **Q: How does the OUCC's proposed rate increase compare to that proposed by**
19 **Aqua?**

20 A: Considering both phases of its rate increase, Aqua proposes to increase its
21 wastewater revenues by \$2,371,948 or 25.00%. The OUCC proposes an increase to
22 wastewater revenues of \$1,260,179 or 13.15%, a decrease of \$1,111,769 or 16.14%
23 from Aqua's proposal. The factors primarily responsible for the difference between
24 the OUCC's and Petitioner's proposals are the amortization of contributed utility

1 plant, the exclusion of a portion of the Main Aboite Basin Improvement Project
2 from rate base, and the OUCC's proposed cost of equity of 9.0%. Additional
3 contributing factors include the determination of customer growth revenues and the
4 proposed amortization period for rate case expense.

5 **Q: Please describe the review and analysis you performed.**

6 A: I read Petitioner's testimony, schedules, and workpapers pre-filed in this Cause. I
7 participated in an on-site review of accounting records on May 11-13, 2016. I
8 reviewed Petitioner's IURC annual reports for the period 2007 through 2015. I
9 attended the public field hearing held on May 17, 2016 and reviewed ratepayer
10 comments received by the OUCC. I participated in the preparation of discovery
11 questions and reviewed the responses provided by Petitioner. Finally, I attended
12 meetings with other OUCC staff to identify and discuss the issues in this Cause.

13 **Q: Are any schedules submitted with your testimony?**

14 A: Yes. The following schedules reflect the issues addressed by the testimony of the
15 OUCC witnesses in this Cause. These schedules are based on my review and
16 analysis as well as the review and analysis of other OUCC staff members.

17 Schedule 1 – Revenue Requirement (page 1)
18 Gross Revenue Conversion Factor (page 2)
19 Comparison of Income Statement Adjustments (page 3)

20 Schedule 2 – Comparative Balance Sheet as of September 30, 2014 and 2015

21 Schedule 3 – Comparative Income Statement for the Twelve Months Ended
22 September 30, 2014 and 2015

23 Schedule 4 – *Pro forma* Net Operating Income Statement

24 Schedule 5 – Revenue Adjustments

25 Schedule 6 – Expense Adjustments

- 1 Schedule 7 – Tax Adjustments
- 2 Schedule 8 – Rate Base
- 3 Schedule 9 – Capital Structure
- 4 Schedule 10 – Midwest Wastewater Treatment Plant Expansion
- 5 Schedule 11 – Proposed Tariff

6 **Q: Are any attachments or workpapers submitted with your testimony?**
7 A: Yes. A list identifying each of the attachments and workpapers referenced in my
8 testimony is included as Appendix B.

II. PETITIONER'S CHARACTERISTICS AND GENERAL INFORMATION

9 **Q: Please describe the characteristics of Aqua's Aboite Wastewater Division.**
10 A: Aboite Wastewater is a division of Aqua Indiana which is an investor owned utility
11 providing wastewater service to approximately 13,000 (primarily residential)
12 customers in the Aboite and Wayne Townships of Allen County, as well as rural
13 portions of Jefferson Township in Whitney County. Petitioner's wastewater utility
14 plant includes two treatment plants, 34 lift stations, and over 225 miles of sewer
15 mains. The Aboite Wastewater Division was previously known as Utility Center,
16 Inc.

17 **Q: What is Petitioner's current ownership structure?**
18 A: As mentioned above, Aboite is a division of Aqua Indiana, Inc. which is 100%
19 owned by Aqua America, headquartered in Bryn Mawr, Pennsylvania. Based on
20 customer count, Aboite Wastewater Division represents approximately 51% of
21 Aqua Indiana, Inc.'s operations.

III. RATEMAKING FOR AN INVESTOR-OWNED UTILITY

1 **Q: Please describe how rates are determined for an investor-owned utility such**
2 **as Aqua.**

3 A: Rates for an investor-owned utility are designed to allow the utility an opportunity
4 to earn a reasonable return for its shareholders on its investment in utility plant. The
5 actual earned return for a utility can and will vary depending upon factors both
6 within a utility's control (e.g., effective utility management, etc.) and outside of a
7 utility's control (e.g., weather, environmental laws, etc.). A utility's revenue
8 requirement is the amount of net income necessary to provide this reasonable
9 return. The revenue requirement for an investor-owned utility is equal to its
10 investment in utility plant times its weighted average cost of capital.

11 **Q: What is the first step in determining investor-owned utility rates?**

12 A: The first step in setting rates for an investor-owned utility is to determine the
13 utility's investment in used and useful utility plant, typically referred to as "rate
14 base." A utility's rate base includes utility plant in operation and providing utility
15 service to customers, including treatment plants, mains, lift stations, pumps,
16 vehicles, and other equipment, net of accumulated depreciation and contributions-
17 in-aid of construction.² Rate base also includes investments in inventory and
18 working capital. Finally, rate base includes any IURC approved acquisition
19 adjustments and regulatory assets.

² Contributions-in-aid of construction include cash payments to the utility as well as contributions in-kind from developers and other customers. Cash contributions generally include system development charges and connections fees. Contributions in-kind for a wastewater utility generally include customer service lines, collection mains, and lift stations. Contributions-in-aid of construction reduce the amount of utility plant included in rate base and for which an investor-owned utility may earn a return.

1 **Q: What is the next step in determining investor-owned utility rates?**

2 A: The next step in the rate-making process is to determine the utility's weighted
3 average cost of capital. The weighted average cost of capital is based on the utility's
4 capital structure and consists of all sources of capital for a utility's investments,
5 including equity, long-term debt, customer deposits, and deferred income taxes.
6 The cost of each capital source is weighted by that source's *pro rata* share of total
7 capital. While the cost of most sources of capital is fairly straight forward, the cost
8 of equity is generally a contested issue in investor-owned utility rate cases and is
9 decided by the Commission after weighing all factors in the case.

10 **Q: Once the net income necessary for a utility to earn a reasonable return on its**
11 **investment is determined, how is the rate increase determined?**

12 A: In order to determine the rate increase necessary to provide the reasonable return,
13 the current net operating income being earned by the utility needs to be calculated.
14 This amount is determined based on the utility's current rates and the test year
15 chosen by the utility. Test year revenues and expenses are then adjusted to include
16 changes that are fixed within the time period (12 months from the end of the test
17 year), known to occur, and measurable in amount.

18 Subtracting this adjusted net operating income from the income necessary
19 to earn a reasonable return on rate base (as discussed above), yields the dollar
20 amount of the increase (or decrease) needed. This increase (or decrease) is then
21 "grossed up" to include additional taxes and fees related to the increased revenue.
22 This process is illustrated on OUCC Schedule 1, page 1, attached to this testimony.

23 Finally, the dollar increase (or decrease) determined above is allocated to
24 each customer class to determine the rates to be charged. This process may be as

1 detailed as a class cost of service study that determines the costs to serve each
2 customer class or as simple as an across-the-board rate increase wherein the overall
3 percentage increase necessary is applied to all customer classes equally.

4 **Q: How are funds received from the sale of utility assets treated in the**
5 **determination of rates?**

6 A: Funds received from the sale of utility assets represent a return of capital to utility
7 shareholders and may include a gain or loss on the assets (investment) sold. To the
8 extent a utility re-invests these funds in utility plant, this investment would be
9 considered equity and would earn an equity return. Funds received from the sale of
10 utility assets would not be considered a contribution-in-aid of construction unless
11 this was a term of the asset acquisition agreement.

IV. REVENUE REQUIREMENT

A. Test Year and Adjustment Period

12 **Q: What test year has Aqua proposed in this Cause?**

13 A: Aqua has proposed a test year ending September 30, 2015. (See paragraph 11 of
14 the Petition.)

15 **Q: What adjustment period has Aqua proposed in this Cause?**

16 A: Aqua proposes that test year results “shall be adjusted for changes that are fixed,
17 known and measurable for ratemaking purposes and occurring through September
18 30, 2016.” (See paragraph 11 of the Petition.)

19 Aqua further proposed that the adjustment period be extended beyond
20 September 30, 2016 for adjustments solely related to the provision of wastewater
21 treatment service to the City of Fort Wayne. (See paragraph 11 of the Petition.)

1 **Q: Does the OUCC accept Aqua's proposed test year and adjustment period?**

2 A: Yes. While the OUCC normally would not agree to adjustments occurring beyond
3 the twelve month adjustment period, we can accept Aqua's proposal in this Cause.
4 Aqua will not begin treating waste from the City of Fort Wayne until January 2017.³³
5 Because this is the primary reason for the Midwest wastewater treatment plant
6 expansion, Aqua's investment in that expansion would not be used and useful
7 absent Aqua's proposal to extend the adjustment period

B. Overview of Petitioner's Case

8 **Q: What revenue increase does Aqua's case-in-chief filing support?**

9 A: Aqua's case-in-chief filing supports an increase in total operating revenues of
10 \$2,779,112 per year. This revenue increase equates to a 29.29% increase in overall
11 operating revenues (Estep Testimony, Schedule A-1).

12 **Q: Does Aqua propose to implement its proposed revenue increase on an across-**
13 **the-board basis?**

14 A: Yes. Aqua did not prepare a cost of service study and proposes to apply its proposed
15 rate increase to all wastewater rates on a *pro rata* basis for each customer class.

16 **Q: Does Aqua seek any other relief in this case?**

17 A: Yes. Aqua also seeks approval of a \$1,300 system development charge.

18 **Q: Is Aqua proposing to limit or cap the revenue increase requested in this Cause?**

19 A: Yes. Aqua proposes to cap its requested rate increase at 25% of total operating
20 revenues or \$2,371,948 per year. This is a reduction of \$407,164 from its
21 "supported" increase of \$2,779,112.

³³ See Petitioner's June 21, 2016 filing of Corrections to Petitioner's Prefiled Direct Testimony –Petitioner's Exhibit 1.

1 **Q: Is Aqua proposing to phase-in its proposed revenue increase?**

2 A: Yes. Aqua proposes this revenue increase be implemented in two phases with 2/3
3 of the increase effective in Phase I. The full increase would be effective in Phase
4 II, which would take place twelve months after the implementation of Phase I.

5 According to Mr. Bruns' testimony, Aqua acknowledges the difficulty that
6 rate increases have on customers and, with this in mind, capped the increase at 25%
7 of total operating revenues. (See Testimony of Tom Bruns, page 8, lines 11-20.)

8 **Q: Is an increase in revenues the same as an increase in customer rates?**

9 A: No. For various reasons, not all of a utility's operating revenues are subject to
10 increase as part of a base rate case. Generally, non-recurring charges are cost-based
11 and, therefore, not subject to a base rate increase. For Aqua, the revenues it will
12 receive from the City of Fort Wayne are based on a wholesale wastewater treatment
13 contract and also are not subject to a base rate increase. Because not all revenues
14 are subject to the base rate increase, it is necessary to increase tariff rates by a larger
15 percentage in order to generate the increase required in annual operating revenues.

16 Aqua's proposal to limit its proposed revenue increase to 25% equates to a
17 29.76% increase to tariff rates (revenues subject to increase). Table 1 below
18 presents both the percentage increase in total operating revenues as well as the
19 increase to tariff rates as proposed by Aqua.

Table 1: Calculation of Aqua's Rate Increase Percentages

			Supported Revenue Increase	Proposed Revenue Increase
			\$ 2,779,112	\$ 2,371,948
Wastewater Revenues	\$ 7,939,779			
Penalties	31,651			
Revenues Subject to Increase	7,971,430	(A)	34.86%	29.76%
Fort Wayne Contract Revenues	1,505,625			
Other Operating Revenues	10,737			
Total Operating Revenues	<u>\$ 9,487,792</u>	(B)	29.29%	25.00%
(A) Increase in customer rates (revenues subject to increase)				
(B) Increase in total revenues				

1 **Q: What are the drivers of Aqua's proposed rate increase in this Cause?**

2 A: As discussed above and demonstrated in Tables 2 and 3 below, the primary drivers
3 of Aqua's proposed rate increase in this Cause are its increased investment in utility
4 plant since its last rate case, increased operating expenses, and increased
5 depreciation expense.

Table 2: Comparison to Revenue Requirement in Prior Rate Case

	Cause No. 43874	Petitioner Cause No. 44752	Increase (Decrease)
Original Cost Rate Base	\$ 31,583,010	\$ 47,665,924	\$ 16,082,914
Weighted Cost of Capital	7.3205%	7.7155%	0.3950%
Required Net Operating income	2,312,032	3,677,604	1,365,572
Adjusted Net Income at Current Rates	2,312,032	2,014,087	(297,945)
Revenue Increase Required		1,663,517	1,663,517
Additional Taxes and Fees (167.062603%)		1,115,595	1,115,595
Total Supported Revenue Increase		<u>\$ 2,779,112</u>	<u>\$ 2,779,112</u>

Table 3: Drivers of Petitioner’s Proposed Rate Increase

	Contribution to Rate Increase	
Increase in Rate Base Investment	\$ 1,240,877	
Increase in Weighted Cost of Capital	124,695	
Required Net Operating Income		\$ 1,365,572
Increase in Operating Revenues	(77,046)	
Increase in Operating Expenses	1,067,614	
Increase in Depreciation/Amortization Expense	1,020,632	
Increase in Other Taxes	312,238	
Decrease in Income Taxes	(519,868)	
Fort Wayne Contract Revenues	(1,505,625)	
Current Net Operating Income Deficit		297,945
Revenue Shortfall		\$ 1,663,517
Additional Taxes and Fees		1,115,595
Total Supported Revenue Increase		\$ 2,779,112
Total Requested Revenue Increase		\$ 2,371,948

1 **Q: What are the primary drivers for the \$1,067,614 increase in operating**
2 **expenses?**

3 A: Total proposed operating expenses have increased \$1,067,615 or 37.94% over the
4 level of operating expenses approved in Cause No. 43874. This equates to an
5 average annual increase of 6.32% since the last rate case. The primary drivers for
6 this increase are: (1) \$267,653 increase in direct salaries and wages, (2) \$154,046
7 increase in employee benefits, (3) \$284,627 increase in management fees, (4)
8 \$325,538 increase in other contractual services, and (5) \$50,391 decrease in
9 transportation expense.

10 Management fees represent charges, either direct or allocated, from Aqua
11 Services, Inc. Other contractual services primarily consist of customer service costs
12 charged to Aboite from Aqua Customer Operations (“ACO”).

Table 4: Comparison of Operating Expenses

	Cause No. 43874	Cause No. 44752	Increase (Decrease)	
Salaries and Wages	\$ 601,786	\$ 869,439	\$ 267,653	44.48%
Employee Benefits	93,952	247,998	154,046	163.96%
Management Fees	197,471	482,098	284,627	144.14%
Other Contractual Services	152,482	478,020	325,538	213.49%
Transportation Expense	110,010	59,619	(50,391)	-45.81%
Other Operating Expenses	1,658,535	1,744,677	86,142	5.19%
	\$ 2,814,236	\$ 3,881,851	\$ 1,067,615	37.94%

1 **Q: What is the primary driver for the \$312,238 increase in other taxes?**

2 A: The increase in other taxes is primarily the result of increased property taxes due to
3 the increased investment in utility plant since the last rate case.

C. Overview of OUCC's Case

4 **Q: What rate relief does the OUCC recommend in this Cause?**

5 A: The OUCC recommends an across-the-board⁴ increase of 15.64% in rates to
6 produce an increase in wastewater revenues of \$1,260,179 per year. Table 5
7 presents a comparison of the revenue requirements proposed by Aqua with those
8 proposed by the OUCC.

⁴ After the OUCC's proposed rate design changes are incorporated into Petitioner's tariff.

Table 5: Comparison of Revenue Requirement

	Per Aqua	Per OUCC	OUCC More (Less)
Original Cost rate Base	\$ 47,665,924	\$ 47,341,474	\$ (324,450)
Times: Weighted Cost of Capital	7.7155%	6.7854%	-0.9301%
Net Operating Income Required for Return on Rate Base	3,677,604	3,212,308	(465,296)
Less: Adjusted Net Operating income	2,014,088	2,454,755	440,667
Revenue Shortfall	1,663,516	757,553	(905,963)
Gross Revenue Conversion Factor	167.062603%	167.073947%	0.011344%
Supported Revenue Increase	2,779,112	1,265,674	(1,513,438)
Less: Cap/Voluntary Reduction	407,164	5,495	(401,669)
Proposed Revenue Increase	<u>\$ 2,371,948</u>	<u>\$ 1,260,179</u>	<u>\$ (1,111,769)</u>
Supported Percentage Increase in Total Revenues	29.29%	13.15%	-16.14%
Supported Percentage Increase in Tariff Rates (Revenues Subject to Increase)	34.86%	15.64%	-19.22%
Proposed Percentage Increase in Total Revenues	25.00%	13.15%	-11.85%
Proposed Percentage Increase in Tariff Rates (Revenues Subject to Increase)	29.76%	15.64%	-14.12%

1 **Q: Does the OUCC propose a two phase rate increase similar to that proposed by**
2 **Aqua?**

3 A: No. Because the OUCC's proposed total rate increase is less than Aqua's proposed
4 Phase I increase, the OUCC proposes that rates be increased all at once with no
5 need to implement a Phase II increase. Under the OUCC's proposal there is no need
6 to defer depreciation expense on major projects or to defer the amortization of rate
7 case expense as proposed by Aqua.

8 **Q: Please explain the primary differences between the revenue requirement**
9 **proposed by Aqua and that recommended by the OUCC.**

10 A: As Table 5 demonstrates, the parties proposals differ as to the value of rate base,
11 the appropriate weighted cost of capital, and current net operating income as
12 adjusted for fixed, known, and measurable changes. The \$324,450 difference in
13 rate base is primarily due to the OUCC's exclusion of \$507,462 of Aqua's proposed
14 Main Aboite Basin major project costs.

1 The difference in weighted cost of capital is primarily due to the cost of
2 equity proposed by each party. Aqua proposed a 10.35% cost of equity while the
3 OUCC proposes a 9.0% cost of equity. (See the testimony of OUCC Witness
4 Crystal Thacker.) Also, the OUCC proposes a 4.57% cost of debt compared to
5 Aqua's proposed 5.08%. (See the testimony of OUCC Witness Edward Kauffman.)

6 The \$440,667 difference in current net operating income is due to
7 differences in revenue and operating expense adjustments proposed by the parties.
8 These differences are primarily related to adjustments proposed for customer
9 growth, rate case amortization, amortization of contributed plant, property taxes,
10 and income taxes.

V. TRANSFER OF ASSETS TO CITY OF FORT WAYNE

11 **Q: Please explain the transfer of utility assets that occurred between Aqua and**
12 **the City of Fort Wayne.**

13 A: The City of Fort Wayne acquired all of Aqua's utility assets located in its North
14 System (water and wastewater) and its water utility assets located in and around
15 Aboite Township of Allen County (southwest). This transaction was finalized in
16 2014 as a result of a settlement negotiated between the parties and approved by the
17 Commission in Cause No. 44503.

18 **Q: What was the final price paid by the City of Fort Wayne to acquire these**
19 **assets?**

20 A: The total price paid by the City of Fort Wayne was \$67,000,000 including the
21 approximately \$16.9 million paid by the City in connection with the transfer of the
22 North System assets in 2008.

1 **Q: What was the impact of this transaction for Aqua?**

2 A: Aqua recorded a pre-tax gain of \$29,210,008 including total transaction costs of
3 \$3,546,184 (Attachment MAS-1).

4 **Q: Were there any contributions associated with the assets transferred to the City
5 of Fort Wayne?**

6 A: Yes. Approximately \$15.0 million of contributions from Aqua's customers were
7 monetized as a result of this asset transfer. In other words, of the \$29.2 million pre-
8 tax gain recorded by Aqua, \$15.0 million or 50% was related to customer
9 contributed assets.

Table 6: Summary of Assets Transferred to the City of Fort Wayne⁵

	North - Water	North - WW	Aboite - Water	Total
Utility Plant in Service	\$ 19,170,732	\$ 2,222,649	\$ 39,939,393	\$ 61,332,774
Accumulated Depreciation	(4,771,530)	(347,494)	(8,546,928)	(13,665,952)
Acquisition Adjustment, net	1,593,250	408,501	1,463,295	3,465,046
Inventory	-	-	81,750	81,750
Net Utility Plant in Service	15,992,452	2,283,656	32,937,510	51,213,618
Contributions	(2,552,981)	(515,536)	(11,418,786)	(14,487,303)
Contractor Liability	-	-	(581,835)	(581,835)
	(2,552,981)	(515,536)	(12,000,621)	(15,069,138)
Book Value of Assets	13,439,471	1,768,120	20,936,889	36,144,480
Fort Wayne Acquisition Adj.	8,286,114	100,048	22,469,358	30,855,520
Purchase Price	\$ 21,725,585	\$ 1,868,168	\$ 43,406,247	\$ 67,000,000

10 **Q: Were any additional contracts approved by the Commission as part of this
11 asset transfer?**

12 A: Yes. Two additional contracts were negotiated between the parties and considered
13 an integral part of the transaction approved in Cause No. 44503: (1) a wholesale
14 wastewater treatment contract and (2) an operations contract. The wholesale
15 wastewater treatment contract set the terms and price to be paid by the City of Fort

⁵ Per the City of Fort Wayne's compliance filing of February 2, 2015 (final accounting entry) in Cause No. 44503. See Attachment MAS-2.

1 Wayne to Aqua for the treatment of wastewater to be diverted to Aqua's Midwest
2 wastewater treatment plant (Attachment JTP-18). The operations agreement
3 determined the terms, conditions and pricing for various services to be provided by
4 the City of Fort Wayne to Aqua, including meter reads and disconnection of water
5 service for delinquent customers (Attachment MAS-3).

VI. PLANT EXPANSION AND FORT WAYNE TREATMENT CONTRACT

D. Expansion of Midwest Wastewater Treatment Plant

6 **Q: Briefly explain Aqua's proposal to expand its Midwest wastewater treatment**
7 **plant in this Cause.**

8 A: One of the three major projects Aqua has proposed in this Cause is the expansion
9 of its Midwest wastewater treatment plant ("WWTP"). The estimated cost of this
10 expansion is \$9,741,000 of which the City of Fort Wayne will contribute \$341,000,
11 leaving a net investment of \$9,400,000. A discussion of the specific plant being
12 expanded or added at the Midwest WWTP can be found in the testimony of OUCC
13 witness James Parks.

14 **Q: Why is Aqua proposing to expand its Midwest WWTP at this time?**

15 A: The Midwest WWTP expansion is primarily necessitated at this time by Aqua's
16 wholesale wastewater treatment contract with the City of Fort Wayne. Mr. Parks
17 discusses the expansion of the Midwest WWTP more thoroughly in his testimony,
18 including the need for the expansion.

19 **Q: What rate is the City of Fort Wayne paying to Aqua to treat its wastewater?**

20 A: For the first five years of the Water Pollution Treatment contract (Attachment JTP-
21 18), the City of Fort Wayne pays a minimum of \$125,468.75 per month. This allows

1 Fort Wayne to send up to 547,500,000 gallons of wastewater to Aqua on an annual
2 basis at a cost of \$2.75 per thousand gallons. Any volumes conveyed by Fort Wayne
3 to Aqua in excess of the contract minimum are billed at \$2.75 per thousand gallons.
4 In contract years 6 – 10, the price to treat wastewater under the contract will escalate
5 according to the CPI.

6 **Q: How was the rate to the City of Fort Wayne determined?**

7 A: The OUCC asked Aqua for the cost to serve the City of Fort Wayne. Aqua
8 responded that it did not know what a fully-allocated cost of service study would
9 show because none was performed. No additional information was provided to
10 explain the basis of the \$2.75 per thousand gallon rate included in the wholesale
11 treatment contract (Attachment MAS-4).

E. Cause No. 44503

12 **Q: Has the Commission approved the water pollution treatment contract between**
13 **Aqua and the City of Fort Wayne?**

14 A: Yes. In Cause No. 44503, the Commission approved both the asset acquisition
15 agreement, transferring assets from Aqua to the City of Fort Wayne, as well as the
16 water pollution treatment contract. The asset acquisition agreement settled the
17 parties' litigation regarding Aqua's North System assets as well as the conveyance
18 of Aqua's remaining water utility assets located in and around Aboite Township.
19 In that Cause, these two agreements, along with an operations agreement, were
20 presented as a "package deal" and approval of the wholesale water pollution
21 treatment contract was made a condition to closing in the asset acquisition
22 agreement.

1 **Q: Did Aqua present an analysis of the revenues and costs under the treatment**
2 **contract in Cause No. 44503?**

3 A: Yes. Exhibit TMB-3 attached to Mr. Bruns' testimony presented a financial
4 analysis of the wholesale wastewater treatment contract (Attachment MAS-5). This
5 analysis showed that revenues to be received under the contract exceeded the
6 estimated costs to treat the waste, yielding net incremental income.

7 **Q: Did Exhibit TMB-3 include all the additional costs of the expansion and**
8 **treatment of the City of Fort Wayne waste?**

9 A: No. While there are differences in the estimated costs presented in Exhibit TMB-3
10 compared to the present case, the primary cost excluded from Exhibit TMB-3 is the
11 pre-tax return to be earned on Aqua's investment in the Midwest WWTP expansion.
12 Exhibit TMB-3 included the cost of debt (interest expense) but did not include the
13 cost of equity Aqua would earn on its investment in the expansion.

F. Existing Customer Subsidization of Expansion

14 **Q: Do the revenues to be received under the Water Pollution Treatment contract**
15 **with the City of Fort Wayne fully recover all of the additional costs of the**
16 **Midwest WWTP expansion as proposed by Aqua in this Cause?**

17 A: No. The revenues Aqua estimates it will receive from the City of Fort Wayne for
18 treatment of wastewater under the Water Pollution Treatment contract do not fully
19 recover all of the estimated additional costs of the WWTP expansion. In this Cause,
20 Aqua has assumed that it will only receive the minimum amount of revenues under
21 the contract, \$1,505,625, based on indications from the City of Fort Wayne. Aqua
22 has not assumed it will receive any excess strength surcharge revenues nor has it
23 included the cost of treating excess strength waste in its proposal.

1 **Q: Will existing customers pay for any of the costs of the expansion of the Midwest**
2 **WWTP under Aqua's proposal in this Cause?**

3 A: No. Aqua has proposed a voluntary cap on its rate increase in this Cause that
4 eliminates any subsidy existing customers would pay. Under Aqua's proposal,
5 estimated costs exceed estimated revenues by \$146,171. Aqua's proposed cap on
6 rates reduces its proposed revenue increase by \$407,164, thus eliminating any
7 subsidy for existing customers.

8 **Q: Will existing customers pay for any of the costs of the expansion of the Midwest**
9 **WWTP under the OUCC's proposal in this Cause?**

10 A: No. Under the OUCC's proposal, primarily due to a reduced weighted cost of
11 capital, the estimated revenues from the Water Pollution Treatment contract recover
12 all but \$5,495 of the estimated additional costs of the expansion. The OUCC
13 proposes this relatively minor subsidization be eliminated from the total rate
14 increase granted to Aqua in a manner similar to that proposed by Aqua.

15 **Q: What costs did you consider in your analysis?**

16 A: I included the pre-tax return on Petitioner's investment in the Midwest WWTP
17 expansion, as well as additional operating expenses, depreciation expense, and
18 property taxes. Table 7 presents a comparison of the OUCC's and Aqua's proposals
19 in this Cause.

20 **Q: Would the subsidy increase if the Commission approves a higher cost of capital**
21 **than what the OUCC has proposed?**

22 A: Yes. An approved weighted cost of capital greater than that proposed by the OUCC
23 would lead to an even greater subsidy than that reflected in Table 7 below.

1 **Q: What do you propose regarding how to treat any subsidy for ratemaking**
2 **purposes?**

3 A: Any subsidy that might result from the Commission's approved revenue
4 requirement should be removed from the revenue increase as proposed by Aqua
5 through its voluntary cap on its rate increase. These excess costs should be borne
6 by shareholders rather than existing customers.

Table 7: Calculation of Midwest WWTP Expansion Subsidy

	Petitioner	OUCC	OUCC More (Less)
Estimated Cost of WWTP Expansion	\$ 9,741,000	\$ 9,741,000	\$ -
Less: Fort Wayne Contribution	341,000	341,000	-
Phase I Depreciation	194,820	-	(194,820)
Net Investment	9,205,180	9,400,000	194,820
Times: Pre-tax Rate of Return	11.186711%	9.804331%	-1.382380%
Increase in Revenue Requirement due to Return on Plant	\$ 1,029,757	\$ 921,607	\$ (108,150)
<u>Incremental Operating Expenses:</u>			
Depreciation Expense (2.5%)	\$ 243,525	\$ 235,000	\$ (8,525)
Additional Operating Expenses			
Sludge Hauling	60,099	60,099	-
Purchased Power	89,916	89,916	-
Chemicals	26,602	26,602	-
Lab Testing	11,936	11,936	-
Property Taxes	174,656	165,960	(8,696)
Total Incremental Operating Expenses	\$ 606,734	\$ 589,513	\$ (17,221)
Return on Plant	\$ 1,029,757	\$ 921,607	\$ (108,150)
Incremental Operating Expenses	606,734	589,513	(17,221)
Additional Costs of Plant Expansion	1,636,491	1,511,120	(125,371)
Less: Estimated Fort Wayne Revenues	1,505,625	1,505,625	-
Excess Costs of Plant Expansion	130,866	5,495	(125,371)
Less: Cap/Voluntary Reduction	(407,164)	(5,495)	401,669
Net Impact to Existing Customers	\$ (276,298)	\$ -	\$ 276,298

VII. RATE BASE

1 **Q: What original cost rate base value did Aqua propose?**

2 A: Aqua proposed an original cost rate base of \$47,665,924 as of September 30, 2015,
3 including \$12,605,444 of net major project costs and \$422,357 of working capital.

4 **Q: What are the rate base cut-off dates in this Cause?**

5 A: The Commission's docket entry dated April 21, 2016 does not address rate base
6 cut-off dates, but Aqua filed this case under the Minimum Standard Filing
7 Requirement 170 IAC 1-5-5. According to 170 IAC 1-5-5(3), the general rate base
8 cut-off date is the end of the test year which in this Cause is September 30, 2015.
9 For major projects, the rate base cut-off date is ten business days before the final
10 hearing in accordance with 170 IAC 1-5-5(5)(E) which states the date on which the
11 utility must declare the major project used and useful.

12 **Q: Do you accept Aqua's proposed rate base?**

13 A: No. I recommend an original cost rate base of \$47,341,474, including \$12,191,288
14 of projected major project costs and \$406,558 of working capital. While I agree
15 with most aspects of Aqua's proposed rate base, I disagree with the amount of costs
16 proposed for its Main Aboite Basin Improvement ("MABI") major project as well
17 as Aqua's inclusion of Phase I major project depreciation expense in the calculation
18 of accumulated depreciation. Table 8 compares the rate base proposed by Aqua
19 with the OUCC's proposal. (See also OUCC Schedule 8.)

Table 8: Comparison of Rate Base

		Per Aqua	Per OUCC	OUCC More (Less)
	Utility Plant in Service at September 30, 2015	\$ 67,374,727	\$ 67,374,727	\$ -
Add:	Allocation of Shared Admin Assets	2,915,907	2,915,907	-
	Office Building	1,700,000	1,700,000	-
	Expansion of Midwest WWTP	9,741,000	9,741,000	-
	Main Aboite Basin (net of retirements)	1,257,750	750,288	(507,462)
	Engineering Fees	-	3,815	3,815
Less:	Retirements (Main Aboite Basin)	93,306	-	(93,306)
	Homestead Road Regional Lift Station Master Plan	-	58,979	58,979
	Gross Utility Plant in Service	82,896,078	82,426,758	(469,320)
	Accumulated Depreciation - Aboite at 9/30/2015	15,282,296	15,282,296	-
Add:	Allocation of Shared Admin Assets	251,895	251,895	-
	Phase I Depreciation on Major Projects	253,975	-	(253,975)
	Contributions-in-Aid of Construction	15,547,979	15,547,979	-
	Fort Wayne CIAC - WWTP Expansion	341,000	341,000	-
	Customer Advances	853,004	853,004	-
Less:	Retirements (Main Aboite Basin)	93,306	-	(93,306)
		32,436,843	32,276,174	(160,669)
	Net Utility Plant in Service	50,459,235	50,150,584	(308,651)
Less:	Deferred Income Taxes	5,815,460	5,815,460	-
Add:	Regulatory Asset - Deferred Depreciation	952,734	952,734	-
	Acquisition Adjustment, net	1,565,194	1,565,194	-
	Materials & Supplies	81,864	81,864	-
	Working Capital (see below)	422,357	406,558	(15,799)
	Total Original Cost Rate Base	\$ 47,665,924	\$ 47,341,474	\$ (324,450)

A. Utility Plant in Service Adjustments

1 **Q: Did Aqua make any adjustments to its proposed utility plant in service as of**
2 **September 30, 2015?**

3 **A;** Yes. Aqua proposed two adjustments to utility plant in service: (1) addition of
4 shared administrative assets and (2) addition of projected major project costs.

1 First, Aqua proposed the inclusion of \$2,915,907 representing Aboite’s
2 allocated portion of shared administrative assets held by Aqua Indiana, including
3 vehicles, computers and other shared assets.

4 Second, Aqua proposed the inclusion of \$12,105,171 of projected major
5 project costs. Aqua proposed three major projects in this Cause: (1) \$9,741,000 of
6 Midwest WWTP expansion costs, (2) \$1,700,000 of office and field services
7 building costs, and (3) \$1,257,750 of Main Aboite Basin Improvement costs. The
8 Main Aboite Basin Improvement project costs were reduced by \$93,306 to reflect
9 related asset retirements.

Table 9: Summary of Major Projects

Midwest WWTP Expansion	\$ 9,741,000
Office and Field Services Building	1,700,000
Main Aboite Basin Improvement	1,257,750
Subtotal	12,698,750
Less: Retirements (Main Aboite Basin)	93,306
	<u>\$ 12,605,444</u>

10 **Q: Do you accept Aqua’s proposed adjustments to utility plant in service?**

11 A: Partially. I accept Aqua’s proposed adjustment for allocated shared administrative
12 assets as well as its proposed major project costs related to its Midwest WWTP
13 expansion and its Office and Field Services building.

14 I disagree with Aqua’s proposed costs for its Main Aboite Basin
15 Improvement project. As discussed in Mr. Parks’ testimony, this “major project”
16 actually consists of ten separate improvement projects at different locations within
17 Aqua’s Main Aboite Basin. The OUCC does not consider this to be a “major
18 project” within the definition included in the Minimum Standard Filing

1 Requirements statute ("MSFR"). The MSFR statute states that a "major project"
2 means a project that is estimated to cost more than one percent (1%) of a utility's
3 proposed rate base (170 IAC 1-5-1(b)(1)).

4 **Q: What do you propose for the Main Aboite Basin Improvement project?**

5 A: As discussed in Mr. Parks' testimony, after reviewing each of the ten projects
6 included in the Main Aboite Basin Improvement project, he determined that one
7 project met the MSFR definition of a major project. The "cured in place pipe"
8 project has a cost of \$750,288 (including change orders) and I included this amount
9 in my proposed utility plant in service. I excluded the remaining costs of \$507,462
10 from utility plant in service. Further, because it is unclear which project the Main
11 Aboite Basin retirements relate to, I also excluded these retirements from my
12 proposed utility plant in service.

13 **Q: Do you propose any additional utility plant in service adjustments?**

14 A: Yes. I propose two additional adjustments to utility plant in service: (1) addition of
15 \$3,815 of engineering fees and (2) removal of \$58,979 of costs related to the
16 "Homestead Road Regional Lift Station Master Plan" report.

17 Aqua included \$3,815 of engineering fees in its test year operating expenses
18 the OUCC determined were capital in nature (Attachment RJC-7). OUCC Witness
19 Richard Corey discusses the exclusion of these costs from test year operating
20 expenses. Accordingly, I included these costs in utility plant in service.

21 Aqua included \$58,979 in utility plant for costs related to the "Homestead
22 Road Regional Lift Station Master Plan." However, when the OUCC requested a
23 copy of this report to review, Aqua was unable to locate or provide it (Attachment

1 MAS-6). The OUCC considers a report that cannot be located or provided as not
2 used and useful in the provision of utility service. Further, because the OUCC was
3 unable to review this report, it cannot say whether the report has value.
4 Accordingly, I removed the costs of this report from my proposed utility plant in
5 service.

6 **Q: Mr. Corey proposes an adjustment to test year capitalized labor. Why haven't**
7 **you proposed a corresponding rate base adjustment?**

8 A: Mr. Corey's adjustment represents the OUCC's proposal regarding salary and wage
9 expense to be incurred by Aqua on a going forward basis. To the extent that Aqua
10 incurs capitalized labor costs on future capital projects, those costs will be paid by
11 the shareholders and included in the shareholder's investment in plant once the
12 capital project is used and useful in the provision of utility service. There is no need
13 for an adjustment to rate base at this time related to this operating expense
14 adjustment.

B. Offsets to Utility Plant in Service (Accumulated Depreciation and CIAC)

15 **Q: Did Aqua make any adjustments to its proposed offsets to utility plant in**
16 **service?**

17 A: Yes. Aqua proposed four adjustments to its proposed offsets to utility plant in
18 service: (1) additional accumulated depreciation expense related to shared
19 administrative assets, (2) Phase I depreciation on major projects, (3) Fort Wayne
20 contribution-in-aid of construction for the Midwest WWTP expansion, and (4)
21 accumulated depreciation associated with the Main Aboite Basin Improvement
22 retirements.

1 First, Aqua included \$251,895 representing Aboite's allocated portion of
2 accumulated depreciation on the shared administrative assets held by Aqua Indiana,
3 including vehicles, computers and other shared assets.

4 Second, Aqua included \$253,975 of Phase I depreciation expense related to
5 its proposed major projects (\$12,698,750 x 2%). In its case-in-chief, Aqua proposed
6 to defer the application of its proposed 2.5% depreciation rate on its major projects
7 until Phase II.

8 Third, Aqua included \$341,000 for the City of Fort Wayne's contribution-
9 in-aid of construction for the Midwest WWTP expansion.

10 Finally, Aqua reduced its accumulated depreciation by \$93,306 for the
11 accumulated depreciation related to the Main Aboite Basin Improvement project
12 retirements.

13 **Q: Do you accept Aqua's proposed adjustments to utility plant in service offsets?**

14 A: Partially. I accept Aqua's proposed adjustments to include accumulated
15 depreciation on the allocation of shared administrative assets and to include Fort
16 Wayne's contribution in aid of construction for the Midwest WWTP expansion.

17 I disagree with Aqua's adjustments related to the Phase I depreciation
18 expense on the major projects and the accumulated depreciation on the Main Aboite
19 Basin Improvement retirements.

20 **Q: Please explain why you disagree with certain Aqua adjustments to utility plant**
21 **in service offsets.**

22 A: Because the OUCC does not propose to phase-in its proposed rate increase, there
23 is no need to defer the application of the 2.5% depreciation rate for major projects
24 and, therefore, there is no need to include Aqua's proposed adjustment. As

1 discussed above, because it is unclear which project the Main Aboite Basin
2 retirements relate to, I also excluded these retirements from my proposed offsets to
3 utility plant in service.

C. Acquisition Adjustment

4 **Q: Is any adjustment needed to reflect the appropriate balance for the**
5 **unamortized portion of Aqua’s approved acquisition adjustment?**

6 A: No. Although I propose an adjustment to reduce test year amortization expense
7 related to the acquisition adjustment, as demonstrated in Table 10 below, there is
8 no need to adjust the unamortized portion of the acquisition adjustment included in
9 rate base.

Table 10: Calculation of Unamortized Acquisition Adjustment Balance

Unamortized Acquisition Adjustment as of 9/30/2009 per the Final Order in Cause No. 43874 (page 8)	\$ 2,026,967
Less: Amortization Expense (2010 - 2015) (\$76,973 x 6)	461,838
Calculated Acquisition Adjustment as of 9/30/2015	1,565,129
Less: Actual Acquisition Adjustment Balance at 9/30/2015	1,565,194
Difference	\$ (65)

D. Working Capital

10 **Q: Please define working capital for ratemaking purposes.**

11 A: For ratemaking purposes, working capital generally is defined as the average
12 amount of capital provided by investors, over and above the investment in plant, to
13 bridge the gap between the time expenditures are required to provide service and
14 the time collections are received for that service. In other words, working capital is
15 the money a utility needs to provide utility service before it receives payment for
16 that service.

1 While some expenses are paid *after* the related service revenues have been
2 collected (paid “in arrears”), some expenses are incurred and paid *before* the related
3 revenues have been collected. Examples of expenses paid before the related
4 revenues are collected include chemical expense, rent, and salaries. Examples of
5 expenses paid in arrears are taxes, purchased water, and purchased power.

6 Working capital is the net amount of money needed on an ongoing basis to
7 fund daily utility operations. Working capital is considered an investment necessary
8 for providing utility service and is included in rate base for investor-owned utilities.

9 **Q: What is the best method to determine a utility’s working capital?**

10 A: The best method to determine a utility’s working capital is to conduct a lead/lag
11 study. A lead/lag study measures the differences between (1) the time services are
12 rendered until the revenues for that service are received, and (2) the time expenses
13 are incurred until those expenses are paid. A lead/lag study requires an in-depth
14 analysis of the timing of a specific utility’s operating revenues and expenses. The
15 difference between these periods is expressed in terms of days. The number of days
16 determined through this process is multiplied by the average daily operating
17 expenses to produce the cash working capital required for operations. A lead/lag
18 study produces a reliable estimate of a utility’s investment in working capital
19 because it is based on *that* utility’s actual operating conditions as well as *its* billing,
20 collecting, and cash disbursement practices.

21 **Q: Did Aqua prepare a lead-lag study to determine its investment in working**
22 **capital?**

23 A: No. Aqua used the FERC 45-day method to calculate its proposed working capital
24 of \$422,357.

1 **Q: Please explain how the FERC 45-day formula method calculates working**
2 **capital.**

3 A: The FERC 45-day formula method calculates a percentage of operating expenses
4 as the estimate of the working capital requirements for a utility. This method
5 assumes the difference between the lead/lag periods discussed above is 45 days and
6 calculates 12.5% (45 days / 360 days) of adjusted annual operating expenses as cash
7 working capital. This methodology typically adjusts operating expenses for those
8 items known to be paid after the receipt of revenues or paid "in arrears." The
9 advantage of the formula method is that it is quick and inexpensive and has
10 generally been thought to be a reasonable estimate of what a lead/lag study would
11 produce without the related expense of a lead/lag study. The disadvantage is the
12 formula approach does not provide evidence that the resulting allowance represents
13 actual investment of capital for a specific utility.

14 **Q: Is the FERC 45-day method a good alternative to a lead/lag study?**

15 A: While this method may be a viable alternative for calculating the working capital
16 allowance provided to municipal and non-profit utilities, I do not believe it is a
17 good alternative to a lead/lag study for investor-owned utilities. The FERC 45-day
18 method was developed over 75 years ago, before modern banking rules regarding
19 money transfers were developed and implemented. Today, cash receipts and
20 disbursements are cleared much more quickly than they were when this method
21 was developed. Further, the ability for customers to pay their bills online further
22 shrinks the lag between when expenditures are incurred and revenues are received.
23 Finally, in Indiana, there is a two year lag between when property taxes are incurred
24 and when these taxes are paid.

1 **Q: Do you agree with Aqua's use of the FERC 45-day method to calculate its**
2 **projected working capital?**

3 A: No. It is not reasonable for Aqua to use the FERC 45-day method to calculate its
4 proposed working capital. Aqua is requesting a return on an investment in working
5 capital but provides no evidence that any investment in working capital actually
6 exists. Aqua has no cash accounts as all cash is managed at the corporate level by
7 Aqua Services Inc. Although each of Aqua Indiana's divisions may appear to be
8 small and the imposition of a lead/lag study to be an undue burden, Aqua is not
9 financially unsophisticated. As stated earlier, Aqua's cash is managed at the
10 corporate level, and it can be assumed that Aqua's parent company strives to
11 minimize the amount of working capital necessary to operate its various businesses,
12 including Aqua Indiana and the Aboite Wastewater Division. For these reasons, I
13 believe the FERC 45-day method does not accurately reflect Petitioner's working
14 capital investment. However, because Aqua has not conducted a lead-lag study in
15 this case, I will accept the FERC 45-day method.

16 **Q: What working capital do you propose to include in rate base?**

17 A: I propose working capital of \$406,558 be included in rate base. See OUCC
18 Schedule 8.

19 **Q: Do you have any recommendations for the calculation of working capital in**
20 **future Aqua base rate cases?**

21 A: Yes. If Aqua desires to include working capital in rate base, it should perform a
22 lead-lag study or present evidence regarding its actual investment in working
23 capital and present it in its next rate case.

VIII. OPERATING REVENUES

1 **Q: Did Aqua propose any adjustments to its test year operating revenues?**

2 A: Yes. Aqua proposed three adjustments to its test year operating revenues: (1)
3 Customer growth during the test year and subsequent to the test year, (2) billing
4 determinants analysis, and (3) City of Fort Wayne wholesale wastewater treatment
5 revenues. Aqua proposed a \$1,539,498 increase to test year operating revenues of
6 \$7,948,293 yielding present rate *pro forma* operating revenues of \$9,487,791.

7 **Q: Does the OUCC accept Aqua's *pro forma* operating revenues?**

8 A: Partially. The OUCC accepts Aqua's adjustments related to its billing determinants
9 analysis and revenues related to the City of Fort Wayne wholesale wastewater
10 treatment revenues. The OUCC disagrees with Aqua's proposed customer growth
11 adjustment. The OUCC also proposes an additional adjustment to include lab
12 testing fees received by Aqua. The OUCC proposes a \$1,631,551 increase to test
13 year operating revenues of \$7,948,293 yielding present rate *pro forma* operating
14 revenues of \$9,579,844. Mr. Corey discusses the OUCC's position regarding *pro*
15 *forma* test year operating revenues and presents the OUCC's proposed adjustments.
16 Table 11 presents a comparison of the operating revenue adjustments proposed by
17 Aqua and the OUCC.

Table 11: Comparison of Operating Revenue Adjustments

	Aqua ¹	OUCC	OUCC More (Less)
Test Year Customer Growth	\$ 107,214	\$ 49,746	\$ (57,468)
Post-Test Year Customer Growth	-	142,698	142,698
Billing Determinants Analysis	(73,341)	(73,341)	-
Wholesale Treatment Revenues	1,505,625	1,505,625	-
Lab Testing Fees	-	6,823	6,823
Total Operating Revenue Adjustments	<u>\$ 1,539,498</u>	<u>\$ 1,631,551</u>	<u>\$ 92,053</u>
<i>¹ Aqua did not provide a dollar breakdown of its proposed customer growth adjustments. The total adjustment proposed by Aqua is reflected on the test year customer growth line.</i>			

IX. OPERATING EXPENSES

1 **Q: Did Aqua propose any adjustments to its test year operating expenses?**

2 A: Yes. Aqua proposed several adjustments to its test year operating expenses,
3 including salaries and wages, employee benefits, costs related to the treatment of
4 Fort Wayne wastewater, costs allocated by Aqua Services, rent expense, insurance
5 expense, and rate case expense. Aqua proposed a \$1,149,057 increase to test year
6 operating expenses of \$5,585,674 yielding *pro forma* operating expenses of
7 \$6,734,731.

8 **Q: Does the OUCC accept any of Aqua's proposed operating expense**
9 **adjustments?**

10 A: Yes. The OUCC accepts Aqua's proposed operating expense adjustments to
11 salaries and wage expense, chemical expense, sludge hauling expenses, purchased
12 power expense, insurance expense, rent expense, contractual services –
13 management fees, and miscellaneous expense.

1 **Q: What adjustments does the OUCC not accept?**

2 A: The OUCC does not accept Aqua's proposed adjustments to employee benefits,
3 contractual services – other, bad debt expense, rate case expense, depreciation
4 expense, and amortization expense related to Aqua's acquisition adjustment.

5 **Q: Does the OUCC propose any additional operating expense adjustments?**

6 A: Yes. The OUCC proposes additional adjustments to sludge hauling, purchased
7 power, and chemical expense to reflect additional operating expenses related to its
8 proposed customer growth calculation. The OUCC also proposes additional
9 adjustments to capitalized labor, to eliminate non-allowed test year expenses as
10 well as costs that are capital in nature, and to amortize contributions-in-aid of
11 construction.

12 The OUCC proposes total operating expense adjustments of \$557,173 to
13 test year operating expense of \$4,911,543 to yield *pro forma* operating expense of
14 \$5,468,716.

15 **Q: Have you prepared a summary of proposed operating expense adjustments in**
16 **this case?**

17 A: Yes. Table 12 compares total operating expense adjustments proposed by Aqua to
18 those proposed by the OUCC.

Table 12: Comparison of Proposed Operating Expense Adjustments

	Per	Per	OUC
	Aqua	OUC	More (Less)
Salaries & Wages	\$ 73,254	\$ 58,742	\$ (14,512)
Employee Benefits	13,996	6,706	(7,290)
Sludge Hauling	60,099	63,154	3,055
Purchased Power	89,913	94,762	4,849
Chemicals	26,602	27,304	702
Contractual Services - Management Fees	85,906	85,906	-
Contractual Services - Other	102,482	56,498	(45,984)
Rents	(37,765)	(37,765)	-
Insurance	(39,063)	(39,063)	-
Bad Debt Expense	6	167	161
Rate Case Expense	99,139	57,083	(42,056)
Miscellaneous	1,120	(61,242)	(62,362)
Depreciation Expense	673,368	646,763	(26,605)
Amortization of CIAC	-	(397,224)	(397,224)
Amortization of Acquisition Adjustment	-	(4,618)	(4,618)
Total Operating Expenses Adjustments	\$ 1,149,057	\$ 557,173	\$ (591,884)

A. Depreciation Expense

1 **Q: Did Aqua propose any depreciation expense adjustments?**

2 A: Yes. Aqua proposed a \$673,368 increase to test year depreciation expense of
3 \$1,423,790 yielding *pro forma* depreciation expense of \$2,097,158. Aqua's
4 depreciation expense adjustment is based on the use of the Commission's 2.5%
5 composite depreciation rate for a wastewater utility with a treatment plant.

6 **Q: Do you accept Aqua's proposed *pro forma* depreciation expense?**

7 A: No. I propose a \$646,763 increase to test year depreciation expense yielding *pro*
8 *forma* depreciation expense of \$2,070,553 (OUC Schedule 6, Adjustment No.
9 10). While I accept Aqua's proposed 2.5% depreciation rate, my proposed
10 depreciation expense is based on a different amount of depreciable plant primarily

1 due to my reduction to the Main Aboite Basin Improvement project costs and my
2 elimination of land value from the office building costs. Additionally, Aqua's
3 depreciation expense includes \$7,619 of deferred depreciation amortization related
4 to the major project costs.

5 **Q: Please explain the differences between your proposed depreciable utility plant**
6 **and that proposed by Aqua.**

7 A: Aqua proposed depreciable utility plant of \$82,695,280 while I propose
8 \$81,935,851, a difference of \$759,429. There are four differences between these
9 proposals: (1) the exclusion of \$507,462 (\$1,257,750 - \$750,288) of costs related
10 to the Main Aboite Basin Improvement project less the \$93,306 of retirements, (2)
11 the inclusion of \$3,815 of engineering fees, (3) the \$290,109 exclusion of land
12 value included in the office building costs, and (4) the removal of \$58,979 of costs
13 related to the Homestead Road Regional Lift Station Master Plan, Please see the
14 discussion of items (1), (2), and (4) in the Rate Base section of my testimony above.

15 **Q; How did you determine the amount of land included in the costs of the office**
16 **building?**

17 A: In response to OUCC Data Request No. 8.21, Aqua stated that the land value
18 included in the costs of the office building was \$290,109 (Attachment MAS-7).
19 Because land is not depreciable, I excluded it from my calculation of depreciation
20 expense.

21 **Q: Please explain the \$7,619 of deferred depreciation expense amortization and**
22 **why you do not include this amount in your proposed depreciation expense.**

23 A: In conjunction with Aqua's proposal to phase-in its proposed rate increase over two
24 phases, Aqua proposed to defer the depreciation of its major project costs until
25 Phase II. Aqua requested that a regulatory asset be established for this deferred

1 depreciation expense which it proposed be amortized over a 50 year period. For the
2 detailed calculation of this amount please see Schedule C-2.4 included in Mr.
3 Estep's testimony.

4 I do not include this amount in my proposed depreciation expense because
5 I do not propose to phase-in my proposed revenue increase. Therefore, there is no
6 need to create a regulatory asset.

B. Amortization of Contributions-in-Aid of Construction

7 **Q: Please define the term "Contributions-in-Aid of Construction."**

8 A: Contributions-in-aid of construction is plant or cash provided by someone other
9 than the utility's shareholders or owners, including customers, developers, and
10 government (grants). It is a well-established ratemaking practice to exclude CIAC
11 from the rate base on which a utility is allowed to earn a return. Whether CIAC
12 should be included in depreciable plant is less well-established. Most Jurisdictions
13 do not allow CIAC to be included in depreciable plant but different rules apply in
14 different jurisdictions.

15 **Q: Please explain what "amortization of CIAC" represents.**

16 A: Amortization of CIAC is the practice of reducing the net amount of CIAC included
17 as an offset to rate base. The amortization rate used is the same rate used to
18 depreciate the corresponding asset.

19 **Q: How does amortizing CIAC impact operating expense?**

20 A: Amortizing CIAC reduces depreciation expense and total operating expenses by
21 eliminating depreciation expense on contributed plant.

1 **Q: How does amortizing CIAC impact rate base?**

2 A: Amortizing CIAC increases rate base by reducing the amount of CIAC included as
3 an offset to rate base.

4 **Q: Does Indiana currently allow depreciation of CIAC?**

5 A: Yes. Indiana is one of a handful of states that allows depreciation of CIAC (i.e.,
6 does not require the amortization of CIAC). This policy has a significant flaw
7 because it depends on the premise that depreciation is provided so that the utility
8 may replace infrastructure at the end of its useful life. But a utility has no obligation
9 to re-invest money received through depreciation.

10 **Q: Does Aqua currently amortize its CIAC?**

11 A: No.

12 **Q: How does the American Water Works Association M1 manual define**
13 **depreciation expense?**

14 A: The M1 manual⁶ defines depreciation expense as “the recovery of the original cost
15 of the asset, less the estimated net salvage value, on a standardized basis over the
16 estimated average service life of that asset.” (Page 43, emphasis added)

17 The M1 manual goes on to say:

18 *An issue that is related to depreciation expense...is the inclusion*
19 *of depreciation expense associated with contributed assets. The*
20 *inclusion or exclusion of depreciation expense on contributed*
21 *assets by a regulatory commission is primarily driven by the*
22 *regulatory commission's viewpoint of the role of depreciation*
23 *expense in the ratemaking process.*

24 (M1 manual, sixth edition, page 43)

⁶ Principles of Water Rates, Fees, and Charges, Manual of Water Supply Practices, Sixth Edition.

1 **Q: How does the Federal Energy Regulatory Commission handle the issue of**
2 **contributed plant and the depreciation of contributed plant compared to the**
3 **National Association of Regulatory Utility Commissioners?**

4 A: The Federal Energy Regulatory Commission ("FERC") requires a different
5 treatment for contributed assets from that required by the National Association of
6 Regulatory Utility Commissioners ("NARUC"). NARUC's Uniform System of
7 Accounts for water and wastewater utilities requires that contributed plant be
8 recorded as a debit to Utility Plant in Service and a credit to contributions-in-aid of
9 construction.⁷ Therefore, contributed plant is included in depreciable utility plant
10 in service under NARUC's guidelines. However, FERC and the Federal
11 Communication Commission require electric, gas, and telephone utilities to reduce
12 utility plant balances by the amount of any contributions to determine the amount
13 of depreciable utility plant.⁸

14 The net impact of NARUC's guidelines is an increase to utility plant in
15 service and depreciable plant. Whether this contributed plant is depreciated is
16 entirely dependent upon how each state's regulatory commission regards
17 depreciation expense for ratemaking purposes.

18 The net impact of FERC's guidelines is the exclusion of contributions from
19 depreciable utility plant in service and, therefore, from the calculation of
20 depreciation expense.

⁷ This accounting treatment results in an increase to utility plant in service (an asset) and an increase to contributions-in-aid of construction (a quasi-equity account).

⁸ Accounting for Public Utilities, Hahne & Aliff; Matthew Bender & Co., Inc.; § 4.04[7], page 4-39. (Attachment MAS-8)

1 **Q: Is contributed plant included in the calculation of depreciation expense for**
2 **federal income tax purposes?**

3 A: No. For water and wastewater utilities, contributed plant is not included in taxable
4 revenues nor is it included in depreciable plant or tax depreciation expense.⁹

5 **Q: Does recent Indiana legislation exacerbate concerns regarding the**
6 **depreciation of CIAC?**

7 A: Yes. SEA 257 (2016) allows a utility to earn a return on and a return of the total
8 purchase price paid to acquire a “distressed” water or wastewater utility without
9 adjusting for any contributed plant included in the acquisition. Therefore, SEA 257
10 (2016) allows CIAC to be monetized. This monetization results in customers
11 paying twice for contributed plant – once when the plant was contributed and again
12 when these contributions are monetized through an acquisition and the new owner
13 earns a return on and a return of its investment in those contributions.

14 **Q: How does the OUCC consider the purpose of depreciation expense for**
15 **ratemaking purposes?**

16 A: For ratemaking purposes, depreciation is a mechanism that allows a utility to
17 recover its investment over the useful life of the asset. In other words, providing for
18 recovery of depreciation in investor-supplied plant allows the utility a “return of”
19 its investment in utility plant. Allowing depreciation on contributed plant allows
20 the utility a “return of” capital that was never provided by the investors.

21 **Q: Are there extenuating circumstances in this case that you believe require the**
22 **Commission to reconsider its position on the amortization of CIAC?**

23 A: Yes. First, as discussed earlier in my testimony, Aqua recently transferred all of its
24 water utility assets and its North System wastewater utility assets to the City of Fort

⁹ There is one exception to this general rule. If the utility does not spend cash contributions on utility plant in service within an allowed two year period, then these contributions would be considered taxable revenues and would be included in depreciable plant.

1 Wayne. This transaction resulted in a pre-tax gain of approximately \$30.0 million
2 for Aqua of which approximately \$15.0 million represented the monetization of
3 CIAC. Based on the past history between Aqua and the City of Fort Wayne, It is
4 conceivable that Aqua's remaining utility plant assets could be transferred or sold
5 to Fort Wayne.

6 Further, as discussed above, the recent passage of SEA 257 (2016), which
7 allows the monetization of CIAC in the acquisition of "distressed" water and
8 wastewater utilities, is an additional argument that regulated water and wastewater
9 utilities in Indiana should be required to amortize their contributed plant. Requiring
10 the amortization of contributions will help mitigate the impact of this legislation on
11 ratepayers of both the acquired utility and the acquiring utility.

12 **Q: What do you propose regarding the amortization of CIAC in this Cause?**

13 A; I propose that the Commission require Aqua to amortize its CIAC on a going-
14 forward basis. I further propose that the depreciation expense approved in this
15 Cause be reduced by the annual amount of CIAC amortization. While this will not
16 eliminate the possibility of the monetization of customer contributions, it will
17 mitigate the effect of any such monetization.

18 **Q: What amount of CIAC amortization do you propose?**

19 A: I propose \$397,224 of CIAC amortization be included as a reduction to depreciation
20 expense. This amount is calculated by taking contributions-in-aid of construction
21 as of September 30, 2015, \$15,547,979, and adding the City of Fort Wayne's
22 contribution for the Midwest WWTP expansion of \$341,000 to determine the
23 \$15,888,979 of total CIAC to be amortized. Total CIAC is then multiplied by the

1 depreciation rate of 2.5% proposed in this Cause to yield my proposed CIAC
2 amortization expense of \$397,224. CIAC amortization expense is a reduction to
3 depreciation expense (OUCC Schedule 6, Adjustment No. 11).

C. Amortization of Acquisition Adjustment

4 **Q: What *pro forma* amortization expense did Aqua propose for its acquisition**
5 **adjustment?**

6 A: Aqua proposed that its test year expense of \$81,591 be considered its *pro forma*
7 acquisition amortization expense.

8 **Q: Do you agree with Aqua's proposal?**

9 A: No. In Cause No. 43874, the Commission established Petitioner's annual
10 acquisition amortization expense related to its remaining wastewater assets was
11 \$76,973. Therefore, I propose a decrease to Aqua's test year acquisition
12 amortization expense of \$4,618 to yield *pro forma* expense of \$76,973 (OUCC
13 Schedule 6, Adjustment No. 12).

X. TAXES

14 **Q: What tax expense adjustments did Aqua propose?**

15 A: Aqua proposed adjustments to payroll taxes, property taxes, utility receipts taxes,
16 IURC fees, and income taxes. Total tax expense adjustments proposed by Aqua
17 resulted in an increase of \$33,437 to test year tax expenses of \$1,379,668 yielding
18 *pro forma* tax expense of \$1,413,105.

19 **Q: Does the OUCC accept any of Aqua's proposed other tax expense**
20 **adjustments?**

21 A: No. While the OUCC agrees with Aqua's methodology for computing adjustments
22 to other taxes, it disagrees in some instances with the rates applied. Further, due to

1 differences in *pro forma* operating revenues, the OUCC’s calculation of certain
 2 taxes differs from Aqua’s. Total tax expense adjustments proposed by the OUCC
 3 resulted in an increase of \$276,706 to test year tax expenses of \$1,379,668 yielding
 4 *pro forma* tax expenses of \$1,656,374.

5 Table 13 compares total tax expense adjustments proposed by Aqua to those
 6 proposed by the OUCC. This table further identifies the OUCC witnesses that
 7 discuss the OUCC’s proposed adjustments.

Table 13: Comparison of Proposed Tax Expense Adjustments

	Per Aqua	Per OUCC	OUCC More (Less)	OUCC Witness
Payroll Taxes	\$ 5,586	\$ 5,310	\$ (276)	Corey
Utility Receipts Taxes	170,040	103,123	(66,917)	Corey
Property Taxes	38,448	18,415	(20,033)	Corey
IURC Fee	756	1,738	982	Stull
Federal Income Tax	(131,975)	142,609	274,584	Stull
State Income Tax	(49,418)	5,511	54,929	Stull
Total Adjustments	<u>\$ 33,437</u>	<u>\$ 276,706</u>	<u>\$ 243,269</u>	

A. IURC Fees

8 **Q: Did Aqua propose any adjustments to IURC fees?**

9 A: Yes. Aqua proposed an increase of \$756 to test year IURC fees of \$9,470 yielding
 10 *pro forma* IURC fees of \$10,226.

11 **Q: Do you accept Aqua’s proposed adjustment?**

12 A: No. I propose an increase of \$1,738 to test year IURC fees yielding *pro forma* IURC
 13 fees of \$11,208 (OUCC Schedule 7, Adjustment No. 4).

1 **Q: How does your proposed adjustment differ from Aqua's adjustment?**

2 A: My proposed adjustment differs from Aqua's in two respects. First, I used the 2016
3 IURC fee of \$0.1171996% effective on July 1, 2016. Second, my calculation of
4 IURC fees includes an allowed deduction for bad debt expense.

B. Federal Income Taxes

5 **Q: Did Aqua propose any adjustments to federal income tax expense on *pro***
6 ***forma* present rate revenues?**

7 A: Yes. Aqua proposed a decrease of \$131,975 to test year federal tax expense of
8 \$564,817 yielding *pro forma* federal income tax expense of \$432,842.

9 **Q: Do you accept Aqua's proposed adjustment?**

10 A: No. I propose an increase of \$142,609 to test year federal income tax expense
11 yielding *pro forma* federal income tax expense of \$707.426 (OUCC Schedule 7,
12 Adjustment No. 6).

13 **Q: How does your proposed adjustment differ from Aqua's adjustment?**

14 A: Other than the differences in various proposed revenue and expense items, there is
15 no difference between my calculation of federal income taxes and Aqua's.

C. State Income Taxes

16 **Q: Did Aqua propose any adjustments to state income tax expense?**

17 A: Yes. Aqua proposed a decrease of \$49,418 to test year state tax expense of \$140,720
18 yielding *pro forma* state income tax expense of \$91,302.

19 **Q: Do you accept Aqua's proposed adjustment?**

20 A: No. I propose an increase of \$5,511 to test year state income tax expense of
21 \$140,720 yielding *pro forma* state income tax expense of \$146,231 (OUCC
22 Schedule 7, Adjustment No. 5).

1 **Q: How does your proposed adjustment differ from Aqua's adjustment?**

2 A: Other than the differences in various proposed revenue and expense items, there is
3 no difference between my calculation of state income taxes and Aqua's.

XI. GROSS REVENUE CONVERSION FACTOR

4 **Q: Please explain the purpose of a gross revenue conversion factor.**

5 A: A gross revenue conversion factor calculates the amount of certain operating
6 expenses and taxes associated with the proposed revenue increase (or decrease).
7 These operating expenses and taxes typically include, as applicable, bad debt
8 expense, the IURC fee, utility receipts taxes, and state and federal income taxes.
9 The proposed revenue increase must be "grossed up" to include the additional taxes
10 and operating expenses that will be incurred due to the increase in operating
11 revenues.

12 **Q: What gross revenue conversion factor did Aqua propose?**

13 A: Aqua proposed a gross revenue conversion factor of 167.062603%.

14 **Q: What gross revenue conversion factor do you propose?**

15 A: I determined that a gross revenue conversion factor of 167.073947% is appropriate.
16 I used this factor to determine the total revenue increase required for Aqua to have
17 the opportunity to earn its approved net operating income (OUCC Schedule 1, Page
18 2 of 3).

19 **Q: Please explain the difference between the OUCC's proposed Gross Revenue
20 Conversion Factor and Aqua's proposal.**

21 A: The difference between the two Gross Revenue Conversion Factor proposals is due
22 to differences in the effective rates used by the parties for IURC fees and utility
23 receipts taxes.

1 Aqua assumed an effective IURC fee of 0.1077802% and did not recognize
 2 that bad debt expense is deductible for IURC fee purposes. I used the 0.1171996%
 3 fee that will be effective on July 1, 2016. My effective IURC fee is 0.11699954%
 4 after deducting bad debt expense.

5 Similarly, Aqua assumed an effective utility receipts tax rate of 1.40%.
 6 While this is the current utility receipts tax rate, Aqua did not recognize that bad
 7 debt expense is also deductible for utility receipts tax purposes. My effective utility
 8 receipts tax rate is 1.39761% after deducting bad debt expense.

9 **Q: What additional operating expenses do you propose related to the OUCC's**
 10 **proposed revenue increase of \$1,265,671?¹⁰**

11 A: Based on my gross revenue conversion factor, I propose additional expenses and
 12 taxes of \$508,121 (OUCC Schedule 1, page 2 of 3) comprised of the following:

Bad Debt Expense		\$ 2,161
IURC Fee		1,481
Utility Receipts Tax		78,877
State Income Tax		17,689
Federal Income Tax		407,913
		<u>\$508,121</u>

XII. WEIGHTED COST OF CAPITAL

13 **Q: What weighted average cost of capital did Aqua propose?**

14 A: Aqua proposed a weighted cost of capital of 7.7155% which is based on a 10.35%
 15 cost of equity and a 5.08% cost of debt. Aqua's proposal is based on its parent

¹⁰ Please note that this revenue increase is reduced by \$5,495 to eliminate the subsidy related to the Midwest WWTP expansion.

1 company's capital structure which consists of 50.01% equity and 49.99% debt as
2 of September 30, 2015.

3 **Q: Does the OUCC accept Aqua's proposed weighted cost of capital?**

4 A: No. The OUCC proposes a 6.7854% weighted cost of capital based on its proposed
5 9.0% cost of equity and a 4.57% cost of debt (OUCC Schedule 9). The OUCC
6 accepts Aqua's proposed capital structure composed of 50.01% equity and 49.99%
7 debt. The OUCC's proposals are discussed more fully by Mr. Kaufman (cost of
8 debt) and Ms. Thacker (cost of equity).

XIII. UNMETERED TARIFF RATES

9 **Q: Is Aqua proposing any change to its rate design in this Cause?**

10 A: No. Aqua proposes to maintain its current rate design.

11 **Q: What is the basis for Aqua's current rate design?**

12 A: In response to customer comments, I reviewed Aqua's current rates charged to
13 metered and unmetered customers. My review and analysis revealed that the current
14 rate design has been in place since approved by the Commission in May, 1990 in
15 Cause No. 38687. In that Cause, the Commission's final order required Utility
16 Center to either (i) submit a revised schedule of rates and charges for sewer service
17 based either on actual usage or metered water volume or (ii) submit detailed cost
18 information demonstrating unequivocally that the institution of such a structure
19 would be cost prohibitive. (See Final Order, Cause No. 38687, May 24, 1989, page
20 8, ordering paragraph 3.) The sewer tariff filed in May 1990 set customer rates
21 based on their actual metered water consumption. For customers who did not have
22 metered water consumption, the rate was based on consumption of approximately

1 8,000 gallons of water.¹¹ The utility has passed through the hands of three owners
2 since this time but none has proposed any changes to this rate design. Further, none
3 of these owners has performed a cost of service study in the last 25 years to
4 determine the utility’s actual cost to serve each customer class.

5 **Q: How did you determine that the current unmetered rate is based on 8,000**
6 **gallons of water consumption?**

7 A: I took the current unmetered rate per EDU of \$59.21 and subtracted the current
8 monthly service charge of \$26.97. This meant that \$32.24 of the unmetered rate is
9 applicable to volumetric charges. Dividing the \$32.24 by the current volumetric
10 rate of \$4.0012 per thousand gallons yielded 8,058 gallons.

Current Unmetered Rate per EDU		\$ 59.21
Less: Current Monthly Service Charge		(26.97)
Portion Attributable to Volumetric Charges		\$ 32.24
Divided by Current Volumetric Rate		4.0012
Gallons Unmetered Rate is Based Upon		<u>8,058</u>

11 **Q: Do unmetered customers pay more per month for sewage service than metered**
12 **customers?**

13 A: Yes. Numerous customers commented that the monthly flat rate sewer charge that
14 exceeds the metered sewer charge is unfair to flat rate customers, especially those
15 with only one or two persons in the residence. The current monthly flat rate is
16 \$59.21. The current metered rate based on the Commission’s typical 5,000 gallons
17 per month usage is \$46.98, composed of the current monthly service charge of
18 \$26.97 and a volumetric charge of \$20.01 (\$4.0012 x 5).

¹¹ I could find no supporting documentation in the Commission’s online filing portal or in the OUCC’s filing database that explains or supports how the current rate design was determined or why 8,000 gallons was used for unmetered customers.

1 **Q: Is 8,000 gallons a fair basis on which to base the provision of wastewater**
2 **service to unmetered customers?**

3 A: No, I don't believe it is. The average test year consumption for residential
4 customers with a 1" meter or smaller is approximately 4,000 gallons per month
5 (Testimony of Bobby Estep, Schedule C-2.1, page 6).. The 8,000 gallons assumed
6 for unmetered flat rate customers is twice the average monthly consumption for a
7 metered residential customer.

8 **Q: Is there any evidence that unmetered customers generate 8,058 gallons of**
9 **wastewater per month?**

10 A: I could find no documentation to support basing the flat rate on 8,058 gallons per
11 month. In response to OUCC Data Request No. 11.9 and 11.10, Aqua stated that
12 since the flat rate was determined prior to Aqua assuming ownership, it was unable
13 to identify any documentation on how the flat rate was determined or how many
14 gallons the flat rate represents.

15 **Q: What changes to Aqua's rate design do you propose to correct this inequity?**

16 A: I propose that unmetered customers be billed based on estimated water
17 consumption of 4,000 gallons per EDU. This water consumption better reflects the
18 average consumption of residential customers in Aqua's service territory and
19 should better reflect this customer class's use of the wastewater system.

20 More specifically, I propose that the current unmetered flat rate be adjusted
21 from \$57.91 per EDU to \$43.85. I further propose that the current volumetric rate
22 be adjusted from \$4.0012 to \$4.2188 per thousand gallons. See OUCC Schedule 5,
23 Adjustment No. 3 for the detailed calculation of these adjusted rates.

1 **Q: What is the impact of your proposal?**

2 A: My proposal has no impact on Aqua as this is merely a rate design issue rather than
3 a revenue requirement issue. Based on test year billings, my proposal represents a
4 reduction of \$175,837 of revenues from unmetered customers and an increase of
5 \$175,837 of volumetric revenues from metered customers. More specifically, an
6 unmetered customer's current monthly bill would be \$43.85 under my proposal
7 compared to the current \$59.21, or a savings of \$15.36 per month. A metered
8 customer's bill would go from the current \$42.97 based on 4,000 gallons of usage
9 to \$43.85, or an increase of \$0.87 per month.

XIV. SYSTEM DEVELOPMENT CHARGE

10 **Q: What is a system development charge?**

11 A: A system development charge is a method of funding capital projects. It is also
12 referred to as a capacity fee, a contribution fee, or a capital recovery fee. System
13 development charge proceeds are typically used to pay for capital projects related
14 to growth. It is a one-time charge to customers, paid when a customer connects to
15 the utility system.

16 **Q: Are system development charges common in investor-owned utilities?**

17 A: No. System development charges have not been common for investor-owned
18 utilities in the past but are becoming more common as utilities struggle with the
19 need to replace aging infrastructure and plan for future needs while at the same time
20 keeping their rates affordable for their customers.

1 **Q: What is the impact of implementing a system development charge?**

2 A: System development charges will usually keep customer rates lower in the long
3 term, but they were not common because investor-owned utilities generally want
4 to make the investment in utility plant and earn a return on that investment. If
5 anyone else pays for or donates the utility plant, the shareholders or owners do not
6 get to earn a return on that plant. The rationale behind system development charges
7 and other infrastructure charges is that “growth should pay for growth.” In other
8 words, customer growth should pay for the additional capacity needed to serve that
9 growth rather than requiring existing customers to pay for growth through their
10 utility rates.

11 **Q: Who generally pays the system development charge?**

12 A: Generally, the developer pays the system development charge. Customers that are
13 required by the Health Department to abandon their failing septic tanks and connect
14 to the utility also pay the system development charge.¹²

15 **Q: Does Aqua currently impose a system development charge for new connections
16 to its wastewater system?**

17 A: Yes. Aqua currently charges a \$500 fee for each new connection to its wastewater
18 system.

19 **Q: Has this fee been approved by the Commission?**

20 A: No. This fee was implemented prior to the Commission assuming jurisdiction over
21 system development charges and other similar fees charged by regulated utilities.

¹² Septic tank elimination customers are provided a low-interest loan from Aqua to pay for connection costs to the wastewater system. This loan has a ten-year term and the customer can include the system development charge in the loan value.

1 Aqua's current fee has not been reviewed by the Commission and is not reflected
2 on its tariff.

3 **Q: How is this current system development charge recorded by Aqua?**

4 A: Aqua appropriately records these fees as contributions-in-aid of construction.

5 **Q: What system development charge is Aqua proposing in this Cause?**

6 A: Aqua is seeking approval of a \$1,300 system development charge in this Cause, an
7 increase of \$800 over it's the current fee.

8 **Q: How are system development charges and other infrastructure charges**
9 **calculated?**

10 A: There are three broadly recognized methods used to calculate a system development
11 charge: (1) System Buy-in Method, (2) Incremental Method, and (3) Combined
12 Method (Attachment MAS-9).

13 **Q: Please explain the system buy-in method of calculating a system development**
14 **charge.**

15 A: The system buy-in method is based on existing facilities and capacities. Under this
16 approach, customers are required to "buy-in" to existing system facilities, generally
17 at a rate that reflects the prior investment of existing customers. This method is
18 fairly easy to compute and administer and is most appropriate where current system
19 facilities have adequate capacity to serve both existing and future customers, the
20 forecast of future system investment is minimal, and where existing facilities are
21 not scheduled for replacement in the near future.

22 There are two ways to calculate a system buy-in fee: (1) capacity buy-in and
23 (2) equity buy-in. The difference between the two approaches is the denominator
24 used in the calculation. In the capacity buy-in approach, the denominator is the total
25 existing system capacity. Under the equity buy-in approach, which is less common,

1 the denominator is the existing used capacity in the system. The capacity buy-in
2 approach will yield a smaller unit cost and system development charge (all other
3 things being equal) than the equity buy-in approach.

4 **Q: Please explain the incremental method of calculating a system development**
5 **charge.**

6 A: The incremental or marginal method is based on the principle that new system users
7 should be responsible for the cost of the latest or next increment of capacity that
8 they cause to be constructed. This fee recovers growth's share of planned additions
9 to the system. The objective of the marginal method is that system expansion
10 needed to serve new development can be accomplished with limited impact to
11 existing wastewater user rates. This method is appropriate when all or a very
12 significant portion of the wastewater capital improvement program serves growth
13 and available facilities cannot accommodate growth.

14 **Q: Please explain the combined method of calculating a system development**
15 **charge.**

16 A: As the name implies, this approach combines both a system reimbursement (buy-
17 in) component and an incremental new capacity component. This approach is
18 generally the most technically rigorous of the system development charge
19 calculation approaches. The goal of this method is to charge new customers for the
20 full cost of growth and thereby avoid the subsidization of new customers by existing
21 customers. This approach generally applies when the current system facilities could
22 serve future customers and a portion of the capital improvement program is also
23 related to growth.

1 **Q: What method did Aqua use to calculate its proposed system development**
2 **charge?**

3 A: Aqua's proposed system development charge is based on the capacity buy-in
4 method. In Attachment B to Mr. Estep's testimony, Aqua calculated the cost of
5 infrastructure as of September 30, 2015 (\$21,052,496) and divided this amount by
6 total system capacity (15,968 EDUs) to determine its proposed \$1,300 system
7 development charge.

8 **Q: Do you accept Aqua's proposed system development charge?**

9 A: Yes. Although Aqua's net investment in utility plant¹³ could support a larger system
10 development charge, I believe that Aqua's proposed system development charge is
11 reasonable and balances the interests of all parties, including developers, the utility,
12 and ratepayers.

13 **Q: Please explain what you mean when you say Aqua could support a larger**
14 **system development charge.**

15 A: Aqua's calculation does not include the costs of its proposed Midwest WWTP
16 expansion nor does it include the additional capacity this expansion provides.
17 Basing Aqua's system development charge on its net proposed utility plant in this
18 Cause yields a charge of approximately \$1,900.

¹³ Including its proposed major projects.

Table 14: System Development Charge Based on Net Proposed Utility Plant

Net Utility Plant per OUCC Schedule 8	\$ 50,059,631	
Add: Acquisition Adjustment, net	1,565,194	
Regulatory Asset	952,734	
Total Utility Plant	<u>\$ 52,577,559</u>	(A)
Total System Capacity	8,350,000	(B)
System Capacity - EDUs	26,935.48	(C) = (B) / 310 gallons
System Development Charge	\$ 1,951.98	(A) / (C)

1 **Q: Are any of the other methods of calculating a system development charge**
2 **appropriate in this case?**

3 **A:** Yes. The use of the incremental method would also be appropriate in this case. This
4 charge would be based on the cost of the Midwest WWTP expansion as reflected
5 in Table 15 below. Basing Aqua's system development charge on the incremental
6 method yields a charge of approximately \$1,600.

Table 15: System Development Charge Based on the Incremental Method

Cost of Midwest WWTP Expansion	\$ 9,741,000	
Less: Fort Wayne Contribution	341,000	
Net Cost of Expansion	<u>9,400,000</u>	(A)
Additional Capacity	1,800,000	(B)
Additional Capacity in EdUs	5,806.45	(C) = (B) / 310 gallons
System Development Charge	\$ 1,618.89	(A) / (C)

XV. OTHER TARIFF ISSUES

7 **Q: Please describe the other tariff issues you have identified.**

8 **A:** Aqua currently includes several non-recurring charges in its tariff that I believe are
9 unnecessary and should be eliminated. Further, there are several non-recurring

1 charges that need to be updated to reflect the costs of the City of Fort Wayne
2 providing services to Aqua.

A. Non-Recurring Charges to be removed from Aqua's Tariff

3 **Q: Please explain which non-recurring charges you believe should be removed**
4 **from Petitioner's tariff.**

5 A: Aqua currently includes a rate for "temporary users" in its tariff. While a fee for
6 temporary users may be appropriate for a water utility, I do not see how there could
7 be "temporary" users of a wastewater utility. Therefore, I recommend this fee be
8 removed from Aqua's wastewater tariff.

9 Aqua's tariff also includes a charge for "service line leaks." Again, I believe
10 this fee is related to water utility service and has no place in a wastewater utility
11 tariff. Because a wastewater utility is collecting wastewater from the customer, a
12 leak in a service line does not injure the wastewater utility. Further, a customer
13 would be motivated to repair a wastewater service line leak without any charges
14 being imposed by the utility.

B. Non-Recurring Charges to be updated

15 **Q: Why is the City of Fort Wayne charging fees to Aqua?**

16 A: As discussed earlier in my testimony, as part of the asset transfer approved by the
17 Commission in Cause No. 44503 Aqua and the City of For Wayne negotiated an
18 operations contract that determined the terms, conditions and pricing for various
19 services to be provided by the City of Fort Wayne to Aqua, including meter reads
20 and disconnection of water service for delinquent customers (Attachment MAS-3).

1 Aqua has no means to disconnect customers when they are delinquent on
2 the payment of their wastewater bills. In order to incent customers to pay their
3 delinquent wastewater bills, Aqua has contracted with the City of Fort Wayne to
4 disconnect water service (for metered customers) when they are delinquent on their
5 Aqua wastewater bills. Once the customer has paid its delinquent wastewater
6 balance, Aqua customer service contacts Fort Wayne and the customer's water
7 service is reconnected.

8 **Q: Please explain which non-recurring charges you believe need to be updated to**
9 **reflect additional costs from the City of Fort Wayne.**

10 A: There are two non-recurring charges that need to be updated to include additional
11 costs billed by the City of Fort Wayne under the operations agreement: (1) new
12 customer fees ("establishment of service fee") and (2) reconnection fees. The
13 charges currently billed by the City of Fort Wayne to Aqua are not being passed on
14 to the customers causing the fees and will be borne by all ratepayers if these non-
15 recurring charges are not updated. Mr. Corey discusses the OUCC's proposed
16 adjustment to remove these charges from test year operating expenses.

17 **Q: Please explain the changes you propose to Aqua's new customer fee.**

18 A: Currently, Aqua charges \$16.00 for customers not previously connected to its
19 wastewater system. This fee needs to be expanded to include a fee for metered
20 customers and a fee for unmetered customers. For unmetered customers (primarily
21 septic tank elimination customers), the current \$16.00 fee is adequate. However,
22 for metered customers, the fee should be \$26.00 to reflect the \$10.00 fee charged
23 to Aqua by the City of Fort Wayne to add new customers.

1 **Q: Please explain the changes you propose to Aqua's reconnection fee.**

2 A: Currently, Aqua's tariff describes this fee but does not state what the fee is. During
3 the test year, Aqua did not charge customers any reconnection fees. I propose that
4 Aqua's reconnection charge be based on the average connection fee charged by the
5 City of Fort Wayne. If Aqua also incurs internal costs related to disconnection and
6 reconnection of customers, it should either provide these costs in its rebuttal
7 testimony or file a thirty day filing with the Commission to include these costs in
8 its fee. This fee would only apply to metered customers as Aqua currently has no
9 way to disconnect unmetered customers. Should Aqua find it necessary to install a
10 shut-off valve or plug in order to disconnect delinquent unmetered customers, it
11 should file a thirty day filing with the Commission to add this fee to its tariff.

12 **Q; Please explain why you propose Aqua's reconnection fee be based on an**
13 **"average" of the fees charged by the City of Fort Wayne.**

14 A: Currently, the City of Fort Wayne charges different fees depending upon the level
15 of service necessary to disconnect and reconnect a customer. At a minimum, Fort
16 Wayne charges a \$10 administration fee for each disconnect/reconnect. To this
17 administration fee, there is either a \$20 fee charged when only a hang tag is
18 necessary or a \$40 fee charged if water service is actually shut-off.

19 **Q: What average disconnect fee do you propose be implemented?**

20 A; I propose a \$35 fee be implemented based on Aqua's test year experience. Table
21 16 below presents my calculation of this average fee.

Table 16: Calculation of Proposed Reconnection Fee

	Test Year Incidences	Admin Fee	Activity Fee	Total Fee	Total Test Year Fees
Tab Only	542	\$ 10	\$ 20	\$ 30	\$ 16,260
Shut Off	200	\$ 10	\$ 40	\$ 50	10,000
	742				\$ 26,260
Average Test Year Fee (Total Test Year Fees divided by Total incidences)					\$ 35.00

XVI. COMMISSION ANNUAL REPORTING

1 **Q: Prior to 2014, how did Aqua Indiana report the annual financial and operating**
2 **data required by the Commission for each regulated water and wastewater**
3 **utility in Indiana?**

4 A: Aqua Indiana provided a separate Commission annual report for each of its
5 regulated water and wastewater utilities within Indiana.

6 **Q: Subsequent to 2014, how is Aqua Indiana providing this information?**

7 A: Beginning with its 2015 Commission annual report, Aqua Indiana provides only
8 consolidated information for all of its regulated water and wastewater utilities. No
9 separate information is provided for its Aboite Wastewater Division, South Haven,
10 or any of its other regulated utilities. No separate financial information is provided
11 nor is any separate operational information provided for revenues, operating
12 expenses, utility plant, etc.

13 **Q: Was separate information required as part of the Commission's approval of**
14 **the consolidation of Aqua Indiana's operations?**

15 A: No. The OUCC did not request separate information be provided in Aqua Indiana's
16 Commission annual reports nor did the Commission impose this requirement.

1 **Q: Why is information on each regulated utility important?**

2 A: The Commission's annual reports are an important source of information for the
3 OUCC and other intervenors when reviewing a utility's rate application. When
4 information on a particular utility is unavailable, it can severely hamper the
5 OUCC's ability to review a utility's historical results and would lead to additional
6 discovery requests in order to obtain the information, along with the attendant delay
7 in receiving such information.

8 **Q: What do you propose in this Cause?**

9 A: I propose that Aqua Indiana be required to provide separate IURC annual reports
10 for each regulated utility until such time as that regulated utility is included in a
11 consolidated rate case or included in the determination of single tariff pricing in the
12 State of Indiana.

XVII. RECOMMENDATIONS

13 **Q: Please summarize your recommendations.**

14 A: I recommend an overall rate increase of 15.64% be implemented without the need
15 for a phased-in approach. As discussed and supported in the foregoing testimony, I
16 further recommend the Commission adopt an original cost rate base of
17 \$47,341,474, including working capital of \$406,558. I recommend the adoption of
18 the operating expense and tax expense adjustments discussed and supported in the
19 foregoing testimony.

20 I recommend the Commission require Aqua to amortize its contributions-
21 in-aid of construction at the same rate as it depreciates its utility plant in service.

1 I recommend the Commission approve my proposed rate design changes to
2 the rates charged to unmetered customers based on 4,000 gallons of water
3 consumption as well as the corresponding increase to the volumetric rate per
4 thousand gallons. In addition, I recommend the Commission approve my
5 recommended changes to Aqua's non-recurring charges for new customer fees and
6 reconnection fees to incorporate the fees charged by the City of Fort Wayne.

7 I further recommend the Commission approve Aqua's request for a \$1,300
8 system development charge as reasonable and in the interest of ratepayers.

9 Finally, I recommend the Commission require Aqua Indiana to provide
10 separate Commission annual reports for each of its regulated utilities until such time
11 as that regulated utility is included in a consolidated rate case or included in the
12 determination of single tariff pricing in the State of Indiana. This requirement
13 should include reports for the calendar year 2015.

14 **Q: Does this conclude your testimony?**

15 A: Yes.

APPENDIX "A"

1 **Q: Please describe your educational background and experience.**

2 A: I graduated from the University of Houston at Clear Lake City in August 1982 with
3 a Bachelor of Science degree in accounting. From 1982 to 1985, I held the position
4 of Gas Pipeline Accountant at Seagull Energy in Houston, Texas. From 1985 to
5 2001, I worked for Enron in various positions of increasing responsibility and
6 authority. I began in gas pipeline accounting, was promoted to a position in
7 financial reporting and planning, for both the gas pipeline group and the
8 international group, and finally was promoted to a position providing accounting
9 support for infrastructure projects in Central and South America. In 2002, I moved
10 to Indiana, where I held non-utility accounting positions in Indianapolis. In August
11 2003, I accepted my current position with the OUCC. In 2011, I was promoted to
12 Senior Utility Analyst. Since joining the OUCC I have attended the National
13 Association of Regulatory Utility Commissioners ("NARUC") Eastern Utility Rate
14 School in Clearwater Beach, Florida, and the Institute of Public Utilities' Advanced
15 Regulatory Studies Program in East Lansing, Michigan. I have also attended several
16 American Water Works Association and Indiana Rural Water Association
17 conferences as well as the National Association of Utility Consumer Advocates
18 ("NASUCA") Water Committee Forums. I have participated in the NASUCA
19 Water Committee and the NASUCA Tax and Accounting Committee. In March
20 2016 I was appointed chairman of the NASUCA Tax and Accounting Committee.

21 **Q: Have you held any professional licenses?**

22 A: Yes. I passed the CPA exam in 1984 and was licensed as a CPA in the State of
23 Texas until I moved to Indiana in 2002.

1 **Q: Have you previously testified before the Indiana Utility Regulatory**
2 **Commission (“Commission”)?**

3 **A:** Yes. I have testified before the Commission as an accounting witness in various
4 causes involving water, wastewater, electric, and gas utilities.

APPENDIX "B"

- Attachment MAS-1** Aqua Response to OUCC Data Request No. 8.32 regarding the gain recorded by Aqua on the transfer of utility assets to the City of Fort Wayne
- Attachment MAS-2** City of Fort Wayne compliance filing (final accounting entry) in Cause No. 44503 (2/2/2015)
- Attachment MAS-3** Operations Agreement between Aqua and the City of Fort Wayne (executed copy)
- Attachment MAS-4** Aqua Response to OUCC Data Request No. 8.19 regarding the cost to provide wholesale sewage treatment to the City of Fort Wayne.
- Attachment MAS-5** Exhibit TMB-3 (Testimony of Tom Bruns) in Cause No. 44503 – Financial Analysis of Wholesale Wastewater Treatment Contract with Fort Wayne
- Attachment MAS-6** Aqua Response to OUCC Data Request No. 4.25 regarding provision of Homestead Road Regional Lift Station Master Plan
- Attachment MAS-7** Aqua Response to OUCC Data Request No. 8.21 regarding the amount of land included in the projected office building costs
- Attachment MAS-8** Accounting for Public Utilities, § 4.04[7] regarding treatment of contributed plant for rate base purposes
- Attachment MAS-9** Financing and Charges for Wastewater Systems, WEF Manual of Practice No. 27, Chapter 10 "System Development Charges"

AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752

**Comparison of Petitioner's and OUC's
Revenue Requirements**

	<u>Per Petitioner</u>	<u>Per OUC</u>	<u>Sch Ref</u>	<u>OUC More (Less)</u>
1 Original Cost rate Base	\$ 47,665,924	\$ 47,341,474	8	\$ (324,450)
2 Times: Weighted Cost of Capital	7.7155%	6.7854%	9	-0.9301%
3 Net Operating Income Required for Return on Rate Base	3,677,604	3,212,308		(465,296)
4 Less: Adjusted Net Operating income	2,014,088	2,454,755	4	440,667
5 Revenue Shortfall	1,663,516	757,553		(905,963)
6 Gross Revenue Conversion Factor	167.062603%	167.0739470%	1	0.0113%
7 Calculated Revenue Increase	2,779,112	1,265,674		(1,513,438)
8 Less: Cap/Voluntary Reduction	407,164	5,495	10	(401,669)
9 Proposed Revenue Increase	<u>\$ 2,371,948</u>	<u>\$ 1,260,179</u>		<u>\$ (1,111,769)</u>
10 Calculated Percentage Increase in Total Revenues	29.29%	13.15%		-16.14%
11 Calculated Percentage Increase in Revenues Subject to Increase	34.86%	15.64%		-19.22%
12 Proposed Percentage Increase in Total Revenues	25.00%	13.15%		-11.85%
13 Proposed Percentage Increase in Revenues Subject to Increase	29.76%	15.64%		-14.12%
14 <u>Phase I:</u>				
15 Proposed Revenue Increase	\$ 1,581,299	13.15%		\$ (1,581,299)
16 Proposed Percentage Increase	19.84%	15.64%		-4.20%
17 <u>Phase II:</u>				
18 Proposed Revenue Increase	\$ 790,649	\$ -		\$ (790,649)
19 Proposed Percentage Increase	8.29%	0.00%		-8.29%

	<u>Proposed</u>		<u>Sch Ref</u>	<u>OUC More (Less)</u>
	<u>Petitioner</u>	<u>OUC</u>		
20 Current Rate for 4,000 Gallons = \$42.97				
21 Current Rate for 4,000 Gallons as adjusted = \$43.85				
22 Proposed Phase I Rate	\$ 51.50	\$ 49.70	11	\$ (1.80)
23 Proposed Phase II Rate	\$ 55.77	\$ 49.70	11	\$ (6.07)
24 Proposed Phase I Rate as adjusted	\$ 52.54	\$ 50.70	11	\$ (1.84)
25 Proposed Phase II Rate as adjusted	\$ 56.90	\$ 50.70	11	\$ (6.20)
26 Current Rate for Unmetered Customers = \$59.21				
27 Proposed Phase I Rate	\$ 70.96	\$ 68.47	11	\$ (2.49)
28 Proposed Phase II Rate	\$ 76.83	\$ 68.47	11	\$ (8.36)
29 Proposed Phase I Rate as adjusted	\$ 52.55	\$ 50.71	11	\$ (1.84)
30 Proposed Phase II Rate as adjusted	56.90	\$ 50.71	11	\$ (6.19)

AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752

Gross Revenue Conversion Factor

	<u>Per Petitioner</u>	<u>Per OUCG</u>	
1 Gross revenue Change	100.00000000%	100.00000000%	\$ 1,265,674
2 Less: Bad Debt Rate	<u>0.17070000%</u>	<u>0.17070000%</u>	2,161
3 Sub-total	99.8293000%	99.8293000%	
4 Less: IURC Fee	<u>0.10778020%</u>	<u>0.116999540%</u>	1,481
5 Income Before State Income taxes	99.72151980%	99.71230046%	
6 Less: State Income Tax (6.25% of Line 5)	6.23259500%	6.23201900%	78,877
7 Utility Receipts Tax (1.4% of Line 3)	<u>1.40000000%</u>	<u>1.39761000%</u>	17,689
8 Income before Federal income Taxes	92.08892480%	92.08267146%	
9 Less: Federal income Tax (35% of Line 8)	<u>32.23112368%</u>	<u>32.22893500%</u>	<u>407,913</u>
10 Change in Operating Income	<u>59.85780112%</u>	<u>59.85373646%</u>	<u>\$ 757,553</u>
11 Gross Revenue Conversion Factor	<u>167.06260200%</u>	<u>167.07394700%</u>	

AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752

Reconciliation of Net Operating Income Statement Adjustments
Pro-forma Present Rates

	<u>Per Petitioner</u>	<u>Per OUCC</u>	<u>OUCC More (Less)</u>
1 Operating Revenues			
2 Flat Rate Wastewater Revenues	\$ 6,243	\$ (146,976)	\$ (153,219)
3 Metered Wastewater Revenues	22,095	260,544	238,449
4 Contract Revenues	1,505,625	1,505,625	-
5 Penalties	4,027	4,027	-
6 Other Operating Revenues	1,508	8,331	6,823
7 Total Operating Revenues	<u>1,539,498</u>	<u>1,631,551</u>	<u>92,053</u>
8 O&M Expense			
9 Salaries and Wages	73,254	58,742	(14,512)
10 Employee Benefits	13,996	6,706	(7,290)
11 Sludge	60,099	63,154	3,055
12 Purchased Power	89,913	94,762	4,849
13 Fuel for Power Production	-	-	-
14 Chemicals	26,602	27,304	702
15 Materials and Supplies	-	-	-
16 Contractual Services - Engineering	-	-	-
17 Contractual Services - Management Fees	85,906	85,906	-
18 Contractual Services - Other	102,482	56,498	(45,984)
19 Lease Expense	(37,765)	(37,765)	-
20 Transportation Expense	-	-	-
21 Insurance	(39,063)	(39,063)	-
22 Bad Debt Expense	6	167	161
23 Rate Case Expense Amortization	99,139	57,083	(42,056)
24 Miscellaneous Expense	1,120	(61,242)	(62,362)
25 Depreciation Expense	673,368	646,763	(26,605)
26 Amortization of CIAC	-	(397,224)	(397,224)
27 Amortization of Acquisition Adjustment	-	(4,618)	(4,618)
28 Taxes Other than Income:			
29 Payroll Tax	5,586	5,310	(276)
30 Property Tax	170,040	103,123	(66,917)
31 Utility Receipts Tax	38,448	18,415	(20,033)
32 IURC Fee	756	1,738	982
33 Other Taxes	-	-	-
34 State Income Tax	(49,418)	5,511	54,929
35 Federal Income Tax	(131,975)	142,609	274,584
36 Total Operating Expenses	<u>1,182,494</u>	<u>833,879</u>	<u>(348,615)</u>
37 Net Operating Income	<u>\$ 357,004</u>	<u>\$ 797,672</u>	<u>\$ 440,668</u>

AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752

COMPARATIVE BALANCE SHEET
As of September 30,

<u>ASSETS</u>	<u>2015</u>	<u>2014</u>
Utility Plant:		
Utility Plant in Service	\$ 67,374,727	\$ 61,352,610
Construction Work in Progress	5,515,222	6,102,478
Less: Accumulated Depreciation	(15,282,296)	(16,313,312)
Net Utility Plant	<u>57,607,653</u>	<u>51,141,776</u>
Utility Plant Acquisition Adjustment	2,976,158	2,976,158
Less: Accumulated Amortization of Acq. Adj.	(1,410,964)	(1,329,373)
Net Utility Plant Acquisition Adjustment	<u>1,565,194</u>	<u>1,646,785</u>
Net Utility Plant in Service	59,172,847	52,788,561
Non-Utility Property	29,360	29,360
Current Assets:		
Cash and Cash Equivalents	-	-
Accounts Receivable - Customers	246,867	514,013
Less: Provision for Uncollectible Accounts	(22,367)	(22,367)
Accounts Receivable - Intercompany	25,474,814	12,943,551
Accounts Receivable - Other	(17)	-
Materials and Supplies	75,298	84,975
Prepays	26,767	16,021
Accrued Utility Revenues	1,480,652	388,052
Other Current Assets	7,989	854
Total Current Assets	<u>27,290,003</u>	<u>13,925,099</u>
Deferred Debits		
Regulatory Asset - Deferred Depreciation	952,735	974,891
Customer Loans - Service Lines (septic tank elimination)	425,168	269,011
Deferred Rate Case Expense	3,541	2,208
Total Deferred Debits	<u>1,381,444</u>	<u>1,246,110</u>
Total Assets	<u>\$ 87,873,654</u>	<u>\$ 67,989,130</u>

AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752

COMPARATIVE BALANCE SHEET
As of September 30,

LIABILITIES AND STOCKHOLDERS' EQUITY	2015	2014
Equity		
Premium on Capital Stock	\$ 50,092,327	\$ 50,092,327
Other Paid in Capital	(15,991,331)	(15,991,331)
Capital Stock Expense	16,313	16,313
Unappropriated Retained Earnings	31,160,652	12,146,350
Total Equity	65,277,961	46,263,659
Contributions in Aid of Construction	15,547,979	15,063,864
Amortization of CIAC	-	-
Net Contributions in Aid of Construction	15,547,979	15,063,864
Current Liabilities		
Accounts Payable	26,718	229
Accrued Taxes	654,809	1,800,269
Misc. Current & Accrued Liabilities	108,167	101,154
Other Current Liabilities	789,694	1,901,652
Deferred Credits		
Customer Advances	853,004	565,009
Accumulated Deferred Income Taxes	4,884,670	3,749,303
Other Deferred Credits	520,346	445,643
Total Deferred Credits	6,258,020	4,759,955
Total Liabilities	\$ 87,873,654	\$ 67,989,130

AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752

COMPARATIVE INCOME STATEMENT
Twelve Months Ended September 30,

	<u>2015</u>	<u>2014</u>
Operating Revenues		
Wastewater Operating Revenues	\$ 7,911,441	\$ 8,014,883
Penalties	27,624	29,659
Other Operating Revenues	9,229	(24,113)
Total Operating Revenues	<u>7,948,294</u>	<u>8,020,429</u>
Operating Expenses		
Salaries and Wages	796,185	707,863
Employee Benefits	234,002	78,671
Sludge Hauling	187,591	171,138
Purchased Power	297,754	340,571
Fuel for Power Production	3,690	5,789
Chemicals	43,109	35,848
Materials and Supplies	42,429	38,465
Contractual Services - Engineering	7,800	5,060
Contractual Services - Management	396,192	425,179
Contractual Services - Other	375,538	224,420
Lease Expense	9,831	40,505
Transportation Expense	59,619	81,854
Insurance	-	-
Bad Debt Expense	16,186	11,987
Rate Case Expense Amortization	-	32,640
Miscellaneous Expense	936,236	866,642
Total O&M Expense	<u>3,406,162</u>	<u>3,066,632</u>
Depreciation Expense	1,423,790	1,248,144
Amortization Expense	81,591	76,005
Taxes Other than Income:	674,131	656,782
Income Taxes:		
State Income Tax	140,720	176,059
Federal Income Tax	564,817	752,423
Total Operating Expenses	<u>6,291,211</u>	<u>5,976,045</u>
Net Operating Income	1,657,083	2,044,384
Other Income (Expense)		
Interest Income	4,822	3,945
AFUDC	97,095	159,982
Non-Utility Income	5,116	-
Non-Operating Income Taxes	(54,019)	(48,300)
Interest Expense	(634,046)	(694,203)
Amortization of Premium on Debt	(2,807)	-
Total Other Income (Expense)	<u>(583,839)</u>	<u>(578,576)</u>
Net Income	<u>\$ 1,073,244</u>	<u>\$ 1,465,808</u>

AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752

Pro-forma Net Operating Income Statement

	Year Ended 9/30/2015	Adjustments	Sch Ref	Pro forma Present Rates	Adjustments	Sch Ref	Pro forma Proposed Rates
1 Operating Revenues							
2 Wastewater Operating Revenues							
3 Unmetered Wastewater Revenues	\$ 671,577			\$ 524,601	\$ 82,413		\$ 607,014
4 Test Year Customer Growth		\$ 9,712	5-1				
5 Post-test Year Customer Growth		12,906	5-2				
6 Billing Determinant Analysis		6,243	Pet				
7 Rate Design		(175,837)	5-3				
8 Metered Wastewater Revenues	7,239,864			7,500,408	1,178,289		8,678,697
9 Test Year Customer Growth		40,034	5-1				
10 Post-test Year Customer Growth		129,792	5-2				
11 Billing Determinant Analysis		(85,119)	Pet				
12 Rate Design		175,837	5-3				
13 Penalties	27,624	4,027	Pet	31,651	4,972		36,623
14 Revenues Subject To Increase	7,939,065	117,595		8,056,660	1,265,674	1	9,322,334
15							
16 Wholesales Treatment Revenues	-	1,505,625	Pet	1,505,625	-		1,505,625
17 Other Operating Revenues	9,229	1,508	Pet	17,560	-		17,560
18 Lab Testing Fees		6,823	5-4				
19 Total Operating Revenues	7,948,294	1,631,551		9,579,845	1,265,674		10,845,519
20							
21 O&M Expense							
22 Salaries and Wages	796,185	73,254	Pet	854,927			854,927
23		(14,512)	6-1				
24 Employee Benefits	234,002	6,706	6-2	240,708			240,708
25 Sludge Hauling	187,591	60,099	Pet	250,745			250,745
26		3,055	6-3				
27 Purchased Power	297,754	89,913	Pet	392,516			392,516
28		4,849	6-3				
29 Fuel for Power Production	3,690	-		3,690			3,690
30 Chemicals	43,109	26,602	Pet	70,413			70,413
31		702	6-3				
32 Materials and Supplies	42,429	-		42,429			42,429
33 Contractual Services - Engineering	7,800	-		7,800			7,800
34 Contractual Services - Management Fees	396,192	85,906	Pet	482,098			482,098
35 Contractual Services - Other	375,538			432,036			432,036
36 Lab Testing Costs		11,938	Pet				
37 Additional ACO Costs		34,001	Pet				
38 Meter Reading Fees (Ft. Wayne)		19,843	6-4				
39 Other Ft. Wayne Fees		(9,284)	6-5				
40 Rent Expense	9,831	(37,765)	Pet	(27,934)			(27,934)
41 Transportation Expense	59,619	-		59,619			59,619
42 Insurance	-	(39,063)	Pet	(39,063)			(39,063)
43 Bad Debt Expense	16,186	167	6-6	16,353	2,161	1	18,514
44 Rate Case Expense Amortization	-	57,083	6-7	57,083			57,083
45 Miscellaneous Expense	936,236	1,120	Pet	874,994			874,994
46		(10,812)	6-8				
47		(51,550)	6-9				
48 Depreciation Expense	1,423,790	646,763	6-10	2,070,553			2,070,553
49 Amortization of CIAC	-	(397,224)	6-11	(397,224)			(397,224)
50 Amortization of Acquisition Adjustment	81,591	(4,618)	6-12	76,973			76,973
51 Taxes Other than Income:							
52 Payroll Tax	104,653	5,310	7-1	109,963			109,963
53 Property Tax	456,221	103,123	7-2	559,344			559,344
54 Utility Receipts Tax	94,381	18,415	7-3	112,796	17,689	1	130,485
55 IURC Fee	9,470	1,738	7-4	11,208	1,481	1	12,689
56 Other Taxes (IDEM Fees)	9,406	-		9,406			9,406
57 Income Taxes:							
58 State Income Tax	140,720	5,511	7-5	146,231	78,877	1	225,108
59 Federal Income Tax	564,817	142,609	7-6	707,426	407,913	1	1,115,339
60 Total Operating Expenses	6,291,211	833,879		7,125,090	508,121		7,633,211
61							
62 Net Operating Income	\$ 1,657,083	\$ 797,672		\$ 2,454,755	\$ 757,553		\$ 3,212,308

**AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752**

Revenue Adjustments

(1)

Test Year Customer Growth Normalization

To normalize customer growth during the test year.

	(A) Customer Count at 9/30/15	(B) = (A) x 12 Normalized Billings	(C) Test Year Billings	(D) = (B) - (C) Additional Billings	(E) Test Year Average Bill	(D) x (E) Additional Revenues
<u>Unmetered Customers</u>						
Residential	898	10,776	10677	99	\$ 59.06	\$ 5,847
Commercial	28	336	308	28	\$ 130.46	3,653
Public Authority	1	12	10	2	\$ 106.10	212
	<u>927</u>	<u>11,124</u>	<u>10,995</u>	<u>129</u>		<u>9,712</u>
<u>Metered Customers</u>						
Residential	11,730	140760	140179	581	\$ 44.80	26,029
Commercial	376	4512	4442	70	\$ 169.14	11,840
Public Authority	63	756	743	13	\$ 166.54	2,165
	<u>12,169</u>	<u>146,028</u>	<u>145,364</u>	<u>664</u>		<u>40,034</u>
Totals	<u>13,096</u>	<u>157,152</u>	<u>156,359</u>	<u>793</u>		<u>\$ 49,746</u>
						<u>Adjustment Increase (Decrease)</u> <u>\$ 49,746</u>

(2)

Post-Test Year Customer Growth

To adjust revenues for projected customer growth after the end of the test year.

	(A) Customer Count at 9/30/15	(B) Customer Growth %	(C) = (A) x (B) Additional Customers	(D) = (C) x 12 Additional Billings	(E) Test Year Average Bill	(D) x (E) Additional Revenues
<u>Unmetered Customers</u>						
Residential	898	1.83%	16	192	\$ 59.06	\$ 11,340
Commercial	28	1.83%	1	12	\$ 130.46	1,566
Public Authority	1		-	-	\$ 106.10	-
	<u>927</u>		<u>17</u>	<u>204</u>		<u>12,906</u>
<u>Metered Customers</u>						
Residential	11,730	1.83%	215	2,580	\$ 44.80	115,584
Commercial	376	1.83%	7	84	\$ 169.14	14,208
Public Authority	63		-	-	\$ 166.54	-
	<u>12,169</u>		<u>222</u>	<u>2,664</u>		<u>129,792</u>
Totals	<u>13,096</u>		<u>239</u>	<u>2,868</u>		<u>\$ 142,698</u>
						<u>Adjustment Increase (Decrease)</u> <u>\$ 142,698</u>

**AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752**

Revenue Adjustments

(3)

Rate Design Adjustment

To reflect a decrease in the Unmetered customer revenues and an increase to the volumetric rate for metered customers.

<u>Flat Rate Customers</u>	<u>Total Test Year Bills</u>	<u>Conversion Factor</u>	<u>Equivalent Bills</u>	
Residential - FR.r.H	10,653	1.00	10,653.00	
Residential - FR.r.H	24	4.09	98.16	
Commercial - FR.c	262	1.00	262.00	
Commercial - FR.c.1124305	10	3.29	32.90	
Commercial - FR.c.MP	24	3.60	86.40	
Commercial - FR.c.RN	12	24.78	297.36	
Public Authority - FR.p.1122743	10	1.79	17.90	
	10,995		11,447.72	
Times Flat Rate per EDU for 4,000 Gallons			\$ 43.85	
<i>Pro Forma</i> Unmetered Revenues				501,983
Less: Test Year Unmetered Revenues				677,820
Decreased to Test Year Unmetered Revenues				(175,837)
Increase to Test Year Metered Volumetric Revenues				175,837
				\$ -

Calculation of Adjusted Current Volumetric Rate

Test Year Volumes	808,327		
Times: Current Volumetric Rate	\$ 4.0012		
		3,234,278	
Add: Increase due to reduction to flat rate revenues		175,837	
Adjusted Test Year Volumetric Rates		3,410,115	
Divide by Test Year Volumes		808,327	
Adjusted Present Volumetric Rate		\$ 4.2188	\$ 43.85
			\$ 0.87

Calculation of Unmetered Rate per EDU

Fixed Monthly Charge	\$ 26.97	16.0048
Volumetric Charge (4,000 Gallons)	16.88	\$ 42.97
	\$ 43.85	\$ (15.36)

Revenue Proof

Service Charge Revenues	3,920,467	3,920,467	-
Volumetric Revenues	3,234,278	3,410,170	(175,892)
Unmetered Revenues	677,578	501,983	175,595
Total Revenues	\$ 7,832,323	\$ 7,832,620	\$ (297)

**AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752**

Revenue Adjustments

(4)

Other Revenues - Lab Fees

To include recurring revenues received for lab work performed for third parties.

Test Year Fees recorded to Account 415020	\$	5,116
Add: Fees recorded to AU 5017 (Aqua Indiana)		5,072
Less: AU 5017 Fees already reclassified to Aboite		<u>3,365</u>

Adjustment Increase (Decrease)

\$ 6,823

**AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752**

Expense Adjustments

(1)

Capitalization of Salaries and Wages

To reflect Petitioner's average capitalization rate since its last rate case.

<i>Pro forma</i> Gross Direct Labor	\$ 899,029	
Times: Average Capitalization Rate	<u>5.68%</u>	
<i>Pro forma</i> Capitalized Direct Labor		(51,065)
Less: <i>Pro forma</i> Capitalized Labor		<u>(36,553)</u>
Adjustment Increase (Decrease)		<u>\$ (14,512)</u>

(2)

Employee Pensions and Benefits

To reflect current projected employee pension and benefit expense based on Towers Watson actuarial report.

<i>Pro forma</i> Pensions and Benefits Cost per updated Towers Watson Report		\$ 334,163
Less: Test Year Employee Benefits - Direct	234,002	
Test Year Benefits - Administrative Portion	61,595	
Capitalized Overheads in Benefits Test Year Add Back	<u>31,860</u>	
		<u>327,457</u>
Adjustment Increase (Decrease)		<u>\$ 6,706</u>

**AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752**

Expense Adjustments

(3)

Additional Expenses due to Customer Growth

To adjust sludge hauling, purchased power, and chemicals for additional costs related to estimated customer growth during and subsequent to the test year.

	(A)	(B)	(C) = (A) / (B)	(D)	(C) x (D)
	Test Year Expense	Test Year Volumes (000's)	Cost per 1,000 Gallons	Additional Volumes	Additional Expense
Sludge Hauling Expense	\$ 187,591	1,399,730	\$ 0.13401942	22,797.061	\$ 3,055
Purchased Power Expense	297,754	1,399,730	\$ 0.21272245	22,797.061	4,849
Chemical Expense	43,109	1,399,730	\$ 0.03079808	22,797.061	<u>702</u>
Adjustment Increase (Decrease)					<u>\$ 8,606</u>

Midwest WWTP Test Year Flows	650,060,000
Main Aboite WWTP Test Year Flows	749,670,000
Total Test Year Flows	<u>1,399,730,000</u>

	Additional Billings	Average Water Consumption	Additional Flow
Test Year Growth			
Residential	680	4,455.56	3,029,780.80
Commercial	98	35,532.19	3,482,154.62
Public Authority	15	34,881.56	523,223.40
Post-test Year Growth			
Residential	2,772	4,455.56	12,350,812.32
Commercial	96	35,532.19	3,411,090.24
			<u>22,797,061.38</u>

Note: Water consumption for each unmetered customer class was assumed to be the same as the water consumption for metered customers for purposes of this adjustment.

(4)

Other Contractual Services - Meter Reading Fees

To reflect annual cost of meter reads from the City of Fort Wayne based on OUCC customer growth projections.

Metered Customers at 9/30/15	12,169	
Add: Projected Metered Customer Additions	<u>239</u>	
Projected Metered Customers at 9/30/16	12,408	
Times: Cost per Read (Ft. Wayne)	<u>\$ 0.30</u>	
Projected Monthly Expense		\$ 3,722
Times: 12 Months		<u>12</u>
<i>Pro Forma</i> Meter Read Expense		44,664
Less: Test Year Expense		<u>24,821</u>
Adjustment Increase (Decrease)		<u>\$ 19,843</u>

**AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752**

Expense Adjustments

(5)

Other Contractual Services - Other Fort Wayne Fees

To eliminate test year disconnection and other customer fees billed by Fort Wayne. These fees should be billed to the customers causing the fees.

Test Year Disconnection Fees	\$	7,054
Test Year Customer Fees		2,230
		9,284
		\$ 9,284

Adjustment Increase (Decrease) \$ (9,284)

(6)

Bad Debt Expense

To reflect *pro forma* present bad debt expense.

Pro forma Revenues at Present Rates		\$9,579,845
Bad Debt Expense Rate (Per Petitioner)		0.1707%
Pro forma Bad Debt Expense		16,353
Less: Test Year Bad Debt Expense		\$ 16,186

Adjustment Increase (Decrease) \$ 167

(7)

Rate Case Expense

To reflect a 5 year amortization of rate case expense beginning with Phase I rates.

Outside Consultants/Witnesses	\$	45,000
Outside Legal Services		75,000
Other Expenses		165,417
Pro forma Rate Case Expense		285,417
Amortization Period (5 years)		5
Pro forma Annual Rate Case Expense		57,083
Less: Test Year Rate Case Expense		-

Adjustment Increase (Decrease) \$ 57,083

(8)

Miscellaneous Expense

To eliminate excess test year costs related to gaging station costs recorded to Account 775600. The fees for 2014 and 2015 were recorded during the test year.

<u>Vendor</u>	<u>Inv #</u>	<u>Inv Date</u>	
Ohio River Valley Water Sanitation Commission	308415014AQIN	1/21/2014	\$ 10,812

Adjustment Increase (Decrease) \$ (10,812)

**AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752**

Expense Adjustments

(9)

Miscellaneous Expense

To eliminate non-allowed test year expenses.

Charitable Contributions	\$	373
Promotional Expenses		4,443
Civic Organization Expenses		173
Flowers and Fruit		136
Service Awards		588
Retirement Lunches		30
Legal Fees		41,992
Engineering Fees		3,815
		<u>3,815</u>

Adjustment Increase (Decrease)

\$ (51,550)

(10)

Depreciation Expense

To reflect annual depreciation expense on rate base, including major projects.

Utility Plant in Service at 9/30/15	\$	67,374,727
Less: Land		79,020
Franchises		121,778
		<u>121,778</u>
Depreciable UPIS at 9/30/15	\$	67,173,929

Add: Allocation of Shared Admin Assets		2,915,907
Office Building		1,700,000
Expansion of Midwest WWTP		9,741,000
Main Aboite Basin Improvement Project		750,288
Engineering Fees		3,815
Less: Office Building Land		290,109
Homestead Rd Regional Lift Station Master Plan		58,979
		<u>58,979</u>
<i>Pro forma</i> Additions to Depreciable UPIS		14,761,922

<i>Pro forma</i> Depreciable Plant	(759,429)	81,935,851
Times: Composite Depreciation Rate		<u>2.50%</u>
Annual Depreciation Expense		2,048,396
Add: Amortization of Deferred Depreciation per Cause No. 41968		22,157
Amortization of Deferred Depreciation on Major Projects		-
<i>Pro forma</i> Annual Depreciation Expense		<u>2,070,553</u>
Less: Test Year Depreciation Expense		<u>(1,423,790)</u>

Adjustment Increase (Decrease)

\$ 646,763

**AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752**

Expense Adjustments

(11)

Amortization of CIAC

To reflect amortization of contributed plant.

CIAC as of 9/30/15	\$ 15,547,979	
Add: Fort Wayne Contribution	<u>341,000</u>	
CIAC as of 9/30/16	15,888,979	
Times: Composite Depreciation Rate	<u>2.50%</u>	
<i>Pro forma</i> CIAC Amortization Expense		(397,224)
Less: Test Year CIAC Amortization Expense		<u>-</u>
Adjustment Increase (Decrease)		<u>\$ (397,224)</u>

(12)

Amortization of Acquisition Adjustment

To reflect annual amortization of acquisition adjustment per Commission's order in Cause No. 43874.

Annual Acquisition Adjustment Amortization (Cause No. 43874)	\$ 76,973	
Less: Test Year Acquisition Amortization Expense	<u>81,591</u>	
Adjustment Increase (Decrease)		<u>\$ (4,618)</u>

**AQUA INDIANA, INC.
 ABOITE WASTEWATER DIVISION
 CAUSE NUMBER 44752**

Tax Adjustments

(1)

Payroll Taxes

To adjust payroll tax at *pro forma* present revenue.

<i>Pro forma</i> Payroll Tax	109,963	
Less: Test Year Payroll Tax	<u>(104,653)</u>	
Adjustment Increase (Decrease)		<u>\$ 5,310</u>

(2)

Property Taxes

To adjust property tax expense to reflect 2015 taxes payable in 2016 and to include property taxes on the Midwest WWTP expansion (major project).

	<u>Township</u>	<u>2015 Pay 2016</u>	
<u>Real Estate</u>			
02-11-24-252-001.000-038	38-Aboite	4,817.28	
02-11-24-400-001.001-038	38-Aboite	584.82	
02-16-03-100-001.004-048	48-Lafayette	167.32	
02-11-28-451-010.001-075	75-FW Aboite	898.30	
02-11-27-476-001.001-075	75-FW Aboite	10,002.90	
02-11-09-301-001.001-038	38-Aboite	242.28	
02-06-34-400-001.001-049	49-Lake Township	<u>93.04</u>	
Sub-total			\$ 16,806
<u>Personal Property</u>			
02-0387690	38-Aboite	372,884.76	
02-0687690	68-Wayne Ptc	2,291.10	
040-950-00000625	40-Jefferson	808.70	
02-0387532	38-Aboite	<u>593.67</u>	
Sub-total			376,578
Midwest WWTP Expansion	38-Aboite	<u>165,960</u>	
<i>Pro Forma</i> Property Tax Expense			\$ 559,344
Less: Test Year Property Tax Expense			<u>(456,221)</u>
Adjustment Increase (Decrease)			<u>\$ 103,123</u>

**AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752**

Tax Adjustments

(3)

Utility Receipts Tax

To adjust utility receipts tax for *pro forma* present rate revenues.

<i>Pro forma</i> Revenue at Present Rates	\$	9,579,845	
Less: Exemption		1,000	
Bad Debt Expense		16,353	
Wholesale Revenues (Ft. Wayne)		1,505,625	
<i>Pro forma</i> Taxable Revenues at Present Rates		8,056,867	
Times: Utility Receipts Tax Rate		1.40%	
<i>Pro forma</i> Utility Receipts Tax			112,796
Less: Test Year Utility Receipts Tax			(94,381)
Adjustment Increase (Decrease)			\$ 18,415

(4)

IURC Fee

To adjust IURC fee for *pro forma* present revenue.

<i>Pro forma</i> Revenue at Present Rates	\$	9,579,845	
Less: Bad Debt Expense		16,353	
<i>Pro forma</i> Taxable Revenues			\$9,563,492
2015/2016 IURC Fee			0.1171996%
<i>Pro forma</i> IURC Fee			11,208
Less: Test Year IURC Fee			(9,470)
Adjustment Increase (Decrease)			\$ 1,738

(5)

State Income Tax

To adjust state income taxes for *pro forma* present rate operating income.

Operating Revenues	\$	9,579,845	
Less:			
Operating Expenses		3,718,414	
Depreciation Expense		1,673,329	
Amortization Expense		76,973	
Other Taxes (excluding URT)		689,921	
Synchronized Interest Expense		1,081,516	
		7,240,153	
State Taxable Income		2,339,692	
Times: Tax Rate		6.25%	
Pro forma State income Tax Expense			146,231
Less: Test Year State Income Tax Expense			140,720
Adjustment Increase (Decrease)			\$ 5,511

**AQUA INDIANA, INC.
 ABOITE WASTEWATER DIVISION
 CAUSE NUMBER 44752**

Tax Adjustments

(6)

Federal Income Tax

To adjust federal income taxes for *pro forma* present rate operating income.

Operating Revenues	\$	9,579,845	
Less: Operating Expenses		3,718,414	
Depreciation Expense		1,673,329	
Amortization Expense		76,973	
Other Taxes (including URT)		802,717	
State Income Tax		146,231	
Synchronized Interest Expense		<u>1,081,516</u>	
	\$	<u>7,499,180</u>	
State Taxable Income			2,080,665
Times: Tax Rate			<u>34.00%</u>
Pro forma State income Tax Expense			707,426
Less: Test Year State Income Tax Expense			<u>564,817</u>
Adjustment Increase (Decrease)			<u><u>\$ 142,609</u></u>

AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752

***Pro forma* Capital Structure**
As of September 30, 2015

	<u>Percent of Total</u>	<u>Cost</u>	<u>Weighted Cost</u>
Common Equity	50.01%	9.00%	4.5009%
Long Term Debt	49.99%	4.57%	2.2845%
Deferred Income Taxes	0.00%	0.00%	0.0000%
Total	<u>100.00%</u>		<u>6.7854%</u>

Synchronized Interest Calculation

Total Original Cost Rate Base	\$ 47,341,474
Times: Weighted Cost of Debt	<u>2.2845%</u>
Synchronized Interest Expense	<u>\$ 1,081,516</u>

AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752

Midwest Wastewater Treatment Plant Expansion

	<u>Petitioner</u>	<u>OUCC</u>	<u>OUCC More (Less)</u>
1 Estimated Cost of Midwest WWTP Expansion	\$ 9,741,000	\$ 9,741,000	\$ -
2 Less: Fort Wayne Contribution	341,000	341,000	-
3 Phase I Depreciation	194,820	-	(194,820)
4 Net Investment	<u>9,205,180</u>	<u>9,400,000</u>	<u>(194,820)</u>
5 Times: Pre-Tax Rate of Return	11.186711%	9.804331%	-1.3824%
6 Increase in Revenue Requirement due to Return on Plant	<u>\$ 1,029,757</u>	<u>\$ 921,607</u>	<u>\$ (108,150)</u>
7			
8 <u>Incremental Operating Expenses</u>			
9 Depreciation Expense (2.5%)	\$ 243,525	\$ 235,000	\$ (8,525)
10 Additional Operating Expenses			
11 Sludge Hauling	60,099	60,099	-
12 Purchased Power	89,916	89,916	-
13 Chemicals	26,602	26,602	-
14 Lab Testing	11,936	11,936	-
15 Property Taxes	174,656	165,960	(8,696)
16 Total Incremental Operating Expenses	<u>\$ 606,734</u>	<u>\$ 589,513</u>	<u>\$ (17,221)</u>
17			
18 Return on Plant	\$ 1,029,757	\$ 921,607	\$ (108,150)
19 Incremental Operating Expenses	606,734	589,513	(17,221)
20 Additional Costs of Plant Expansion	<u>1,636,491</u>	<u>1,511,120</u>	<u>(125,371)</u>
21 Less: Estimated Fort Wayne Revenues	1,505,625	1,505,625	-
22 Excess Costs of Midwest Plant Expansion	130,866	5,495	(125,371)
23 Less: Cap/Voluntary Reduction	(407,164)	(5,495)	401,669
24 Net Impact to Existing Customers	<u>\$ (276,298)</u>	<u>\$ -</u>	<u>\$ 276,298</u>

AQUA INDIANA, INC.
ABOITE WASTEWATER DIVISION
CAUSE NUMBER 44752

Current and Proposed Rates and Charges

Phase I				
	Current	Petitioner Proposed	OUCC Proposed	OUCC More (less)
Metered Rate per Water Meter:				
Service Charge per Month - All Meter Sizes	\$ 26.97	\$ 32.32	\$ 31.19	\$ (1.13)
Volumetric Charge per 1000 Gallons	4.0012	4.7949	4.6270	(0.1679)
Volumetric Charge per 1000 Gallons as adjusted (See OUCC Schedule 5, Adjustment No. 3)	4.2188	5.0560	4.8786	(0.1774)
Unmetered Residential Rate per EDU	59.21	70.96	68.47	(2.49)
Unmetered Residential Rate as adjusted (See OUCC Schedule 5, Adjustment No. 3)	43.85	52.55	50.71	(1.84)

Phase II				
	Petitioner Phase I	Petitioner Proposed	OUCC Proposed	OUCC More (Less)
Metered Rate per Water Meter:				
Service Charge per Month - All Meter Sizes	\$ 32.32	\$ 35.00	\$ 31.19	\$ (3.81)
Volumetric Charge per 1000 Gallons	4.7949	5.1918	4.6270	(0.5648)
Volumetric Charge per 1000 Gallons as adjusted	5.0560	5.4745	4.8786	(0.5959)
Unmetered Residential Rate	\$ 70.96	\$ 76.83	68.47	(8.36)
Unmetered Residential Rate as adjusted	52.55	56.90	50.71	(6.19)

Q 8.32. Please state the gain or loss recorded on the transfer of assets to the City of Fort Wayne. If any transaction costs are included in the calculation of the gain or loss, please state the total amount of these transaction costs.

Response: The pre-tax gain recorded on the books of Utility Center, Inc. was \$29,210,008. The after-tax gain was \$17,610,714. The total transaction costs were \$3,546,184.

Witness: Bobby D. Estep

Fort Wayne City Utilities
Final Entry to record the purchase of Aqua's North and SW systems
Response to IURC Cause #44503; Order dated October 22, 2014; Item #4
Prepared by Poehler; February 1, 2015

<u>Journal Entry</u>	<u>Amount</u>
Cash	\$ (67,000,000)

North System - Water

Utility Plant in Service *	19,170,732
Accumulated Depreciation *	(4,771,530)
Utility Plant Acquisition Adj (UPAA) Aqua *	1,903,357
Accum Amort - UPAA - Aqua *	(310,107)
CIAC *	(2,552,981)
UPAA - Fort Wayne	8,286,114

North System - Sewer

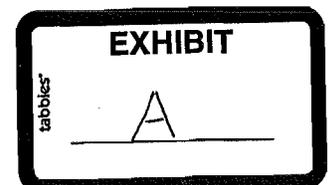
Utility Plant in Service *	2,222,649
Accumulated Depreciation *	(347,494)
Utility Plant Acquisition Adj (UPAA) Aqua *	484,491
Accum Amort - UPAA - Aqua *	(75,990)
CIAC *	(515,536)
UPAA - Fort Wayne	100,048

SW System -= Water

Utility Plant in Service *	39,939,393
Accumulated Depreciation *	(8,546,928)
Utility Plant Acquisition Adj (UPAA) Aqua *	2,326,325
Accum Amort - UPAA - Aqua *	(863,030)
Inventory *	81,750
Developers Payable	(581,835)
CIAC *	(11,418,786)
UPAA - Fort Wayne	22,469,358

Proof of Entry nets to \$0	<u>\$ -</u>
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* Sourced from Aqua Indiana, Inc.



**OPERATIONS AGREEMENT
BETWEEN
CITY OF FORT WAYNE, INDIANA
AND
UTILITY CENTER, INC. d/b/a AQUA INDIANA, INC.**

**OPERATIONS AGREEMENT
BETWEEN
CITY OF FORT WAYNE, INDIANA
AND
UTILITY CENTER, INC. d/b/a AQUA INDIANA, INC.**

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**OPERATIONS AGREEMENT
BETWEEN
CITY OF FORT WAYNE, INDIANA
AND
UTILITY CENTER, INC. d/b/a AQUA INDIANA, INC.**

THIS OPERATIONS AGREEMENT (hereinafter referred to as “Agreement”) entered into this 4th day of December, 2014, by and between and **CITY OF FORT WAYNE, INDIANA**, a municipal corporation, of the State of Indiana (hereinafter referred to as “City”) and **UTILITY CENTER, INC. d/b/a AQUA INDIANA, INC.**, a for-profit corporation organized under the laws of the State of Indiana (hereinafter referred to as “Aqua”). Aqua and City are herein referred to as “party” or collectively as “parties.”

WITNESSETH THAT:

WHEREAS, Utility Center, Inc. d/b/a Aqua Indiana, Inc., intends to sell and the City intends to purchase a water utility located in southwest Allen County (the “Southwest Water System”) pursuant to the terms and conditions of a certain Utility System Asset Acquisition Agreement dated May 14, 2014 (“AAA”); and

WHEREAS, Aqua is an affiliate of Utility Center, Inc. d/b/a Aqua Indiana, Inc. and, following the Purchased Assets Closing Date pursuant to the AAA, will own and operate a sewer utility located in southwest Allen County (the “Southwest Sewer System”) (collectively the Southwest Water System and Sewer System are referred to as the “Utility System”);

NOW THEREFORE, in consideration of the above and foregoing, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

I. **DEFINITIONS**

These words and phrases shall have the following meaning:

Certificate of Territorial Authority: Authorization from IURC to permit an investor-owned or not-for-profit public sewer utility to provide sewer customers within the designated area.

Utility System Asset Acquisition Agreement: (the “AAA”): The agreement between the parties that facilitates the City’s purchase of the Southwest Water System from Aqua.

Water Account: Service location of a Public Water System serviced by a water meter in the City System and where the City collects Consumption Data.

Public Water System: As defined in 170 Indiana Administrative Code §6-1-1(h).

Business Day: A day when the City Utilities Customer Relations Center is open to the public. Any times listed in this Agreement in association with Business Days are for Fort Wayne time.

Common Council: The City of Fort Wayne Common Council.

Sewer Account: Service location of sanitary sewer service served by the Southwest Sewer System as defined herein.

IURC: Indiana Utility Regulatory Commission or its successor agency.

Dual Account: Service location of a customer who receives both potable water service from the City System and sanitary sewer service from the Sewer System.

Consumption Data: Data gathered to measure the amount of water used by a City Water Account.

Excel File: Microsoft Excel spreadsheet file or compatible format.

Retail Shut-Off Fee: The City's generally applicable charge to turn off and restore water service due to a delinquent payment as set forth in the City rules and regulations or as otherwise promulgated by City. This does not include any fees to restore water service on the same day.

Southwest Sewer System: Sanitary sewer and wastewater collection, transmission, treatment, disposal and reuse system that Aqua owns and operates in and near southwest Allen County, Indiana.

Southwest Water System: A Public Water System owned by Aqua in southwest Allen County, Indiana, that the City intends to purchase through the AAA.

City System: The Public Water System owned by the City. The City System shall include all current and future accounts, persons or premises to which the City provides water service including but not limited to the Southwest Water System.

II. EFFECTIVE DATE

- A. The parties understand and agree that this Agreement shall become effective (hereinafter referred to as the "Effective Date") on the latest date of the following:

- a. Approval by the Fort Wayne Board of Works, the Common Council and signature by the Mayor of Fort Wayne,
 - b. Approval by Aqua's representative(s), and
 - c. The effective date of the Purchased Assets Closing as defined in the AAA.
- B. It is understood and agreed that this Agreement may also be subject to the approval of other local, state and federal agencies as may be legally required.

III. BILLING AND DISCONNECTION AGREEMENT

A. SERVICE AREAS.

This Agreement applies to present and future Dual Accounts located within the City Excluded Area as described in the AAA (Appendix R), a copy of which is included as Exhibit A-1 of this Agreement.

B. CONSUMPTION AND OTHER DATA

1. The City shall provide to Aqua the water consumption data as listed below ("Consumption Data") for each Dual Account on a monthly basis. The City shall provide Consumption Data in both in an electronic upload format and in an Excel File. The City shall provide Consumption Data for each Dual Account within fifteen (15) days after the City reads the Dual Account's water meter.
2. The Consumption Data shall be provided in an electronic format and the System Upload files will be provided in an agreed upon format (*see Exhibit A-2. – Sample Usage Reporting Data Formats*). In no event shall such format require proprietary software not in use by Aqua during this Agreement.
 - a. The record fields will contain, unless otherwise agreed upon by the Parties, the following information:
 1. Service Address: Street address of service location
 2. Billing Address: Mailing address of customer
 3. Customer name: Name of Water Account holder
 4. Customer contact phone number and e-mail, if available
 5. Water consumption as measured in gallons for the billing period
 6. Prior Read
 7. Current Read
 8. Reading Date(s)
 9. Actual reading or estimated reading
 10. Meter size

11. Serial number of meter
 12. Number of dials on meter
 13. Type of service (commercial, residential, etc.)
3. Additionally, the City shall provide Aqua with information required to facilitate the billing of Aqua's Southwest Sewer System in an Excel File. The City shall e-mail the Excel File to Aqua's designee within fifteen (15) days of the meter reading.

The data shall be provided as and include the information contained in the following Exhibits ("Billing Files"):

- a. Meter Read File – detailed meter information (Exhibit A-3.)
- b. Account Changes – changes to Water Account data, including transfers, terminations, move ins and move outs. (Exhibit A-4.)
- c. Adjustments – financial adjustments (Exhibit A-5.)
- d. Billing Address Update (Exhibit A-6.)

Aqua agrees to use the above data for the sole purpose of billing Sewer Accounts.

4. For each Dual Account that the City provides to Aqua 1) the information in both Sections III.B.1. and III.B.2. above and 2) an actual meter read, City will charge Aqua in accordance with the Cost Schedule for "Cost per month per meter read per Dual Account" listed in Exhibit B for each Dual Account per month. The City also shall charge Aqua in accordance with the Cost Schedule in Exhibit B for each month for the creation and transfer of the Billing Files. The City will also charge Aqua in accordance with the Cost Schedule for "Cost per each new, transferred or terminated Dual Account" listed in Exhibit B for new, transferred or terminated service of a Dual Account during each month as shown in Exhibit A-5. The City shall bill Aqua on the first day of each month for all charges due for the previous month and each account shall only be charged once in a billing period.
5. Aqua shall provide the City with the current Service Addresses of all Sewer Accounts for whom Aqua desires Consumption Data.
- a. The Parties agree to notify the other in writing within seven (7) days of any changes to Dual Accounts, including any new accounts established for service, any, transferred accounts and any service terminations. The Parties agree to work together to properly identify Dual Accounts.

C. TERMINATION OF SERVICE

1. The parties agree that the City will shut off water service to Dual Accounts in the event a Sewer Account is delinquent in payment of Southwest Sewer System charges as provided herein. The City will reinstate water service when the Dual Account is current for Southwest Sewer System charges and, if applicable, City System charges.
2. Aqua shall be responsible for notifying the City of delinquent Sewer Accounts. The shut-off process will proceed as follows:
 - a. If a Dual Account is delinquent for both City System service and Southwest Sewer System service and eligible for water service shut-off, the City will shut off water service, per the City's shut-off rules, and will not reinstate water service until the both the Water Account and Sewer Account are current. Aqua shall notify the City of the Sewer Account's payment delinquency in writing as provided herein. The City will bill the Shut-Off Charge directly to the Water Account and not bill Aqua. Aqua agrees not to bill the Sewer Account for an applicable shut-off charges not paid by Aqua pursuant to this section.
 - b. If a Dual Account is delinquent only for Southwest Sewer System service and eligible for water shut-off for such delinquency pursuant to this Agreement, Aqua shall notify the City of the payment delinquency in writing as provided herein. The City will bill the Retail Shut-Off Fee to Aqua.
 - c. To initiate water service termination for non-payment of Southwest Sewer System charges, Aqua shall deliver to City a written request for service shut-off, together with the following information:
 1. The billing name and Service Address of the Dual Account; if premise is tenant-occupied, if known, the name and address of the landlord and the name and Service Address of the tenant;
 2. A statement that the Sewer Account remains unpaid for a period of at least sixty 60 days from the due date thereof; and
 3. A statement setting forth: (i) that Aqua has fulfilled all applicable notice and procedural steps required by law, statute, regulations or ordinances and (ii) Aqua has not received information that would make water service termination unlawful.

3. Upon receipt of the information specified under Section III.C.2(c) hereof, the City shall promptly initiate water service termination procedures and terminate service to the Water Account, in accordance with the procedures outlined in this Agreement and consistent with and pursuant to the provisions of City Utilities' tariff and IURC regulations. The City will notify Aqua in writing by 9 a.m. the next Business Day when water service for a Dual Account has been shut off because of Aqua's request.
4. Upon shut-off for non-payment of Southwest Sewer System service, the City shall bill Aqua the retail Shut-Off Fee per Dual Account shut-off plus a \$10 administrative fee ("Shut-Off Administrative Fee"), if the respective Water Account was current at the time of shut off. Aqua agrees not to seek reimbursement for the Shut-Off Administrative Fee directly from the respective Sewer Account customer. The City shall charge Aqua the retail Shut-Off Fee, as set by City ordinance, for the duration of this Agreement.

D. RESTORATION OF SERVICE

1. The Parties agree to cooperate to timely restore water service when a Dual Account becomes current on Southwest Sewer System charges. When a Southwest Sewer System customer becomes current on its Sewer Account following a water shut-off, Aqua agrees to notify the City's designee in writing of the payment as follows:
 - a. Aqua shall prior to close of business on any applicable day send to the City a report showing Dual Accounts for which service has been terminated for which Aqua received confirmed payment receipts processed in Aqua's systems as of the previous business day.
 - i. For purpose of confirmed payment receipts that have been processed in Aqua's systems, the Parties understand that Aqua's third party vendors receive payments and generate reports to Aqua for payments made to or received by such processors as of a certain time each day. Reports of such payments are transferred to Aqua by the close of business on such day. Aqua shall report to the City such payments received for any Dual Accounts terminated for delinquent sewer service payments by the close of the following business day.
 - b. In addition to sending the report in subsection a. above, Aqua agrees to maintain both a contract payment location available to Sewer Account customers in a location within Aboite Township, Allen County ("Local

Center”) and a contract phone and/or online payment processing capability for Dual Account customers no later than 30 days after the Effective Date (“Automated Centers”).

- i. The Local Center and Automated Centers will serve Sewer Accounts who have received a notice of non-payment for Southwest Sewer System service.
 - ii. The Local Center and Automated Centers shall accept credit payments from Southwest Sewer Account customers to bring their Sewer Accounts current.
 - iii. If a Dual Account customer has had City System water service shut off and brings the Sewer Account current through a payment at the Local Center or Automated Centers, such will provide the customer with a paper receipt, confirmation number or other confirmation of payment that the Sewer Account is current (“Proof of Payment”).
 - iv. The Dual Account customer may call and notify Aqua by phone of such Proof of Payment in full and request from Aqua a restoration of service as applicable
 - v. Aqua shall provide notification to the City of any such payment and request within one-hundred and twenty (120) minutes of any such Dual Account’s notice to Aqua made between 8:30 a.m. and 2:15 p.m. on a Business Day. If such notice is made to Aqua prior to 8:30 a.m. or after 2:15 p.m. on a Business Day, Aqua agrees to notify the City’s designee in writing no later than 10 a.m. the next Business Day in the event that water service for a Dual Account has been shut off.
2. To have City System service restored, the parties agree that the Dual Account customer must be current on both the Water Account and Sewer Account. The City agrees to restore service, per the City’s service restoration procedures including same-day restoration, upon receiving notification from Aqua of payment for Southwest Sewer System charges and a request from the Dual Account holder. Any Dual Account holder, after the Sewer and/or Water Accounts are current, must notify the City, via the Customer Relations Center, to schedule water service restoration. The City will not restore water service without notification by both the Dual Account customer and written

notification, including but not limited to text, facsimile or e-mail, from Aqua if the Sewer and Water accounts were delinquent.

The parties agree that any fees for same-day water service restoration will be charged directly to the Water Account and will appear on the City's bill.

IV. SOUTHWEST SANITARY SEWER COOPERATION, PLANNING

(A) As set forth and required in the AAA, Aqua shall provide the City with a copy of the final updated sanitary sewer master plan once it is completed, but in no event later than twelve (12) months after the Purchased Assets Closing Date

(B) The Parties agree that the terms provided in Section 4.12(C) of the AAA shall constitute the Sanitary Sewer Boundary Agreement (the "**Boundary Agreement**") to be effective upon consummation of the Purchased Assets Closing, and shall be deemed approved and sanctioned by the IURC upon the IURC's approval of this Agreement and the sale and transfer by Seller of the Southwest Water System and the Purchased Assets to the City. The boundaries for the area that shall be the subject of the Boundary Agreement are shown in **Appendix A-1** of this Agreement.

(1) The City shall not oppose, interfere in or interrupt any effort by Seller to obtain a certificate of territorial authority within the area marked as "City Excluded Area" in Appendix A-1 to this Agreement. Further, as set forth and required in the AAA, City shall not expand sanitary sewer facilities within the area marked "City Excluded Area" in Appendix A-1 for a period of twenty (20) years after the Purchased Assets Closing Date. Notwithstanding the foregoing, this prohibition shall not apply to existing City facilities and the following "City Existing Projects":

- (a) Covington Dells Septic Relief Project;
- (b) Ridgewood Professional Park and Aboite Center Road/Huth Drive/Rosewood/Dicke Road Septic Relief Project; and
- (c) Westlawn Septic Relief Project.

(2) As set forth and required in the AAA, Aqua shall not, for a period of twenty (20) years after the Purchased Assets Closing Date, seek a Certificate of Territorial Authority or provide sewer service to areas of Allen County, Indiana, marked "Aqua Excluded Area" in **Appendix A-1**. Notwithstanding the above, this prohibition shall not apply to existing Seller facilities and the following "Aqua Existing Projects":

- (a) Covington Club Condominiums; and
- (b) Fort Wayne Country Club.

(C) As set forth and required in the AAA, City shall not initiate or prosecute any condemnation proceedings against the Southwest Sewer System prior to five (5) years after

the Purchased Assets Closing Date, except in the event of (i) the insolvency or bankruptcy of Seller or its successors and assigns; (ii) the entry of a final and unappealable court order that Seller or its successors or assigns have materially violated a state or federal law; or (iii) the entry of a final and unappealable administrative order that Seller or its successors or assigns is a “troubled utility” under Indiana law.

(D) City and Aqua intend that this Section IV shall be deemed to give effect to the provisions of Sections 4.12(A), 4.12(B), 4.12(C) and 4.12(D) of the AAA and shall create no greater right and impose no greater burden than as set forth in the AAA.

V. INFRASTRUCTURE IMPROVEMENT ASSISTANCE

A. As set forth and required in Section 4.13 of the AAA, Aqua shall assist the City with certain infrastructure and environmental improvement initiatives that are intended to provide benefits to both the City and Aqua.

B. Aqua may seek reimbursement of such contributions as recoverable costs in Aqua's approved sewer rates from time to time and the City agrees not to contest Aqua's application for reimbursement.

C. Aqua's obligation to participate in these initiatives is conditioned upon all of Aqua's costs being recoverable through the IURC ratemaking policies and procedures. The certain initiatives are limited to the following two (2) items:

1. Aqua shall become a full member in Greater Fort Wayne, Inc., or its successor. This full membership shall continue for the lesser of twenty (20) years, or such time as Aqua no longer owns the Southwest Sewer System.

2. Aqua shall provide at least Twenty-Five Thousand Dollars (\$25,000) per year to be exclusively earmarked by Aqua for Aqua's own sanitary sewer related infrastructure to be used as customer incentives for City-approved (with such City approval not to be unreasonably withheld or delayed) infrastructure improvements or septic system elimination projects initiated or directed by the City (with reasonable prior notice to Aqua) and located in Aqua's service area. This provision shall continue for the lesser of twenty (20) years, or such time as Aqua no longer owns the Southwest Sewer System.

D. City and Aqua intend that this Section V shall be deemed to give effect to the provisions of Section 4.13 of the AAA and shall create no greater right and impose no greater burden than as set forth in the AAA.

VI. ASSURANCE OF AQUA RATE STABILIZATION

As set forth and required in Section 4.15 of the AAA, Aqua agrees to the following for rate increase requests to the IURC or its successor agency:

1. Aqua will not file for a rate increase in 2014 or 2015 for the Southwest Sewer System.
2. Prior to filing for any rate increases for the Southwest Sewer System, Aqua will appear before the Common Council of the City of Fort Wayne to describe the rate increase and the justification for the rate increase prior to filing a rate increase request with the IURC. The parties acknowledge and agree that this Agreement does not require Common Council approval for such rate increases which are not prohibited by this Agreement.
3. Nothing in this Paragraph precludes the City from intervening and participating in any IURC proceeding involving an Aqua rate increase.
4. City and Aqua intend that this Section VI shall be deemed to give effect to the provisions of Section 4.15 of the AAA and, except to the extent specifically set forth herein, shall create no greater right and impose no greater burden than as set forth in the AAA.

VII. METER CONVERSIONS

- A. Aqua shall upgrade up to 3,000 non-Automatic Meter Reading (AMR) water meters, sized 1" and less, to AMR capabilities such that the Southwest Water System is substantially drive-by radio read capable at or before the Purchased Assets Closing Date. City will reimburse Aqua its costs to upgrade the AMR capability of the Southwest Water System. Such costs will be submitted to the City and pre-approved by the City in writing prior to installation, which approval shall not be unreasonably withheld, conditioned or delayed.
- B. In addition to the upgrades set forth in Section VII.A., to the extent that time and Aqua resources are available, City may request certain large meter upgrades of Aqua; with compensation to be agreed to in advance. City will reimburse Aqua for the cost of such agreed large meter upgrades. Aqua shall submit such costs to City and City shall approve such costs in writing prior to the performance of any work, with such approval not to be unreasonably withheld, conditioned or delayed.
- C. Aqua will provide all the materials, perform or contract for all the upgrade labor.
- D. Aqua will update their billing records to reflect any conversions or upgrades hereunder.
- E. Aqua shall invoice City once a month for all work performed under this section and may send such invoices by U.S. Mail or electronic mail. The City agrees to pay all bills submitted hereunder within thirty (30) days of receipt. All amounts outstanding shall carry an interest rate of 0.5% per month or the greatest rate permitted by applicable law, whichever is less.

F. City shall assist Aqua in meter conversions or upgrades hereunder.

G. In the event that the sale of the Southwest Water System to the City does not occur by December 31, 2015, Aqua shall keep and benefit from the meter upgrade and refund back to City by December 31, 2015 all payments made by City for this upgrade effort.

VIII. MISCELLANEOUS

A. Notices and Invoices.

1. Except for required written notices of payment, any notices required under this Agreement shall be served by certified mail, return receipt requested, postage prepaid, addressed to the party to be served at the last address filed by such party with the other party.

2. Invoicing under this Agreement shall be served by first class mail addressed to the other party at the address on file.

3. At the Effective Date of this Agreement, Aqua's address is: Aqua Indiana, Inc., Attention of the President, 5750 Castle Creek Parkway N. Dr. Suite 314, Indianapolis, Indiana 46250.

4. At the Effective Date of this Agreement, the City's address is: Fort Wayne City Utilities, Attention of the Director, 200 E. Berry St. Suite 270, Fort Wayne, Indiana 46802.

B. Term of Agreement, Renewals.

1. Original Term. This Agreement shall continue in full force and effect for twenty (20) consecutive years starting on the Effective Date.

2. Agreement Renewal. This Agreement does not renew automatically. An extension or renewal will only occur if the parties agree in writing to such terms and conditions. The parties agree to negotiate a request for an extension or renewal in good faith.

C. Amendments.

1. Written Mutual Consent. Written amendments to the Agreement executed and approved by the parties shall be the only recognized changes to the Agreement. Verbal modifications do not constitute a legally binding amendment. The parties shall have up to six (6) months to negotiate in good faith the proposed amendments to the Agreement. In the event that the parties do not reach

agreement on the proposed amendments, the Agreement provisions herein will remain in force.

2. Notice. In the event a party wishes to amend the Agreement, that party shall send written notice in accordance with Section VIII.A. hereof to the other party and include the following

- a) Desire of party to discuss and amend;
- b) List of subject portions of the Agreement; and
- c) Description of relief or change desired.

D. Change of Conditions or Legal Environment.

1. If a party believes there has been a material change in conditions or legal regulations applicable to the Agreement, the Agreement terms and conditions may be renegotiated in good faith to reflect the effect of such change.

2. Such a request must be initiated by a notice provided from a party to the other in accordance with Section VIII.A. hereof that includes the following

- a) Desire of party to discuss and renegotiate,
- b) Description of substantial change in conditions; and
- c) Description of conceptual relief or change desired.

E. Termination by Both Parties.

This Agreement may be terminated in writing with agreement by both parties.

F. Successors and Assignment.

1. This Agreement is binding upon and shall inure to the benefit of City, Aqua and their successor and assigns.

2. Either party may assign or delegate their rights or duties to an affiliated entity under common ownership or control with the entity, or in the case of Aqua such an affiliated entity that acquires ownership or control of all or substantially all of the stock or sewer assets of Aqua, and provides sewer service in the Sewer System. Other than stated herein, assignment or delegation of this Agreement requires written notice to the other party of its intent to assign rights or delegate

duties to a third party and written assent by the other party to the assignment or delegation.

G. Remedies.

If either party fails to meet their respective obligation(s) under this Agreement, the aggrieved party shall provide a written notice of default to the defaulting party and provide a reasonable opportunity to cure.

In addition to any remedies that may be available at law, temporary, preliminary and permanent injunctive relief may be granted to enforce any provision of this Agreement in the event of an actual breach or violation, or a threatened breach or violation, of any restriction or covenant under this Agreement.

H. Severability.

Invalidity or unenforceability of any covenant, condition, term or provision in this Agreement shall not affect the validity and enforceability of any other covenant, condition, term or provision in this Agreement.

I. Waiver.

The failure of either party to exercise any right or power given hereunder or insist upon strict compliance with any obligation specified herein shall not constitute waiver of such party's rights to demand exact compliance with the terms hereof.

J. Headings.

The headings to the paragraphs of this Agreement are solely for the convenience of the parties and shall not be used to explain, modify, simplify, or aid in the interpretation of the provisions of this Agreement.

K. No Third Party Beneficiary.

This Agreement shall not confer any rights or remedies upon any third-party other than the parties to this Agreement and their respective successors and permitted assigns.

L. Applicable Law.

This Agreement shall be governed by, construed and interpreted in accordance with the laws of the State of Indiana.

[Remainder of this page left intentionally blank, signature page follows]

[Signature page to Operations Agreement]

CITY OF FORT WAYNE, INDIANA ("CITY")

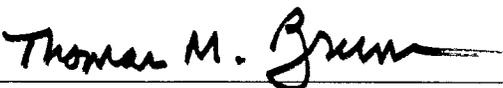
By: 

Printed: THOMAS C. HENRY

Title: MAYOR

Date: 12/4/2014

UTILITY CENTER, INC. d/b/a
AQUA INDIANA, INC. ("AQUA")

By: 

Printed: Thomas M. Bruns

Title: President

Date: 12/4/2014

Exhibit A.

Boundary Map and Sample Report Formats

A-1: Sanitary Sewer Boundary: Aqua and City (from Appendix R Schedule of Sanitary Sewer Boundary (page S-1) of the US AAA).

A-2: Sample Usage Reporting Data Formats

A-3: Sample Detailed Meter Information

A-4: Sample Changes to Water Account Data

A-5: Sample Financial Adjustments

A-6: Sample Billing Address Update

Exhibit A-1

Boundary Agreement Area

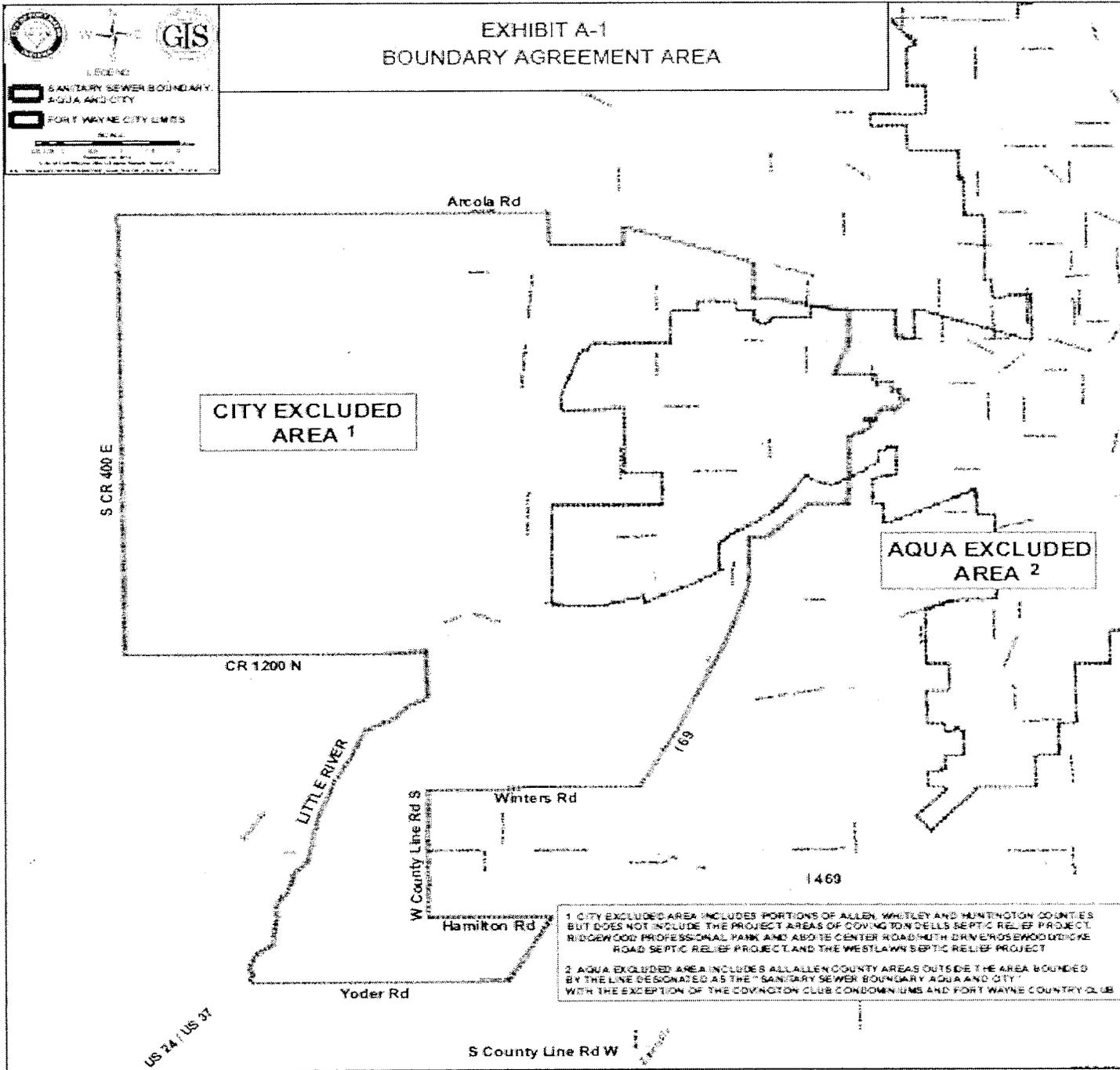


Exhibit A-2

Sample Usage Reporting Data Formats

Record formats 1, 2 and 3 are 80 byte records
Record format 4 is a 96 byte record

RECORD FORMAT = 01

Position	Field	Description
01 - 12	Water Co.'s Premises Number	12
13 - 31	CUSTOMER NAME	19
32 - 35	House Number	4
36 - 52	Street Name	17
53 - 59	WATER USAGE 1ST QTR	7
60 - 66	WATER USAGE 2ND QTR	7
67 - 73	WATER USAGE 3RD QTR	7
74 - 80	WATER USAGE 4TH QTR	7

RECORD FORMAT = 02

Position	Field	Description
01 - 12	Water Co.'s Premises number	12
13 - 16	BLANK	4
17 - 35	Water Co.'s Customer's Name	19
36 - 39	HOUSE NUMBER	4
40 - 56	STREET NAME	17
57 - 62	WATER USAGE 1ST QTR	6
63 - 68	WATER USAGE 2ND QTR	6
69 - 74	WATER USAGE 3RD QTR	6
75 - 80	WATER USAGE 4TH QTR	6

RECORD FORMAT = 03

Position	Field	Description
01 - 12	Water Co.'s Premises Number	12
13 - 16	House Number	4
17 - 37	Street Name	21
38 - 43	READ DATE	6
44 - 52	METER READING	9
53 - 59	WATER USAGE 1ST QTR	7
60 - 66	WATER USAGE 2ND QTR	7
67 - 73	WATER USAGE 3RD QTR	7
74 - 80	WATER USAGE 4TH QTR	7

Exhibit A-3

Meter Read File – Detailed Meter Information

(This exhibit is depicted below in 3 parts and in production is actually as 40 column spreadsheet.)

District Code	Customer No.	Premises No.	First Name	Last Name	Premises Address	City	State	Zip Code	SVC Status	SVC Category	SVC Type	Meter Route	Meter Read Seq
MA	1391147	1037924				MASURY	OH	44438	A	WTR	RSM1	6513	8620
MA	1406071	1041778				MASURY	OH	44438	A	WTR	RSM1	6513	7530
MA	1412749	1049801				MASURY	OH	44438	A	WTR	CMM1	6513	1060
MA	1543496	1090035				MASURY	OH	44438	A	WTR	CMM1	6513	450
MA	1680044	1138201				MASURY	OH	44438	A	WTR	RSM1	6513	1430

Previous Read Date	Previous Read	Previous Consumption	Previous Read Type	Curr. Read Date	Curr. Read	Curr. Consumption	Curr. Read Type	Multiplier	Days of SVC	U of M	Meter Mfg	Meter Serial No.	Meter Size	No of Dials	Read Method
08-FEB-13	1511	20	A	11-MAR-13	1533	22	A	1	31	HG	R	67907095	5/8"	5	RF
08-FEB-13	4016	71	A	11-MAR-13	4088	72	A	1	31	HG	R	67906753	5/8"	5	RF
08-FEB-13	11	0	A	11-MAR-13	12	1	A	1	31	HG	R	67906893	5/8"	5	RF
08-FEB-13	1014	21	A	11-MAR-13	1042	28	A	1	31	HG	S	68221326	5/8"	5	RF
08-FEB-13	283	5	A	11-MAR-13	289	6	A	1	31	HG	R	72163740	5/8"	5	RF

Exhibit A-4

Account Changes – Changes to Water Account Data

District Code	Customer No.	Premises No.	First Name	Last Name	Premises Address	Unit Type	Unit No.	City	State	Zip Code	SVC Status	Action Code	Reason Code
MA	1672429	756671									A	IN	C
MA	1672429	756671						SHARON	PA	16146	A	MBCA	A
MA	1672429	756671						SHARON	PA	16146	A	MBCA	ER
MA	1219029	894723						MASURY	OH	44438	A	IN	X
MA	1219029	894723						MASURY	OH	44438	A	MBCA	
MA	1219029	894723						MASURY	OH	44438	A	OUT	X
MA	1219329	894779						MASURY	OH	44439	A	IN	C

Reading	Read Type	Consumption	Adjustment	Days Of Svc	Multiplier	U of M	Meter Serial No.	Meter Size	Service Code	Read Method	ERT 1	ERT 2	Cancel Date	Cancel Code	Cancel Description
8692	A			32	1	HG	65632132	5/8"	WTR	RF	22836456		26-MAR-13	MVOT	Cancel Only
8692	A	55	-55	32	1	HG	65632132	5/8"	WTR	RF	22836456		20-FEB-13	RATP	Cancel Only
8892	E	0	0	29	1	HG	65632132	5/8"	WTR	RF	22836456		14-MAR-13	ESTS	Cancel Only
1	A				1	HG	74732450	5/8"	WTR	RF	29770605				
574	E	23	-23	30	1	HG	72006315	5/8"	WTR	RF	29770605		11-MAR-13	EXCP	Cancel Only
565	A	0		3	1	HG	72006315	5/8"	WTR	RF	29770605				
902	A				1	HG	71609040	5/8"	WTR	RF	27153838				

Meter Route	Meter Read Seq	Billing Street Address	Billing Unit Type & No.	Billing Address Line 2	Billing Address Line 3	Billing Address Line 4	Billing City	Billing State
9013	6805							
9013	6805							
9013	6805							

Exhibit A-5

Adjustments – Financial Adjustments

‘Adjustments’ File to contain the following:

Customer Number

Premise Number

Customer first name

Customer last name

Premise Address

City, State Zip

Account status

Adjustment Amount

Adjustment Code / Reason (for the adjustment)

***Transition Team to work through the details of this file layout.**

**Exhibit A-6
Billing Address Update**

(This exhibit is depicted in 3 parts and in production is actually as 40 column spreadsheet.)

District Code	Customer No.	Premises No.	SVC Status	First Name	Last Name	Billing Street Address	Unit Type	Unit No.	Billing Address Line 2
MA	1419095	894790	I						
MA	1419095	894790	I						
MA	1219464	895050	A						
MA	1219464	895050	A						
MA	1219504	895085	A						
MA	1219504	895085	A						
MA	1219510	895090	I						
MA	1219510	895090	I						
MA	1666305	895187	I						
MA	1219510	895253	I						

Billing Address Line 3	Billing Address Line 4	Billing City	Billing State	Billing Zip	From Date	To Date	Activity Date	Meter Route
		HERMITAGE	PA	16148	21-JAN-13		21-JAN-13	6513
		MASURY	OH	44438	08-OCT-09	20-JAN-13	21-JAN-13	6513
		MASURY	OH	44438	23-JAN-13		22-JAN-13	6513
		MASURY	OH	44438	27-JUL-01	22-JAN-13	22-JAN-13	6513
		BROOKFIELD	OH	44438	01-JAN-65	19-FEB-13	19-FEB-13	6513
		HUBBARD	OH	44438	20-FEB-13		19-FEB-13	6513
		MASURY	OH	44438	05-NOV-12	22-JAN-13	22-JAN-13	6513
		MASURY	OH	44438	24-JAN-13		22-JAN-13	6513
		LOWELLVILLE	OH	44436	29-JAN-13		29-JAN-13	6513
		MASURY	OH	44438	05-NOV-12	22-JAN-13	22-JAN-13	6513

Exhibit B

Cost Schedule

Cost per month per meter read per Dual Account

Year 1 to and including Year 4	\$0.30
Year 5 to and including Year 9	\$0.50
Year 10 to the end of the Agreement ¹	\$0.60

Cost per new, transferred or terminated Dual Account

Year 1 to and including Year 9	\$10.00
Year 10 to the end of the Agreement ¹	\$20.00

¹ Starting in the tenth year of the Agreement, the City reserves the right to adjust the charges listed in this Cost Schedule annually based on the *Consumer Price Index for All Urban Consumers, United States City Average, All Items*, starting with the data from the tenth year of this Agreement.

Q 8.19. Please state Petitioner's cost to serve Fort Wayne and provide any detailed calculations performed to determine this cost.

Response: Aqua Indiana objects to the Request on the grounds that it is vague and potentially confusing. The key phrase "cost to serve" is not defined and is otherwise unclear. Subject to its objection, Aqua Indiana would state that Aqua does know what a fully-allocated cost of service study would show the cost to serve Fort Wayne under the Water Pollution Treatment Contract would be since none was performed. Also, see response to Q. 8.20

Witness: Bobby D. Estep

Cause No. 44503
Joint Petitioners Exhibit TMB-3
Financial Analysis of Wholesale Wastewater Treatment Contract with Fort Wayne

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Estimated Incremental Income										
Gallons to be treated	547,500,000	547,500,000	547,500,000	547,500,000	547,500,000	547,500,000	547,500,000	547,500,000	547,500,000	547,500,000
Rate per thousand gallons	\$ 2.75	\$ 2.75	\$ 2.75	\$ 2.75	\$ 2.75	\$ 2.81	\$ 2.86	\$ 2.92	\$ 2.98	\$ 3.04
Total estimated incremental income	\$ 1,505,625	\$ 1,505,625	\$ 1,505,625	\$ 1,505,625	\$ 1,505,625	\$ 1,535,738	\$ 1,566,452	\$ 1,597,781	\$ 1,629,737	\$ 1,662,332
Estimated Incremental Expense										
O&M	233,484	238,153	242,916	247,775	252,730	257,785	262,941	268,199	273,563	279,035
Other taxes	81,401	70,629	69,552	69,552	69,552	69,552	69,552	69,552	69,552	69,552
Depreciation	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000
Subtotal	488,884	482,782	486,468	491,326	496,282	501,337	506,492	511,751	517,115	522,586
Estimated incremental income before interest and income taxes	1,016,741	1,022,843	1,019,157	1,014,299	1,009,343	1,034,401	1,059,960	1,086,030	1,112,622	1,139,745
Interest expense	217,500	217,500	217,500	217,500	217,500	217,500	217,500	217,500	217,500	217,500
Income before taxes	799,241	805,343	801,657	796,799	791,843	816,901	842,460	868,530	895,122	922,245
Income taxes at effective rate	317,398	317,204	314,450	312,544	310,600	320,429	330,455	340,681	351,112	361,751
Total estimated incremental expenses	1,023,783	1,017,487	1,018,418	1,021,371	1,024,382	1,039,266	1,054,447	1,069,932	1,085,727	1,101,837
Estimated Net Incremental Income	481,842	488,138	487,207	484,254	481,243	496,472	512,005	527,849	544,010	560,495

Assumptions:

- 1) Rates charged for treatment are increased by an estimated CPI adjustment of 2% each year for years 6 through 10.
- 2) Estimated incremental O&M costs are increased by an estimated inflationary rate of 2% each year.

Joint Petitioner's Exh.
TMB-3

Q 4.25. Please provide a copy of the Homestead Road Regional Lift Station Master Plan referenced in the list of Plant Asset Additions in Attachment B to the Direct Testimony of Thomas M. Bruns.

Response: Aqua has not located the document referred to in the Request. It will, however, be continuing its efforts to locate a copy. Upon securing a copy, Aqua will supplement its response to this Request and provide a copy of the requested document to the OUCC. Aqua also wishes to state that the referenced document is more accurately referred to as a "feasibility study," not a master plan.

Person providing Response: Jeffery W. Gard

Q 8.21. Please state how much of the estimated \$1.7 million cost for the new office building is for the land on which the building will be placed.

Response: The cost of the land on which the building is placed is \$ 290,109.41

Witness: Bobby D. Estep

The “imminent use” criterion is most clearly demonstrated where the subject PHFU is actually in service before the rate order or will be in the immediate future. On the other hand, the “definite plan for use” criterion is usually more difficult to prove, since the time frame generally extends further into the future. An important question raised in this respect is what period into the future constitutes a definite plan. While there is no clear-cut trend in this area, several commissions allowing PHFU in the rate base under the definite plan criterion have used three years as an upper limit for a definite plan.²¹

In addition to the general criteria described above, some regulatory authorities consider other factors before allowing PHFU in the rate base. The various circumstances sometimes resulting in rate base treatment include:

- (1) *Environmental factors*— Environmental restrictions (safety, aesthetics, etc.) on site locations for new construction have sometimes required utilities to purchase several potential land sites well in advance. The extended time frame is necessary in order to perform required environmental studies and to obtain the required regulatory approvals, with the purchase of several potential sites considered necessary to reduce the possibility that no site will be available due to a failure to pass environmental tests. In these situations, commissions sometimes extend the time frame of the definite plan and allow the various land purchases in the rate base as prudent purchases under the circumstances. When allowed in the rate base, any gains on the subsequent sales of alternative sites may be passed on to the ratepayers, while any transfers to nonutility operations are closely scrutinized as to their ultimate disposition.
- (2) *Economic factors*— Overall economic conditions or specific conditions in the area where a utility operates may make it prudent to invest in land in order to secure future plant sites. This may well be the case where land is extremely scarce (especially for urban utilities) and/or when the price of real estate is steadily increasing. Under these situations, some commissions deem these land purchases as good management decisions for the benefit of ratepayers and thus allow rate base treatment. Again, the treatment of gain or loss from any subsequent sale or transfer of the property may take into consideration whether ratepayers have previously paid a return on these investments.

Many state commissions have policies allowing certain portions of PHFU in the rate base under various circumstances. In addition, both the FCC and the FERC allow certain plant held for future use in the rate base.

[7] Customer Advances for Construction/Contributions in Aid of Construction

Customer advances for construction are distinguished from contributions in aid of

²¹ Re Northwestern Bell Tel Co, 3 PUR4th 486 (SD 1974); Re Florida Power and Light, 9 PUR4th 146 (Fla 1975); Re Pacific Tel and Tel Co, 58 PUR3d 229 (Cal 1965).

construction in that the former involves a recorded liability representing the obligation to eventually return the funds advanced. Little controversy exists over the fact that the liability associated with customer advances should be deducted from the rate base. The utility plant constructed with these funds is not financed with debt or equity; ratepayers should not, therefore, be obligated to pay a return on these plant investments.

A question does arise regarding appropriate ratemaking treatment if the utility pays interest on customer advances. Two basic options are available, both of which provide for appropriate consideration of the interest costs. First, customer advances can be treated similar to any other form of debt financing. In this case, the liability associated with these advances is included in the capital structure for purposes of computing the rate of return allowed on the rate base, and no reduction from the rate base is made for the customer advances liability balance. The other option is to continue to reduce the rate base for customer advances while treating the interest expense associated with these borrowings as a component of cost of service.

Ratemaking treatment for contributions in aid of construction is a different situation, because no obligation exists for the utility either to repay any funds received or to reimburse parties donating physical property. The general rule is that any such contributions should be excluded from the rate base, since the related plant investment has not been financed by the utility, and customers should not therefore be required to pay a return on the plant. The actual process of reducing the rate base for these contributions varies from one regulatory jurisdiction to another. The FERC and most state commissions now require utilities to reduce initially the plant account balances to which contributions from customers relate by the actual amount of the contribution. On the other hand, many water and wastewater utilities follow the practice (formerly followed by most utilities) of recording a contribution in aid of construction "liability" when the contribution is first received. In this case, all plant (including that constructed with contributions) is included in the rate base which in turn is generally reduced by the contribution's "liability."

Where utilities still record a contribution's liability, the question is raised regarding ratemaking treatment of depreciation expense associated with plant supported by contributions. In these situations, the ruling factor appears to be the regulatory commission's view as to the appropriate role of depreciation accounting in utility ratemaking—whether the purpose of depreciation is to provide funds for the eventual replacement of plant used by customers or whether depreciation is designed simply to enable a utility to recoup its investment in plant over the period in which it provides customers with service. Those jurisdictions that take the former view are much more likely to allow depreciation on contributed plant as an operating expense. Here, the fact that the utility did not make an investment in the plant is basically viewed as irrelevant. The utility must eventually replace this plant which customers are using, and the ratepayers are therefore obligated to provide funds for this replacement. Those jurisdictions taking the latter view clearly see no reason to allow depreciation as a component of cost of service, since the utility has no investment to recoup for plant contributed by others.

If cost of service treatment is allowed for depreciation of contributed plant, it is

generally accomplished by depreciating gross plant with no amortization of the contribution-related liability. In effect, contributions are treated as permanent capital contributed by customers. Where cost of service treatment is not allowed for this depreciation, the accounting generally involves depreciation of gross plant with an offsetting amortization of the contribution's liability to operating revenues.

[8] Operating Reserves

In some situations, regulatory commissions allow annual operating expense provisions for the purpose of creating "reserves" for either future extraordinary loss contingencies or significant future expenditures that can be anticipated to occur but for which actual future amounts can only be estimated. When actual losses or expenditures are experienced, they are applied against available reserves to the extent possible. The purpose of creating these reserves is basically twofold:

- (1) In the case of extraordinary loss contingencies, operating reserves avoid placing the entire burden of the loss on rate payers at the time of occurrence (or placing the burden on future ratepayers).
- (2) In the case of significant known future expenditures, reserves represent an attempt to require customers to pay all costs associated with providing their current service, a portion of which will not actually be incurred by the utility until some time in the future.

A good example of operating reserves for use against extraordinary loss contingencies relates to the casualty losses incurred by electric utilities as a result of significant unexpected storm damage to transmission and distribution plant. Reserves in connection with known future expenditures have been less commonplace until the recent advent of nuclear power plants. In this case, two interrelated types of future expenditures have received considerable attention in recent years—nuclear plant decommissioning costs and the costs of handling and storing spent nuclear fuel. In the case of future costs for decommissioning nuclear power plants, the current expense provisions in some instances have been included as a component of depreciation expense, and the reserve has been included as a part of the accumulated depreciation reserve. In these instances, decommissioning costs have been treated in the same manner as traditional costs of removal. On the other hand, extremely large reserves have sometimes been associated with the current provisions for future costs of handling and storing spent nuclear fuel. As nuclear fuel is amortized, its net cost balance may, in fact, become a credit balance. For this reason, the provisions and related reserves for spent fuel often have been segregated from the nuclear fuel and the accumulated amortization accounts.

When expense provisions required to create reserves are allowed in cost of service, the ratepayer is supplying funds to the utility in advance of actual need. The funds so supplied are generally available to the utility for supporting its rate base investment. Thus, the accumulated reserves are deducted from the rate base to avoid customers paying a return on funds they have supplied. In a few cases, the reserves may be funded by the utility with the money set aside for payment of the future expenditures. Under these circumstances, the utility does not have access to the funds for general

FINANCING AND CHARGES FOR WASTEWATER SYSTEMS

WEF Manual of Practice No. 27

*Prepared by
Financing and Charges for Wastewater Systems Task Force
of the Water Environment Federation*

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Under the Direction of the Municipal Subcommittee of the Technical Practice Committee

2004

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Chapter 10

System Development Charges

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INTRODUCTION

A well-conceived financial plan is critical to ensuring that a wastewater utility is adequately prepared for ongoing system operation and replacement requirements, and for future capacity expansion needs. Such a plan should consider the full array of capital funding alternatives available to the utility, as discussed in Chapter 4. One

Financing and Charges for Wastewater Systems

possible funding source for capital projects is system development charges (SDCs) (also referred to as development fees, impact fees, or capital recovery fees). System development charge proceeds are typically used to pay for capital projects related to growth. Application of these fees assists the utility in implementing a "growth pays for growth" policy.

System development charges have been used since the 1920s, as evidenced by the U.S. Department of Commerce's Standard Planning Enabling Act, enacted in 1922. Capital projects required to meet the demands of growth are often a burden on existing wastewater ratepayers. Through the use of SDCs, costs associated with growth may largely be shifted to the new customers and away from the existing wastewater customers over time. Typically, SDCs are used to pay for backbone wastewater facilities, including treatment plants, collector mains, interceptor mains, outfall sewers, and lift stations. These fees are one-time charges to customers when they connect to the system or by developers as part of the permitting or planning process. Other growth-related charges, including service connection and hook-up fees, acreage fees, and main extension charges, are associated with service to a particular customer, development, or service area.

A great deal of planning needs to take place before the implementation of legally defensible fees. Planning begins with a Capital Planning Process, as noted in Chapter 4, Table 4.1, that determines existing and future system capacity needs and the specific capital projects required to meet those needs. It takes knowledge, time, and effort to create legally sound and politically stable fee programs. Typical actions required by a utility to implement system development charges include the following:

- Determine that the local government has authority to establish such fees by statute or otherwise.
- Adopt a Facility Plan, Master Plan, or other Capital Improvement Plan that projects growth in the service area, identifies the projects or portion of projects required for serving growth, and identifies the anticipated funding source for each project.
- Develop a fee structure or method that is consistent with legal guidelines.
- Monitor programs to ensure that revenues benefit the intended growth area.

This chapter will detail the steps involved in developing and implementing SDCs. It will also discuss the legal guidelines that contributed to the development of

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standards in formulating and implementing SDCs, various methodologies and concepts, and implementation issues, including the application of revenues.

PLANNING AND LEGAL REQUIREMENTS

Local governments across the country have varying policies in relation to growth. At one extreme are communities actively pursuing economic development, while others seek to limit or control further growth and development. Although SDCs should not be used as a disincentive for growth, this type of fee is an important tool in ensuring adequate infrastructure to serve growth.

PLANNING. Utilities facing minimal growth may require only minor modifications to the wastewater system for each additional customer. However, other utilities experiencing rapid growth may require significant capital projects to serve planned development. In the latter case, it is particularly important that the utility adopt a capital improvement plan (often part of a master plan or other system infrastructure plan) that includes the following:

- Projected development throughout the planning period;
- Distribution of growth throughout the service area;
- Capacity requirements of growth, in terms of flows and loadings;
- Existing system loadings and facility capacities;
- List of planned capital improvements to address various needs (replacement, rehabilitation, expansion, etc.); and
- Estimated time frame for completion of capital improvements.

Capital planning may be explicitly addressed in master plans or be separate from such plans. Capital improvement plans may address the need for creating new wastewater facility capacity and needed improvements to existing facilities to meet designated service demands or regulatory requirements. The capital improvement plan used to develop the SDCs should identify the costs of the growth-related facilities separate from the improvement and regulatory-related facilities costs for existing customers.

Projected capacity requirements are based on growth assumptions applied to area maps and land-use assumptions such as residential, multifamily, commercial, or

Financing and Charges for Wastewater Systems

industrial uses. New capacity requirements can also be based on existing development in the area to be served. Once land-use requirements are categorized and the needs of existing development have been estimated, the utility can assess additional capacity requirements. Further, the capital improvement plan should forecast timing of development, enabling sizing and timing of wastewater facilities. Table 10.1 provides examples of improvements required to serve growth.

The use of engineers who specialize in utility master planning is important in the development of detailed capital projects, schedules, cost estimates, and project prioritization. Once a plan has been developed by the utility, it may be advantageous to create a public forum such as citizen committees to provide comments on capital improvement program priorities and alternatives. Because growth-related projects can place a financial burden on existing customers (if fully funded through user rates), utilities often look for other means of funding these projects through direct charges to the benefiting users.

LEGAL GUIDELINES. Before implementing SDCs, the utility should develop its philosophy and capital improvement plan for further development and maintenance of its infrastructure. It should also review pertinent legislation, state statutes, local municipal codes, and judicial rulings related to SDCs. Utilities need to be aware of the legislative authority within the state in which they operate in developing such fees. Authority for charging SDCs generally comes from the following: (1) specific enabling legislation; (2) general home-rule powers, which provide local governments the authority to establish fees and charges for local government facilities; (3) broad police power to protect general health, safety, and welfare of the community through provision of services; and (4) utility rate-setting authority. Laws regarding SDCs can often be vague, and misapplication of concepts and approaches can lead to legal chal-

TABLE 10.1 Examples of growth facilities.

Sewer mains in growth area
Additional lift stations, pumping stations, and force mains
Additional treatment plants or increase in capacity at existing plant
Additional reclamation plants or increases in capacity at existing plant
Residuals processing and outfall sewers
Oversizing of a facility or sewer main

lenges. Utilities being considered

Legal guidelines for government to address SDC standards for established become an accepted SDC statutes in jurisdictions other jurisdictions in courts over a sample of national

Right of Local governments have the authority to develop that authority (1997). Opponents of state statute. To regulate the use while others have

Regulation v the basis that it is not totally, acceptable rationale that facility. System is distinguishable from ties and are pr

Banberry Fa court cases in *v. South Jordan* establishing d costs to be borne by existing pr must consider

enges. Utilities should seek competent legal advice, especially when new SDCs are being considered for implementation.

Legal guidelines, dating back to the early 1900s, established the rights of local government to regulate growth. The phenomenon of SDCs as applied in local communities derived from these rights. Over the past 20 years, various courts have addressed SDCs and, in that process, have established various guidelines and standards for establishing such charges. System development charges have increasingly become an accepted revenue source in supporting growth in urban areas. Although SDC statutes and judicial findings are state-specific, leading case law from other jurisdictions can also provide relevant guidelines, as many courts draw on rulings in other jurisdictions, leading to consistency nationwide. General guidelines developed in courts over the last century are described below, and Appendix B provides a sample of nationwide case law covering SDCs.

Right of Local Governments to Regulate Development. State and local governments have the right through the Tenth Amendment of the Constitution to regulate land development. The power of regulation rests with states that generally elect to delegate that authority to local governments for purposes of guiding land developments (Porter, 1997). Opponents of SDCs often have argued that these fees were not authorized by state statute. To address this issue, many states have adopted legislation officially authorizing the use of SDCs. Some of these statutes authorize very specific uses of SDCs, while others have adopted more general authorizing statutes (Nicholas et al., 1991).

Regulation versus Taxation. In the past, SDCs have repeatedly been challenged on the basis that they constitute taxes rather than fees for service. It is now generally, but not totally, accepted that SDCs are user charges rather than taxes. This is based on the rationale that the fee is voluntary and benefits the paying entity based on use of the facility. System development charges for new wastewater users are thus fees distinguishable from taxes as they are related to cost of construction and use of the facilities and are proportionately charged to users who benefit from facilities.

Banberry Factors (Standards of Reasonableness). One of the most influential court cases in the history of development fees was *Banberry Development Corporation v. South Jordan City* (Utah, 1981). In this case, the Utah Supreme Court held that in establishing development fees, local governments must consider the share of capital costs to be borne by newly developed properties relative to the costs already borne by existing properties. Specifically, the court identified seven factors that an entity must consider

Financing and Charges for Wastewater Systems

- (1) Cost of existing capital facilities;
- (2) The manner of financing existing capital facilities;
- (3) The relative extent to which the newly developed properties and other properties in the municipality have already contributed to the cost of existing capital facilities;
- (4) The relative extent to which newly developed properties and other properties in the municipality will contribute to cost of existing capital facilities in the future;
- (5) The extent to which newly developed properties are entitled to a credit because the municipality is requiring their developers or owners to provide common facilities that have been provided by the municipality and financed through general taxation or other means in other parts of the municipality;
- (6) Extraordinary costs, if any, in servicing the newly developed properties; and
- (7) The time-price differential inherent in fair comparisons of amounts paid at different times (Utah, 1981).

Banberry established procedural and substantive guidelines for cases where SDCs are challenged as well as providing guidance for policy makers in establishing an equitable program.

Rational Nexus. *Rational nexus* is the concept that there needs to be a reasonable connection between the following:

- The new development that will pay the fees and the need for facilities,
- Growth needs and levels of cost to meet that need compared to the cost to serve others,
- Identified costs and the fee level,
- Identified costs and the amount of revenue generated by the fee, and
- The cost to the utility of new development and the amount of the fee collected.

This test is referenced in many court cases and provides the guidelines found in state statutes for SDCs.

Good Faith Intent. In 1997, Arizona courts found that a municipality needs only to develop a plan that shows a "good faith" intent to use SDCs to provide growth-related services within a reasonable time. This case suggests the SDC programs are not required to be precise, but do have to be formulated based on sensible planning.

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SYSTEM DEVELOPMENT CHARGE CALCULATION

In calculating SDCs, a utility needs to select a fee structure and develop a fee schedule based on selected units of service. Methodological approaches should be evaluated and selected with careful consideration of state regulations, data availability, and local growth policies. Ultimately, there are several principles the utility needs to satisfy in developing the methodology, which are listed below

- Fee is proportionate to proposed impact,
- Fee proceeds are used to provide infrastructure serving the growth area (which may be the entire service area),
- Fee methodology is uniform and consistent,
- Other sources of funding are considered for capital improvements, and
- Fee includes only eligible growth-related costs.

Specific approaches to developing the fee structure and schedule are discussed below.

FEE STRUCTURE. There are three broadly recognized structures of system development charges (Galardi et al., 2004)

- (1) System buy-in approach. Based on existing facilities.
- (2) Marginal or incremental approach. Based on the projection of capacity-enhancing system improvements.
- (3) Combined approach. Considers both existing and planned future facilities.

Each option is discussed in more detail below. It is important to determine the underlying philosophy before adopting a specific methodology and to check applicable state statutes and case laws for permissible methodologies.

Buy-In Approach. Under this approach, new customers are required to "buy-in" to existing system facilities, generally at a rate that reflects the prior investment of existing customers per unit of total capacity (capacity buy-in). A buy-in type approach is fairly easy to administer and is most appropriate where current system facilities have adequate capacity to serve both existing and future customers, the forecast of future system investment is minimal, and where existing facilities are not scheduled for replacement in the near future (AWWA, 2000).

The rationale behind the capacity buy-in approach is that new customers should be charged for existing available capacity at a rate consistent with the average value of available capacity of the existing system (see following subsection System Valuation for considerations related to establishing appropriate system value—the numerator of the buy-in fee equation). To the extent that there is sufficient available capacity in the existing system to serve growth, the capacity buy-in approach is generally a reasonable basis for determining growth-related costs. However, if the existing system has little available capacity, and the cost of providing new capacity (on a per-unit basis) is higher than the existing facilities (because of higher standards and fewer grants, for example), then a capacity buy-in approach may not generate sufficient revenues to fully fund the total capacity needs of growth.

A less common approach to a buy-in structure is the “equity” buy-in approach. The equity buy-in approach differs from the capacity buy-in approach in terms of the denominator of the unit cost calculation. The denominator in the equity buy-in approach is the existing used capacity in the system. In contrast, the denominator of the capacity buy-in approach is the total existing system capacity. To the extent that there is capacity available in the existing system (meaning total capacity is greater than the existing used capacity), the capacity buy-in approach will yield a smaller unit cost and SDC (all other things being equal) than the equity buy-in approach.

Under the equity buy-in approach, SDCs are designed based on the philosophy that new customers will be assessed a charge at the same equity position as existing customers. A key component in developing equity method SDCs is determining system equity based on a utility’s capital structure. Equity represents the current value of the utility’s capital derived from previous and existing customers and taxpayers who paid user charges, fees, and tax payments to build up wastewater system capacity available to serve growth customers.

The equity buy-in approach will often generate more revenue than the capacity buy-in approach, and may be viewed as more equitable by existing customers who have provided the resources for the utility to invest in capacity. However, this approach may not be consistent with legal requirements in all states. This is particularly true where the methodology must demonstrate consideration of growth-specific capacity requirements and associated costs. The equity buy-in approach may overstate the cost of capacity, particularly when there is substantial excess capacity in the system.

SYSTEM VALUATION methodology is the following:

- Original
- Net book value
- Replacement cost in current dollars
- Replacement cost in current dollars

The valuation objective of the accumulated depreciation on constructed assets includes the following:

- Outstanding
- Contributions
- Grants, etc.
- Ad valorem
- Interest

Again, in determining value consistent with the cost of service from the development of wastewater systems to avoid double-funded facilities. The credit is given in allocations toward

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SYSTEM VALUATION. A key methodological decision under a buy-in fee methodology is how to value the utility's system assets. Valuation approaches include the following:

- Original cost. The nominal dollar value paid at the time of construction.
- Net book value. Original cost less accumulated depreciation.
- Replacement cost less depreciation. Original cost less accumulated depreciation further adjusted to reflect the cost of reproducing or replacing the system in current dollars.
- Replacement costs. Original cost adjusted to reflect replacing the system in current dollars.

The valuation method selected depends on the individual system and the objective of the utility managers. For example, it may be appropriate not to subtract accumulated depreciation from the original costs in instances when a utility has constructed a larger facility to accommodate future growth to benefit from economies of scale. Other factors that need to be considered in system valuation include the following:

- Outstanding long-term debt,
- Contributions in aid of construction,
- Grants,
- Ad valorem tax payments, and
- Interest.

Again, knowledge of relevant enabling legislation and case law is helpful in determining which of the above factors may be legally required versus simply consistent with equity objectives. Outstanding debt principal is generally excluded from the development of the buy-in fee valuation to avoid double-charging new customers—first, through SDCs, and again, through general rates and charges for wastewater service, that are used to retire the debt. However, another approach to avoid double-charging new development for debt principal costs is to include debt-funded facilities in the valuation, but to then provide a credit or offset to the SDC. The credit is generally equal to the estimated present value of future rate contributions toward the debt principal. This latter approach is significantly more complex,

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as it requires a multiyear cash flow analysis to estimate the future contributions of new customers through rates or other charges, and ongoing administration of the credit system. However, a credit approach may address potential equity issues among new development as a whole, as the level of credit is often tied to when a development connects to the system.

There are instances when a developer will contribute capital for wastewater facilities. This allows the developer to plan the development area without the financial and construction constraints of the utility. Therefore, if a growth-related project is funded with contributions from developers or other sources of funding, like grants, the corresponding amounts are generally excluded from the fee calculation to avoid double recovery of costs. For debt-funded facilities, existing customers have borne interest costs, in addition to repaying a portion of principal costs. Therefore, interest expense may also be considered when valuing the system for purposes of calculating buy-in fees.

Table 10.2 illustrates determination of system value under a buy-in approach. In the example provided, assets are valued based on the net book value (original cost less depreciation) approach, and deductions include outstanding debt principal, federal funding, and developer contributions.

CAPACITY DETERMINATION. The next component in calculating system development charges under a buy-in approach is the determination of system capacity. The appropriate capacity measure under the capacity buy-in method is *total system capacity (as opposed to used capacity for the equity buy-in approach)*. In either case, capacity may be stated in terms of hydraulic or loading capacity, or in terms of equivalent units served. Equivalent units are the number of units in the system of varying size expressed in terms of a common unit (typically a residential dwelling). In this case, multifamily, commercial, and industrial facilities are assigned multiple equivalent units in proportion to their total contribution to capacity, relative to that of a single-family-dwelling unit.

Total system capacity is generally determined based on facility sizing criteria and wastewater permit requirements. Existing used capacity can be determined from wastewater plant records and billing data. The systemwide unit cost is calculated by dividing the system valuation by the selected capacity measure. Table 10.3 shows these sample calculations under the capacity buy-in approach.

TABLE 10.2 Exa

Treatment plant
Pumps & lift stat
Collection system
Residual process
Existing system v
Less (offsets)
Debt service (c
Federal fundin
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System valuation

TABLE 10.3 Exa

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TABLE 10.2 Example of system valuation.

	Net book value
Treatment plant	\$93,533,000
Pumps & lift stations	\$4,092,000
Collection system	\$79,723,000
Residual processing	\$3,986,000
Existing system value	\$181,334,000
Less (offsets)	
Debt service (outstanding principal)	(\$40,000,000)
Federal funding (grants)	(\$1,000,000)
Contributions	(42,630,000)
System valuation for buy-in fee	\$97,704,000

TABLE 10.3 Example of capacity buy-in method.

Existing system valuation	\$97,704,000
Total capacity in equivalent units	170,000
Average cost per unit	\$575

Marginal or Incremental Approach. The marginal or incremental approach is based on the principle that new system users should be responsible for the cost of the latest or next increments of capacity that they cause to be constructed. This fee recovers growth's share of planned additions to the system. A utility generally relies on its capital improvement plan to estimate cost and capacities of growth-related projects. The capacity resulting from the additional facilities will be used in the fee calculation. Selecting the appropriate capacity can be determined by (1) using total new treatment plant capacity or (2) capacity of new projects weighted by individual project costs (Corssmit, 2002). System development charges may be phased in as development in a growth area progresses and capacity use increases by using marginal pricing.

Utilities need to avoid including overlapping cost in both the SDCs and in wastewater user charges used in the area of capital financing. As in the buy-in approach,

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capital contributions and grants for additional facilities should not be included in the calculation of the fee. The objective of the marginal method is that system expansion needed to serve new development can be accomplished with limited impact to existing wastewater user rates. This method is appropriate when all or a very significant portion of the wastewater capital improvement program serves growth and available facilities cannot accommodate growth.

Table 10.4 provides an illustration of a marginal or incremental approach. In this case, individual projects are analyzed to determine the portion of costs associated with system expansion and capacity, versus rehabilitation or replacement.

Combined Fee Approach. Increasingly, in response to the stated goal to charge new customers for the full cost of growth, and thereby avoid the subsidization of new customers by existing customers, many state laws allow utilities to implement a combined fee approach. This approach is rapidly gaining favor in many jurisdictions. It generally applies when the current system facilities could serve future customers and a portion of the wastewater capital improvement program is also related to growth. The combined fee approach includes two separate elements

- (1) System reimbursement component. Includes a portion for new customer to pay for an equitable share of existing facilities.
- (2) Incremental new capacity component (also referred to as growth-related improvement component). Includes future facilities that will be constructed to accommodate growth.

This approach is generally the most technically rigorous of the system development charge calculation approaches. It involves explicit determination of *available*

TABLE 10.4 Example of marginal or incremental approach.

Capital improvement plan	Growth costs
Treatment plant improvements (60% capacity)	\$4,000,000
Pipe replacement (0% capacity)	\$0
New pump station (100% capacity)	\$1,000,000
Cost-of-growth related projects	\$5,000,000
Total new system equivalent units	10,000
Unit cost per unit	\$500

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capacity value in the existing system, and apportionment of future capital costs between existing users and new development. The reimbursement fee component is determined by dividing the value of available capacity in the existing system by the estimated growth units during the planning period. The improvement fee component is determined by dividing the value of future capacity-increasing costs by the estimated growth units. So, unlike the marginal or incremental approach described previously, that only recovers the future capacity costs related to growth, the combined approach also recovers the costs of available capacity of the existing system.

Some states, such as Oregon, explicitly allow for use of a combined fee methodology. Other states have case law that supports this approach. For example, a 2001 Colorado Supreme Court decision found that a SDC methodology including a reimbursement component and a growth-related improvement component was justifiable and defensible. A defensible method requires rational policy, application of appropriate laws, collection and analysis of relevant data, sound asset valuation, and cost-allocation methodology. The Colorado ruling has since been adopted by several other states, and its implications may be useful to utilities elsewhere (Corssmit, 2002).

FEE SCHEDULE. The fee structure is the mechanism for determining the costs to be recovered from new development as a whole. Of equal concern to local governments and the development community alike is how the fees are then assessed to different types, sizes, and location of development. The applicable SDC for a specific development is determined by multiplying the system-wide unit cost (as defined by one of the methods described above) by the estimated capacity requirements (Galardi et al., 2004).

Scaling Measures. At the very least, the fee schedule generally provides one or more scaling measures for assessment of development fees to different types and sizes of developments. The use of scaling measures in calculating development fees is designed to ensure that customers who are larger, or use infrastructure systems more intensively, pay the associated costs of capacity required to serve them. There are several measures used in the wastewater industry to represent use of capacity.

- Wastewater demand measured or estimated by appropriate flow and strength parameters,
- New plumbing fixtures,
- Dwelling unit count,

- Square footage, and
- Meter size.

In developing or choosing a scaling measure for wastewater SDCs, the choice of an indicator must be easy to explain to the public, defensible in courts, and must have data supporting how the measure was derived. Estimated wastewater demand measured by appropriate flow and strength parameters is, in theory, the most equitable indicator; however, it can be difficult to develop and administer. The most common indicators used in wastewater to represent capacity use are new plumbing fixtures and meter size because of simplicity, ease of understanding, and ease in fee administration. An example of a SDC schedule based on meter size and the unit cost of capacity from Table 10.4 is illustrated in Table 10.5.

The utility should assess which indicator best apportions capacity cost to customers based on land use and characteristics of the service area. For example, one multifamily unit typically requires less wastewater treatment capacity, measured on either average annual or peak use, than one single family residential unit because it serves, on average, fewer people per unit and, therefore, is generally assigned a lower cost per unit. However, multifamily units could be assigned a higher value based on the class service characteristics of the community. In one instance, a utility, located in a ski resort community, found that the peak season number of occupants in multifamily rental units were typically higher than the single-family residential unit (Corssmit, 2002). When peak demands are significant in the determination of infrastructure costs, peaking demands at wastewater collection systems and treatment plants should be considered in the development of fee schedules for various types of developments.

A utility may choose to determine specific capacity requirements to reflect a customer with more extreme uses or potential demands. For example, if a large industrial facility is to locate in the service area, the facility size, capacity requirements or number of fixtures could be used to establish the fee specifically for that facility. For example, a large airport in a cold climate requiring deicing facilities may impose significant biochemical oxygen demand (BOD) loads on the system's treatment capacity. Consequently, the utility may choose to compute the total BOD capacity cost for the new user because the BOD capacity cost is substantially higher than the average system strength. Such exception-type users are recognized in various wastewater

TABLE 10.5

Meter size, mm (in.)
15.9 (5/8)
25.4 (1.0)
38.1 (1.5)
50.8 (2.0)
76.2 (3.0)
101.6 (4.0)
152.4 (6.0)
203.2 (8.0)

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TABLE 10.5 Example of system development charge schedule.

Meter size, mm (in.)	Meter capacity, m ³ /d (gal/min)	Capacity ratio	System development charge
15.9 (5/8)	109 (20)	1.0	\$500
25.4 (1.0)	273 (50)	2.5	\$1,250
38.1 (1.5)	545 (100)	5.0	\$2,500
50.8 (2.0)	872 (160)	8.0	\$4,000
76.2 (3.0)	1744 (320)	16.0	\$8,000
101.6 (4.0)	2726 (500)	25.0	\$12,500
152.4 (6.0)	5451 (1000)	50.0	\$25,000
203.2 (8.0)	8722 (1600)	80.0	\$40,000

utilities. Utilities, in accordance with state laws and regulations, should reserve the option to deal with extreme customers appropriately.

Geographic Area. Fee schedules may also consider the location of the development in computing fees. Location factors may be technically based—in cases where certain geographic areas exhibit unique costs or service characteristics. In this case, it is important that the fee structure calculate separate unit costs for the fee areas, based on the individual area costs and growth requirements. Geographically differentiated fee schedules may also reflect policy objectives, for example, in the case of downtown revitalization incentives.

LOCAL ON-SITE FACILITIES CHARGES APPROACHES

In addition and separate from SDCs, there are a variety of local on-site facility charges that utilities implement to recover the cost of capital improvements not recovered through SDCs or user charges. These on-site charges are related to development; specifically, to the actual cost for connection to the systems including mains, taps, and engineering cost. The following describe several fees:

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- Front foot benefit charges. Impact fees based on the lineal footage of property bordering on a facility such as a street or sewer line. Front footage fees may be valid for reimbursement of previous construction but are not appropriate for SDCs. The most defensible use is to recover the cost of the main serving the premises.
- Service connection and hook-up fees. Cost of the service installation including labor, equipment, and materials. These fees are paid by contractors for the installation of a new service line, main tap, and, if applicable, meters.
- Acreage fees. Fee for connection to the wastewater system calculated on a per-gross-acre basis for property serviced by the connection.
- Main extension charges. Designed to recover costs associated with installing sewer main extension, including engineering and applicable overhead expenses.
- Engineering plans and review fees. Administrative fees that include cost to review and develop plans for sewer connections.

PROGRAM EVALUATION

The last step in implementing SDCs is to monitor and manage the fee program. A utility may either use SDCs to fund capital expenditures or reimburse itself for any growth-related expenditure where working capital or debt is the funding source used, so long as the utility's intentions to do so are established before initiating such expenditures. Revenues from the SDCs are typically collected when permits are issued, which happens as the growth takes place. To meet such growth-capacity requirements, however, capital facilities are generally in place and funds already spent by the time such charges are collected. The timing of collection involves potentially conflicting issues, because the utility needs to collect the SDC early enough to make funds available for system improvements. However, the utility can accurately assess the SDCs only later in the development process when the actual meter size, usage, or number of fixture units is known. To address timing issues, utilities typically use bond proceeds to fund large capital projects. The debt service payments on these bonds are typically recovered through the wastewater rates and, in some cases, SDCs. The level of and repayment means for outstanding debt needs to be consid-

ered in the calculation of charging new customers.

Another recommendation is to meet legal requirements. To ensure SDCs should be properly levied and collected and intended project improvements funded, related projects, SDCs and interest

The fee established to determine improvement plan related projects. change in the utility

The utility should continuously work with customers. charges can be growth, if they established legal stan-

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ered in the calculation and development of the SDCs to avoid potentially double charging new customers.

Another requirement in monitoring revenues is to ensure that practices are meeting legal requirements. Segregated funds are generally required by many jurisdictions. To ensure that revenues are applied to intended projects, revenue from the SDCs should be placed in a segregated fund earning interest. Fees are to be assessed and collected and draws on the fund can be made to pay debt service for the intended projects. Interest earnings on a specific fund, such as growth-related improvements fee in the combined approach, need to also be applied to growth related projects. Reliable tracking procedures are essential to ensure revenues from SDCs and interest earnings are used to pay for designated capital projects.

The fee established for specific capital improvements should be reviewed periodically to determine whether an adjustment is required. Similarly, the capital improvement plan and budget should be reviewed periodically to identify growth-related projects. Reviews and updates to SDCs ultimately depend on the degree of change in the utility's capital improvement program.

The utility should also monitor legal activities as they relate to SDCs and continuously work with the public on program administration. System development charges can be an effective tool in ensuring adequate facilities to accommodate growth, if they are based on local growth policy, thorough capital planning, established legal standards, equitable fee calculations, and are continuously monitored.

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Chapter

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AFFIRMATION

I affirm, under the penalties for perjury, that the foregoing representations are true.



Margaret A. Stull

Indiana Office of Utility Consumer Counselor

June 24, 2016

Date

Cause No. 44752
Aqua Indiana, Inc.
Aboite Wastewater Division

CERTIFICATE OF SERVICE

This is to certify that a copy of the foregoing *OUCC's Notice of Filing Written Comments of Members of the Public* has been served upon the following counsel of record in the captioned proceeding by electronic service on June 24, 2016.

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