STATE OF INDIANA

INDIANA UTILITY REGUALTORY COMMISSION

PETITION OF THE CITY OF FORT WAYNE, INDIANA, FOR AUTHORITY TO ISSUE LONG-TERM DEBT TO FINANCE WATER SYSTEM IMPROVEMENTS AND TO ADJUST ITS RATES AND CHARGES FOR WATER SERVICE	))))))	**CAUSE No. 45125**

INTERVENOR CITY OF NEW HAVEN'S EXHIBIT 2
DIRECT TESTIMONY OF WILLIAM STEVEN SEELYE

/S/ R.M. Glennon
Robert M. Glennon
Robert Glennon & Assoc., P.C.
3697 N. Co. Rd. 500 E.
Danville, Indiana 46122
Telephone: (317) 852-2723
Fax: (317) 852-0115
robertglennonlaw@gmail.com

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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is William Steven Seelye. My business address is 6001 Claymont Village Drive, Suite 8, Crestwood, Kentucky 40014.

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

A. I am the managing partner for The Prime Group, LLC, a firm located in Crestwood, Kentucky, providing consulting and educational services in the areas of utility regulatory analysis, revenue requirement support, cost of service, rate design and economic analysis.

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of the City of New Haven, Indiana ("New Haven"). New Haven's municipal water utility purchases its water needs as a wholesale customer from the City of Fort Wayne, Indiana ("Fort Wayne'). The New Haven municipal water utility has been in business since at least 1896 and has been purchasing its water needs from Fort Wayne since 1962. During 2017, New Haven purchased 476,281 CCF of water from Fort Wayne. New Haven is the largest customer and only sale-for-resale customer on Fort Wayne's system.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is (i) to offer comments and my concerns about Fort Wayne's proposed rate increase, and (ii) to present a cost of service analysis that I performed that supports a reduction for New Haven going forward.

Q. Please summarize your testimony.

A. **Inappropriate Phase-Ins**. In this proceeding, Fort Wayne is proposing to increase its rates in five phases for the period 2019 through 2023. Fort Wayne's proposed Phase I rates would become effective upon approval of the Indiana Utility Regulatory Commission ("IURC" or "Commission"). Phase II would go into effect 12 months after Phase I. Phase III would go into effect 12 months after Phase II. Phase IV would go into effect 12 months after Phase III. And Phase V would then go into effect after Phase IV. (See Exhibit A, at page 5, Section 3, of Fort Wayne's Petition in this proceeding.) The proposed revenue requirements for each of the five phases are based on the full recovery of projected costs of replacements and improvements for each year from 2019 through 2023. (See Petitioner's Exhibit 12, Pro Forma Annual Revenue Requirements, at page 19.)

Fort Wayne is therefore proposing rates based on *five years* of *projected* costs of replacements and improvements from 2019 through 2023. Fort Wayne states that in developing its proposed rates a test year of the 12-month period ending December 31, 2017, was used, along with adjustments permitted for changes that are known, fixed and measurable, and to be in effect within 12 months after the test year. Fort Wayne specifically requested the Commission approve that test year ended December 31, 2017 "with adjustments fixed known and measurable and will be in effect within (12) twelve months after the test year." (See Fort Wayne's Petition, at page 2, paragraph 6.) Thereafter, that test year and pro forma fixed known and measurable methodology were approved in this Cause and made binding upon the Parties. This

12-month requirement for fixed, known and measurable changes is clearly not satisfied for the projected capital expenditures that are in included in revenue requirements for Fort Wayne's proposed Phase I, II, III, IV, and V rates.

For its proposed Phase I rates, Fort Wayne is proposing to include costs of *projected* expenditures for planned replacements and improvements in revenue requirements that Fort Wayne anticipates to spend from 13 to 24 months beyond the end of the proposed test year. Fort Wayne's Phase II revenue requirements would include the same type of projected costs that would occur 25 to 36 months beyond the end of the test year. Phase III revenue requirements would include projected costs that would occur 37 to 48 months beyond the end of the test year. Phase IV revenue requirements would include projected costs that would occur 49 to 60 months beyond the end of the test year. Finally, Phase V revenue requirements would include projected costs that would occur 51 to 72 months beyond the end of the test year. Phase I through V all violate Fort Wayne's requested, and the Commission-ordered, pro forma adjustment period and the fixed known and measurable requirement.

Fort Wayne's forward-looking approach to developing rates is not consistent with the determination of test-year revenue requirements pursuant to Section 5 of the IURC's regulation 170 IAC 1-5-5. These regulations do not permit pro forma adjustments beyond 12 months after the end of a test year. Fort Wayne is required to determine rates based on its test year for this proceeding, adjusted for fixed, known, and measurable changes for the 12 months ended December 31, 2018. Thus I calculate that using its adjusted test year, For Wayne's rate increase *in total* for all its customers,

including New Haven, should be no more than $89,289, as shown on page 19 of Petitioner's Exhibit No. 12. Fort Wayne's phased-in approach violates Commission regulations, the procedure approved in this Cause, and is not consistent with sound regulatory practices. Consequently, Fort Wayne's proposed Phase I, II, III, IV, and V increases should be rejected because they include cost adjustments far outside of the allowed historical test period.

Cost of Service. Fort Wayne is proposing rates that will significantly overcharge New Haven. Fort Wayne did not submit a class cost of service study in this proceeding and is proposing to apply an across-the-board percentage increase to all rates in this proceeding. Based on my experience working in the utility industry it is highly unusual for a utility the size of Fort Wayne not to perform a cost of service study in conjunction with a major rate case. Because Fort Wayne did not perform a cost of service study, New Haven looked to Fort Wayne's previous cost of service study from its last rate case to evaluate the reasonableness of its current rates. That previous cost of service study remains the basis for Fort Wayne's current rates. I sponsor a revised version of Fort Wayne's most recent cost of service study to show how New Haven's current rates are overstated and in this case should be corrected.

Based on my analysis of the cost of service study submitted in Case No. 44162, I have determined that New Haven is being significantly overcharged by Fort Wayne. By not properly considering the close proximity of New Haven's take points to Fort Wayne's water treatment facility, and the limited transmission line service it receives, the cost of service study submitted by Fort Wayne in its last rate case and underlying

current rates significantly over allocated costs to New Haven. I demonstrate that with that correction, New Haven's rates should be reduced in this proceeding. Fort Wayne should not be authorized to increase its rates in total (for all its customers, including New Haven) by more than $89,289, or 0.44%, based on its adjusted test year revenue requirement, as adjusted for known and measurable changes for the 12 months ended December 31, 2018. After considering the lower cost of providing service to New Haven because of its close proximity to the Fort Wayne water treatment plant, and also considering the sale for resale nature of service New Haven receives, New Haven's rates should be reduced even after applying that *overall* increase of 0.44%. However, if based on the OUCC and Intervenor's accounting adjustments to revenue requirements the Commission determines that Fort Wayne's overall annual revenue should be reduced, then that reduction should be applied to the rates for New Haven.

I also discuss why it is inappropriate for New Haven to be charged fees for fire protection service. New Haven purchases all of its water needs from four metering stations connected to Fort Wayne's transmission lines, including water used for fire protection that New Haven provides for its own customers. Unlike the fire protection service that Fort Wayne provides on other parts of its system, Fort Wayne does not directly serve fire hydrants and other fire protection systems for customers served by New Haven. Fort Wayne provides fire protection assets such as hydrants and water to its customers. New Haven provides its own fire protection assets and water service to its customers and consequently should not be charged Fort Wayne's fees for public fire protection.

Q. How is your testimony organized?

A. My testimony is divided into the following sections: (I) Introduction, (II) Qualifications, (III) Regulatory Problems with Fort Wayne's Phased-In Rate Increases, (IV) Allocation of Proposed Revenue Increase to New Haven, (V) the inappropriateness of New Haven being charge public fire protection fees, (VI) Further Considerations for New Haven's Lower Municipal Sale for Resale Rates, and (VII) Summary and Recommendations.

II. QUALIFICATIONS

Q. Please describe your educational and professional background.

A. I received a Bachelor of Science degree in Mathematics from the University of Louisville in 1979. I have also completed 54 hours of graduate level course work in Industrial Engineering and Physics. From 2014 through 2015 I completed an additional 12 hours of Electrical Engineering coursework at the University of Louisville's Speed School of Engineering (courses in computer design, microcontroller programming, digital signal processing, and computer communications). In addition, from 2012 through 2015, I was an instructor at Louisville's Walden School and a private tutor and instructor in advanced placement calculus, linear algebra, pre-calculus, college algebra and differential equations.

Concerning my professional background, from May 1979 until July 1996, I was employed by Louisville Gas and Electric Company ("LG&E"). From May 1979 until December 1990, I held various positions within the Rate Department of LG&E. In December 1990, I became Manager of Rates and Regulatory Analysis. In May

1994, I was given additional responsibilities in the marketing area and was promoted to Manager of Market Management and Rates. I left LG&E in July 1996 to form The Prime Group, LLC, with two other former employees of LG&E. Since leaving LG&E, I have performed or supervised the preparation of cost of service and rate studies for over 150 investor-owned utilities, rural electric distribution cooperatives, generation and transmission cooperatives, and municipal utilities. Therefore, including my time at LG&E, I have more than 35 years of experience in the utility industry. A more detailed description of my qualifications is included in Exhibit No. WSS-1.

Q. Have you ever testified before any state or federal regulatory commissions?

A. Yes. I have testified in over 70 regulatory and court proceedings in 13 different jurisdictions. I have testified before the IURC on numerous occasions. A listing of my testimony in other proceedings is included in Exhibit No. WSS-1.

Q. Please describe your work and testimony experience as they relate to topics addressed in your testimony.

A. I have performed or supervised the development of cost of service and rate studies for over 150 electric, gas, water, and wastewater utilities throughout North America. I have testified on numerous occasions regarding proposed rates for electric, gas and water utilities.

III. REGULATORY PROBLEMS WITH FORT WAYNE'S PROPOSED PHASED-IN RATE INCREASES

Q. Please describe how Fort Wayne determined its proposed revenue requirements in this proceeding.

A. Fort Wayne determined its proposed revenue requirements using what is often called the "cash-needs approach". Under this methodology, revenue requirements include: (1) operation and maintenance expenses, (2) utility receipts taxes, (3) debt service payments, (4) payments in lieu of property taxes, (5) replacements and improvements, less (6) revenue credits. The "cash-needs" approach differs significantly from the "utility approach" used by investor-owned utilities and many rural cooperatives in that (a) instead of recovering depreciation expenses ratably over the life of the utility property, the "cash-needs" approach includes the utility's annual cash requirements for replacements and improvements and (b) instead of recovering interest on debt, the "cash-needs" approach includes both interest on debt plus any repayments of principal. In this proceeding, Fort Wayne is proposing a massive increase in capital expenditures for replacements and improvements that it proposes to recover *currently* from customers rather than ratably through depreciation expenses over the life of the assets.

Q. What test year did Fort Wayne select?

A. The test year selected by Fort Wayne was the 12 months ended December 31, 2017. Fort Wayne made numerous pro forma adjustments to reflect cost for the 12 months ended December 31, 2018.

Q. What is the accounting method requested, approved and applied in this Cause?

A. Pro forma operating revenues, expenses and operating income are to be adjusted and reflect changes that are fixed, known, and measurable and that occur within 12 months following the end of the 2017 test year.

Q. Did Fort Wayne conform with that ratemaking requirement by making only fixed, known, and measurable adjustments to form revenue requirements based solely on 2018 pro forma costs?

A. No. Fort Wayne proposes to determine revenue requirements in five phases. For its Phase I rates, Fort Wayne included projected capital expenditures for replacements and improvements that it expects to incur during the 12 months ended December 31, 2019. Including capital expenditures for 2019 in revenue requirements results in adjustments to the test year for as long as 24 months beyond the end of the test year.

Q. Aside from the accounting method approved for this Cause, do the Commission's regulations permit pro forma adjustments to be made to the test year 12 months after the end of the test year as proposed by Fort Wayne?

A. No. Section 5 of the Commission's Regulations, ***170 IAC 1-5-5 Accounting Methodology and Guidelines for Cutoffs***, state as follows:

> Sec. 5. All information filed by an electing utility under this rule shall conform to the following accounting guidelines:
>
> (1) The test year shall be historical for a twelve (12) month period, the end of which may not be more than one hundred eighty (180) days prior to the filing of the utility's case-in-chief.
>
> (2) Accounting data shall be adjusted for changes that:
>
> (A) for ratemaking purposes, are:
>
> (i) fixed;

(ii) known; and
(iii) measurable; and

(B) will occur within twelve (12) months following the end of the test year.

(Emphasis supplied.)

Consequently, the test year may only include costs for the test year as adjusted for changes that "will occur within twelve (12) months following the end of the test year." Moreover, it is a traditional approach that the test year be adjusted for changes that are fixed known and measurable within twelve (12) months of the test year close.

Q. Explain how Fort Wayne's proposal includes costs that will occur beyond 12 months following the end of the test year?

A. Fort Wayne's proposed revenue requirements for its Phase I rates will include the cash outlays for replacements and improvements and debt service costs that are projected to be incurred during the 12 months ended December 31, 2019, a full year beyond the end of the 2018 pro forma adjustment period. Fort Wayne's revenue requirements for its Phase II rates include the replacements and improvements that are projected to be incurred during the 12 months ended December 31, 2020. The revenue requirements for the Phase III rates include the replacements and improvements that are projected to be incurred during ended December 31, 2021. The revenue requirements for the Phase IV and V rates would include the replacements and improvements that are projected for the calendar years 2022 and 2023. Fort Wayne is seeking approval to include projected cash outlays for replacements and improvements that it projects to make during the years 2019 through 2023.

Q. Are you aware of anything in the Commission's regulations that would permit the recovery of changes in costs for *up to six years* beyond the end of the test year?

A. No.

Q. Is Fort Wayne's proposal for these future adjustments consistent with sound regulatory practices?

A. No, not based on my 40 years of experience working in various regulatory environments. There are two standard regulatory frameworks for adjusting rates. Their availability varies among jurisdictions. Under the first framework, a regulated utility will adjust its rates based on historical test year costs adjusted for known and measurable changes in operating results. Under this framework, test year revenue requirements will be adjusted for known and measurable changes that are representative of costs on a going-forward basis. This framework is essentially what is prescribed in Section 5 of 170 IAC 1-5-5 of the IURC's regulations and requested and approved in this Cause. In its application, Fort Wayne purports to utilize this historical cost framework but violates the historical test-year approach by including debt service and replacements and improvements for 2019, 2020, *et seq.*

The second framework would utilize a fully-forecasted "future" test year for determining revenue requirements. Under this approach, the utility projects both revenues and costs for a prescribed forecasted test year. When using a forecasted test year, regulatory commissions will generally require provisions that will ensure that the forecasted test year is not assumed to occur too far into the future and to ensure that the utility's revenues and expenses are properly matched; i.e., that the matching

principle is followed. Indiana has a forward-looking test year option that allows "projected data for the twelve (12) month period beginning not later than twenty-four (24) months after the date on which the utility petitions the commission for a change in its basic rates and charges." (Indiana Code § 8-1-2-42.7.) In this proceeding, Fort Wayne filed its proposed rates based on a historical test year adjusted for fixed, known, and measurable changes and not a forward-looking test year. But even if it had used a forward-looking test year option, that statute states the Commission may approve "A forward looking test period determined on the basis of projected data for the 12 month period beginning not later than 24 months after the date on which the utility petitions the commission for a change in its basic rates and charges." (*Id.*) In this proceeding Fort Wayne is proposing to include cost recovery of expenditures that extend to the end of the year 2023, which is more than five years after the date of Fort Wayne's petition in this proceeding.

Q. In your opinion, is Fort Wayne's proposal consistent with either of those standard regulatory frameworks?

A. No. As I mentioned earlier, Fort Wayne's proposal violates the historical test-year framework. It also violates the forecasted test-year framework by projecting costs beyond periods that would typically be permitted with a forward-looking test year.

Q. Does Fort Wayne propose to match revenue with these distant projected costs?

A. No. Fort Wayne made no attempt to match future revenues with costs. You see, while Fort Wayne is proposing to include the projected cash outlays for replacements and improvements for the years 2019 to 2023, no attempt was made to forecast the

additional revenues from customer additions that would be collected during those years, other than the additional revenue from the phased-in rates. Since its last rate case, Fort Wayne has added over 21,000 customers, and one can only assume that it will continue its expansion program to increase sales and serve new developments. Thus, Fort Wayne's proposal violates the important rate making concept referred to as the *matching principle.* Additionally, Fort Wayne is proposing significant increases in its cash-funded or "pay-as-you-go" replacements and improvements during the years 2019 through 2023, but no mechanism is proposed to true up its revenues if those costs are not incurred. Thus, it would be possible for Fort Wayne to reflect those projected expenditures in rates but actually fail to make those cash-funded expenditures to replace or improve its system and retain the intended capital cost recovery. Without a *post hoc* review and true-up mechanism, Fort Wayne's proposal could create an opportunity for the utility to over-recover its costs significantly. Furthermore, Fort Wayne's proposed phased-in rates do not afford the IURC, OUCC, New Haven or other intervenors an opportunity to review the utility's incurred expenditures or revised plan expenditures for each upcoming year. Five years is an extremely long and clearly unreasonable rate case period for allowing *projected* expenditures, particularly those that have not been and will not be reviewed or audited to be reflected in rates or related to assets that have been demonstrated to be used and useful.

Fort Wayne is asking the Commission to approve plant expenditures for capital assets without *any* certainty that those assets will actually be installed. Fort Wayne's

capital expansion plan, which includes expenditures for an extensive array of capital assets five to six years into the future, will almost certainly be modified during the five-year phase-in rate period of the rates for which Fort Wayne seeks approval. Fort Wayne's proposed revenue requirement does not and cannot satisfy the *used and useful* standard. The *used and useful* principle is the regulatory concept that requires utility assets to be physically used and useful to current ratepayers before those ratepayers are required to pay the costs associated with them.

Q. What are the cash-funded replacements and improvements that Fort Wayne is proposing to include in revenue requirements for it phased rates?

A. The following table (Table 1) shows the cash-funded replacements and improvements for 2018 and for the years 2019 through 2023 which correspond to Fort Wayne's phased-in rates:

Table 1

Year	Applicable Rate Phase	Projected Replacements and Improvements Included in Revenue Requirements	Percentage Increase over Previous Year
2018		$7,703,360	
2019	Phase I	$9,187,000	19.3%
2020	Phase II	$11,294,500	22.9%
2021	Phase III	$14,766,000	31.7%
2022	Phase IV	$16,702,500	13.1%
2023	Phase V	$17,397,000	4.1%

Over the period 2018 through 2023, Fort Wayne's proposed replacements and improvements correspond to an annual increase of 17.7% ([$17,397,000 ÷ $7,703,360]$^{1/5}$ - 1 = 17.7%). Fort Wayne is therefore proposing to include large

increases in its cash-funded replacements and improvements in rates for the five-year phase-in period of its proposed rates.

Q. Do you recommend that Fort Wayne be allowed to recover these proposed replacements and improvements through the rates authorized by the Commission in this proceeding?

A. No. The rates approved in this proceeding should not include replacements and improvements beyond any reasonable level of expenditures that are projected to be incurred during for the 12 months ended December 31, 2018, which is within 12 months after the end of the test year in this proceeding. Limiting the inclusion of replacements and improvements to the cash-funded expenditures projected for 2018 is consistent with the 12-month fixed known and measurable standard requested and approved for this Cause and also stated in Section 5 of 170 IAC 1-5-5. Limiting the inclusion of replacements and improvements to the projected levels for 2018 is also consistent with standard regulatory practice in the utility industry. Therefore, the replacements and improvements included in revenue requirements *should be no more than* $89,289, based on pro forma test-year operating results for 2018, as shown on Petitioner's Exhibit No. 12, at page 19. (For reference, this exhibit is included as Exhibit No. WSS-2.)

However, as discussed in Mr. Guerrattaz's testimony, Fort Wayne could take a number of actions to lower its revenue requirements. But, in no event should the amount authorized to be recovered through rates be more than the revenue requirement for 2018 shown on Exhibit No. WSS-2.

Q. What are your recommendations concerning Fort Wayne's rate proposal?

A. Fort Wayne should only be permitted to implement rates corresponding to its historical test year, as adjusted for known and measurable changes during the pro forma period 2018. Fort Wayne's phased-in rates, which are based on capital expenditures and debt service for 2019 and beyond, should be denied. I understand that the Commission's regulations provide that, in normal circumstances, a utility would be permitted to file another rate case 15 months subsequent to its most recent rate case petition. Fort Wayne should not be allowed to pancake five annual rate increases in this single Cause. If after this Cause Fort Wayne requires a rate increase it can timely make such a filing. Fort Wayne's proposed multi-phased pancaked rate increases that reflect estimated replacements and improvements and debt service spending for the five years 2019 through 2023 should be rejected.

IV. ALLOCATION OF THE PROPOSED INCREASE TO NEW HAVEN

Q. Did Fort Wayne conduct a class cost of service study in support of its proposed rate increase?

A. No. Fort Wayne did not conduct a class cost of service study nor did it revise its preceding rate case cost of service study to support its proposed rates in this proceeding. Fort Wayne is just proposing to increase the rates to all customer classes by the same percentage "across the board."

Q. What is a cost of service study and why is it important?

A. A cost of service study is a basic tool for ratemaking. The principal purpose of a cost of service study is to attribute costs to different categories of customers based on how

costs are incurred in providing service to those customers. The American Water Work Association's P*rinciples of Water Rates, Fees, and Charges: Manual of Water Supply Practice M1,* Sixth Edition ("AWWA Manual M1") states that an objective of establishing cost-based rates is to provide "fairness in the apportionment of total costs of service among the different rate papers." (*Id.*, at p. 4.) Accordingly, a cost of service study allocates costs to the customer classes based on principles of cost causation.

Q. Did Fort Wayne conduct a cost of service study in its last rate case proceeding?

A. Yes. As part of an earlier settlement agreement by the parties filed with the IURC on July 3, 2012, in Cause No. 44162, Fort Wayne was required to complete a cost of service study. The cost of service study was conducted by Kerry A. Heid and filed with the Commission as part of a second settlement agreement on August 13, 2013. In testimony filed concurrently with the cost of service study, New Haven's witness indicated that the settlement agreement and acceptance of the cost of service study simply represented a "measured compromise". (See Testimony of Gregory T. Guerrettaz filed in Case No. 44162 on August 13, 2013, at p. 3.) At no time did New Haven express agreement with the cost of service study prepared by Mr. Heid. Because Fort Wayne failed to conduct a cost of service study in support of its proposed rates in this proceeding, we looked to the cost of service study submitted by Fort Wayne in its previous rate case, which forms the basis for Fort Wayne's current rates, to help evaluate the reasonable of its proposed rate increase to New Haven.

Q. Did you review the cost of service study performed by Mr. Heid on behalf of Fort Wayne?

A. Yes.

Q. Did Fort Wayne's most recent cost of service study properly allocate costs to New Haven?

A. No. Fort Wayne's cost of service study failed to consider the close proximity of New Haven's water take points to Fort Wayne's water treatment plant. *AWWA Manual M1* is clear on this point. *AWWA Manual M1* states that "unique situations or circumstances may occur in which the location of customer[s] relative to the source of supply or treatment plant (i.e. nearby) may suggest a limited amount of infrastructure to deliver water to the customers." (Id., at p. 168.) *AWWA Manual M1* also states that, "Because most wholesale customers do not use the supplying utility's smaller distribution main system and perhaps other facilities, a separate, a separate classification and rate schedule is typically warranted." (*Id.* at p, 165.) Although Fort Wayne's cost of service study allocated only transmission mains (mains of size 12 inches and larger) to New Haven, the study failed to account for the fact that New Haven's major connection points to Fort Wayne's transmission mains (metering stations) are located in close proximity to Fort Wayne's water treatment plant. The cost of service study allocated a pro rata portion of the cost of hundreds of miles of Fort Wayne transmission mains to New Haven, even though only a modest fraction of the transmission mains are actually used to provide service to New Haven. New Haven's take points are in close proximity (approximately 5.5 miles on average) to

Fort Wayne's Water treatment facility, and the transmission main network system providing service to Network spans just a few miles. The approximate 490 miles of transmission mains that Fort Wayne has installed to serve approximately 102,900 other customers on its system are not utilized by New Haven's municipal utility and the cost of those transmission mains should not be allocated to New Haven's nearby municipal utility. Specifically, Fort Wayne now has 486.6 linear miles (2,569,392 feet) of transmission lines installed around the City of Fort Wayne. (See Exhibit No. WSS-5, at p. 2, which includes Fort Wayne's response to New Haven's Fourth Data Request dated September 28, 2018, Item 4-1.) But a network of only a few miles of transmission lines is used to provide service to New Haven's major take points. Consequently, New Haven should not be allocated the cost of hundreds of miles of transmission lines. It is not cost based and it is not reasonable to charge New Haven's municipal water utility for more than it uses.

Q. Have you corrected the cost of service study filed in Fort Wayne's last rate case to allocate transmission costs properly to New Haven?

A. Yes. I modified the cost of service study filed in Case No. 44162 to allocate transmission mains appropriately to New Haven. No changes were made to the allocation of costs functionally assigned to Fort Wayne's Water Treatment Plant. The only change that I made was to correct for the allocation of transmission mains to account for the close proximity of New Haven water utility's connect points to the Fort Wayne's water treatment plant.

Q. Please describe how mains were functionally assigned in the cost of service study?

A. In Fort Wayne's cost of service study, main costs were functionally assigned between transmission mains and distribution mains on the basis of size of pipe. Specifically, Fort Wayne's cost of study functionally assigned 12-inch mains and larger as transmission mains and functionally assigned mains smaller than 12 inches in diameter as distribution mains. (See Cause No. 44162, Testimony of Kerry A. Heid, at page 12, lines 19-23.) Fort Wayne's cost of service study indicated that Fort Wayne had 763.2 miles of distribution mains and 383.1 miles of transmission mains as of October 31, 2011. (See Cause No. 44162, Exhibit KAW, Schedule 3WP.)

Q. Has Fort Wayne added a significant amount of distribution and transmission mains since its last rate case?

A. Yes. The problem with assigning New Haven the same percentage increase as other customer classes is illustrated in the miles of transmission mains that Fort Wayne has installed since its last rate case. The following table (Table 2) shows the miles of distribution and transmission mains that Fort Wayne has added since its last rate case.

Table 2

Expansion of Fort Wayne's Transmission and Distribution System			
Functional Category of Mains	**Miles of Main As of 10/31/11**	**Miles of Main Currently**	**Increase In Miles of Pipe**
Distribution (<12 inch)	763.2	915.3	152.1
Transmission (≥ 12 inch)	383.1	486.6	103.5

As illustrated in the above table, Fort Wayne has added 103.5 miles of transmission mains since October 31, 2011. But the distance from Fort Wayne's treatment plant to New Haven's take points have not increased. While Fort Wayne has been adding miles and miles of distribution and transmission mains to serve its increasing customer base, that increase in the amount of transmission pipe was not necessary to serve New Haven's water utility, whose physical proximity to Fort Wayne's treatment plant is fixed, close, and has not moved since Fort Wayne's last rate case.

By allocating a pro rata portion of Fort Wayne's entire transmission system which radiates out from city center to serve customers both inside and outside of the city, Fort Wayne is, in effect, proposing that New Haven fund Fort Wayne's transmission expansion efforts. Since its last rate case, Fort Wayne has added over 21,000 customers (103,000 customer now compared to 82,000 when it filed its last rate case.) This is an increase in customers of over 25 percent. While Fort Wayne has expanded its transmission system extensively, the transmission system needed to serve

New Haven is essentially the same as it always was. Accordingly, New Haven should not be required to fund Fort Wayne's expansion efforts that do not relate to serving New Haven.

Q. Is accounting for distance a standard approach in the industry?

A. Yes. As mentioned earlier, *AWWA Manual M1* states that "circumstances may occur in which the location of customer[s] relative to the source of supply or treatment plant (i.e. nearby) may suggest a limited amount of infrastructure to deliver water to the customers." (*Op cit.*, at p. 168.) It is not uncommon for water and waste water utilities to differentiate their cost of service between inside-the-city customers and outside-the-city customers based on considerations based on the distance of the customers from the water treatment plants. Mileage based allocation methodologies are also commonly used for natural gas transmission systems. In situations where certain customers are located in close proximity to the sources of supply than other customers, it is reasonable to consider distance in the development of the allocation factors used in cost of service studies.

Q. Have you modified the cost of service study to recognize the close proximity of New Haven to Fort Wayne's water treatment plant?

A. Yes. Based on an analysis of the proximity of New Haven to Fort Wayne's water treatment plant, I adjusted the allocation factors used in Fort Wayne's cost of service study to account for distance, i.e. the close proximity of New Haven's transmission line meter points. The four meter points are – (1) State Road 930, (2) Nelson Road, (3) Moeller Road, and (4) at the North, Camden Wood. Relative to Fort Wayne's total

transmission system as a whole, all four of these meter points are close to Fort Wayne's water treatment plant. Specifically, based on a Geographic Information System ("GIS") analysis conducted by New Haven, these meter points are located between 4.66 and 6.26 miles from the water treatment plant. New Haven currently purchases approximately 98.4% of its water supply from three of these meter stations -- the State Road 930 meter station, the Nelson Road meter station and the Moeller Road meter station -- which are fed from well-defined transmission lines originating from Fort Wayne's water treatment plant on the south side of the river. New Haven purchases the remaining 1.6% of its water supply received at the Camden Wood take point from a transmission line on the north side of the river. This can be seen from the system map provided in Exhibit No. WSS-3. Although Fort Wayne's transmission and distribution mains have expanded in a radial 360-degree fashion away from the water treatment plant, which is located in the east center of Fort Wayne, New Haven's meter points have remained fixed and close to the water treatment plant. The transmission segments that send water to New Haven's four meter points are labeled as segments "1", "2", "3", and "4 on the attached map, Exhibit No. WSS-3". The length of each segment based on New Haven's GIS analysis is shown in Exhibit No. WSS-4. The *total* distance of three main segments feeding the connection points on the south side of the river is approximately 68,941 feet, which is equivalent to 13.06 miles of transmission pipe. The total distance of the line that feeds the North, Camden Wood meter point is approximately 33,051 feet, which is equivalent to 6.26 miles. By comparison, in Fort Wayne's cost of service study filed in Case No. 44162, Fort

Wayne reported that it had 383.13 miles of transmission mains as of October 31, 2011. (See Exhibit No. WSS-5.) Thus, the transmission network from Fort Wayne's treatment plant to New Haven's metering points on the south side of the river only accounts for approximately 3.41% of Fort Wayne's total transmission system (13.06 miles ÷ 383.13 miles = 3.41%). The line on the north side of the river only accounts for approximately 1.63% of the total transmission system (6.26 miles ÷ 383.13 miles = 1.63%). In total, the lines that can reasonably be determined to serve New Haven represent only 5.04% of the total transmission system. (See Exhibit No. WSS-4.)

Q. But couldn't an argument be made that since the Fort Wayne's transmission system forms a larger system, New Haven's allocation of transmission mains should represent more than just 5.40% of the system.

A. Someone could quibble. But it is unreasonable to assert that 383 linear miles of transmission plant are used and useful in providing water service to New Haven when New Haven's connection points on average are only about 5.5 miles from Fort Wayne's water treatment plant. One focused on such quibbling would in my opinion be primarily focused on charging New Haven more than would be fair, just and reasonable. The water that nearby New Haven receives and uses to satisfy the public need for potable water of its 15,000 residents, is provided by just a small portion of Fort Wayne's water system, not the entire Fort Wayne system. The wholesale water rates New Haven's water utility pays should reflect that.

Q. Please proceed with your explanation for how you developed corrected allocation factors for New Haven.

A. As I explained, the transmission lines reasonably serving New Haven's connection points south of the river consist of only 13.06 miles of transmission pipe, which is equivalent to only 3.41% of Fort Wayne's transmission system, and the transmission line providing service to the Camden Wood take point on north of the river consists of only 6.26 miles of transmission pipe, which is equivalent to 1.63% of the system. I have used that these percentages of the Fort Wayne's transmission system used to serve New Haven to develop appropriate distance-based allocation factors for Fort Wayne's cost of service study. Fort Wayne's cost of service study utilized the "Base-Extra Capacity" methodology to allocate main-related fixed costs in the cost of service study. This is one of the methodologies described in *AWWA Manual M1.* (See Cause No. 44162, Testimony of Kerry A. Heid, at page 8.) This methodology utilizes annual usage for each rate class to allocate "Base Costs" and utilizes estimated extra capacity above average day (i.e., total capacity less average demand) to allocate "Extra Capacity Costs". In Fort Wayne's cost of service study, most fixed costs are classified as Base Costs and are thus allocated based on annual usage for each rate class. My revisions retained the "Base-Extra Capacity" methodology.

I developed a revised Annual Use Allocation Factor and Extra Capacity Allocation Factor based on the proportion of Fort Wayne's transmission system that is used to provide service to New Haven's metering points. Based on 2017 data, the State Road 930 meter station represented 48.63% of New Haven's total water usage;

the Nelson Road meter station represented 22.37% of New Haven's total water usage; the Moeller Road meter station represented 27.36% of New Haven's total water usage; and the North, Camden Wood represented 1.64% of total water usage. As shown in WSS-4, the transmission allocation factors for the south meter points are reduced to reflect the 3.41% factor, representing proportion of Fort Wayne's transmission system feeding these meter points, and the transmission allocation factors for the north metering point is reduced to reflect the 1.63% factor, representing the proportion of Fort Wayne's transmission system feeding that Camden Wood metering point. Because the north side Camden Wood connection is served by the system on the opposite side of the river, the volumes and capacity of this meter station were treated separately from the other three meter points. Exhibit No. WSS-6 shows the derivations of the allocation factors properly accounting for the portion of Fort Wayne's transmission system essentially utilized to serve New Haven's major metering points. Only the transmission portion of the allocation factors were adjusted for distance with this approach.

Q. Have you prepared a revised schedule of allocation factors correcting the New Haven allocation factors for distance from the treatment plant?

A. Yes. Exhibit No. WSS-7 shows the revised allocation factors from Fort Wayne's cost of service study adjusting New Haven for its distance to the water treatment plant. This exhibit is a revision of Petitioner's Exhibit KAW-S4, Schedule 9 from Mr. Heid's Direct Testimony filed in Cause No. 44162. Exhibit No. WSS-7 incorporates the distance-based methodology applied in Exhibit No. WSS-6.

Q. After correcting the cost of service study, what do we learn?

A. We learn the rates currently charged to New Haven are too high. Specifically, the cost of service study as modified to account for New Haven's close proximity to Fort Wayne's water treatment plant indicates that the rates currently charged to New Haven are overstated. New Haven's current rates are too high and should have less costs allocated in the rates from this Cause. After appropriately accounting for distance in the cost of service study, Exhibit No. WSS-8 demonstrates that New Haven's current base rates are too high. The current excess rates started in the determination of the Phase II revenue requirements in Cause No. 44162. Had the accurate distance-based transmission factor I point out here been used New Haven would not have been allocated a portion of Phase II revenue requirement greater than $856,309. Because the Phase II revenue requirement in that Cause provided the basis for Fort Wayne's current rates to New Haven, the current rates to New Haven are significantly overstated.

Q. Please describe how the current rates were determined?

A. Based on the Joint Stipulation and Settlement Agreement in Fort Wayne's previous rate case, Cause No. 44162, the supposed "subsidies" that New Haven was assumed to be receiving according the cost of service study filed in that proceeding would be eliminated beginning with rates that were to go into effect on December 1, 2016, i.e. Phase IV. Fort Wayne's cost of service study indicated that New Haven's Phase II cost of service was $971,473. The Phase IV rates were to increase the revenue requirement to New Haven by 5.70%. In its submission in Cause No. 44162 to

implement the Phase IV rates for New Haven, the Phase II revenue requirement of $971,473 was increased by 5.70%, resulting in a Phase IV revenue requirement of $1,026,847. (See Compliance Filing in Cause No. 44162 submitted on November 10, 2016.) However, Fort Wayne submitted a revised Compliance Filing on November 21, 2016, making a small adjustment to the New Haven's increase, resulting in a revenue requirement of $1,024,328.

Q. Have you performed a calculation of the excess rate recovery in New Haven's current rates?

A. Yes, Exhibit No. WSS-8 demonstrates that the Phase II revenue requirement for New Haven, with the correct transmission factors, should have been no more than $856,309. Because the Phase IV revenue increase to New Haven was to be increased by 5.70%, the Phase IV revenue requirement should not have been more than $905,119. Therefore, the rates currently being applied to New Haven were designed to yield revenues that are overstated by approximately $119,209. ($1,024,328 - $905,119 = $119,209).

Q. Are New Haven's current rates overstated by more than $119,209?

A. Yes. Fort Wayne did not perform a new cost of service study to support its current rate increase. Fort Wayne is proposing the same percentage increases for all rate classes. Based on my experience, it is highly unusual for a utility the size of Fort Wayne not to perform a cost of service study as part of a rate case. It is my recommendation that in future rate cases Fort Wayne should be required to perform a cost of service study. But since Fort Wayne did not perform a cost of service study in

the current proceeding, New Haven had no viable recourse other than to look to Fort Wayne's most recent cost of service study to evaluate the reasonableness of Fort Wayne's current base rates and the rates being proposed in this proceeding. But based on Fort Wayne's most recent cost of service study, after corrected to take the distance of New Haven to Fort Wayne's water treatment plant, there is solid support for the conclusion that Fort Wayne is charging New Haven rates that are significantly overstated, by $119,209.

Q. Are you suggesting the New Haven should be provided a refund for the amounts that it overpaid beginning in December 2016?

A. No. I am not suggesting a refund. My proposed adjustment relates solely to future rates to be approved in this cause. It is my contention that any across-the-board percentage increase should not be applied to New Haven's current rates but rather any suggested rate increase to New Haven must first reflect the modified transmission allocation factor base savings of $119,209. Because the rates that Fort Wayne is currently charging New Haven are overstated, any percentage increase that might result in this case should be applied to a lower basis. If Fort Wayne is not permitted to increase its rates overall, then New Haven's rates would be reduced by $119,209 annually.

Q. What guidance can be provided from your revised cost of service study in relation to the proposed revenue increase in the current proceeding for New Haven?

A. Based solely on the revised cost of service study, New Haven is currently being overcharged $119,209 annually. Any rate increase considered in this proceeding must

first reflect a $119,209 reduction in revenue requirements to New Haven. The starting point for any increase should be rates equivalent to an annual revenue requirement for New Haven of no more than $905,119. Rates that would have produced annual revenues of $905,119 for New Haven, within rounding of the unit charges, are developed in Exhibit No. WSS-9. The commodity charge was adjusted to produce the targeted revenue cost of service. The rates shown in Exhibit No. WSS-9 correspond to a reasonable starting point for applying a percentage increase to an appropriate set of underlying rates for New Haven.

Q. What is your recommendation regarding the proposed increase to New Haven in this proceeding?

A. If over New Haven's opposition Fort Wayne is simply allowed to apply the same percentage increase to all rates, then any such percentage increase should be applied to the charges shown in Exhibit No. WSS-9 that reflect New Haven's corrected cost of service, rather than New Haven's current rates, which are overstated with respect to cost of service.

However, as mentioned earlier in my testimony, Fort Wayne should not be allowed to determine revenue requirements that include cost adjustments that extend beyond the 12 months ended December 31, 2018. Limiting any increase in this proceeding to revenue requirements for Fort Wayne's test year, as adjusted for pro forma operating results for 12 months after the test year, would result in a *total* increase in revenue requirements for Fort Wayne of $89,289. (See Petitioner's Exhibit No. 12, at page 19, included as Exhibit No. WSS-2.) This corresponds to a percentage

increase of 0.19% ($89,289 ÷ $47,166,524 = 0.19%). When the lower initial cost of service for New Haven, reflective of reduced revenues of $119,209, is reflected in test year revenues, then the overall percentage increase for Fort Wayne would be 0.44% [($89,289 + $119,209) ÷ ($47,166,524 - $119,209) = 0.44%]. Applying this percentage increase to the cost-based rates for New Haven would produce the following rates for the City of New Haven (Table 3):

Table 3

Service Charge per Meter per Month	$840.74
Demand Charge per Meter per Month	$3,040.85
Commodity Charge per CCF	$1.4519

These charges are calculated in Exhibit No. WSS-10. As mentioned earlier in my testimony, Fort Wayne should not be permitted to implement five pancaked phased-in rate increases based on projected replacements and improvements projected to be spent during 2019 through 2023.

Q. But if over New Haven's opposition Fort Wayne is permitted to implement its phased-in approach for the years 2019 through 2024 then would it be appropriate to apply the same percentage rate increase to New Haven, which is a wholesale customer, as to all other customers?

A. No. The sole driver of Fort Wayne's proposed Phase I through V rate increases is Fort Wayne's capital expansion plan, which results in increases in cash-funded

replacements and improvements and increased debt service requirements. As shown on page 14 of Petitioner's Exhibit 12, Fort Wayne capital expansion plan results in net capital improvements of $160,085,567. The following table (Table 4) shows the breakdown of net capital improvements by functional area for the period 2018 through 2023:

Table 4

Fort Wayne's Capital Expansion Plan Total Exenditures by Functional Area 2018-2023		
Functional Area	Total 2018-2023	Percentage of Total
Filtration Plant Improvements	$ 38,263,444	23.9%
Raw Water Dams and Reservoirs	9,862,255	6.2%
Distribution Pumping and Storage	4,977,465	3.1%
Distribution System	100,687,982	62.9%
General Water Maintenance	6,294,421	3.9%
Total	**$ 160,085,567**	**100.0%**

As shown in this table, the largest category of spending (62.9%) relates to Fort Wayne's distribution system. (In this proceeding, what Fort Wayne refers to as its "Distribution System" includes both transmission and distribution mains.) Prudent improvements to the filtration plant, raw water dams, and reservoirs (30.1% of the expenditures), if completed, would presumably benefit New Haven. But it is not tenable that New Haven, whose primary metering points utilize only 5.40% of Fort Wayne's transmission system, should be responsible for a proportionate share, based on its current revenues, of the $100,687,982 in Fort Wayne's Distribution System projected spending or the $4,977,465 in Distribution Pumping and Storage spending. As explained in the direct testimony of New Haven's Superintendent of Engineering,

Keith A. Schlegel, New Haven derives essentially zero benefit from most of these expenditures.

Q. If Fort Wayne is permitted to implement its Phase I through V rates for the projected period 2019 through 2023, then *arguendo,* adjusting solely for your corrected cost of service study, how should the percentage increases for New Haven be determined?

A. Should the Commission authorize Phase I-V increases, then for New Haven the increases should be lowered to reflect (1) the elimination of the estimated increase in revenue requirement for distribution mains (i.e. mains < 12 inches in diameter) that are not utilized by New Haven, (2) the elimination of the estimated increase in revenue requirement for distribution pumping and storage that are not utilized by New Haven, and (3) a reduction in the estimated increase in revenue requirements for transmission mains (i.e., mains ≥ 12 in diameter) to reflect the close proximity of New Haven major meter points to the water treatment plant. Fort Wayne is proposing the following increases for Phases I through V:

Table 5

Across-the-Board Increases Proposed by Fort Wayne		
Phase	**Year**	**Percentage Increase**
I	2019	5.93%
II	2020	5.92%
III	2021	5.89%
IV	2022	5.85%
V	2024	5.90%

In Exhibit No. WSS-11, I have calculated the percentage increases that are appropriate

for New Haven assuming that the IURC accepts Fort Wayne's proposed phased-in approach and approves Fort Wayne's proposed revenue increases for Phases I through V, as filed. These percentage increases for New Haven are shown in the following table (Table 6):

Table 6

Increases Appropriate to New Haven Assuming that Fort Wayne's Proposed Overall Phased-In Increases Are Found Reasonable by the IURC		
Phase	**Year**	**Percentage Increase**
I	2019	2.97%
II	2020	2.02%
III	2021	2.12%
IV	2022	1.72%
V	2024	1.50%

Of course, these percentage increases would only be applied to New Haven's rates *after* its revenue requirements are reduced by $119,209 to reflect the correction of the current over recovery, as discussed earlier.

Q. How would your methodology be applied to the overall revenue requirements shown in Mr. Guerrataz's Exhibit GTG-1 to determine the percentage increases applicable to New Haven?

A. Applying the methodology to the Phase IV and Phase V increases in revenue requirements increases shown in Mr. Guerrataz's Exhibit GTG-1 results in the following annual percentage decreases/increases for New Haven:

Table 7

Increases Appropriate to New Haven Assuming that Fort Wayne's Proposed Overall Phased-In Increases Are Found Reasonable by the IURC		
Phase	**Year**	**Percentage Increase**
I	2019	-6.85%
II	2020	-3.03%
III	2021	-4.01%
IV	2022	1.72%
V	2024	0.84%

Again, these percentage decreases or increases would only be applied to New Haven's rates *after* its revenue requirements are reduced by $119,209 to reflect the correction of the current over recovery, as discussed earlier. It should be noted that Mr. Guerrataz also testifies that New Haven should not be responsible for paying the debt cost associated with the Aqua North and Aqua Southwest acquisitions. The elimination of the financing costs related to the Aqua acquisitions have not been reflected in percentage increases and decreases shown in Table 7. Other intervenor and OUCC witnesses will likely propose other adjustments to Fort Wayne's revenue requirements, possibly reducing them further. Ultimately, Fort Wayne should be required to make a compliance filing, with all parties given 30 days to respond, that shows all of the accepted accounting adjustments with the appropriate reductions applicable to New Haven. In any event, the approved overall percentage increases should be reduced in accordance to the methodology shown in Exhibit No. WSS-11, as applied in Table 7, above.

V. INAPPROPRIATENESS OF NEW HAVEN BEING BILLED FIRE PROTECTION FEES

Q. Fort Wayne assesses a fire protection charge to New Haven. Is this charge appropriate?

A. No. New Haven is currently charged a monthly public fire protection fee of $232.87 per meter per month. New Haven has four meters. The annual charge to New Haven is $11,177.76 (4 meters x $232.87/meter/month x 12 months = $11,177.76.) As a wholesale customer, New Haven is responsible for its own fire protection service to its customers. Any water needed to provide fire protection to New Haven's customers is purchased pursuant to Fort Wayne's wholesale rates applicable to New Haven. Furthermore, the cost of providing wholesale water service to New Haven, including water purchased by New Haven to provide fire protection service to its customers, flows through New Haven's four meters and is recorded by those meters and is fully captured and reflected in the sale-for-resale rates billed by Fort Wayne and paid by New Haven. Unlike residential, commercial and industrial customers within Fort Wayne's retail service territory, Fort Wayne does not provide unmetered service to fire hydrants and other fire-protection system (such as sprinkler systems) for New Haven's customers. All water obtained through the four New Haven metering points is paid for by New Haven and used by New Haven to provide water service to New Haven's customers regardless of whether it is for customer's domestic use or for fire suppression.

Q. Therefore, what is your recommendation?

A. I recommend that Fort Wayne's water tariff be modified to explicitly state that public fire protection fees are not applicable to New Haven, which is a sales-for-resale customer.

VI. FURTHER CONSIDERATIONS FOR NEW HAVEN'S LOWER MUNICIPAL SALE FOR RESALE RATES

Q. Is there additional justification that warrants the proposed lower Sale for Resale rate to New Haven?

A. Yes. there is. In addition to giving more accurate consideration to the actual amount of transportation mains used to render service to New Haven, the character of New Haven's service should reasonably be taken into consideration. New Haven is a municipal water utility that serves approximately 5,200 customers the bulk of which are residential, in a small city of about 15,700 people. It purchases all of its water requirements from Fort Wayne. New Haven has its own capital improvement and replacement projects. To the extent it can reduce its costs of purchased water that makes revenue available for other needs like helping to pay for repairs and replacements. It is a municipal utility, not investor owned. As such, it does not seek to generate and maximize revenue to pay dividends to shareholders and or increase stock value. Rather, it seeks to meet the needs of public potable water service without the earnings considerations of investor owned entities. Not only because they are providers of public utility service, but also because they serve the public convenience and necessity with the utility service that is most critical to sustaining human life,

municipal sale for resale water purchasers are unique entities. And New Haven must do so with water purchased from another utility. Their unique characteristics and public service purpose and devotion is worthy of consideration in the pricing the water that they in turn sell to their municipal constituents. This is a reasonable consideration in identifying the best path possible to ensuring New Haven is not over charged for sale for resale service by Fort Wayne, a path that in turn that will generally help New Haven meet its capital improvement needs and diminishes upward pressure on its rates, primarily to residential customers.

VII. SUMMARY OF RECOMMENDATIONS

Q. Please Summarize your recommendation.

A. Based on my review of Fort Wayne's rate case application in this proceeding and the cost of service study filed in its last rate case, I recommend the following:

(1) Fort Wayne's proposal to phase-in a series of five pancaked rate increases based on projected replacements and improvements for the years 2019 through 2024 is not consistent with IURC regulations or sound regulatory practices and should therefore be rejected.

(2) Fort Wayne's revenue requirements in this rate case should be based strictly on test-year operating results adjusted for fixed, known, and measurable changes that will have reasonably occurred during the 12 months ended December 31, 2018. Consistent with the Commission's regulations and the approved procedural process, Fort Wayne should not be allowed to include expenditures that are projected to be made after December 31, 2018.

(3) Accordingly, Fort Wayne should not be authorized an overall rate increase in this proceeding that is greater than a 0.44% increase. Specifically, Fort Wayne's overall increase in revenue in this proceeding should be no greater than $89,289, which corresponds to the increase in rates necessary to generate Fort Wayne's test-year revenue requirements, adjusted for known and measurable changes in operating results for the 12-month period following its 2017 test year, the pro forma adjustment period requested and approved in this Cause and permitted by Section 5 of the Commission's Regulations, 170 IAC 1-5-5.

(4) A utility the size of Fort Wayne should be expected to submit a cost of service study whenever it files a general adjustment to its base rates. Fort Wayne serves approximately 103,000 customers. It has been my experience working in numerous jurisdictions, including Indiana, that utilities with that many customers will file cost of service studies in general rate cases. It is my recommendation that in future rate actions, Fort Wayne should submit a cost of service study that properly takes into consideration the short distance from Fort Wayne's water treatment plant and New Haven's meter points.

(5) Based on my corrections to the Fort Wayne's most recent cost of service study to account for the short distance from Fort Wayne's water treatment plant to New Haven's major meter points, the current cost of service for New Haven should be $119,209. Applying a 0.44% increase to cost-based rates for New Haven based on this revenue requirement results in the following charges: (1) a Monthly Service Charge per Meter of $840.74; (2) a Monthly Demand Charge per Meter of

$3,040.85; and (3) a Commodity Charge of $1.4519 per CCF. Because Fort Wayne did not submit a cost of service study in this proceeding, New Haven utilized Fort Wayne's cost of service study field in its last rate case to develop rates.

(6) New Haven's rate should be adjusted for the decreased expense and capital cost adjustments recommended by Mr. Guerrataz and other parties in this Cause.

(7) Fort Wayne should make a compliance filing incorporating all the approved adjustments in this Cause, including those that reduce New Haven's rates and the other Parties should have 30 days to respond to that filing.

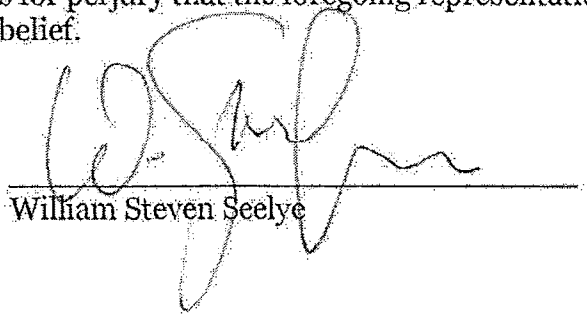
Q. Does this conclude your testimony?

A. Yes, it does.

VERIFICATION

I affirm under the penalties for perjury that the foregoing representations are true to the best of my knowledge and belief.

Date: October 30, 2018



William Steven Seelye

Exhibit No. WSS-1

Qualifications
of
William Steven Seelye

WILLIAM STEVEN SEELYE

Summary of Qualifications

Provides consulting services to numerous investor-owned utilities, rural electric cooperatives, and municipal utilities regarding utility rate and regulatory filings, cost of service and wholesale and retail rate designs; and develops revenue requirements for utilities in general rate cases, including the preparation of analyses supporting pro-forma adjustments and the development of rate base.

Employment

Principal and Managing Partner The Prime Group, LLC (1996 to 2012) (2015-Present) (Associate Member 2012-2015)	Provides consulting services in the areas of tariff development, regulatory analysis, revenue requirements, cost of service studies, rate design, fuel and power procurement, depreciation studies, lead-lag studies, and mathematical modeling. Assists utilities with developing strategic resource and marketing plans. Assist with resource planning and cost benefit analyses for generation investment projects. Performs economic analyses evaluating the costs and benefits of an electric generation projects; performs business practice audits for electric utilities, gas utilities, and independent transmission organizations, including audits of production cost modeling, fuel procurement practices and controls, and wholesale marketing procedures. Assists investor-owned utilities in the development of testimony regarding the prudence of power supply decisions and of investments in specific generation and distribution assets. Provides utility clients assistance regarding regulatory policy and strategy; project management support for utilities involved in complex regulatory proceedings; process audits; state and federal regulatory filing development; cost of service development and support; the development of innovative rates to achieve strategic objectives; unbundling of rates and the development of menus

	of rate alternatives for use with customers; performance-based rate development. Prepared retail and wholesale rate schedules and filings submitted to the Federal Energy Regulatory Commission (FERC) and state regulatory commissions for numerous of electric and gas utilities. Performed cost of service or rate studies for over 150 utilities throughout North America. Prepared market power analyses in support of market-based rate filings submitted to the FERC for utilities and their marketing affiliates. Performed business practice audits for electric utilities, gas utilities, and independent transmission organizations (ISOs), including audits of production cost modeling, retail utility tariffs, retail utility billing practices, and ISO billing processes and procedures.
Instructor in Mathematics Walden School and Private Instruction (2012-2015)	Taught advanced placement calculus, linear algebra, pre-calculus, college algebra and differential equations.
Manager of Rates and Other Positions Louisville Gas & Electric Co. (May 1979 to July 1996)	Held various positions in the Rate Department of LG&E. In December 1990, promoted to Manager of Rates and Regulatory Analysis. In May 1994, given additional responsibilities in the marketing area and promoted to Manager of Market Management and Rates.

Education

Bachelor of Science Degree in Mathematics, University of Louisville, 1979
66 Hours of Graduate Level Course Work in Electrical and Industrial Engineering and Physics.

Associations

Member of the Society for Industrial and Applied Mathematics

Expert Witness Testimony

Alabama:	Testified in Docket 28101 on behalf of Mobile Gas Service Corporation concerning rate design and pro-forma revenue adjustments.

Colorado: Testified in Consolidated Docket Nos. 01F-530E and 01A-531E on behalf of Intermountain Rural Electric Association in a territory dispute case.

Submitted expert report in No. 14-CV-30031 before District Court, Prowers County, State of Colorado, on behalf of Arkansas River Power Authority in the *City of Lamar et al v. Arkansas River Power Authority regarding* power planning and operations.

FERC: Submitted direct and rebuttal testimony in Docket No. EL02-25-000 et al. concerning Public Service of Colorado's fuel cost adjustment.

Submitted direct and responsive testimony in Docket No. ER05-522-001 concerning a rate filing by Bluegrass Generation Company, LLC to charge reactive power service to LG&E Energy, LLC.

Submitted testimony in Docket Nos. ER07-1383-000 and ER08-05-000 concerning Duke Energy Shared Services, Inc.'s charges for reactive power service.

Submitted testimony in Docket No. ER08-1468-000 concerning changes to Vectren Energy's transmission formula rate.

Submitted testimony in Docket No. ER08-1588-000 concerning a generation formula rate for Kentucky Utilities Company.

Submitted testimony in Docket No. ER09-180-000 concerning changes to Vectren Energy's transmission formula rate.

Submitted testimony in Docket No. ER11-2127-000 concerning transmission rates proposed by Terra-Gen Dixie Valley, LLC.

Submitted testimony in Docket No. ER11-2779 on behalf of Southern Illinois Power Cooperative concerning wholesale distribution service charges proposed by Ameren Services Company.

Submitted testimony in Docket No. ER11-2786 on behalf of Norris Electric Cooperative concerning wholesale distribution service charges proposed by Ameren Services Company.

Florida: Testified in Docket No. 981827 on behalf of Lee County Electric Cooperative, Inc. concerning Seminole Electric Cooperative Inc.'s wholesale rates and cost of service.

Illinois: Submitted direct, rebuttal, and surrebuttal testimony in Docket No. 01-0637 on behalf of Central Illinois Light Company ("CILCO") concerning the modification of interim supply service and the implementation of black start service in connection with providing unbundled electric service.

Indiana: Submitted direct testimony and testimony in support of a settlement agreement in Cause No. 42713 on behalf of Richmond Power & Light regarding revenue requirements, class cost of service studies, fuel adjustment clause and rate design.

Submitted direct and rebuttal testimony in Cause No. 43111 on behalf of Vectren Energy in support of a transmission cost recovery adjustment.

Submitted direct testimony in Cause No. 43773 on behalf of Crawfordsville Electric Light & Power regarding revenue requirements, class cost of service studies, fuel adjustment clause and rate design.

Kansas: Submitted direct and rebuttal testimony in Docket No. 05-WSEE-981-RTS on behalf of Westar Energy, Inc. and Kansas Gas and Electric Company regarding transmission delivery revenue requirements, energy cost adjustment clauses, fuel normalization, and class cost of service studies.

Kentucky: Testified in Administrative Case No. 244 regarding rates for cogenerators and small power producers, Case No. 8924 regarding marginal cost of service, and in numerous 6-month and 2-year fuel adjustment clause proceedings.

Submitted direct and rebuttal testimony in Case No. 96-161 and Case No. 96-362 regarding Prestonsburg Utilities' rates.

Submitted direct and rebuttal testimony in Case No. 99-046 on behalf of Delta Natural Gas Company, Inc. concerning its rate stabilization plan.

Submitted direct and rebuttal testimony in Case No. 99-176 on behalf of Delta Natural Gas Company, Inc. concerning cost of service, rate design and expense adjustments in connection with Delta's rate case.

Submitted direct and rebuttal testimony in Case No. 2000-080, testified on behalf of Louisville Gas and Electric Company concerning cost of service, rate design, and pro-forma adjustments to revenues and expenses.

Submitted rebuttal testimony in Case No. 2000-548 on behalf of Louisville Gas and Electric Company regarding the company's prepaid metering program.

Testified on behalf of Louisville Gas and Electric Company in Case No. 2002-00430 and on behalf of Kentucky Utilities Company in Case No. 2002-00429 regarding the calculation of merger savings.

Submitted direct and rebuttal testimony in Case No. 2003-00433 on behalf of Louisville Gas and Electric Company and in Case No. 2003-00434 on behalf of Kentucky Utilities Company regarding pro-forma revenue, expense and plant adjustments, class cost of service studies, and rate design.

Submitted direct and rebuttal testimony in Case No. 2004-00067 on behalf of Delta Natural Gas Company regarding pro-forma adjustments, depreciation rates, class cost of service studies, and rate design.

Testified on behalf of Kentucky Utilities Company in Case No. 2006-00129 and on behalf of Louisville Gas and electric Company in Case No. 2006-00130 concerning methodologies for recovering environmental costs through base electric rates.

Testified on behalf of Delta Natural Gas Company in Case No. 2007-00089 concerning cost of service, temperature normalization, year-end normalization, depreciation expenses, allocation of the rate increase, and rate design.

Submitted testimony on behalf of Big Rivers Electric Corporation and E.ON U.S. LLC in Case No 2007-00455 and Case No. 2007-00460 regarding the design and implementation of a Fuel Adjustment Clause, Environmental Surcharge, Unwind Surcredit, Rebate Adjustment, and Member Rate Stability Mechanism for Big Rivers Electric Corporation in connection with the unwind of a lease and purchase power transaction with E.ON U.S. LLC.

Submitted testimony in Case No. 2008-00251 on behalf of Kentucky Utilities Company and in Case No. 2008-00252 on behalf of Louisville Gas and Electric Company regarding pro-forma revenue and expense adjustments, electric and gas temperature normalization, jurisdictional separation, class cost of service studies, and rate design.

Submitted testimony in Case No. 2008-00409 on behalf of East Kentucky Power Cooperative, Inc., concerning revenue requirements, pro-forma adjustments, cost of service, and rate design.

Submitted testimony in Case No. 2009-00040 on behalf of Big Rivers Electric Corporation regarding revenue requirements and rate design.

Submitted testimony on behalf of Columbia Gas Company of Kentucky in Case No. 2009-00141 regarding the demand side management program costs and cost recovery mechanism.

Submitted testimony in Case No. 2009-00548 on behalf of Kentucky Utilities Company and in Case No. 2009-00549 on behalf of Louisville Gas and Electric

Company regarding pro-forma revenue and expense adjustments, electric and gas temperature normalization, jurisdictional separation, class cost of service studies, and rate design.

Submitted testimony in Case No. 2010-00116 on behalf of Delta Natural Gas Company concerning cost of service, temperature normalization, year-end normalization, depreciation expenses, allocation of the rate increase, and rate design.

Submitted testimony in Case No. 2011-00036 on behalf of Big Rivers Electric Cooperative concerning cost of service, rate design, pro-forma TIER adjustments, temperature normalization, and support of MISO Attachment O.

Submitted testimony in Case No. 2016-00107 on behalf of Columbia Gas Company of Kentucky regarding a tariff application to continue its energy efficiency and conservation rider and programs.

Submitted testimony in Case No. 2016-00274 on behalf of Kentucky Utilities Company and Louisville Gas and Electric Company in support of community solar rates.

Submitted testimony in Case No. 2016-00370 on behalf of Kentucky Utilities Company and in Case No. 2016-00371 on behalf of Louisville Gas and Electric Company regarding electric and gas class cost of service studies and proposed rates.

Submitted rebuttal testimony in Case No. 2018-00050 on behalf of South Kentucky Rural Electric Cooperative Corporation regarding the regulatory application of the filed rate doctrine and cost shifts to other electric cooperatives related to a proposed purchased power agreement.

Submitted testimony in Case No. 2018-00044 on behalf of Columbia Gas Company of Kentucky regarding an assessment of its energy efficiency and conservation rider and programs.

Submitted in testimony in Case No. 2018-00294 on behalf of Kentucky Utilities Company and in Case No. 2018-00295 on behalf of Louisville Gas and Electric Company regarding electric and gas cost of service studies, proposed electric rates, solar rates, electric vehicle rates, late payment charges, pole attachment charges, excess facilities charges, and lead-lag studies.

Maryland — Submitted direct testimony in PSC Case No. 9234 on behalf of Southern Maryland Electric Cooperative regarding a class cost of service study.

Nevada: Submitted direct and rebuttal testimony in Case No. 03-10001 on behalf of Nevada Power Company regarding cash working capital and rate base adjustments.

Submitted direct and rebuttal testimony in Case No. 03-12002 on behalf of Sierra Pacific Power Company regarding cash working capital.

Submitted direct and rebuttal testimony in Case No. 05-10003 on behalf of Nevada Power Company regarding cash working capital for an electric general rate case.

Submitted direct and rebuttal testimony in Case No. 05-10005 on behalf of Sierra Pacific Power Company regarding cash working capital for a gas general rate case.

Submitted direct and rebuttal testimony in Case Nos. 06-11022 and 06-11023 on behalf of Nevada Power Company regarding cash working capital for a gas general rate case.

Submitted direct and rebuttal testimony in Case No. 07-12001 on behalf of Sierra Pacific Power Company regarding cash working capital for an electric general rate case.

Submitted direct testimony in Case No. Docket No. 08-12002 on behalf of Nevada Power Company regarding cash working capital for an electric general rate case.

Submitted direct testimony in Case No. Docket No. 10-06001 on behalf of Sierra Pacific Power Company regarding cash working capital for an electric general rate cases.

Submitted direct testimony in Case No. Docket No. 11-06006 on behalf of Nevada Power Company regarding cash working capital for an electric general rate case.

New Mexico Submitted testimony in support of filing of Advice Notice No. 60 on behalf of Kit Carson Electric Cooperative, Inc.

Submitted direct testimony in Case No. 15-00375-UT on behalf of Kit Carson Electric Cooperative, Inc. regarding revenue requirements, the need for a rate increase, class cost of service study, apportionment of the revenue increase to the classes of service, and rate design.

Submitted testimony in Advice Notices in Case No. 15-00087-UT on behalf of Jemez Mountain Electric Cooperative in support of tribal right of way cost recovery surcharge mechanisms.

Submitted direct testimony in Case. No. 16-00065-UT on behalf of Kit Carson Electric Cooperative in support of an application for continuation of its fuel and purchased power cost adjustment clause.

Nova Scotia: Testified on behalf of Nova Scotia Power Company in NSUARB – NSPI – P-887 regarding the development and implementation of a fuel adjustment mechanism.

Submitted testimony in NSUARB – NSPI – P-884 regarding Nova Scotia Power Company's application to approve a demand-side management plan and cost recovery mechanism.

Submitted testimony in NSUARB – NSPI – P-888 regarding a general rate application filed by Nova Scotia Power Company.

Submitted testimony on behalf of Nova Scotia Power Company in the matter of the approval of backup, top-up and spill service for use in the Wholesale Open Access Market in Nova Scotia.

Submitted testimony in NSUARB – NSPI – P-884 (2) on behalf of Nova Scotia Power Company's regarding a demand-side management cost recovery mechanism.

Virginia: Submitted testimony in Case No. PUE-2008-00076 on behalf of Northern Neck Electric Cooperative regarding revenue requirements, class cost of service, jurisdictional separation and an excess facilities charge rider.

Submitted testimony in Case No. PUE-2009-00029 on behalf of Old Dominion Power Company regarding class cost of service, jurisdictional separation, allocation of the revenue increase, general rate design, time of use rates, and excess facilities charge rider.

Submitted testimony in Case No. PUE-2009-00065 on behalf of Craig-Botetourt Electric Cooperative regarding revenue requirements, class cost of service, jurisdictional separation and an excess facilities charge rider.

Submitted testimony in Case No. PUE-2011-00013 on behalf of Old Dominion Power Company regarding class cost of service, jurisdictional separation, allocation of the revenue increase, and rate design.

Exhibit No. WSS-2

Fort Wayne's
Proposed Revenue Requirements

FORT WAYNE (INDIANA) MUNICIPAL WATER UTILITY

PRO FORMA ANNUAL REVENUE REQUIREMENTS
AND ANNUAL OPERATING REVENUE
(See Explanation of References, Page 20)

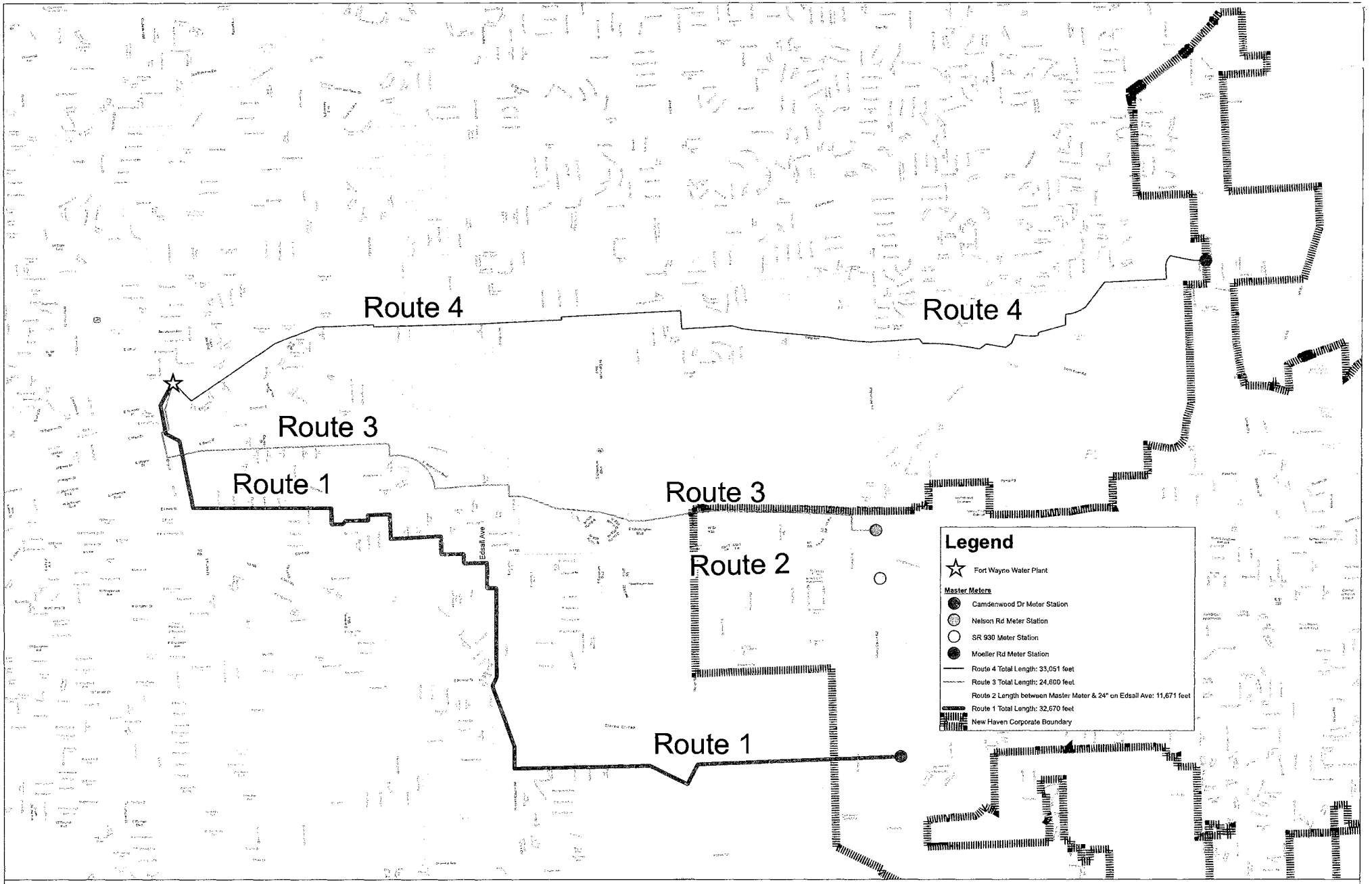
	2018	Phase I	Phase II	Phase III	Phase IV	Phase V
Annual Revenue Requirements		(2019)	(2020)	(2021)	(2022)	(2023)
Operation and maintenance expenses (page 10)	$24,842,170	$24,843,894	$24,843,894	$24,843,894	$24,843,894	$24,843,894
Utility receipts tax (1)	590,386	628,295	664,579	702,816	743,029	785,960
Debt service						
Outstanding bonds (page 29)	12,183,526	12,184,263	10,730,623	10,747,980	10,749,619	10,775,995
Proposed 2019 bonds (page 16)	-	508,683	2,513,169	2,515,240	2,511,235	2,516,289
Proposed 2022 bonds (page 17)	-	-	-	-	732,793	2,859,190
Debt service reserve (2)	-	703,086	703,086	-	255,450	510,900
Lease payments (3)	66,788	66,788	66,788	66,788	66,788	66,788
Payment in lieu of property taxes (4)	2,989,800	3,169,188	3,359,339	3,560,899	3,774,553	4,001,026
Replacements and improvements (page 14)	7,703,360	9,187,000	11,294,500	14,766,000	16,702,500	17,397,000
Total annual revenue requirements	48,376,030	51,291,197	54,175,978	57,203,617	60,379,861	63,757,042
Less other sales (page 5)	(571,148)	(571,148)	(571,148)	(571,148)	(571,148)	(571,148)
Less water charges private (page 5)	(66,863)	(66,863)	(66,863)	(66,863)	(66,863)	(66,863)
Less interest income (5)	(171,684)	(171,684)	(171,684)	(171,684)	(171,684)	(171,684)
Less connectivity revenue (page 5)	(204,854)	(204,854)	(204,854)	(204,854)	(204,854)	(204,854)
Less miscellaneous non-operating revenue (page 5)	(105,668)	(105,668)	(105,668)	(105,668)	(105,668)	(105,668)
Less additional revenue from non-recurring charges (6)	-	(267,573)	(267,573)	(267,573)	(267,573)	(267,573)
Net annual revenue requirements	$47,255,813	$49,903,407	$52,788,188	$55,815,827	$58,992,071	$62,369,252
Annual Revenues						
Test year metered revenues, sales for resale and interdepartmental sales (page 5)	$40,595,633	$40,595,633	$40,595,633	$40,595,633	$40,595,633	$40,595,633
1% annual decrease in outside surcharge for 5 years	-	(58,043)	(124,153)	(201,270)	(286,315)	(382,592)
Test year fire protection revenues (page 5)	5,934,793	5,934,793	5,934,793	5,934,793	5,934,793	5,934,793
Test year forfeited discounts (page 5)	636,098	636,098	636,098	636,098	636,098	636,098
Additional revenue from phased increases	-	-	2,794,926	5,745,817	8,850,573	12,111,862
Total annual operating revenues	$47,166,524	$47,108,481	$49,837,297	$52,711,071	$55,730,782	$58,895,794
Additional revenues required	$89,289	$2,794,926	$2,950,891	$3,104,756	$3,261,289	$3,473,458
Across-The-Board Rate Adjustment	N/A	5.93%	5.92%	5.89%	5.85%	5.90%
Avg. monthly bill (4,000 gallons/535 cu. ft.)	*$22.78*	*$24.12*	*$25.55*	*$27.08*	*$28.65*	*$30.32*
Bond Coverage With PILOT	*163%*	*178%*	*191%*	*212%*	*222%*	*211%*

(Continued on Next Page)

(See Accountant's Report)

Exhibit No. WSS-3

Fort Wayne's System Map



Fort Wayne Distribution Lines Benefitting New Haven

City of New Haven
GIS Department
NHGIS
10/31/2018

0 1,000 2,000 4,000 Feet

N
W E
S

Exhibit No. WSS-4

Length of Transmission Line Segments Serving New Haven

FORT WAYNE MUNICIPAL WATERWORKS
IURC CAUSE NO. 45125
Approximate Distances of Line Segments
of Transmission System Serving Metering Points
of Municipal Wholesale Customer (City of New Haven)

Route	Distance in Feet	Distance in Miles
1	32,670 Ft	6.19 Miles
2	11,671 Ft	2.21 Miles
3	24,600 Ft	4.66 Miles
Total Transmission Network Serving New Haven's South Meter Points	68,941 Ft	13.06 Miles
Ft Wayne's Total Transmsision Mains	2,022,937 Ft	383.13 Miles
Percentage of Total	3.41%	3.41%

Route	Distance in Feet	Distance in Miles
4	33,051 Ft	6.26
Total Transmission Network Serving New Haven's South Meter Points	2,022,937 Ft	383.13 Miles
Percentage of Total	1.63%	1.63%

Exhibit No. WSS-5

Distribution and Transmission Units from Cost of Service Study

ANALYSIS OF MAINS SIZES
FROM COST OF SERVICE STUDY

DATA: 12 MONTHS ENDED 10/31/11

Size (inches)	(1) Miles (a)			(2) Feet	(3) Repl. Cost Per Foot (b)	(4) Replacement Cost ($000)
1	0.000			0	$40.00	$0
2	8.250			43,560	$40.00	$1,742
3	0.600	**Distribution**		3,168	$40.00	$127
4	23.120		763.180	122,074	$75.00	$9,156
5	0.170			898	$75.00	$67
6	552.020			2,914,666	$75.00	$218,600
8	173.860			917,981	$85.00	$78,028
10	5.160			27,245	$100.00	$2,724
12	218.220			1,152,202	$120.00	$138,264
14	0.000			0	$120.00	$0
16	115.480			609,734	$150.00	$91,460
18	0.010			53	$150.00	$8
20	2.170	**Transmission**		11,458	$180.00	$2,062
24	32.940		383.132	173,923	$220.00	$38,263
30	7.680			40,550	$300.00	$12,165
36	2.930			15,470	$375.00	$5,801
42	2.770			14,626	$450.00	$6,582
48	0.260			1,373	$525.00	$721
54	0.670			3,538	$650.00	$2,299
112	0.002			11	$650.00	$7
Grand Total	1,146.312		1,146.312	6,052,527		$608,078

Source: Petitioner's Exhibit KAH-S4, Schedule 3WP filed in Case No. 44162

increase based, in part, on the cost of service study that supported the rate design in Cause No. 44162. Notably, that Cost of Service Study was approved by the Commission in December of 2013, which is approximately just three years prior the start of the test year in this Cause. To that end, issues related to Fort Wayne's Cost of Service Study are not relevant to this Cause. Fort Wayne further objects to this request to the extent it is vague and ambiguous in that it does not define what New Haven means by "continuing property records."

Response: Subject to and without waiving said objections, and to the extent New Haven is referring to Fort Wayne's fixed asset database, Fort Wayne's fixed asset database does not contain the specific length of pipe. Instead, Fort Wayne determines length of pipe through using its GIS data. Forty Wayne has pulled this data and added the current costs per foot information which provides an approximation of replacement cost new calculation for the pipe. See the below table.

Diameter (inch)	Length (feet)	Replacement Cost ($/Ft)	Replacement Value
<4	104,099	$ 50.00	$ 5,204,938.94
4	121,855	$ 84.00	$ 10,235,811.00
6	3,149,457	$ 90.00	$ 283,451,150.73
8	1,427,804	$ 108.00	$ 154,202,794.80
10	29,523	$ 120.00	$ 3,542,727.13
12	1,473,487	$ 162.00	$ 238,704,832.36
16	785,440	$ 180.00	$ 141,379,159.07
20	10,600	$ 216.00	$ 2,289,505.99
24	191,660	$ 264.00	$ 50,598,245.28
30	46,799	$ 359.00	$ 16,800,893.27
36	16,376	$ 449.00	$ 7,353,011.16
42	39,445	$ 539.00	$ 21,260,984.74
48	2,073	$ 628.00	$ 1,301,975.68
54	3,512	$ 778.00	$ 2,732,193.50

Person(s) providing information: Fort Wayne engineering staff and Fort Wayne accounting staff.

Testifying Witness: Andrew G. Schipper

Exhibit No. WSS-6

Distance-Based Allocation Factors For New Haven

FORT WAYNE MUNICIPAL WATERWORKS
IURC CAUSE NO. 45125
Transmission Mains Units Of Service (Allocation Factors)
Based on Feet of Pipe Used by Municipal Wholesale Customer
Within Transmission Pipeline Network Near in Proximity to Water Treatment Plant

Metering Point	CY 2017 Water Usage in Gallons	Percentage of Total	Percent Portion of Ft. Wayne's Trans System Used Based on Distance from Treatment Plant	Weighted Percentage of Total Base on Distance from Treatment Plant	Distance Adjusted Annual Use Allocation from Cost of Service Study	Distance Adjusted Total Capacity Allocation from Cost of Service Study	Distance Adjusted Extra Capacity Above Avg Day Allocation from Cost of Service Study
					497,850	2,592.0	2,591.5
State Road 930	171,794,150	48.63%	3.41%	1.66%	8,250	43.0	42.95
Nelson Road	79,048,893	22.37%	3.41%	0.76%	3,796	19.8	0.33
Moeller Road	96,675,242	27.36%	3.41%	0.93%	4,643	24.2	0.00
Camden Wood	5,779,448	1.64%	1.63%	0.03%	133	0.7	0.00
Total	353,297,733	100.00%			16,822	87.6	43.3
Percentage of Transmission Cost of Service to Total					13.96%	19.61%	58.71%
Percentage of Non-Transmission Cost of Service to Total					86.04%	80.39%	41.29%
Transmission Component of Allocator					2,349	17	25
Non-Transmission Component of Allocator					428,345	2,084	1,070
Total Allocator					430,693	2,101	1,095

Exhibit No. WSS-7

Revised Allocation Factors for Cost of Service Study

FORT WAYNE MUNICIPAL WATERWORKS
IURC CAUSE NO. 44162-COSS
COST OF SERVICE STUDY - PHASE II
UNITS OF SERVICE

DATA: 12 MONTHS ENDED 10/31/11

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
					Maximum Day			Maximum Hour			Customer		Eq. Monthly
			Annual Use (Ccf)	Average Daily Use (Ccf/Day)	Capacity Factor (%)	Total Capacity (Ccf/Day)	Extra Capacity Above Avg Day (Ccf/Day)	Capacity Factor (%)	Total Capacity (Ccf/Day)	Extra Capacity Above Max Day (Ccf/Day)	No. of Bills	Equivalent Meters	Public Fire Connections Bills
				(1) / 365		(2) * (3)	(4) - (2)		(2) * (6)	(7) - (4)			
	Inside Customers												
1	Residential-Inside		4,836,715	13,251	200%	26,503	13,251	255%	33,791	7,288	828,101	89,821	
2	Commercial-Inside		3,832,150	10,499	190%	19,948	9,449	240%	25,198	5,250	83,801	25,398	
3	Industrial-Inside												
4	Large Industrial-Inside	*											
5	Sale for Resale-Inside	*	430,693	1,180	190%	2,101	1,005	240%	2,832	731	48	130	
	Other2-Inside		-	-	0%	-	-	0%	-	-	-	-	
6	Public Fire Protection-Inside		97,174	266		4,099	3,833		24,638	20,539			94,260
7	Private Fire Protection-Inside			-		1,238	1,238		7,871	6,633			30,443
8	Total Inside Customers		9,814,530	26,889		56,935	30,220		98,222	41,267	915,335	97,053	124,703
9	Total Inside Customers w/o Fire		9,717,357	26,623	194%	51,598	25,149	247%	65,713	14,115			
	Outside Customers												
10	Residential-Outside		604,858	1,657	200%	3,314	1,657	255%	4,226	911	91,618	7,800	
11	Commercial-Outside		178,869	490	190%	931	441	240%	1,176	245	4,171	1,703	
12	Industrial-Outside												
13	Large Industrial-Outside	*											
14	Sale for Resale-Outside	*	-	-	190%	-	-	240%	-	-	-	-	
	Other2-Outside		-	-	0%	-	-	0%	-	-	-	-	
15	Public Fire Protection-Outside		11,830	32		666	634		4,063	3,397			15,588
16	Private Fire Protection-Outside			-		125	125		798	672			3,085
17	Total Outside Customers		1,194,807	3,273		6,946	3,673		12,630	5,583	96,155	9,932	18,673
18	Total Outside Customers w/o Fire		1,182,977	3,241	190%	6,155	2,914	237%	7,670	1,515			

Exhibit No. WSS-8

Settlement Phase II Adjusted Cost of Service for New Haven

FORT WAYNE MUNICIPAL WATERWORKS
IURC CAUSE NO. 44162-COSS
COST OF SERVICE STUDY - PHASE II
PHASE II ACROSS-THE-BOARD REVENUES AND PHASE II COST OF SERVICE COMPARISON

DATA: 12 MONTHS ENDED 10/31/11

		(1)	(2)	(3)	(4)
Line No.	Customer Class	Revenues Under A/B Phase II Rates	Phase II Cost of Service (a)	Increase Necessary For Cost of Service $	Increase Necessary For Cost of Service %
			(Schedule 13)	(2) - (1)	(3) / (1)
	Inside City				
1	Residential-Inside	$16,895,569	$17,038,066	$142,497	0.84%
2	Commercial-Inside	$10,310,675	$10,556,689	$246,014	2.39%
3	Industrial-Inside	[redacted]			
4	Large Industrial-Inside				
5	Sale for Resale-Inside	$703,198	$856,309	$153,110	21.77%
6	Total Inside City Metered Sales	$29,204,692	$29,975,692	$771,000	2.64%
7	Public Fire Protection-Inside	$3,717,614	$2,929,540	($788,075)	-21.20%
8	Private Fire Protection-Inside	$1,125,768	$672,881	($452,887)	-40.23%
9	Total Fire Protection-Inside	$4,843,382	$3,602,421	($1,240,961)	-25.62%
10	Total Inside Revenues From Sales	$34,048,074	$33,578,113	($469,961)	-1.38%

Exhibit No. WSS-9

Cost-Based for New Haven at Current Revenue Requirements

FORT WAYNE MUNICIPAL WATERWORKS
IURC CAUSE NO. 45125
Cost-Based Rates that would Produce
Appropriate Level of Current Revenue Requirement for
City of New Haven

	Inside		
	Montly Rate	Cost Based Charges	Proposed Revenues
Sales for Resale			
Service Charge Four 6-Inch Meters -- Sale for Resale	48	$837.06	$40,178.88
Commodity Charges -- Sale for Resale	497,850	$1.4455	$719,642.18
Demand Charges -- Sale for Resale	48	$3,027.53	$145,321.44
Total Underlying Revenues			$905,142.50

Exhibit No. WSS-10

Recommended Reduced Charges For New Haven

FORT WAYNE MUNICIPAL WATERWORKS
IURC CAUSE NO. 45125
Cost-Based Rates that would Produce
Appropriate Level of Current Revenue Requirement for
The City of New Haven

	Cost Based Charges	Proposed Charges
Sales for Resale		
Service Charge Four 6-Inch Meters -- Sale for Resale	$837.06	$840.74
Commodity Charges -- Sale for Resale	$1.4455	$1.4519
Demand Charges -- Sale for Resale	$3,027.53	$3,040.85

Percentage Increase 0.44%

Exhibit No. WSS-11

Increases Appropriate for New Haven Assuming Fort Wayne is Granted Its Proposed Phased-In Increases in Full

Fort Wayne Water Utility
Percentage Increase Appropriate for New Haven
Assuming that Fort Wayn'e Proposed Overall Increase is Found Reasonable
Cause No. 45125

Description	Phase I 2019	Phase II 2020	Phase III 2021	Phase IV 2022	Phase V 2023
Net Capital Expenditures					
Filtration Plant Improvements	$ 11,308,000	$ 5,515,000	$ 4,290,000	$ 9,595,000	$ 4,285,000
Raw Water Dams and Reservoirs	3,475,000	2,265,000	325,000	1,600,000	1,805,000
Distribution Pumping and Storage	1,275,000	1,380,000	250,000	480,000	190,000
Distribution System	15,100,000	16,815,000	10,390,000	31,330,000	22,930,000
General Water Maintenance	954,000	1,094,500	1,001,000	1,087,500	1,147,000
Total	$ 32,112,000	$ 27,069,500	$ 16,256,000	$ 44,092,500	$ 30,357,000
Net Capital Expenditures					
Filtration Plant Improvements	$ 11,308,000	$ 5,515,000	$ 4,290,000	$ 9,595,000	$ 4,285,000
Raw Water Dams and Reservoirs	3,475,000	2,265,000	325,000	1,600,000	1,805,000
Distribution Pumping and Storage	1,275,000	1,380,000	250,000	480,000	190,000
Transmission System	7,390,997	8,230,438	5,085,593	15,335,095	11,223,547
Distribution System	7,709,003	8,584,562	5,304,407	15,994,905	11,706,453
General Water Maintenance	954,000	1,094,500	1,001,000	1,087,500	1,147,000
Total	$ 32,112,000	$ 27,069,500	$ 16,256,000	$ 44,092,500	$ 30,357,000
Percentage of Capital Expenditure					
Filtration Plant Improvements	35.21%	20.37%	26.39%	21.76%	14.12%
Raw Water Dams and Reservoirs	10.82%	8.37%	2.00%	3.63%	5.95%
Distribution Pumping and Storage	3.97%	5.10%	1.54%	1.09%	0.63%
Transmission System	23.02%	30.40%	31.28%	34.78%	36.97%
Distribution System	24.01%	31.71%	32.63%	36.28%	38.56%
General Water Maintenance	2.97%	4.04%	6.16%	2.47%	3.78%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
Proposed Revenue Increase	$ 2,794,926	$ 2,950,891	$ 3,104,756	$ 3,261,289	$ 3,473,458
Proposed Revenue Increase by Functional Group					
Filtration Plant Improvements	$ 984,212	$ 601,199	$ 819,353	$ 709,691	$ 490,291
Raw Water Dams and Reservoirs	302,453	246,911	62,072	118,344	206,529
Distribution Pumping and Storage	110,972	150,436	47,748	35,503	21,740
Transmission System	643,289	897,214	971,305	1,134,256	1,284,202
Distribution System	670,967	935,817	1,013,096	1,183,059	1,339,456
General Water Maintenance	83,033	119,313	191,182	80,437	131,240
Total	$ 2,794,926	$ 2,950,891	$ 3,104,756	$ 3,261,289	$ 3,473,458
Projected Total Operating Revenues	$ 47,108,481	$ 49,837,297	$ 52,711,071	$ 55,730,782	$ 58,895,794
Percentage Increase for New Haven					
Filtration Plant Improvements	2.09%	1.21%	1.55%	1.27%	0.83%
Raw Water Dams and Reservoirs	0.64%	0.50%	0.12%	0.21%	0.35%
Distribution Pumping and Storage	0.00%	0.00%	0.00%	0.00%	0.00%
Transmission System	0.06%	0.08%	0.08%	0.09%	0.10%
Distribution System	0.00%	0.00%	0.00%	0.00%	0.00%
General Water Maintenance	0.18%	0.24%	0.36%	0.14%	0.22%
Percentage Increase Appropriate to New Haven Assuming that Fort Wayne's Proposed Overall Increase is Found Reasonable	**2.97%**	**2.02%**	**2.12%**	**1.72%**	**1.50%**
Percentage Increase Propose by Ft. Wayne	5.93%	5.92%	5.89%	5.85%	5.90%
Ratio of New Haven Increase to Fort Wayne's Proposed Increase	50%	34%	36%	29%	25%

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing Testimony was served upon the following by electronic delivery this the 30th day of October 2018, to:

Daniel M. Le Vay
Indiana Office
of Utility Consumer Counselor
PNC Center, Suite 1500 South
115 West Washington Street
Indianapolis, Indiana 46204-2208

Brian C. Bosma
Kroger, Gardis & Regas, LLP
111 Monument Circle, Suite 900
Indianapolis, IN 46204
bbosma@kgrlaw.com

J. Christopher Janak
Jonathan W. Hughs, Esq.
Bose McKinney & Evans LLP
111 Monument Circle, Suite 2700
Indianapolis, IN 46204
jjanak@boselaw.com
jhughes@boselaw.com

Brandon J. Almas
Associate City Attorney – City Utilities
200 E. Berry St.
Fort Wayne, IN 46802

/s/ R.M. Glennon
Robert M. Glennon
Attorney at Law, #8321-49

Counsel for City of New Haven

Robert M. Glennon
Robert Glennon & Assoc., P.C.
3697 N. Co. Rd. 500 E.
Danville, Indiana 46122
Telephone: (317) 852-2723
Fax: (317) 852-0115
robertglennonlaw@gmail.com