STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

PETITION OF INDIANA-AMERICAN WATER COMPANY, INC. FOR (1) AUTHORITY TO INCREASE ITS RATES AND CHARGES FOR WATER AND WASTEWATER UTILITY SERVICE THROUGH A THREE-STEP RATE IMPLEMENTATION, (2) APPROVAL OF NEW SCHEDULES OF RATES AND CHARGES APPLICABLE TO WATER AND WASTEWATER UTILITY SERVICE, INCLUDING A NEW UNIVERSAL AFFORDABILITY RATE, (3) APPROVAL OF REVISED DEPRECIATION RATES APPLICABLE TO WATER AND WASTEWATER PLANT IN SERVICE, (4) APPROVAL OF NECESSARY AND APPROPRIATE ACCOUNTING RELIEF, (5) APPROVAL OF THE EXTENSION OF SERVICE TO AN INFRASTRUCTURE DEVELOPMENT ZONE IN MONTGOMERY COUNTY, INDIANA AND AUTHORITY TO IMPLEMENT A SURCHARGE UNDER IND. CODE § 8-1-2-46.2, AND (6) APPROVAL OF PETITIONER'S PLANS TO DEVELOP FUTURE WATER SOURCES OF SUPPLY UNDER IND. CODE § 8-1-2-23.5.	)	**CAUSE NO. 45870**

PUBLIC'S EXHIBIT NO. 1

TESTIMONY OF SCOTT A. BELL

ON BEHALF OF

THE INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

JULY 21, 2023

Respectfully submitted,

INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

Daniel M. Le Vay, Attorney No. 22184-49
Deputy Consumer Counselor
T. Jason Haas, Attorney No. 34983-29
Deputy Consumer Counselor
Thomas R. Harper, Attorney No. 16735-53
Deputy Consumer Counselor
OFFICE OF UTILITY CONSUMER COUNSELOR
115 W. Washington St. Suite 1500 South
Indianapolis, IN 46204
Email: dlevay@oucc.in.gov
thaas@oucc.in.gov
thharper@oucc.in.gov

CERTIFICATE OF SERVICE

This is to certify that a copy of the ***Public's Exhibit No. 1 – Scott A. Bell on behalf of the OUCC*** has been served upon the following in the captioned proceeding by electronic service on July 21, 2023.

Indiana-American Water Company, Inc:
Nicholas K. Kile
Hillary J. Close
Lauren M. Box
Lauren Aguilar
BARNES & THORNBURG LLP
11 South Meridian Street
Indianapolis, Indiana 46204
Email: Nicholas.kile@btlaw.com
hillary.close@btlaw.com
lauren.box@btlaw.com
lauren.aguilar@btlaw.com

City of Crown Point:
Robert M. Glennon
ROBERT GLENNON & ASSOC., P.C.
3697 N. Co. Rd. 500 E.
Danville, IN 46122
Email: robertglennonlaw@gmail.com

Mark W. Cooper
ATTORNEY AT LAW
1449 North College Avenue
Indianapolis, IN 46202
Email: attymcooper@indy.rr.com

Courtesy Copy to:
Gregory D. Shimansky
Director Rates and Regulatory
Indiana-American Water Company, Inc.
153 N. Emerson Ave.
Greenwood, Indiana 46143
Email: Gregory.Shimansky@amwater.com

Citizens Action Coalition (CAC):
Jennifer Washburn
CITIZENS ACTION COALITION
1915 West 18th Street, Suite C
Indianapolis, Indiana 46202
Email: jwashburn@citact.org

Industrial Group (IN-American)
Joseph P. Rompala
Aaron A. Schmoll
LEWIS & KAPPES, P.C.
One American Square, Suite 2500
Indianapolis, Indiana 46282-0003
Email: JRompala@Lewis-Kappes.com
ASchmoll@Lewis-Kappes.com

Wholesale Water Customers:
J. Christopher Janak
Kristina Kern Wheeler
BOSE MCKINNEY &EVANS LLP
111 Monument Circle, Suite 2700
Indianapolis, Indiana 46204
Email: cjanak@boselaw.com
kwheeler@boselaw.com

Town of Whiteland:
Stephen K. Watson
Jacob G. Bowman
William W. Barrett
WILLIAMS, BARRETT & WILKOWSKI, LLP
600 North Emerson Ave.
P.O. Box 405
Greenwood, IN 46142
Email: swatson@wbwlawyers.com
jbowman@wbwlawyers.com
wbarrett@wbwlawyers.com

Hamilton County Regional Utility District Customers:
J. Christopher Janak
Kristina Kern Wheeler
BOSE MCKINNEY & EVANS LLP
111 Monument Circle, Suite 2700
Indianapolis, Indiana 46204
Email: cjanak@boselaw.com
kwheeler@boselaw.com

Daniel M. Le Vay
Deputy Consumer Counselor

INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR
115 West Washington Street
Suite 1500 South
Indianapolis, IN 46204
infomgt@oucc.in.gov
317/232-2494 – Phone
317/232-5923 – Facsimile

TESTIMONY OF OUCC WITNESS SCOTT A. BELL
CAUSE NO. 45870
INDIANA-AMERICAN WATER COMPANY, INC.

I. INTRODUCTION

Q: Please state your name and business address.

A: My name is Scott A. Bell, and my business address is 115 West Washington Street, Suite 1500 South, Indianapolis, Indiana 46204.

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

A: I am employed by the Indiana Office of Utility Consumer Counselor ("OUCC") as the Director of the Water/Wastewater Division. My qualifications and experience are set forth in Appendix A.

Q: What is the purpose of your testimony?

A: I provide a broad overview of the OUCC's recommendations in this case, as the agency recommends a $68,183,095 reduction to the utility's request. The OUCC's recommendations would limit Indiana American Water Company, Inc's (Indiana American." "INAWC," or "Petitioner") annual revenue increase to $18,558,410, rather than the $86,741,505 increase Petitioner requested in its case-in-chief. I introduce the OUCC's eleven witnesses and describe the subjects each witness addresses. I discuss the importance of affordability for all ratepayers. I respond to Petitioner's proposal to modify its rate design to establish an allowance-based rate for all customers, which will allow the first 1,500 gallons of a customer's water usage to be included within the proposed fixed monthly 5/8" meter charge of $20.00. I explain why the OUCC does not oppose that change. I also explain in detail that Indiana American's proposed Universal Affordability Tariff is not in the public interest for a number of reasons, including the absence of any

company/shareholder funding and scheme to pay for discounts through subsidization by captive customers.

Q: What have you done to prepare your testimony?

A: I reviewed Indiana American's Petition and case-in-chief. I reviewed relevant Indiana Utility Regulatory Commission ("Commission" or "IURC") orders, including orders in previous Indiana American cases. I submitted discovery questions and reviewed Indiana American's responses to the OUCC's discovery as well as discovery from the Intervenors (Citizens Action Coalition of Indiana, Inc., Indiana American Water Company, Inc. Industrial Group,[1] City of Crown Point, Town of Whiteland, Wholesale Customers).[2] I reviewed Indiana American's "Report on Low Income Pilot Program" for the years 2019-2022. I reviewed portions of Indiana American's IURC Annual Reports from 2017 through 2022. I reviewed pertinent sections of Title 8 of the Indiana Code. On March 14, 2023, I, along with other members of the OUCC, met with representatives of Indiana American to discuss the base rate case. On July 6, 2023, I attended the Commission's public field hearing in Gary, IN.[3]

II. OUCC WITNESSES

Q: Please introduce the OUCC's witnesses in this Cause.

A: The OUCC's witnesses provide testimony on the following issues:

Ms. Carla Sullivan. Ms. Sullivan makes revenue requirement adjustments and sponsors the OUCC's overall revenue requirement recommendation for Indiana American. Ms. Sullivan incorporates the recommendations of other OUCC witnesses into her schedules.

[1] Cleveland Cliffs Steel LLC, General Motors, Haynes International, Inc., Linde, United States Steel Corporation.

[2] Sullivan Vigo Rural Water Corp., Town of Schererville, Borden Tri-County Regional Water District, Jackson County Water Utility, Inc., Town of Greenville.

[3] The 27 speakers at the Commission's public field hearing included Jerome A. Prince, Mayor of Gary; Pete Land, Mayor of Crown Point; David Fossett, Gary City Council – District 2; and Sue Pelfrey, New Chicago Water Works.

She responds to INAWC's operating revenue adjustments and presents her own recommendations affecting operating revenue and expense adjustments. **(Public's Exhibit No. 2)**

Ms. Margaret Stull. Ms. Stull makes recommendations with respect to Indiana American's rate base and recommends a process for updating rate base in each step of implementation. She responds to Indiana American's request for regulatory accounting treatment. Ms. Stull also responds to Indiana American's proposed recovery of COVID-19 costs. She makes recommendations with respect to Indiana American's expenses related to its service company, depreciation expense, amortization expense, property tax expense, and income tax expense. She also presents the OUCC's recommended capital structure and weighted average cost of capital. Ms. Stull addresses Indiana American's proposal to implement an infrastructure development zone surcharge for its Montgomery County customers. Finally, Ms. Stull addresses various capital tracker issues that are best dealt with in the context of a base rate case rather than an expedited tracker case. **(Public's Exhibit No. 3)**

Mr. Tom Malan. Mr. Malan makes recommendations regarding Indiana American's expenses for salaries and wages and employee benefits. He testifies regarding Indiana American's requested contractual services for additional contracted line locates. **(Public's Exhibit No. 4)**

Mr. Jason Compton. Mr. Compton responds to aspects of Indiana American's affordability analyses and identifies conceptional and functional errors in the utility's methodology. Mr. Compton also discusses adjustments to expense accounts, specifically addressing Indiana American's adjustment for the inclusion of credit and debit card fees along with the annualization of several expense accounts. **(Public's Exhibit No. 5)**

Mr. Shawn Dellinger. Mr. Dellinger testifies regarding the return on equity component of the cost of capital and recommends a return on equity of 9.00% for Indiana American. He also testifies regarding the declining use adjustment requested by the company and recommends an approximately .89% declining use adjustment. He further testifies regarding the effect of the capital structure on affordability. (**Public's Exhibit No. 6**)

Mr. David Garrett of Resolve Utility Consulting, PLLC. Mr. Garrett presents adjustments to the depreciation rates proposed in INAWC's depreciation study. Relying on statistical and actuarial analyses as well as informed professional judgment, Mr. Garrett develops service life and net salvage estimates for the Company's depreciable property which are used to determine his proposed depreciation rate adjustments. (**Public's Exhibit No. 7**)

Mr. Jerome Mierzwa of Exeter Associates, Inc. Mr. Mierzwa testifies regarding Indiana American's class cost of service study ("COSS") and proposed rate design. Mr. Mierzwa recommends the Industrial and Sales for Resale ("SFR") classes' maximum hour extra capacity factors be modified because they are too low. He also proposes to modify the

allocation of mains between the transmission and distribution functions. Because the Industrial, SFR and Public Authority classes are not paying their fully allocated cost of service, Mr. Mierzwa recommends a more equitable allotment of the assigned increases. (**Public's Exhibit No. 8**)

Mr. James Parks. Mr. Parks recommends denial of two major project rate base additions – the complete replacement of the Winchester treatment plant ($24.3 million) and the complete replacement of the Sheridan treatment plant ($30.8 million). Mr. Parks testifies the Winchester treatment plant project is oversized and lacks adequate support for the need for the project. Mr. Parks recommends disallowing the Sheridan project because of lower cost alternatives and because Petitioner has failed to support the need for the project. Mr. Parks also recommends disallowing Petitioner's proposal to include in rate base in this case a $9.3 million transmission main from the Sheridan treatment plant to serve the Hamilton County Regional Utility District because it is a main extension that should be funded by the new customer. Mr. Parks testifies that Petitioner's Lake Station wells and water treatment plant should be removed from rate base because they have not been used to produce any water since 2019. **(Public's Exhibit No. 9)**

Mr. Carl Seals. Mr. Seals discusses Indiana American's increasing levels of non-revenue water and recommends more frequent fire service audits. Mr. Seals also notes a decrease in field service orders and describes comments received from customers. (**Public's Exhibit No. 10**)

Ms. Kristen Willoughby. Ms. Willoughby explains why the proposed replacement and relocation of the Sheridan 6th Street Lift Station and the acquisition in Sheridan of property for new well(s) should be disallowed due to the lack of support provided for these projects. She also explains why the cost of the Sheridan Maple Run Lift Station Improvement Project should be adjusted due to a new cost estimate provided by Petitioner. (**Public's Exhibit No. 11**)

Customer Comments. The OUCC is including 286 customer comments. **(Public's Exhibit No. 12)**

Q: Does the OUCC have specific overarching concerns about this particular Indiana American rate request?

A. Yes. Individual OUCC witnesses put forth testimony and recommendations regarding specific issues or requests contained in Indiana American's case. For example, Indiana American proposes to spend approximately $24.3 million for a new water treatment plant

in the Winchester district that is not necessary.[4] The OUCC's testimony, opposition from elected officials,[5] and ratepayer comments raise serious concerns about the immediate financial impacts of these expensive requests. If approved, Indiana American's capital investment requests will likely realize significant returns on a proposed $875 million increase in rate base by 2025. It must be remembered that state policy for investment in infrastructure also requires decision-makers to recognize how infrastructure projects affect the affordability of utility services for present and future generations of Indiana citizens.[6]

Q: Should the OUCC's silence with respect to any proposal or evidence be construed as agreement or consent?

A: No. In my 35 years of experience with utility ratemaking and IURC proceedings, Indiana American's case is perhaps the most complicated and issue-loaded base rate case this utility has ever presented. The OUCC's witnesses have endeavored to meet all issues within the time provided. Indiana American has the burden of proving its case with adequate evidence and a showing that each of its requested approvals are in the public interest. Any silence with respect to specific items, adjustments, or amounts Indiana American proposes from my or any other OUCC witness's testimony is not intended to indicate approval. The scope of my and other OUCC witnesses' testimony is limited to the specific items addressed.

[4] See Direct Testimony of OUCC witness James Parks.

[5] State Representatives Ragen Hatcher (District 3), Earl Harris (District 2), and Vernon Smith (District 14), along with State Senator Eddie Melton (District 3) signed a letter to the Commission stating their opposition to "Indiana American Water's audacious request to levy a rate hike of 31% on 328,000 Hoosiers' water and wastewater bills." See Public's Exhibit No. 12.

[6] I.C. § 8-1-2-0.5.

III. OVERVIEW OF INDIANA AMERICAN'S CASE AND OUCC REVENUE REQUIREMENTS

Q: Please summarize the OUCC's findings regarding Petitioner's revenue requirement.

A: Indiana American requests an 31.1% rate increase to generate $86,741,505 of additional annual revenue. After reviewing Petitioner's case and conducting discovery, the OUCC determined Indiana American has justified an overall rate increase of 6.60% to generate $18,558,410 of additional annual revenue.[7] Overall, the OUCC recommends reducing Indiana American's proposed revenue increase by $68,183,095.[8]

Q: What is the OUCC's recommended weighted cost of capital?

A: The OUCC's recommended revenue increase is based on a weighted average cost of capital ("WACC") of 6.01 percent for Step 1, a WACC of 6.01 percent for Step 2, and a WACC of 6.14 percent for Step 3.[9]

IV. OUCC REVENUE REQUIREMENT ANALYSIS

Q: Please describe the OUCC's process to evaluate Indiana American's revenue requirements.

A: Indiana American is an investor-owned utility, whose rates and charges are regulated under Ind. Code § 8-1-2-1, *et seq*. The OUCC compared the operating revenues, operating expenses, rate base figures, capital structure, and net operating income from Indiana American's historical base period (12 months ended September 30, 2022) against the same from its forecasted test year (May 2024 – April 2025). Adjustments to the forecasted test year revenue and expense data were generally made to reflect changes projected to occur by the end of the forecasted test year. The OUCC also adjusted Petitioner's forecasted rate

[7] Direct Testimony of Carla Sullivan, OUCC Schedule 1TC, p. 1 of 7.
[8] Direct Testimony of Carla Sullivan, OUCC Schedule 1TC, p. 1 of 7.
[9] Direct Testimony of Carla Sullivan, OUCC Schedule 9TC, pp. 1-4.

base and recommends a fair rate of return ("ROR") on rate base.

In developing its recommendations, the OUCC reviewed Indiana American's case-in-chief, exhibits, accounting schedules, attachments, and workpapers. OUCC staff and witnesses issued data requests and gathered financial information about Indiana American through discovery. OUCC staff members participated in a conference call with Indiana American staff to discuss accounting issues. The OUCC attended public field hearings in this Cause and reviewed written comments from Indiana American's ratepayers. The OUCC received 286 written customer comments and is including them as Public's Exhibit No. 12.

V. AFFORDABILITY

Q: Is the OUCC concerned about the affordability of Indiana American's rates?

A: Yes. Indiana American directly serves more than 300,000 households and customers of various means throughout the state. Through its direct customers, Indiana American serves many more households that ultimately pay for Indiana American's rising rates. It is concerning that Indiana American is asking for water rates that are 55% higher overall than the rates approved in its last rate case set in 2019, and for wastewater rates that are 106% higher overall. Through Ind. Code § 8-1-2-0.5, the Indiana General Assembly has recognized the danger that water and wastewater rates may become unaffordable to Indiana customers. I.C. § 8-1-2-0.5 expresses that the policy of the State of Indiana is to encourage the planning for, and investment in, infrastructure, while protecting affordability for

present and future generations of Indiana citizens.[10]

Indiana American's affordability analysis recognizes that INAWC has reached a tipping point. Indiana American's rates have risen to the point where a significant number of its customers can no longer be expected to afford its increasingly expensive water services without, according to its proposed affordability tariff and program, financial assistance from Indiana American's own residential customer base.

Since its last base rate increase was approved in Cause No. 45142 on June 26, 2019, Indiana American has filed three Distribution System Improvement Charge ("DSIC")[11] cases (Cause No. 42351 DSIC 12, 13 and 14) and two Service Enhancement Improvement ("SEI")[12] cases, which have increased rates to water customers by approximately 17.69%.[13] Indiana American is now seeking approval for an overall rate increase of approximately 31.11%, when current base rates and approved trackers are taken into account, to generate an additional $86.7 million of annual revenues.[14] To delineate further, Indiana American is requesting to increase its rates to water customers by approximately 30.49% overall and to increase its rates to wastewater customers by approximately 106.37% overall.

---

[10] Sec. 0.5. The general assembly declares that it is the continuing policy of the state, in cooperation with local governments and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to create and maintain conditions under which utilities plan for and invest in infrastructure necessary for operation and maintenance while protecting the affordability of utility services for present and future generations of Indiana citizens. *As added by P.L.104-2016, SEC.1.*

[11] Pursuant to I.C. ch. 8-1-31.

[12] Pursuant to I.C. ch. 8-1-31.7.

[13] The 17.69% rate increase for water service is net of rate reductions associated with the elimination of Utility Receipts Tax ("URT") and reduction of the corporate tax rate per the Tax Cuts and Job Act ("TCJA").

[14] Direct Testimony of Gregory D. Shimansky, pp. 6-7.

After new rates are established in this Cause, Indiana American is expected to seek future rate increases for its water customers through DSIC and SEI infrastructure cost recovery mechanisms. The cumulative economic effect on ratepayers of these increases raises issues of affordability.

Q: How should affordability be considered?

A: Water and wastewater utilities in Indiana are monopolies whose customers have no choice in their service providers. These customers depend on the Commission to apply traditional ratemaking principles to ensure that a water or wastewater utility's costs and returns are reasonable so that customers are not paying for unreasonable expenses, imprudent investments, or excessive returns through higher rates. While water and wastewater utilities need to make investments in infrastructure to provide safe, reliable, and adequate service, these utilities need to acknowledge how methods of choosing what to build affect the affordability of its services – services that supply basic human needs and are therefore not discretionary.

Indiana American is a for-profit utility with an obligation to its shareholders to provide reasonable returns on their investments. As a monopoly that has increasingly been empowered to recover costs incurred between rate cases through DSIC and SEI trackers, Indiana American has fewer external pressures to avoid unnecessary costs. Pressures to reduce costs and avoid unnecessary capital projects come in the form of the possibility that expenses it has incurred and projects it completes may be deemed by the Commission to be unreasonable, imprudent, or unnecessary.

According to its customer notifications in Attachments MP-1 "a significant portion of the revenue requested is related to more than $875 million of capital expenditures made

or projected throughout the state since our last rate case." Indiana American has not tightened its own belt and cannot be expected to do so without a meaningful response from the state entities responsible for regulating this monopoly. Indiana American's response to the increasing unaffordability of its water service, which it proposes to increase by 55% since its last rate order, is to place a further burden entirely on its customers, to assist those customers to pay the balance of what Indiana American acknowledges is a rate a significant number of its customers cannot afford.

Safe and reliable water and wastewater systems are critical to basic human needs. However, at the same time customers are faced with increasing utility costs, they must also contend with other cost of living increases due to inflation. This combination of price pressure is unsustainable. These hardships are only worsened during periods of widespread economic turmoil. In recognition of the importance of affordability, Indiana American could seek a lower and more reasonable ROE than the 10.6% it requests in this docket, lower the equity portion of the capital structure to establish a more reasonable 50/50 debt to equity ratio, moderate the growing level of capital expenditures, and reduce the corporate overhead costs being allocated to Indiana American. These actions could lower the proposed rate increase and lessen the financial impact to customers.

Q: What action does the OUCC request the Commission take?

A: The Commission is charged with the task of balancing the interests of the utilities with ratepayers. Consistent with the General Assembly's stated policy, the Commission should take steps to moderate the imposition of higher rates over time and only approve necessary and reasonable requests for Indiana American to provide affordable water and wastewater service. The OUCC recognizes the necessity of financially sound utilities that can provide

quality services at reasonable prices. However, at some point, it becomes crucial to review whether the scales have become imbalanced and weigh too heavily toward the utilities' desire to provide larger dividends to its shareholders. The OUCC requests the Commission consider the affordability of Indiana American's existing and proposed rates when examining the various components of the utility's requests.

VI. COMPARISON OF RATES

Q: How affordable are Indiana American's current water rates and resulting bills when compared to other large water utilities operating in the state?

A: As explained below, Indiana American (the largest investor-owned water utility in the state by customer count) has the highest water rates in the State when compared to Citizens Water (the largest water utility in the state by customer count), Citizens Water of Westfield, LLC (the second largest investor-owned water utility in the state by customer count), and the next eight largest municipal water utilities. Thus, Indiana American has by far the most unaffordable rates when compared to those ten water utilities.

Q: How do Indiana American's current water rates and resulting bills compare to Citizens Water's rates and resulting bills?

A: Indiana American provides water service to approximately 328,000 customers and Citizens Water provides water service to approximately 341,597 customers.[15] A bill for a Citizens Water customer that uses 5,000 gallons of water in a month, including its $8.56 service charge and $0.72 DSIC charge, is $33.43. An Indiana American residential customer using 5,000 gallons of water during a month (subject to current Area 1 rates) pays $54.90, a difference of $21.47 or 64.2% more than a Citizens Water residential customer, for

[15] Source: Citizens Water's IURC Annual Report, Class A Municipal or Not-For-Profit Water, dated December 31, 2022.

basically the same level of service.[16] If Indiana American's proposed rate increase is approved, a residential customer using 5,000 gallons of water during a month (subject to Area 1 rates) would pay $79.85, a difference of $46.42, or 139% more than a Citizens Water residential customer. Bill differences are similar if a comparison is based on usage of only 4,000 gallons per month. A Citizens Water residential customer would pay $28.60, compared to an Indiana American residential customer who would pay $49.75 a month - a difference of $21.15 or 74% more. If the entire rate increase is approved as proposed, an Indiana American residential customer will pay $64.10 for 4,000 gallons compared to only $28.60 for a Citizens Water residential customer - a difference of $35.50 or 124% more.

Q: How do Indiana American's current water rates and resulting bills compare to Citizens Water of Westfield, LLC's rates and resulting bills?

A: Citizen Water of Westfield, LLC serves approximately 18,895 metered customers.[17] A bill for a Citizens Water of Westfield customer that uses 5,000 gallons of water in a month is $32.96, which includes a $10.47 base charge and a $3.39 fire protection charge service fee. For comparison purposes, an Indiana American residential customer using 5,000 gallons of water during a month (subject to Area 1 rates) currently pays $54.90, a difference of $21.94 or 66.6% more than a Citizens Water of Westfield residential customer for basically the same level of service. If Indiana American's proposed rate increase is approved, a residential customer using 5,000 gallons of water during a month (subject to Area 1 rates) will pay $79.85, or 142% more than a Citizens Water of Westfield residential customer.

[16] The $54.90 is calculated by multiplying the $0.51480 / 100 gallon (Area 1 Rate for the First 15,000 gallons) times 50 to determine the volumetric charge of $25.74. Adding on the $15.26 customer charge, plus the $4.85 public fire protection charge, plus $7.98 DSIC Charge, plus $1.07 SEI Charge, totals $54.90.

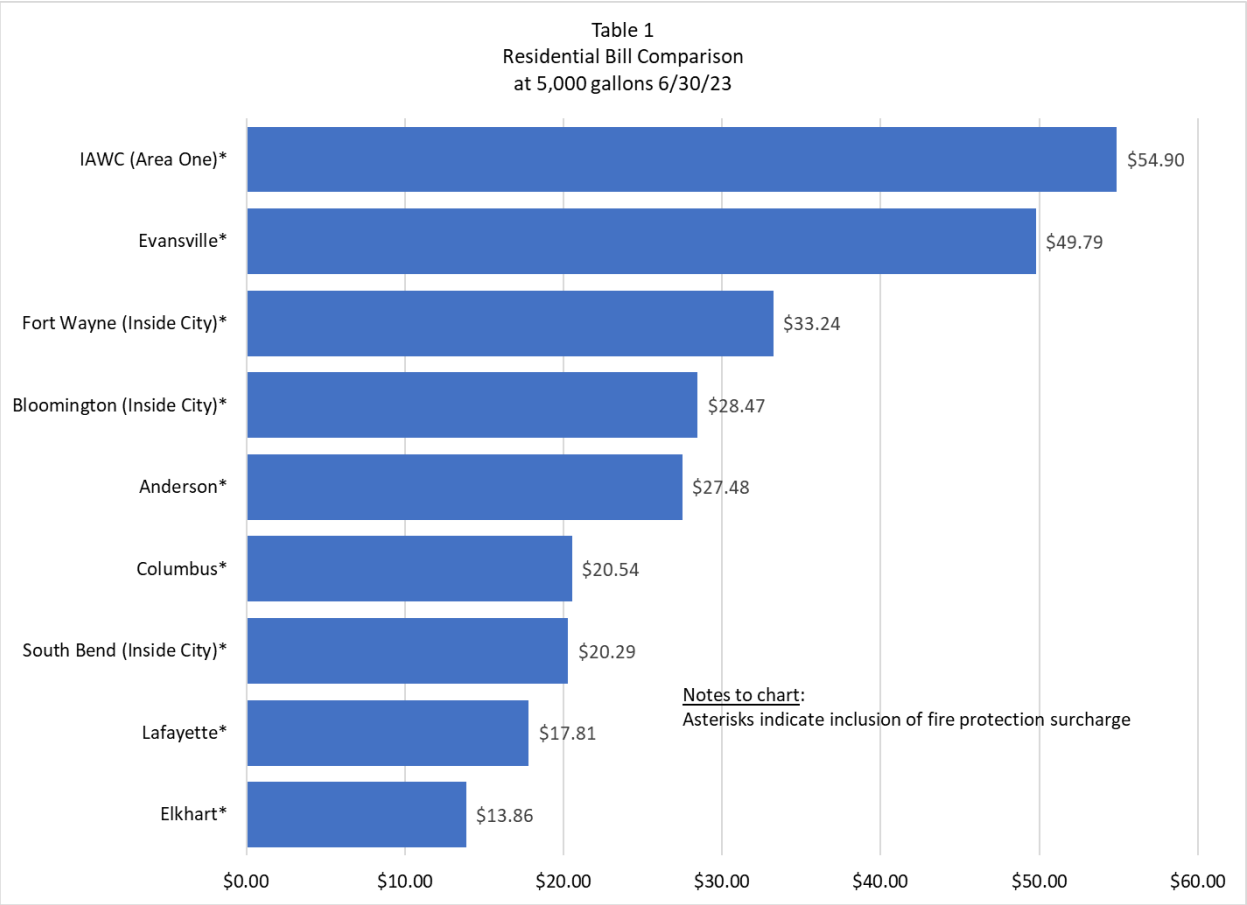
[17] Citizens Water of Westfield, LLC, IURC Annual Report, p. W-1, Year ending 2021.

The bill differences are similar if based on usage of only 4,000 gallons per month. A Citizens Water of Westfield residential customer would pay $29.14 compared to an Indiana American residential customer who would pay $49.75 a month, a difference of $20.61 or 71% more. If the entire rate increase is approved as proposed, an Indiana American residential customer will pay $64.10 for 4,000 gallons versus $29.14 for a Citizens Water of Westfield residential customer, a difference of $34.96 or 120% more.

Q: How do Indiana American's current water rates and resulting bills compare to large regulated municipal water utilities in the State of Indiana?

A: When compared to the state's eight largest regulated municipal water utilities (Ft. Wayne, Evansville, South Bend, Lafayette, Bloomington, Anderson, Elkhart, and Columbus), Indiana American customers pay the highest water bills in the State.[18] Table 1 below graphically compares Indiana American's current water bill for 5,000 gallons of usage to the eight largest regulated municipal water utilities.

[18] For this comparison, I obtained the most recent approved tariffs for each of the eight regulated municipal water utilities.



Q: What is your conclusion regarding Indiana American's water utility rates?

A: Based on my comparison of Indiana American's rates to Citizens Water, Citizens Water of Westfield, LLC and the eight largest regulated municipal water utilities, Indiana American currently has the highest and most unaffordable rates in the State. If the proposed excessive rate increase is approved, Indiana American will continue, by an even larger margin, to have the highest, most expensive, and most unaffordable rates in the State. Not only will Indiana American's rates be an increasing financial burden to its captive residential customers, but it may also be problematic for businesses and could hinder economic development. Affordability is not just an issue of a customer's ability to pay, but it may also speak to how a utility's rates compare to the rates of other utilities in the state providing

the same service. The Indiana General Assembly has recently acknowledged that the comparison of prices has a place when considering affordability of utility service. HEA 1007 (2023), states that decisions concerning Indiana's electric generation resource mix, energy infrastructure, and electric service ratemaking constructs must consider, among other things, "(2) Affordability, including ratemaking constructs that result in retail electric utility service that is affordable and competitive across residential, commercial, and industrial customer classes." (Emphasis added.) Indiana American's very high rates (current and proposed) when compared to other utilities in the state should be considered when discussing whether its rates are affordable.

VII. AFFORDABILITY METRIC

Q: By what measure does Indiana American assess the affordability of its water service and wastewater service?

A: Mr. Rea states that "the Company assesses affordability of water and wastewater service by comparing annual bills for water and/or wastewater service to household income in the communities that we serve." He explains that his assessment required at least two data points: (1) "the average monthly or annual bill for water and wastewater service" and (2) "some measure of household income for the customer population." For the household income data point, he used Median Household Income ("MHI").

Q: Does Mr. Rea state that there is a generally accepted standard for affordability of water and wastewater service?

A: Yes. Mr. Rea states that a "benchmark for affordability as a total bill's percentage of Median Household Income ("MHI") is a policy decision, however bills less than 2.0% or 2.5% of MHI for water service and 4.0% to 4.5% of MHI for combined water/wastewater

service are considered 'affordable' by some."[19] Mr. Rea footnoted a peer reviewed article in the Journal AWWA, 2018, by Manuel P. Teodoro, Texas A&M University, College Station, Texas, which I provide as Attachment SAB-1. Mr. Rea's footnote reference might lead one to believe that Mr. Teodoro advocates percentage of median household income (%MHI) to be an acceptable method to measure the affordability of a utility's average bill. Actually, Mr. Teodoro made it clear in his article (AWWA Journal p. 14) that he, in fact, does not support the use of %MHI as a measure of affordability:

> Despite its widespread use, the %MHI approach is seriously flawed. The main trouble with using it as a measure of affordability is that it does not measure affordability—at least not at the household level, in the way that most interested observers typically think of affordability. The %MHI method and accompanying 2.0% standard as developed by the US Environmental Protection Agency (USEPA) were intended as a gauge of a community's financial capability for purposes of negotiating regulatory compliance by its utilities. The idea of %MHI as a measure of financial capability can be traced to the USEPA's Financial Capability Guidebook (USEPA 1984). Identifying specific %MHI thresholds for determining financial capability appears to emerge from the agency's 1995 guidelines on Water Quality Standards (USEPA 1995) and Combined Sewer Overflow compliance schedule (USEPA 1997). For purposes of assessing financial capability, %MHI values for water and sewer would be calculated separately, with the sum of the two held up against the standard. For example, a 2.0%MHI standard for water and 2.0%MHI standard for sewer implies a 4.0%MHI combined standard. None of these USEPA documents offers a theoretical rationale for the 1.0, 2.0, or 2.5%MHI standards.
>
> It is not clear when or how analysts began to conflate these utility-level financial capability metrics with household-level affordability, but as noted previously, %MHI is now widely used as a household affordability metric. Unfortunately, as a method of measuring household affordability, the %MHI method is flawed in at least four ways. (Emphasis added)

[19] Direct Testimony of Charles B. Rea, p. 8.

Q: What are the four ways the %MHI method is flawed according to Mr. Teodoro?

A: Mr. Teodoro identified the following four ways the %MHI method to determine affordability is flawed.[20]

1. **Average versus essential water use**: Using average residential demand as a basis for affordability analysis inflates the cost of water and sewer service for purposes of affordability analysis.

2. **Median versus low income**: Perhaps the most frequent criticism of the %MHI standard is that its focus on median income misses the real subject of affordability concerns: poor households (Stratus Consulting 2013, Baird 2010, Rubin 2001). The median-income household is unlikely to face serious water and sewer affordability problems in any but the smallest or most desperately poor communities. For low-income households, however, water and sewer services may force important economic tradeoffs. Measuring affordability as a function of an entire community's MHI obscures the effects of rate-setting on low-income customers, for whom utility leaders presumably have the greatest affordability concerns. As income stratification in a community increases, the degree to which %MHI masks potential affordability problems increases.

3. **Essential costs of living**: Water and sewer services are vital but are not the only vital goods and services customers must purchase. Housing, food, health care, home energy, and other essential goods and services also affect water and sewer affordability to the extent that they constrain households' financial flexibility.

4. **An arbitrary, binary standard**. Whether the affordability standard is set at 1.0, 2.0, 2.5, or any other %MHI, the standard represents a value of water and sewer service that is rarely (if ever) rooted in any philosophical reasoning or as a result of a deliberative process. Instead, analysts simply cite precedent and invoke the standard. Whatever its origins, the 2.0 (or 2.5) %MHI affordability threshold has evolved into a "golden number" (Socolow 1976), now held up as a definitive measure of household-level affordability, apparently for no other reason than its familiarity and convenience.

   The simple binary nature – either affordable or unaffordable – of the %MHI standard is also problematic. The affordability of anything is rarely a strict yes/no phenomenon – in microeconomics, things are more or less affordable relative to the costs of other things. Although informal rules of thumb can be useful, the %MHI standard has become a crutch that causes simplistic and misleading analyses.

[20] Attachment SAB-1, AWWA Journal dated January 2018, pp. 14-15

Q: Did Mr. Rea and Indiana American make a policy decision to use the 2% of MHI as Indiana American's affordability metric?

A: Apparently, yes. Despite the flaws Mr. Teodoro described in using MHI% to determine affordability, Mr. Rea uses 2% of MHI as his defined level of affordability for Indiana American's residential customers.

Q: Why is Indiana American establishing an affordability metric?

A: American Water Works Company, Inc.'s ("American Water") and Indiana American's leadership realize that its water rates are the highest in the State and that increasing the water rates by over 30% and the wastewater rates by over 106% would make them more unaffordable for an even larger portion of its customer base.[21] However, according to American Water's June 2023 Investor Presentation, to achieve its 2023-2027 Plan of 7-9% Earnings per Share Compound Annual Growth Rate Target, its regulated utilities target a 5-7% capital expenditure growth per year.[22] (See Attachment SAB-2.) American Water plans to grow its overall rate base by 8-9% per year through 2032. Indiana American is already aggressively growing its utility plant and will need to continually make increasing amounts of capital investments in infrastructure to keep building its rate base. (See Attachment SAB-3 which graphically shows that Indiana American's utility plant has grown on average at 7.34% annually since 2018.)[23]

Increasing future rate base will cause Indiana American's water and wastewater rates to increase even more, making them even more unaffordable. Therefore, Indiana

[21] "The Company estimates that there are approximately 54,000 water customers with household incomes at or below 150% of FPL that would qualify for service under the Company's proposed Universal Affordability tariff." Direct Testimony of Charles B. Rea, p. 40.

[22] American Water June 2023 Investor Presentation, p. 25.

[23] See Indiana American's IURC Annual Reports for years 2018-2022, total utility plant in service, p. W-3(b).

American provided a complex affordability analysis of its water and wastewater customers in an attempt to persuade the Commission that the vast majority of customers can afford the resulting bills - because the bills represent less than 2% of the median household income of Indiana American customers. For those customers falling above the so-called 2% affordability metric, Indiana American proposes implementation of a Universal Affordability Tariff. Unfortunately, the funding for discounts provide by the proposed Universal Affordability Tariff falls completely on other captive customers, with Indiana American contributing nothing. Indiana American's solution to its affordability problem is to conduct a study to justify its high rates, rather than take meaningful actions to address affordability such as (1) asking for a lower, more reasonable ROE than 10.6%, (2) lowering the equity portion of the capital structure to a more reasonable 50% debt / 50% equity ratio, (3) moderating the growing level of capital expenditures and eliminating expensive unnecessary infrastructure additions, and (4) reducing the corporate overhead costs being allocated to Indiana American. These actions would directly and more meaningfully effect rates and would actually provide needed relief to customers.

Q: What is your recommendation regarding the 2% of MHI affordability metric?

A: Mr. Rea's affordability analysis and his use of a 2% of MHI affordability metric should be disregarded. As Mr. Teodoro pointed out in his AWWA Journal article, the 2% of MHI affordability metric is "seriously flawed" and does not measure affordability at the household level. In addition, OUCC witness Jason Compton has identified several errors in Mr. Rea's affordability analyses that skew the results of the analyses. Those include a calculated median household income for Indiana American's customers that is too high and the use of a statewide median household income that is inaccurate and not

representative of the entire statewide population. Mr. Rea's affordability analysis based on the 2% of MHI metric falsely indicates the level of rate affordability. It also cannot hide the fact that Indiana American currently has the highest rates in the state and that it is proposing to increase those rates by over 30%.

VIII. WATER AND WASTEWATER UTILITY CUSTOMER ASSISTANCE PROGRAMS

Q: Does Indiana law address customer assistance programs for water and wastewater utilities?

A: Yes. Ind. Code § 8-1-2-46 addresses the ability of a water or wastewater utility to establish a customer assistance program. Section 46 indicates that when the Commission considers whether to approve a utility's proposed customer assistance program, it should determine whether the proposed customer assistance program (1) "furthers the interests set forth in section 0.5 of this chapter" and (2) "is in the public interest." Ind. Code § 8-1-2-46(c) is as follows:

> (c) Upon request by a water or wastewater utility in a general rate case, the commission may allow, but may not require, a water or wastewater utility to establish a customer assistance program that:
> (1) uses state or federal infrastructure funds; or
> (2) provides financial relief to residential customers who qualify for income related assistance.
> A customer assistance program established under this subsection that affects rates and charges for service is not discriminatory for purposes of this chapter or any other law regulating rates and charges for service. In considering whether to approve a water or wastewater utility's proposed customer assistance program, the commission shall determine that a customer assistance program established under this subsection furthers the interests set forth in section 0.5 of this chapter and is in the public interest.

This statutory language appears to allow water or wastewater utilities to establish a customer assistance program that charges customers differently based on qualification for income-related assistance. However, this language does not mandate or authorize a public

utility to force captive customers to pay for other customers' discounts.

Q: What factors does I.C. § 8-1-2-0.5 suggest the Commission should consider when reviewing a proposed customer assistance program?

A: Ind. Code § 8-1-2-0.5 establishes that it is the continuing policy of the state to promote utility investment in infrastructure while protecting affordability of utility service:

> Sec. 0.5. The general assembly declares that it is the continuing policy of the state, in cooperation with local governments and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to create and maintain conditions under which utilities plan for and invest in infrastructure necessary for operation and maintenance while protecting the affordability of utility services for present and future generations of Indiana citizens. (Emphasis added)

Q: Has the Commission approved any customer assistance programs for water or wastewater utilities?

A: Yes. In Cause No. 45151, CWA Authority, Inc. ("CWA") proposed a Low-Income Customer Assistance Program ("LICAP"). CWA's LICAP provides monthly bill discounts and a fund for wastewater infrastructure repair and replacement assistance for eligible and qualifying low-income customers. The Commission's order dated July 29, 2019, approved a Settlement Agreement which established how CWA's LICAP operates and is funded. A low-income customer is eligible for the bill credit component of CWA's LICAP if the customer has applied and is eligible for assistance from the State's Energy Assistance Program. The LICAP is funded by both ratepayers and CWA. Ratepayers receiving service under Sewer Rates Nos. 1, 2, and 5 pay a fixed monthly charge of $0.45 per bill to fund the LICAP. CWA contributes $200,000 each year to also fund the LICAP. Customers participating in the LICAP receive a bill credit depending on their level of need. Available bill credits are designed to make wastewater bills more manageable for CWA's low-income customers commensurate with their income level. In addition to the bill credits,

$400,000 of LICAP funding is allocated to a wastewater infrastructure fund to be used to help low-income customers keep their bills lower in the long run through infrastructure investment assistance.

Q: Since Ind. Code § 8-1-2-46 was amended in 2017 to include this language, has the Commission denied any requests to establish a customer assistance program?

A: Yes. In Cause No. 45651, Community Utilities of Indiana, Inc. ("CUII") proposed to implement a low-income rate which was to provide an approximate 62% discount on the volumetric portion of qualifying customers. Residential customers whose incomes fell at or below the federal poverty level were to be eligible for the low-income rate. CUII proposed to recover the lost revenue associated with providing the low-income rate by increasing the rates for regular residential customers. This additional requested rate increase was approximately $2.80 (water) and $2.90 (wastewater) per month for customers using 5,000 gallons of water or wastewater, approximately $68.90 additional per customer per year. CUII proposed ratepayers fund 100% of the low-income program without any utility company or shareholder contribution. The OUCC recommended CUII's shareholders fund the low-income program. In CUII's rebuttal testimony, its witness testified that any imposition of a requirement for CUII or its shareholders to subsidize the rates of its customers would be confiscatory, declaring that CUII was entitled to its authorized return. The Commission's order denied CUII's proposed low-income program, finding the program was not in the public interest.

> Clearly, it would not be confiscatory for CUII or its shareholders to voluntarily fund a portion of Petitioner's low-income program. Nor would it be for CUII's customers to voluntarily subsidize other customers through a round-up or opt-in program. Nevertheless, CUII chose to design a program that has its non-qualifying residential ratepayers fund 100% of its low-income program without any utility contribution. We are concerned that CUII's proposal unreasonably shifts the longstanding responsibility of the

> utility for providing just and reasonable rates to all customers onto its non-qualifying residential ratepayers.
>
> For these reasons, after considering the evidence of record, we find that CUII's proposed low-income program is not in the public interest and is therefore denied.

Petition of Community Utilities of Indiana, Inc., Cause No. 45651, Final Order, p. 82, 2023 WL 1795197 at *82 (Ind. Util. Regul. Comm'n Feb. 1, 2023), *recons. den*., 2023 WL 3336924 (Ind. Util. Regul. Comm'n May 1, 2023).[24]

Q: Has the Commission previously approved a customer assistance program for Indiana American?

A: Yes. In Cause No. 45142, Indiana American proposed to implement a low-income pilot program ("LIPP") designed to help customers in the Terre Haute and Muncie service districts better afford water service. Indiana American stated that one of the reasons it proposed the LIPP in that case was to "gauge interest in the program among low income customers to see if rollout of the program on a statewide basis is useful."[25] The OUCC recommended that customers in the Gary/NW district also be eligible for the LIPP. The Commission approved a Settlement Agreement in Cause No. 45142, which granted Indiana American the authority to implement the LIPP for customers in the Muncie, Terre Haute and Northwest/Gary ("NW/Gary") districts. Customer eligibility for the program was based on meeting the low-income guidelines for the Indiana Low-Income Home Energy Assistance Program ("LIHEAP"). Qualified customers with a 5/8" meter were to receive a discount of 80% of the fixed 5/8" meter charge every month. Indiana American originally proposed in Cause No. 45142 to defer any discount applied to customers' bills to a

[24] CUII subsequently appealed the Commission's final order, and the matter is pending before the Indiana Court of Appeals, docketed as *Cmty. Utils. of Ind., Inc. v. Ind. Util. Regul. Comm'n, et al.*, 23A-EX-458.

[25] Cause No. 45142, Direct Testimony of Charles B. Rea, p. 26

regulatory asset for recovery in the next rate case proceeding. The OUCC opposed Indiana American's proposed ratemaking treatment (i.e., creating a regulatory asset) because it required all - and *only* - ratepayers to fund the LIPP, and because ratepayers would be paying a return on and of the proposed regulatory asset. Under a settlement agreement, the settling parties agreed that the total program cost for the LIPP would be borne evenly (50/50) between customers (through the recovery of a deferred asset) and Indiana American (through a non-deferred contribution).[26] In summary, the LIPP was to be funded with up to $600,000 per year, up to $300,000 from Indiana American (non-deferred contribution) and up to $300,000 from customers that was to be accrued in a deferred asset. According to Mr. Shimansky, Indiana American has the right to limit participation in the LIPP to 1,395 participating customers.[27] The specific terms (i.e., amounts and timing) of the funding of the LIPP are included on pages 12 – 13 of the settlement agreement, which I have included as Attachment SAB-4.

Q: How many customers are eligible for the LIPP?

A: Mr. Shimansky testified that the "Company estimates that there are approximately 28,000 water service customers in the Gary, Muncie, and Terre Haute service territories that would qualify for these benefits based on their household income." *Id*.

Q: Has Petitioner disclosed the pilot program's participation level and the value of provided discounts?

A: Yes. In compliance with Ordering Paragraph 8 of the Commission's Order in Cause No. 45142, dated June 26, 2019, Indiana American has submitted a "Report on Low Income

[26] Cause No. 45142, Stipulation and Settlement Agreement filed March 18, 2019, Paragraph 4., pp. 12-13.

[27] Cause No. 45870, Petitioner's Exhibit 2, Direct Testimony of Gregory Shimansky, p. 48.

Pilot Program" ("LIPP Report") to the Commission for the years 2019-2022 describing the level of participation and the dollar value of discounts provided. See Attachment SAB-5.

Q: What was the level of participation in Indiana American's LIPP?

A: Based on Indiana American's LIPP Reports, the level of participation and amount of bill credits are summarized in Table 1 below:

Table 1: Number of LIPP participants and amount of bill credits by District

Year	Muncie	Terre Haute	NW / Gary	Total Participants Per Year	Total Amount of Bill Credits Provided Per Year
2019	0	0	0	0	$0
2020	201	132	1	334	$29,852
2021	203	301	1	505	$40,486
2022	0	376	0	376	$20,547

In his testimony in this cause, Mr. Shimansky also discussed the level of participation in the LIPP by stating that "[c]urrently approximately 140 customers are taking service through the Pilot, which is approximately 0.5% of the total estimated eligible customer base."[28] Mr. Shimansky's reported level of participation is even lower than was indicated in the LIPP Reports.

Q: Are you concerned that the level of participation in the LIPP has been so low?

A: Yes. As I discussed above, Indiana American has some of the highest rates in the State of Indiana for water service. While the pilot program was intended to assess levels of participation and Indiana American's ability to implement such a program, the OUCC believed the pilot program should be implemented in areas that seemed to need the most assistance (i.e., Gary/NW, Muncie and Terre Haute). In the Settlement Agreement in Cause

[28] Cause No. 45870, Direct Testimony of Gregory D. Shimansky, p. 48.

No. 45142, Indiana American agreed to add the Gary/NW district to the LIPP and contribute up to $300,000 per year to fund the LIPP. Customers were to contribute up to $300,000 (recorded as a deferred asset) to fund the program, for a combined total of up to $600,000 of assistance per year - up to $2.4 million over the past four years (2019-2022). However, Indiana American has administered only $90,885 out of $2.4 million of available assistance to qualifying low-income customers. In total, Indiana American administered only 3.8% of the available funds, leaving $2,309,115 or 96.2% of the available funds undistributed to its customers who qualify for LIPP assistance.

Q: What Agencies are involved in administering the Indiana American's LIPP?

A: According to responses to OUCC DR 39-001, 39-002 and 39-003, the Northwest Indiana Community Action Corporation ("NWICA") administers the LIPP in the Gary/NW district, the Western Indiana Community Action Corporation (WICAA) administers the LIPP in the Terre Haute district, and the Interlocal Community Action Corporation ("ICAP") administers the LIPP in the Muncie district. Indiana American provided the OUCC its memorandum of understanding ("MOU") with NWICA, WICAA, and ICAP in response to OUCC DR 39-001, 39-002 and 39-003. I have included the MOUs as Attachment SAB-6. However, the MOUs with WICAA and ICAP expired on December 31, 2020, and the MOU with NWICA expired on December 31, 2021. Indiana American provided no additional information indicating that these MOUs have been extended, modified, or terminated by mutual agreement.

Q: Do you have any concerns about the administration of the LIPP?

A: I am both concerned and surprised that Indiana American did not work more effectively with the community action agencies to provide more assistance to its customers in need. In

Gary, for instance, according to the American Census Survey (ACS) 32% of the population of Gary are below the federal poverty level.[29] Given the level of need Indiana American described in its case in Cause No. 45142, providing only 3.8% of the available funds ($90,885 out of a possible $2.4 million of available assistance) must be considered a failure by Indiana American.

IX. UNIVERSAL AFFORDABILITY TARIFF

Q: Is Indiana American seeking approval of a customer assistance program in this case?

A: Yes. Indiana American is proposing to implement a "Universal Affordability Tariff for water service that includes multiple tiers of discounts based on different levels of household income stated as multiples of the Federal Poverty Level."[30] Petitioner's witness Mr. Charles Rea testified that that the "driving principle behind the Company's proposed Universal Affordability tariff is to provide all participating customers discounts such that the expected bill for Basic Water Service (40 gallons of water per household member per day) will be no more than 2% of their annual household income."[31]

Q: How many Indiana American customers would be eligible for the discount under the proposed Universal Affordability tariff?

A: Mr. Rea estimates that 54,000 water customers with household incomes at or below 150% of the Federal Poverty Level would be eligible.

Q: How is Indiana American proposing to recover costs from the discounts provided through its proposed Universal Affordability Tariff?

A: Indiana American proposes to roll back into base rates the estimated total amount of discounts provided through the Universal Affordability Tariff (i.e., $1,274,901 for Step 2

[29] American Community Survey (ACS) Table S1703 2021: ACS 5-Year Estimates.

[30] Direct Testimony of Charles Rea, p. 38.

[31] *Id*., p. 39.

rates and $1.371,677 for Step 3 rates).[32] Therefore, Indiana American proposes 100% of the discounts provided to qualifying low-income customers be paid for entirely by customers. Indiana American indicated in response to OUCC DR 22-021(a) that the "proposed water affordability discount provided to low-income customers is being subsidized primarily by residential customers because it is residential customers who are primarily the beneficiaries of the subsidies provided by low-income customers."

Q: Is Indiana American contributing financially to fund the Universal Affordability Tariff?

A: No. Neither Indiana American nor its parent company, American Water Works Company, Inc. (with a market cap of over $27 billion) has proposed to contribute any funds whatsoever to assist low-income customers from its ever-increasing rates. Indiana American may actually benefit by receiving more timely payments, reducing bad debt expense, and increasing customer retention at no expense to shareholders, reducing Indiana American's overall risk.

Q: Is Indiana American's proposed Universal Affordability Tariff in the public interest?

A: No. The proposed Universal Affordability Tariff is not in the public interest. First, it does not protect the affordability of utility services for present and future generation of Indiana citizens as required by Ind. Code § 8-1-2-0.5. Second, the funding for the bill discounts from the Universal Affordability Tariff is generated neither by an opt-in or opt-out program but rather by having captive ratepayers solely and involuntarily fund the discounts (i.e., approximately $1.3 million in Step 2 rates and approximately $1.4 million in Step 3 rates). Neither Indiana American nor American Water Works Company, Inc. proposes to

[32] Indiana American response to OUCC DR 22-020.

contribute any funds to providing bill discounts through the proposed Universal Affordability Tariff. Finally, Indiana American's past performance in administering bill discounts to qualifying low-income customers in the Terre Haute, Muncie and Northwest/Gary districts through the LIPP must be considered a failure. Indiana American has not shown it is able to administer a program of its own design.

1. <u>Affordability</u>:

Q: Does Indiana American's proposed Universal Affordability Tariff rate protect "the affordability of utility services for present and future generations of Indiana citizens" as required in I.C. § 8-1-2-0.5?

A: No. Although Indiana American's Universal Affordability Tariff would make water service more affordable to those customers that apply and qualify, it does so entirely at the expense of all other customers that either do not qualify or are not enrolled. Non-participating customers (mostly residential) will fund the low-income rate 100%, making their water and wastewater rates *less* affordable. Also, because Petitioner's program includes regulatory accounting treatment to address under-recovery, the cost of the program to captive ratepayers may be even higher than what Petitioner proposes to recover in this case.

2. <u>Involuntary funding of Universal Affordability Tariff by customers</u>:

Q: Is it in the public interest to have captive customers involuntarily fund 100% of a customer assistance program?

A: No. Again, Indiana American proposes to fund 100% of the discounts provided through the Universal Affordability Tariff by charging captive customers. The customers have no ability to opt-in or opt-out of funding other customers' use. It is not in the public interest to hold captive customers financially responsible for providing bill discounts to other customers.

Q: Does I.C. § 8-1-2-46(c) permit Indiana American to develop a customer assistance program that is fully funded by voluntary contributions or from sources other than ratepayer funded revenue requirements?

A: Nothing in I.C. § 8-1-2-46(c) prohibits Indiana American from establishing a program relying on voluntary contributions or sources other than a revenue requirement included in rates. The legislature modified I.C. § 8-1-2-46 to indicate that a customer assistance program that affects rates and charges for service is not discriminatory for purposes of that chapter or any other law regulating rates and charges for service. This language allows utilities to establish programs to charge customers lower rates or provide discounts based on something other than usage characteristics of a kind of customer. However, that does not mean that any program a utility proposes is in the public interest or should be approved. Moreover, nothing in I.C. § 8-1-2-46 explicitly authorizes a utility to fund a customer assistance program by creating a charge imposed on other ratepayers. In fact, the only source of funds described in the statute is state or federal infrastructure funds. I.C. § 8-1-2-46(c). While a lower rate or discount for certain customers is no longer considered discriminatory, it remains unreasonable to make captive customers pay higher rates to fund a customer assistance program with no company contribution whatsoever.

Q: Could Indiana American solicit voluntary contributions to fund the low-income rate?

A: Yes. Indiana American could propose a program to fund all or a portion of the low-income rate by soliciting voluntary customer contributions. Voluntary contributions from customers could be made from an opt-in roundup program or from an opt-in contribution.

Q: Could Indiana American also make contributions to fund the low-income rate?

A: Yes. Indiana American is a for-profit company and is a wholly owned subsidiary of American Water Works Company, Inc. ("American Water"). American Water has a market capitalization of over $27 billion. Indiana American has significant resources that it can

draw from to fund the proposed low-income rate if it chooses.

3. Low Income Pilot Program (LIPP) results:

Q: What concerns do you have with the proposed participation level for Universal Affordability Tariff and the resulting costs to customers?

A: Mr. Rea proposes a 10% level of customer participation in the bill discounts provided through the proposed Universal Affordability Tariff.[33] He uses this hypothetical customer participation level to determine the amount of funds to include in rates to recover from customers. This proposed 10% level of customer participation is *not* consistent with the extremely low level of low-income customer participation in the current LIPP, which is only 0.5%. Mr. Rea's testimony does not address why he estimates a participation level that is 20 times the current level of participation in the LIPP. In Cause No. 45142, Mr. Rea testified that one of the reasons Indiana American was proposing its LIPP was to "gauge interest in the program among low-income customers to see if rollout of the program on a statewide basis is useful."[34] It appears Mr. Rea disregarded the current level of participation in the LIPP (0.5%) when projecting the proposed 10% participation level in the Universal Affordability Tariff. It is excessive and not in the public interest to fund the discounts provided through the Universal Affordability Tariff based on participation estimates that are twenty times the actual participation levels experienced in the existing pilot program (i.e., the LIPP).

Q: What is your recommendation?

A: I recommend that the Commission deny the proposed Universal Affordability Tariff. I also

[33] Mr. Rea's proposed level of customer participation in the Universal Affordability Tariff is *20 times* more than the current level of participation in the LIPP.

[34] Cause No. 45142, Direct Testimony of Charles B. Rea, p. 26. (Filed September 14, 2018)

recommend that Indiana American remove $1,274,901 from Step 2 rates and $1,371,677 from Step 3 rates, which are imbedded in the proposed rate design to fund the discounts provided by the Universal Affordability Tariff.

X. PROPOSED ALLOWANCE BASED RATE

Q: Is Petitioner proposing to modify the water design to include an allowance-based rate?

A: Yes. Mr. Rea presented Indiana American's proposed allowance-based rate for all customers in Areas 1 and 2.

Q: Please explain the allowance-based rate.

A: Petitioner's allowance-based rate would provide all customers the first 1,500 gallons of usage at no additional charge above its proposed monthly service charge of $20.00. According to Petitioner's proposal, Customers would not be charged a volumetric rate on the first 1,500 gallons of water usage per month. Volumetric charges would only apply to usage above the first 1,500 gallons of usage.

Q: Does the OUCC oppose the allowance-based rate structure?

A: No.

XI. RECOMMENDATIONS

Q: What do you recommend?

A: I recommend the Commission limit Petitioner's revenue increase to $18,558,410, a $68,183,095 reduction from Indiana American's request.

I also recommend the Commission deny Indiana American's proposal to implement a Universal Affordability Tariff for the reasons explained in my testimony. I further recommend that Indiana American remove $1,274,901 from Step 2 rates and $1,371,677 from Step 3 rates, which are imbedded in the proposed rate design to fund the discounts provided by the Universal Affordability Tariff.

Q: Does this conclude your testimony?

A: Yes.

APPENDIX A

Q: Please describe your educational background and experience.

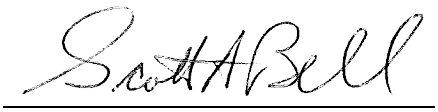
A: I have a Bachelor of Science degree in Industrial Management, with a minor in Industrial Engineering from Purdue University. I began working for the Indiana Utility Regulatory Commission ("Commission") in 1988 as a Staff Engineer. In 1990, I transferred to the OUCC at the time of the reorganization of the Commission and the OUCC. In 1999, I was promoted to the position of Assistant Director and in 2005 I was promoted to the position of Director of the Water / Wastewater Division. During my term as Director, I have served on the Water Shortage Task Force, created by SEA 369 in the 2006 General Assembly and the Water Resources Task Force, created by HEA 1224 in the 2009 General Assembly. I am a member of the American Water Works Association ("AWWA") and have attended numerous utility related seminars and workshops including the Western Utility Rate Seminar sponsored by the National Association of Regulatory Utility Commissioners ("NARUC"). I also completed additional coursework regarding water and wastewater treatment at Indiana University-Purdue University at Indianapolis ("IUPUI").

Q: Have you previously testified before the Commission?

A: Yes. I have testified in many causes relating to telecommunications, natural gas, electric, water, and wastewater utilities. During the past twenty (20) years, I have testified exclusively on water and wastewater utility issues. Some of those issues included the reasonableness of cost-of-service studies, rate design, fair value, Replacement Cost New Less Depreciation ("RCNLD") studies, engineering-related operation and maintenance expenses, capital improvement projects, non-revenue water and water conservation.

AFFIRMATION

I affirm the representations I made in the foregoing testimony are true to the best of my knowledge, information, and belief.



By: Scott A. Bell
Cause No. 45870
Office of Utility Consumer Counselor (OUCC)

Date: July 21, 2023

Peer Reviewed

Measuring Household Affordability for Water and Sewer Utilities

MANUEL P. TEODORO

Texas A&M University, College Station, Tex.

Rising costs and recent high-profile crises have brought renewed and increasing attention to the affordability of water and sewer service. Meaningful, accurate assessment of affordability is critical as utility leaders seek to serve low-income customers while also raising the revenue necessary to maintain and advance public health and conservation. Unfortunately, the predominant conventional method of measuring household affordability is fundamentally flawed and often misleading. This article advances a more accurate and meaningful method for measuring the affordability of water and sewer service for low-income households. The proposed method accounts for essential household water needs, income disparities, and core nonwater/sewer costs. After detailing the method, the new approach is used to measure water and sewer service affordability in the 25 largest US cities. The article concludes with a discussion of the new method's limits and general guidelines for its use in policymaking and rate design.

Keywords: *affordability, finance, measurement, rates*

This article advances a new method for measuring the affordability of water and sewer service for low-income households. Rising costs and recent high-profile crises have brought renewed and increasing attention to the affordability of water and sewer service for utilities that rely upon rate revenue to meet operating and capital needs. Consequently, communities across the United States and elsewhere are under increasing pressure to ensure that the most economically vulnerable can afford to pay for these essential services in an era of rising costs. Meaningful, accurate assessment of affordability is more critical than ever as utility leaders seek to serve low-income customers while raising the revenue necessary to maintain and advance public health and conservation (LaFrance 2017).

As with any organizational goal, getting affordability right requires measuring affordability accurately; unfortunately, the predominant method of measuring household water and sewer affordability is fundamentally flawed. The conventional approach measures affordability as a community's average cost of water and sewer service as a percentage of that community's median household income (%MHI), with values <2.0 or 2.5%—4.0 or 4.5% combined—deemed "affordable" (Mack & Wrase 2017). Originally intended as a means of gauging a community's overall financial capability for purposes of negotiating regulatory compliance, this standard has been widely misapplied to household affordability. As a result, evaluations of household water and sewer utility affordability are inaccurate at best and misleading at worst.

This article offers a more meaningful and accurate method for measuring the affordability of water and sewer service at the household level. Unlike the conventional approach, the proposed affordability ratio (AR) accounts for essential household water needs and core nonwater/sewer costs. Further, because the main concern for affordability in the United States and other developed countries is for low-income households, the proposed method assesses affordability at the 20th income percentile (AR_{20}), rather than at median income. Basic household water and sewer cost is expressed in terms of hours of labor at minimum wage (HM) and offered as a useful complementary affordability measure. Together, these two metrics offer a more defensible and practically useful way of assessing utility affordability for purposes of budgeting, planning, rate-setting, and policy design.

This article begins by summarizing the current conventional %MHI approach to measuring affordability and the ways in which it fails. The proposed new and improved method is then presented, along with a discussion of its advantages over the conventional approach. As an illustration, the new method is used to measure water and sewer affordability in the 25 most populous US cities. The article concludes with a discussion of the new method's applicability, limitations, and general guidelines for use in budgeting and rate design. Significant portions of the current article draw on Davis and Teodoro (2014), which first introduced the AR method.

THE CONVENTIONAL APPROACH AND WHY IT IS WRONG

As noted previously, the most widely applied method of measuring water and sewer affordability in the United States is to calculate the average residential water and sewer bill for

a given utility as a percentage of the community's MHI. Usually, this percentage is calculated for an entire utility, but sometimes it is calculated for a subset of customers, such as a neighborhood or a census tract. Typically, this percentage is compared with a set affordability standard, most often 2.0% or more, recently, 2.5%. A simple binary declaration follows this standard: if a utility's average bill as %MHI is less than this standard, then it is deemed "affordable"; if it is greater, then it is "unaffordable." Sometimes these %MHI standards are applied separately to water and sewer rates; at other times, they are combined water plus sewer costs. Often used but rarely considered carefully, the 2.0 or 2.5%MHI (4.0 or 4.5%MHI combined) standard has become the default basis for analyzing water and sewer affordability in recent published research (Mack & Wrase 2017, Janzen et al. 2016), with no other rationale than that it is convenient and conventional. Utility rate analysts typically follow suit; the University of North Carolina Environmental Finance Center's Water and Wastewater Rates Dashboard uses the %MHI method to guide rate design, for example (https://efc.sog.unc.edu/reslib/item/north-carolina-water-and-wastewater-rates-dashboard).

Despite its widespread use, the %MHI approach is seriously flawed. The main trouble with using it as a measure of affordability is that it does not measure affordability—at least not at the household level, in the way that most interested observers typically think of affordability. The %MHI method and accompanying 2.0% standard as developed by the US Environmental Protection Agency (USEPA) were intended as a gauge of a community's financial capability for purposes of negotiating regulatory compliance by its utilities. The idea of %MHI as a measure of financial capability can be traced to the USEPA's *Financial Capability Guidebook* (USEPA 1984). Identifying specific %MHI thresholds for determining financial capability appears to emerge from the agency's 1995 guidelines on Water Quality Standards (USEPA 1995) and Combined Sewer Overflow compliance schedule (USEPA 1997). For purposes of assessing financial capability, %MHI values for water and sewer would be calculated separately, with the sum of the two held up against the standard. For example, a 2.0%MHI standard for water and 2.0%MHI standard for sewer implies a 4.0%MHI combined standard. None of these USEPA documents offers a theoretical rationale for the 1.0, 2.0, or 2.5%MHI standards.

It is not clear when or how analysts began to conflate these utility-level financial capability metrics with household-level affordability, but as noted previously, %MHI is now widely used as a household affordability metric. Unfortunately, as a method of measuring household affordability, the %MHI method is flawed in at least four ways.

Average versus essential water use. Using average residential demand as a basis for affordability analysis inflates the cost of water and sewer service for purposes of affordability analysis. In nearly all US utilities of significant size, average residential water consumption is considerably higher than its median—that is, relatively conservative customers greatly outnumber high-volume customers. Consequently, in most utilities, a minority of high-volume customers drive up the average demand that the conventional method uses as the basis for affordability analysis. Further, most American water utilities exhibit significantly greater demand during summers because of residential outdoor irrigation, indicating that much of the "average" water bill is for usage that is not serving basic health needs. Public policy discussions of water and sewer affordability seldom are concerned with the cost of maintaining large lawns, swimming pools, or other discretionary outdoor use. Rather, affordability is typically thought of as the ability of customers to pay for water and sewer services that are adequate to meet their basic needs for drinking, cooking, health, and sanitation. For most US utilities, then, evaluating affordability as a function of average consumption implies an unduly high demand.

Median versus low income. Perhaps the most frequent criticism of the %MHI standard is that its focus on median income misses the real subject of affordability concerns: poor households (Stratus Consulting 2013, Baird 2010, Rubin 2001). The median-income household is unlikely to face serious water and sewer affordability problems in any but the smallest or most desperately poor communities. For low-income households, however, water and sewer services may force important economic tradeoffs. Measuring affordability as a function of an entire community's MHI obscures the effects of rate-setting on low-income customers, for whom utility leaders presumably have the greatest affordability concerns. Certainly the tenor of public policy debates surrounding utility affordability suggests that low-income residential customers are the focus of alarm. As income stratification in a community increases, the degree to which %MHI masks potential affordability problems increases.

Essential costs of living. Water and sewer services are vital, but are not the only vital goods and services customers must purchase. Housing, food, health care, home energy, and other essential goods and services also affect water and sewer affordability to the extent that they constrain households' financial flexibility. These nonwater/sewer costs vary widely across utilities. Water and sewer bills may be low as a percentage of income, but much higher as a percentage of disposable income if the costs of housing or health care are high, for example. In such cases, water and sewer bills that are nominally low or are a small percentage of MHI may force serious sacrifices for low-income customers. The conventional approach to affordability measurement is insensitive to these differences in costs of living.

An arbitrary, binary standard. Whether the affordability standard is set at 1.0, 2.0, 2.5, or any other %MHI, the standard represents a value of water and sewer service that is rarely (if ever) rooted in any philosophical reasoning

or as a result of a deliberative process. Instead, analysts simply cite precedent and invoke the standard. Whatever its origins, the 2.0 (or 2.5) %MHI affordability threshold has evolved into a "golden number" (Socolow 1976), now held up as a definitive measure of household-level affordability, apparently for no other reason than its familiarity and convenience.

The simple binary nature—either affordable or unaffordable—of the %MHI standard is also problematic. The affordability of anything is rarely a strictly yes/no phenomenon—in microeconomics, things are more or less affordable relative to the costs of other things. Although informal rules of thumb can be useful, the %MHI standard has become a crutch that causes simplistic and misleading analyses. For example, simplistic application of the %MHI standard to census tracts led one recent study to report that "water rates are currently unaffordable for an estimated 11.9% of households" (Mack & Wrase 2017), with no attention to the validity of %MHI standard or the distribution of water consumption within the census tracts in which water was declared unaffordable. By the same token, leaders of a utility that satisfies the %MHI threshold can use the standard as an excuse not to address affordability, even if many of its customers struggle to pay their bills.

A BETTER WAY

This article offers a method for measuring water and sewer utility affordability that proceeds from an understanding of affordability as the ability of individual customers to pay for water and sewer services to meet their basic needs while maintaining the ability to pay for other essential costs (Davis & Teodoro 2014). This definition is similar to what the USEPA's National Drinking Water Advisory Council called "household relative affordability" (NDWAC 2003). The method aims to retain the intuitive appeal of the conventional approach while remedying its shortcomings. Specifically, the proposed method: (1) measures household-level affordability (rather than the entire utility's financial capability); (2) provides for basic water needs (rather than average consumption); (3) focuses on low-income households (not average- or median-income customers); and (4) accounts for essential costs other than water and sewer. The proposed method involves two complementary metrics: the AR and basic costs expressed as HM.

The AR. Household-level affordability (sometimes called micro-affordability) can be measured as the percentage or ratio of basic water and sewer costs to disposable household income for low-income customers. This measure may be calculated for an individual customer or aggregated statistically for any defined group of customers. For a given customer *c*, the AR (AR_c) is

$$AR_c = \frac{p_c(W + S)}{I_c - E_c} \quad (1)$$

where I is household income, E is essential household expenses (other than water and sewer services), p is the number of persons in the household, and W and S are the per capita cost of essential water and sewer services, respectively. The relevant time frame for calculating AR depends on the billing cycle used by the utility (e.g., monthly, bimonthly, quarterly).

The numerator in Eq 1 is the price of basic service to customer *c*, which varies according to the water volume considered necessary to maintain health, the utility's rates, and the number of people in the household. The denominator is *c*'s disposable income, which depends on the customer's income and the cost of essential nonwater/sewer household expenses. The definitions of basic water needs and essential household expenses may vary from one utility to another, depending on local values and conditions. The resulting AR_c reflects the economic tradeoffs that customer *c* faces because of the costs of basic water and sewer service.

AR can be calculated for any customer, group of customers, or hypothetical customer. An assessment of AR_{20} provides a meaningful look at affordability for low-income customers. This focus on the 20th percentile household aligns the analysis of water and sewer affordability with mainstream assessments of welfare economics, which typically identify the 20th percentile as the lower boundary of the middle class. At this income level, "working poor" households have very limited financial resources, but may not qualify for income assistance programs. Public assistance programs vary considerably across the United States and across the world, and the absolute income level at the 20th percentile may qualify for significant assistance in some places. Still, the 20th percentile standard is a useful benchmark level for assessing the economic conditions of lower-middle-class and working-poor households. Analysts might choose to focus on a different income percentile when assessing affordability depending on the economic conditions or distribution of incomes in a particular community.

The ease and precision with which the AR can be calculated depend on the availability of household-level customer data. Calculating the numerator is straightforward, requiring only information about the utility's rates (or proposed rate). Ideally, the AR's denominator would be calculated using a comprehensive household-level consumer survey of the utility's customer base. Because such data are unlikely to be readily available, in most cases analysis will depend on estimates of household income and expenditures. Those estimates can draw from a variety of sources; the analysis presented in this article uses regression-based estimates, but a simpler approach could be to use more readily available data on local housing, food, medical, home energy, and tax costs for a given community.

Basic service costs as HM. A complementary way to measure affordability is to calculate the HM that would be necessary to pay for basic water and sewer service. As with the AR, the HM may be calculated for an individual

customer or aggregated statistically for any defined group of customers. For a given customer c, basic service costs as HM (HM_c) is

$$HM_c = \frac{p_c(W + S)}{A} \quad (2)$$

where p is the number of persons in the household; W and S are the per capita cost of essential water and sewer services, respectively; and A is the minimum wage in c's labor market. HM represents the cost of basic water and sewer service for low-income households, many of which work at or near minimum wage. HM is not sensitive to other essential costs as AR is, but it is intuitively appealing because minimum wage is a familiar economic touchstone.

Analytical assumptions. The AR and HM methods are generally applicable metrics flexible enough to accommodate specific conditions that apply in any utility. The definitions of basic service and (nonwater/sewer) essential expenses may vary depending on local community values, and the analyst should adjust assumptions as necessary. Basic service is a moving target because consumption patterns vary across utilities and are broadly trending downward in the United States (Rockaway et al. 2011). For purposes of this analysis and as a guideline for affordability analysis in the United States, basic service is defined as 50 gpcd. This standard is a typical assumed minimal residential wastewater flow for purposes of sewer system design (Bowne et al. 1994) and is meant to reflect indoor, nondiscretionary water use to maintain health in a contemporary US home. In a similar vein, the Texas Water Development Board (2004) recommended 50 gpcd as its standard for indoor water use in crafting a water conservation plan. Significantly less than average consumption of 91 gpcd (DeOreo et al. 2016) but greater than the 35.6 gpcd standard that Chenoweth (2008) identifies as the "minimum water requirement for social and economic development," the 50 gpcd assumption represents a reasonable, conservative level of basic service for purposes of evaluating affordability across large numbers of utilities. Values of AR can be calculated for any household size, but a four-person household is assumed for this analysis. This is significantly greater than the average household size in the United States, which is 2.64 people (ACS 2015). As such, an assumed four-person household yields a conservative measure of affordability.

Essential household expenses in the present analysis include the costs of taxes, housing, food, medicine, health care, and home energy. These categories are considered essential because they are either inevitable (taxes) or at least as important as water for maintaining health. Any of these elements may be adjusted to reflect local conditions and values. For example, if the analyst believes that 50 gpcd is too high or too low a standard for basic service, then the AR_{20} formula can be adjusted accordingly. Similarly, essential household costs may be expanded to include other expenses (e.g., child care, transportation, telephone service) as appropriate according to local preferences and conditions. The definition and measurement of essential costs should be based on the needs of low-income households locally. Local organizations that provide assistance to low-income households can provide useful information about these costs.

AFFORDABILITY IN MAJOR US CITIES

Water and sewer utility affordability in the 25 most populous US cities are analyzed here with the new affordability measurement as an empirical demonstration of the method and to provide a descriptive profile of affordability in the country's largest cities. Capital costs, operational expenses, rate structures, demographics, and economic conditions change frequently within and across utilities; therefore, the following information should be considered a snapshot of affordability in early 2017.

Data. To calculate basic service costs, water and sewer rates were gathered from utility websites during spring 2017. Because rate structures vary considerably across utilities in ways that affect the prices that individual customers pay, to maintain comparability and capture affordability, basic service costs were calculated assuming a single-family residential customer with a ⅝ in. meter connection, billed monthly. For utilities that bill bimonthly or quarterly, volumes and charges were converted to monthly to maintain comparability. A four-person household and 50 gpcd were assumed. In cases in which rates vary seasonally or across geographic zones, the highest seasonal and/or zone rates were assumed. Although it might be argued that these assumptions lead to unduly high basic costs, they actually result in a conservative, worst-case scenario test of affordability. Utilities that use seasonal and/or zone rates might opt to calculate basic costs by averaging across time and/or space. However, the current analysis uses a worst-month scenario to calculate affordability because a low-income household is most likely to be stressed by a single high bill than its average bill. Because basic service is assumed to include indoor use only, the same volume is applied to both water and sewer charges.

In most cases, water and sewer services are provided by a single organization (e.g., a city government). In cases in which different entities provide water and sewer services, costs were calculated using the rate structures from both organizations. Some of the utilities in this analysis calculate bills in thousand gallon units, whereas others use hundred cubic foot units; in each case, bills were calculated in the appropriate units for the utility being analyzed.

Many utilities (including several analyzed here) offer discount, subsidy, or other assistance programs aimed at improving affordability. Crucially, the current analysis does not account for such assistance programs in assessing affordability because the analytical goal is to measure affordability in the absence of policy intervention. In this sense, accurate affordability measurement helps gauge the need for assistance programs. Including assistance programs would complicate attempts to measure affordability across large numbers of utilities because such programs

vary widely in scope, structure, and implementation. When using AR_{20} and HM to analyze rates in a utility, calculations can be made with and without assistance programs to understand their potential effects.

Income data—including 20th percentile household income—were drawn from the 2015 American Community Survey five-year estimates. Essential nonwater/sewer expenses were estimated on the basis of the Bureau of Labor Statistics' 2015 Consumer Expenditure Survey (CEX), which includes a probability-weighed national sample of 23,683 households that reported several categories of expenditures as well as income and demographic information. The American Community Survey and CEX data include public assistance programs in determining net income. These data were used to develop regression models that estimate essential expenditures (e.g., taxes, health care, food, housing, home energy) for low-income households. The CEX includes intentional oversamples of several metropolitan areas. Where the CEX included more than 200 households from a given utility's service area, those data were used to calculate essential expenditures for that utility. For all other utilities, the full national sample was used to estimate essential expenditures. These regression models are reported in the appendix. CEX sampling is based on metropolitan areas, whereas the present affordability analysis is based on cities. This sampling unit mismatch limits the accuracy of the essential expenditure estimates used here because expenses can vary considerably within metropolitan areas. Metropolitan area subsamples are used when available because they are likely to be more representative of their respective cities than the full national sample. Coefficients from these models were combined with parameters for each city; the essential expenditures were then estimated at each city's 20th income percentile, assuming a four-person household and single-family home. The legal minimum wages in each utility's political jurisdiction that was in effect on June 1, 2017, were used to calculate HM.

Example: Dallas, Tex. Analysis of affordability in Dallas provides an illustration of how these affordability metrics are calculated. Table 1 shows the monthly basic water and sewer cost calculation for Dallas. Dallas bills water service using units of 1,000 gal; at 50 gpcd, basic service for a four-person household is 6,200 gal monthly. Dallas water rates include a fixed monthly charge of $5.25 for a ⅝ in. meter and increasing block volume charges of $1.90/1,000 gal for the first 4,000 gal and $4.25/1,000 gal for volumes of 4,000 to 10,000 gal. (Dallas water rates include additional blocks that apply for volumes beyond the basic demands analyzed here.) The city's sewer rates include a fixed monthly charge of $4.70 and a uniform $5.31/1,000 gal winter average volume. These rates generate a basic cost of $59.82/month.

Table 2 combines this basic monthly cost with income, essential expenditure, and minimum wage information to illustrate the calculation of AR_{20} and HM values for Dallas, where 20th percentile household annual income is $18,585 ($1,549 monthly) and minimum wage is $7.25/h. A four-person household in Dallas at that income level would have estimated essential expenses of $864/month, leaving $685 as disposable income. The basic water and sewer cost of $59.82 thus translates into an AR_{20} of 8.74% and an HM of 8.25. In plain language, this result indicates that basic water and sewer service costs a lower-middle class, four-person household in Dallas ~9% of its disposable income, or ~8 h of HM.

TABLE 1 Basic monthly water and sewer costs, Dallas, Tex.[a]

Monthly basic volume—*gal*	6,200
Water charges	
Fixed	$5.25
Volume (4,000 gal at $1.90/1,000 gal, 2,000 gal at $4.25/1,000 gal)	$16.95
Sewer charges	
Fixed	$4.70
Volume (6,200 gal at $5.31/1,000 gal)	$32.92
Total water and sewer charges	$59.82

[a]Based on 2017 rates

A big-city snapshot. The results of this affordability analysis for the top 25 US cities are reported in Table 3, which is arranged by population. The average single-family residential bill at 6,200 gal (8.3 ccf) across these cities is $83.58/month, although costs and rate structures vary considerably across these cities, from a low of $39.68 (Phoenix, Ariz.) to a high of $180.70 (Seattle, Wash.). Incomes also vary widely, with AR_{20} ranging from $9,436 (Detroit, Mich.) to $33,342 (San Jose, Calif.) annually. After accounting for essential nonwater/sewer expenses, disposable income averages $780/month. Hourly minimum wages vary from the federally mandated $7.25 to Seattle's $15.00.

TABLE 2 Affordability metrics for Dallas, Tex.[a]

A. Basic monthly water and sewer cost	$59.82
AR	
B. AR_{20} annual income	$18,585.00
C. Monthly income (B ÷ 12)	$1,548.75
D. Estimated monthly essential expenses[b]	$864.11
E. Monthly disposable income (C – D)	$684.64
AR_{20} (A ÷ E)	8.74%
HM	
F. Minimum wage per hour	$7.25
HM (A ÷ F)	8.25

AR—affordability ratio, AR_{20}—affordability at the 20th income percentile, HM—hours of labor at minimum wage

[a]Based on 2017 rates
[b]Estimates based on regression analysis of 2015 Consumer Expenditure Survey. See appendix.

TABLE 3 Affordability in largest 25 US cities in 2017[a]

Population Rank	City, State	Monthly Basic Service Cost $	20th Percentile Annual Income $	Affordability Ratio, Four-Person Household		Minimum Wage $	HM
				Estimated Disposable Monthly Income at 20th Percentile $	AR_{20} %		
1	New York, N.Y.	81.78	18,085	579	14.1	12.00	6.8
2	Los Angeles, Calif.	73.11	19,063	888	8.2	10.50	7.0
3	Chicago, Ill.	47.27	17,386	576	8.2	10.50	4.5
4	Houston, Tex.	74.87	19,109	642	11.7	7.25	10.3
5	Phoenix, Ariz.	39.68	21,401	825	4.8	10.00	4.0
6	Philadelphia, Pa.	58.54	13,546	524	11.2	7.25	8.1
7	San Antonio, Tex.	55.16	19,517	933	5.9	7.25	7.6
8	San Diego, Calif.	108.71	26,381	636	17.1	11.50	9.5
9	Dallas, Tex.	59.82	18,585	685	8.7	7.25	8.3
10	San Jose, Calif.	104.47	33,342	1,188	8.8	10.5	9.9
11	Austin, Tex.	91.20	24,438	1,108	8.3	7.25	12.6
12	Jacksonville, Fla.	68.23	19,817	873	7.8	8.05	8.5
13	San Francisco, Calif.	176.85	24,946	658	26.9	13.00	13.6
14	Columbus, Ohio	106.36	18,784	840	12.7	8.15	13.1
15	Indianapolis, Ind.	97.60	17,395	724	13.5	7.25	13.5
16	Fort Worth, Tex.	66.67	21,817	831	8.0	7.25	9.2
17	Charlotte, N.C.	68.84	23,135	1,044	6.6	7.25	9.5
18	Seattle, Wash.	180.70	27,290	961	18.8	15.00	12.0
19	Denver, Colo.	64.91	21,698	884	7.3	9.30	7.0
20	El Paso, Tex.	54.45	17,879	787	6.9	7.25	7.5
21	Washington, D.C.	112.51	22,526	785	14.3	11.5	9.8
22	Boston, Mass.	99.51	14,913	618	16.5	11.00	9.0
23	Detroit, Mich.	92.68	9,436	379	24.4	8.90	10.4
24	Nashville, Tenn.	65.95	21,153	926	7.1	7.25	9.1
25	Memphis, Tenn.	39.53	14,913	618	6.4	7.25	5.5
	25-city average	83.58	20,262	780	11.4	9.19	9.0

AR_{20}—affordability at the 20th income percentile, HM—hours of labor at minimum wage

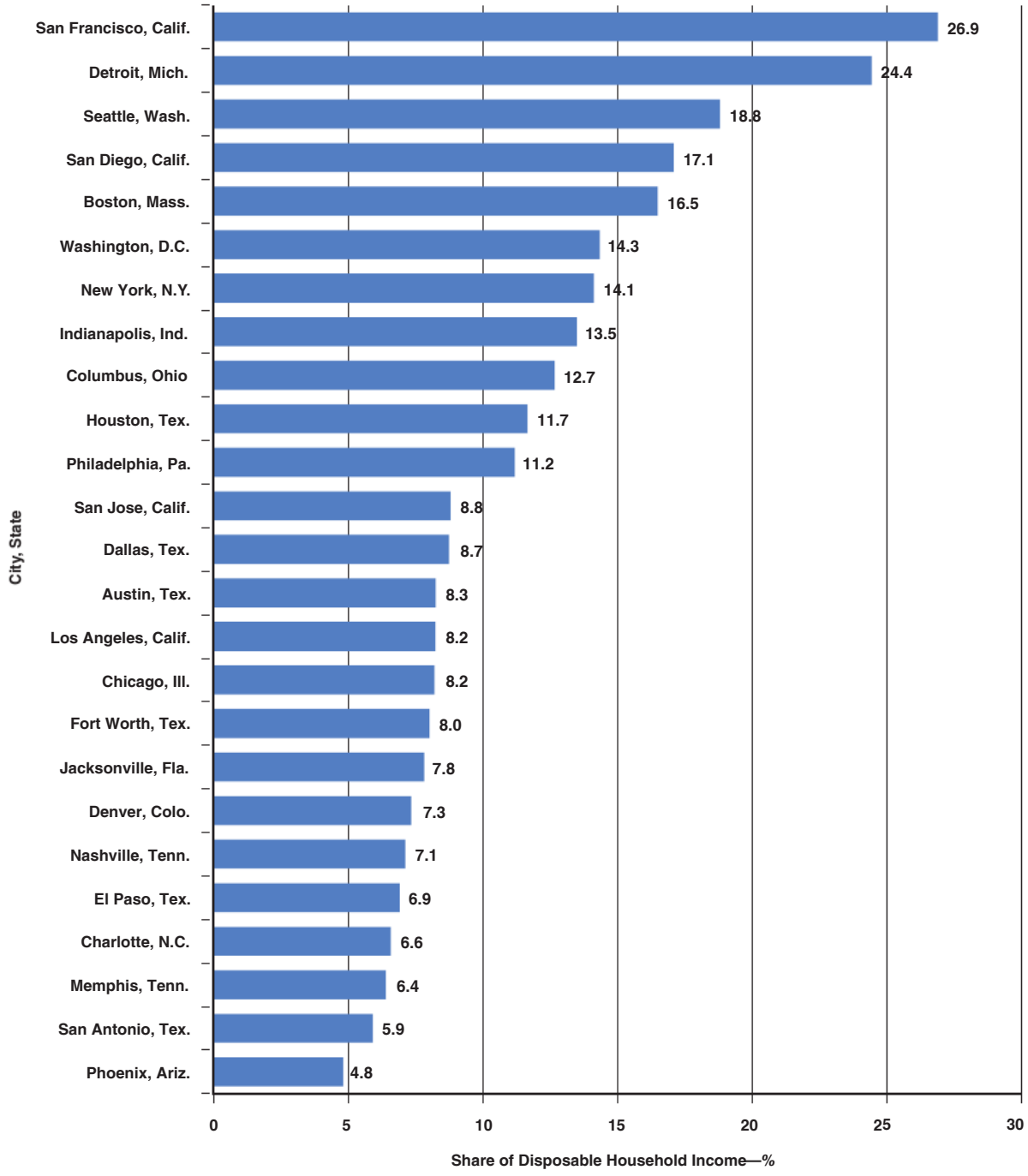
[a]Does not include low-income assistance programs

The resulting AR_{20} values average 11.4%, ranging from a low of 4.8% in Phoenix to a high of 26.9% in San Francisco. In terms of labor, basic monthly water and sewer service in the top 25 cities average 9.0 HM, with Phoenix and San Francisco again at the ends of the distribution (4.0 and 13.6 HM, respectively). Figures 1 and 2 depict these AR_{20} and HM results, with cities arranged from most to least affordable. These results should be considered with some caution because the assumptions underlying the AR_{20} and HM calculations may not be appropriate for all 25 cities and, as noted previously, do not reflect low-income assistance programs that some utilities provide.

The results appear to follow from several factors. Although discussions of utility affordability frequently focus on costs and revenue requirements, a cursory review of these 25 cities suggests that rate structures, particularly the level of fixed charges and rates paid for the first few units of water, also significantly affect affordability for low-income households. Put another way, from a low-income affordability perspective, how a utility collects rate revenue can be as important as how much total revenue it collects. The method applied here reveals the less obvious but critical ways that income distributions and essential nonwater/sewer expenses affect affordability, which are variations not reflected in the conventional %MHI metric.

The significance of these metrics becomes clearer when compared with the conventional %MHI approach to measuring affordability. Consider Dallas (AR_{20} = 8.7, HM = 8.3) and Boston (AR_{20} = 16.5,

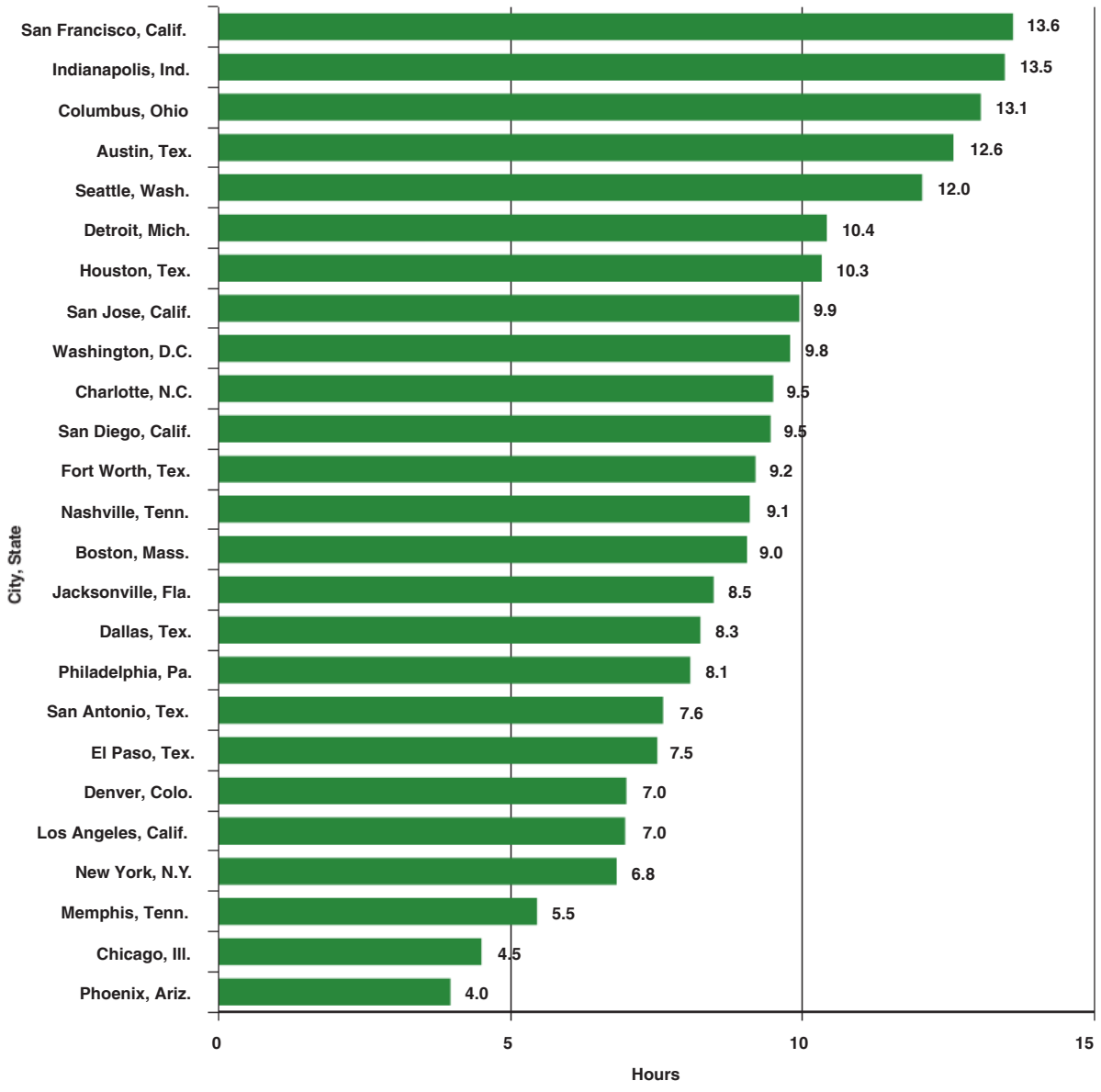
FIGURE 1 Basic water and sewer service AR_{20} for the 25 largest US cities in 2017



AR_{20}—affordability at the 20th income percentile

HM = 9.0): average single-family residential water consumption in Dallas is 8,300 gal, with billed sewer volume at 5,500 gal, resulting in an average bill of $65.04 (DWU 2016). With a median annual income of $43,781, the conventional metric puts Dallas' water rates at 1.8%MHI, which is well below typical affordability thresholds. Boston's average combined monthly average water and sewer bill is $87.83 and its median income is $62,775, making its average water and sewer cost just 1.7%MHI (BWSC 2017). Naïve application of the conventional standard to Dallas and Boston would lead to the conclusion that these two cities' water and sewer rates are affordable according to USEPA standards, and that they are roughly comparable in terms of affordability. The AR_{20} and HM metrics indicate that the real economic burden of these

FIGURE 2 Basic water and sewer service HM for the 25 largest US cities in 2017



HM—hours of labor at minimum wage

services is markedly greater for low-income households in Boston than in Dallas. (Data necessary for calculation of average sewer bills were not available for all 25 cities.)

DISCUSSION

With improved affordability metrics and a snapshot of affordability in major US cities established, discussion now turns to their limitations, implications, and applications.

Limitations. Although AR_{20} and HM offer major improvements over the conventional method of assessing affordability, they are not perfect. A clear drawback of the AR_{20} is the relative complexity of estimating it with the data typically available to analysts. Although AR_{20} is intuitive, estimating disposable household income in a given community requires a level of effort and/or technical sophistication greater than what is required of the conventional method. For all of its drawbacks, %MHI has back-of-the-envelope simplicity (even if that simplicity is misguided and misleading). Complexity is not an insurmountable barrier to using these metrics for any specific utility, however. Regression analysis of CEX data is not necessary for AR_{20} calculations in a single utility, and, for most, income distribution and reasonably accurate essential household estimates are possible with locally available data.

Two additional limitations are more serious for purposes of advancing the cause of affordability and should be considered when using AR_{20} and HM. First, the metrics

advanced here focus on single-family residential customers. Theoretically, the same metrics could be applied to any class of customer, but measuring affordability for households in multifamily or rental housing is difficult or impossible if those households do not pay their own water and sewer bills. Assessing and addressing affordability for these "hard to reach" customers is a perennial, vexing challenge for utilities (Raucher et al. 2017); unfortunately, the metrics advanced here offer little leverage on that challenge.

Second, and more fundamentally, AR_{20} and HM measure affordability; they do not define it. The metrics advanced here can significantly clarify the scope of the water and sewer affordability issues that utilities face, but they cannot in themselves define affordability.

What is affordable? Water and sewer affordability is a matter of community priorities. When confronting affordability questions, utility leaders and policymakers are actually asking: How much is reasonable to expect households of limited means to pay for these essential services? What economic sacrifices are reasonable to expect low-income households to make in order to pay water and sewer bills?

These are fundamentally normative questions. No metric, however well conceived and executed, can in itself define what is affordable; there is no scientific answer to a philosophical question. Just as incomes and essential expenditures vary from one community to another, so can social and political values: what one community considers affordable may not be considered affordable elsewhere.

As noted previously, one of the main weaknesses of conventional affordability analysis is that it declares utility rates "unaffordable" or "affordable" because they fall above or below a combined 4.0 or 4.5%MHI threshold—golden numbers with no underlying rationale. In the public policy arena, these arbitrary standards tend to preclude or preempt meaningful discussion of affordability. Better measurement of affordability can facilitate clearer thinking and discussion, and the metrics introduced here can serve as a framework.

Beware of cross-utility comparisons. The affordability snapshot of the 25 utilities developed here is interesting in its own right because it depicts the general state of affordability in large US cities; however, this snapshot is not especially useful for setting affordability policy in any given utility. There is a common (perhaps innate?) human tendency to think about performance in comparison with others, so it is tempting to think about a utility's affordability relative to others when developing policy. This kind of comparison distracts from the core issue of affordability. As a metaphor, consider water treatment: no responsible engineer would recommend a treatment technology for Boston based on measurements of average source water quality in the other top 25 cities; for purposes of designing treatment processes, the only relevant measurement is of Boston's source water. Developing affordability policy according to other utilities' affordability metrics is like designing a treatment plant for other communities' average source water. Utility rates and affordability programs ought to reflect their own communities' needs and values, not those observed elsewhere.

For these reasons, utility leaders and policymakers should resist the temptation to make decisions about affordability in their communities based on affordability conditions nationally or in neighboring communities. The relevant question is not how affordable our water and sewer rates are compared with other communities but rather if they are consistent with the value our community places on affordability.

Rules of thumb. Bearing in mind the dangers of "golden numbers" and cross-utility comparison, some simple rules of thumb for evaluating water and sewer affordability are offered here in response to queries from professionals and policymakers grappling with affordability in their utilities. These guidelines are not rooted in any theory of welfare economics, law, or philosophy; they simply reflect an intuitive answer to what trade-offs low-income households should be expected to make in order to pay for basic water and sewer service. The following double-barreled standard is suggested:

- an AR_{20} value of no more than 10%, so that a four-person household at the 20th income percentile pays no more than 10% of its disposable income on water and sewer service, and
- an HM value of no more than 8.0, so that a four-person household's basic monthly water and sewer bill requires no more than 8 h of labor at minimum wage.

These two standards have some visceral appeal ("10%, one day"), but the intuition behind them is that water and sewer are essential services, so it is reasonable to ask low-income customers to pay up to 10% of disposable income and/or work up to one full day at minimum wage to pay for them. Beyond these levels, water and sewer costs may begin to severely constrain the welfare and economic opportunities of low-income households.

Analysts, utility leaders, policymakers, and interested observers are urged to use these rules of thumb not as new golden numbers to supplant the conventional %MHI standard, but as starting points for discussion and development of affordability policies for their own utilities. These rules can help frame efforts to define affordability locally. Mumm and Ciaccia's (2017) pairwise comparison approach offers promising means of inferring community values about affordability, for example.

Based on the present analysis, 14 of the 25 largest US cities meet the first rule of thumb; only eight satisfy the second. Do these findings indicate that cities that fail to meet these standards have an affordability problem? Not necessarily. Several utilities fall just above or below the 10%/8 h thresholds; therefore, it would be simplistic to declare them "affordable" or "unaffordable" on the basis of rules of thumb. In some cases—most conspicuously, Detroit—high AR_{20} figures are driven more by very low 20th percentile incomes than by utility rates and so may not reflect the range of public assistance programs available to extremely low-income households. In other cases, 50 gpcd indoor water use may be an unrealistically high level of water use. Many of these utilities

use assistance programs to help address affordability concerns in ways that are not captured in AR_{20} or HM. Moreover, utility rates that exceed the rules of thumb may nevertheless be consistent with their communities' understanding of affordability. On the other hand, it is possible that some of these utilities have serious affordability challenges that are underappreciated because they satisfy a %MHI convention. The best solutions for any affordability problems identified with these metrics will vary from one utility to another.

Implications for practice. Better measurement can facilitate better decisions. Utility leaders, policymakers, and regulators should abandon %MHI as a measure of household water and sewer affordability. Instead, better metrics like AR_{20} and HM should be used when setting rates or developing affordability programs, because they capture the kinds of welfare tradeoffs that utility rates force low-income households to make. When considering alternative rate structures, budgets, and affordability programs, policymakers should tailor the AR_{20} and HM metrics to reflect local conditions, compare the AR_{20} and HM that would result under various alternatives, and then set policies to align those results with their communities' priorities. Abandoning the flawed convention in favor of the metrics advanced here can greatly strengthen the way that the utility community thinks about and responds to affordability concerns.

ABOUT THE AUTHOR

Manuel P. Teodoro *is an associate professor at Texas A&M University, 4348 TAMU, College Station, TX 77813 USA; mteodoro@tamu.edu.* *Teodoro researches, teaches, and provides expertise on public policy and management in American government and utility organizations, with emphases on environmental policy and public finance. Teodoro's research has been supported by the National Science Foundation and Water Research Foundation. He has served on the AWWA Rates & Charges Committee, Workforce Strategies Committee, and Strategic Management Practices Committee.*

https://doi.org/10.5942/jawwa.2018.110.0002

PEER REVIEW

Date of submission: 07/10/2017
Date of acceptance: 09/21/2017

REFERENCES

ACS (American Community Survey), 2015. Data Tables & Tools. www.census.gov/acs/www/data/data-tables-and-tools/index.php (accessed Oct. 23, 2017).

Baird, G.M., 2010. Water Affordability: Who's Going to Pick Up the Check? *Journal AWWA*, 102:12:16.

Bowne, W.C.; Naret, R.C.; & Otis, R.J., 1994. *Alternative Wastewater Collection Systems Manual*. USEPA Office of Wastewater Enforcement and Compliance, Washington.

BWSC (Boston Water and Sewer Commission), 2017. www.bwsc.org/SERVICES/Rates/rates.asp (accessed Oct. 23, 2017).

Chenoweth, J., 2008. Minimum Water Requirement for Social and Economic Development. *Desalination*, 229:1:245. https://doi.org/10.1016/j.desal.2007.09.011.

Davis, J.P. & Teodoro, M.P., 2014 (4th ed.). Financial Capability and Affordability. In *Water and Wastewater Finance and Pricing* (G. Raftelis, editor). New York: Taylor & Francis.

DeOreo, W.; Mayer, P.; Dziegielewski, B.; & Kiefer, J., 2016. *Residential End Uses of Water, Version 2*. Water Research Foundation, Denver.

DWU (Dallas Water Utilities), 2016. *Water & Wastewater Retail Cost of Service Rate Study*. http://dallascityhall.com/government/Council%20Meeting%20Documents/bfa_3_dallas-water-utilities-water-and-wastewater-retail-cost-of-service-rate-study_combined_120516.pdf (accessed Oct. 23, 2017).

Janzen, A.; Achari, G.; Dore, M.H.I.; & Langford, C.H., 2016. Cost Recovery and Affordability in Small Drinking Water Treatment Plants in Alberta, Canada. *Journal AWWA*, 108:5:E290. https://doi.org/10.5942/jawwa.2016.108.0047.

LaFrance, D.B., 2017. Affordability Mega-steps. *Journal AWWA*, 109:6:10.

Mack, E.A. & Wrase, S., 2017. A Burgeoning Crisis? A Nationwide Assessment of the Geography of Water Affordability in the United States. *PLOS ONE*, 12:1:e0169488. https://doi.org/10.1371/journal.pone.0169488.

Mumm, J. & Ciaccia, J., 2017. Improving the Narrative on Affordability and the Measurements We Need to Take Us There. *Journal AWWA*, 109:5:42. https://doi.org/10.5942/jawwa.2017.109.0060.

NDWAC (National Drinking Water Advisory Committee), 2003. Recommendations of the National Drinking Water Advisory Council to the U.S. EPA on its National Small Systems Affordability Criteria. Report to the EPA. www.epa.gov/sites/production/files/2015-11/documents/report_ndwac_affordabilitywg_final_.08-08-03.pdf (accessed Oct. 13, 2017).

Raucher, RR.; Clements, J.; Giangola, L.; & Colton, R., 2017. *Customer Assistance Programs for Multi-Family Residential and Other Hard to Reach Customers*. Project #4557. Water Research Foundation, Denver.

Rockaway, T.D.; Coomes, P.A.; Rivard, J.; & Kornstein, B., 2011. Residential Water Use Trends in North America. *Journal AWWA*, 103:2:76.

Rubin, S.J., 2001. Affordability of Water Service. White paper, National Rural Water Association, Duncan, Okla.

Socolow, R.H., 1976. Failures of Discourse. *Bulletin of the American Academy of Arts and Sciences*, 29:6:11. https://doi.org/10.2307/3822935.

Stratus Consulting, 2013. *Affordability Assessment Tool for Federal Water Mandates*. Report to the United States Conference of Mayors, AWWA, and Water Environment Federation.

Texas Water Development Board, 2004. *Water Conservation Implementation Task Force Report to the 79th Legislature*. Texas Water Development Board, Austin.

USEPA (US Environmental Protection Agency), 1997. Combined Sewer Overflows—Guidance for Financial Capability Assessment and Schedule Development. USEPA Office of Water (EPA 832-B-97-004).

USEPA, 1995. Interim Economic Guidance for Water Quality Standards. USEPA Office of Water (EPA 832-B-95-002).

USEPA, 1984. *Financial Capability Guidebook*. USEPA Office of Water (EPA 000-R-84-101).

Appendix: Household Expenditure Estimates

The following tables report the regression models used to estimate essential household incomes using the 2015 Consumer Expenditure Survey (CEX) interview data. Essential expenses were calculated as the sum of average quarterly household expenditures on housing (CEX variable *sheltpq*), food (*foodpq*), health care (*healthpq*), home energy (*ntlgaspq+elctrcrpq+allfulpq*), and taxes (*totxest*), divided by 3 to represent monthly expenditures. Ordinary least squares (OLS) regression models employed robust standard errors to correct for heteroskedasticity, and applied the CEX's sampling weights (*finlwt21*). Models were estimated for all cities for which the CEX included at least 200 responses; cities with fewer than 200 responses were estimated using the national data set. Regression results are reported in Tables A1 and A2.

The coefficients from these models were used to estimate essential household expenditures at the 20th income percentile for each city, single-family home, and a four-person household. All other variables were estimated at the city's mean values.

TABLE A1 Essential household expenditure estimation models

DV: Log Essential Household Expenditures	National Sample	New York City	Los Angeles	Chicago	Houston	Phoenix	Philadelphia
Household size	–0.035	–0.027	–0.096	–0.019	–0.077	–0.01	–0.095
	(0.005)	(0.019)	(0.023)	(0.015)	(0.036)	(0.029)	(0.091)
Single-family home	0.0332	0.076	0.056	0.148	0.148	0.507	0.125
	(0.017)	(0.050)	(0.057)	(0.064)	(0.197)	(0.109)	(0.027)
High school graduate	0.134	0.194	–0.073	0.015	0.109	0.109	0.205
	(0.020)	(0.062)	(0.076)	(0.101)	(0.132)	(0.134)	(0.103)
College graduate	0.279	0.236	0.227	0.213	0.437	0.319	0.080
	(0.012)	(0.041)	(0.049)	(0.048)	(0.110)	(0.093)	(0.063)
Married	0.208	0.017	0.181	0.185	0.298	0.158	0.292
	(0.012)	(0.044)	(0.060)	(0.055)	(0.090)	(0.085)	(0.070)
Black	–0.122	–0.088	–0.164	–0.264	–0.584	–0.547	0.044
	(0.017)	(0.056)	(0.065)	(0.079)	(0.139)	(0.233)	(0.071)
Native American/Indian	–0.147	0.262	0.156		–0.109	0.145	
	(0.078)	(0.260)	(0.334)		(0.229)	(0.209)	
Asian/Pacific Islander	0.021	–0.091	–0.221	–0.118	–0.008	0.201	–0.040
	(0.022)	(0.062)	(0.072)	(0.079)	(0.108)	(0.206)	(0.133)
Multi-race	–0.075	0.031	–0.287	–0.506	–0.159	–0.526	–1.436
	(0.047)	(0.067)	(0.127)	(0.194)	(0.350)	(0.609)	(0.472)
Hispanic	–0.098	–0.052	–0.250	–0.254	–0.177	–0.118	0.169
	(0.017)	(0.050)	(0.058)	(0.073)	(0.122)	(0.095)	(0.118)
Income (log)	0.558	0.609	0.675	0.555	0.247	0.488	0.575
	(0.011)	(0.031)	(0.047)	(0.033)	(0.090)	(0.044)	(0.030)
Homeowner	–0.018	0.025	–0.025	–0.106	–0.097	–0.104	0.027
	(0.014)	(0.045)	(0.051)	(0.062)	(0.186)	(0.089)	(0.078)
Urban	0.301						
	(0.017)						
Intercept	0.728	0.695	0.307	1.339	4.496	1.495	0.906
	(0.103)	(0.307)	(0.469)	(0.335)	(0.892)	(0.425)	(0.285)
R^2	0.530	0.595	0.544	0.704	0.367	0.601	0.631
N	23,254	1,533	1,166	795	406	300	562

DV—dependent variable

Cells contain coefficients (robust standard errors in parentheses).

TABLE A2 Essential household expenditure estimation models (continued from Table A1)

DV: Log Essential Household Expenditures	Dallas and Fort Worth	San Jose and San Francisco	Seattle	Denver	Washington	Boston	Detroit
Household size	0.008	0.026	–0.004	–0.008	–0.033	–0.116	–0.023
	(0.022)	(0.038)	(0.037)	(0.025)	(0.030)	(0.024)	(0.029)
Single-family home	–0.009	0.167	–0.06	0.181	0.092	0.004	0.336
	(0.113)	(0.091)	(0.134)	(0.108)	(0.098)	(0.113)	(0.128)
High school graduate	0.291	0.327	0.405	0.461	–0.022	0.150	0.049
	(0.113)	(0.183)	(0.219)	(0.225)	(0.198)	(0.175)	(0.260)
College graduate	0.197	0.254	0.281	–0.158	0.239	0.065	0.332
	(0.058)	(0.084)	(0.008)	(0.066)	(0.085)	(0.065)	(0.067)
Married	0.140	–0.080	–0.096	–0.011	0.114	0.325	–0.001
	(0.085)	(0.087)	(0.081)	(0.087)	(0.088)	(0.078)	(0.090)
Black	0.072	–0.651	–0.347	0.172	–0.057	0.566	–0.017
	(0.085)	(0.158)	(0.116)	(0.180)	(0.093)	(0.128)	(0.085)
Native American/Indian	0.341			–0.050	0.079		–0.242
	(0.217)			(0.278)	(0.086)		(0.084)
Asian/Pacific Islander	–0.077	–0.036	0.183	–0.019	–0.115	–0.239	0.242
	(0.010)	(0.089)	(0.101)	(0.146)	(0.104)	(0.367)	(0.098)
Multi-race	–0.334	–0.108	0.302	–0.672	–0.236	–0.714	
	(0.161)	(0.118)	(0.247)	(0.170)	(0.186)	(0.319)	
Hispanic	–0.312	0.126	–0.400	–0.093	–0.155	–0.277	0.301
	(0.079)	(0.097)	(0.260)	(0.115)	(0.094)	(0.152)	(0.096)
Income (log)	0.426	0.638	0.503	0.754	0.641	0.645	0.737
	(0.044)	(0.055)	(0.072)	(0.055)	(0.068)	(0.048)	(0.077)
Homeowner	0.009	–0.231	–0.008	–0.571	–0.112	–0.050	–0.216
	(0.109)	(0.071)	(0.101)	(0.094)	(0.086)	(0.076)	(0.110)
Intercept	2.330	0.264	1.640	–1.015	0.568	0.508	–0.945
	(0.443)	(0.623)	(0.734)	(0.613)	(0.739)	(0.576)	(0.838)
R^2	0.556	0.726	0.521	0.674	0.574	0.704	0.632
N	449	327	280	261	413	285	323

DV—dependent variable

Cells contain coefficients (robust standard errors in parentheses).

Strong Cap Ex Growth to Start 2023

Drives Improved Water Quality, Reliability, and Earnings Growth

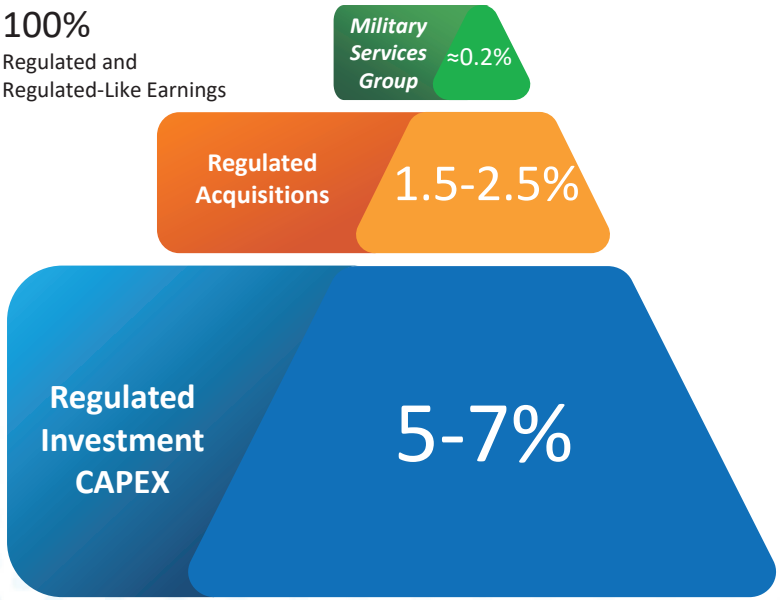
AMERICAN WATER

AWK EPS Growth Triangle

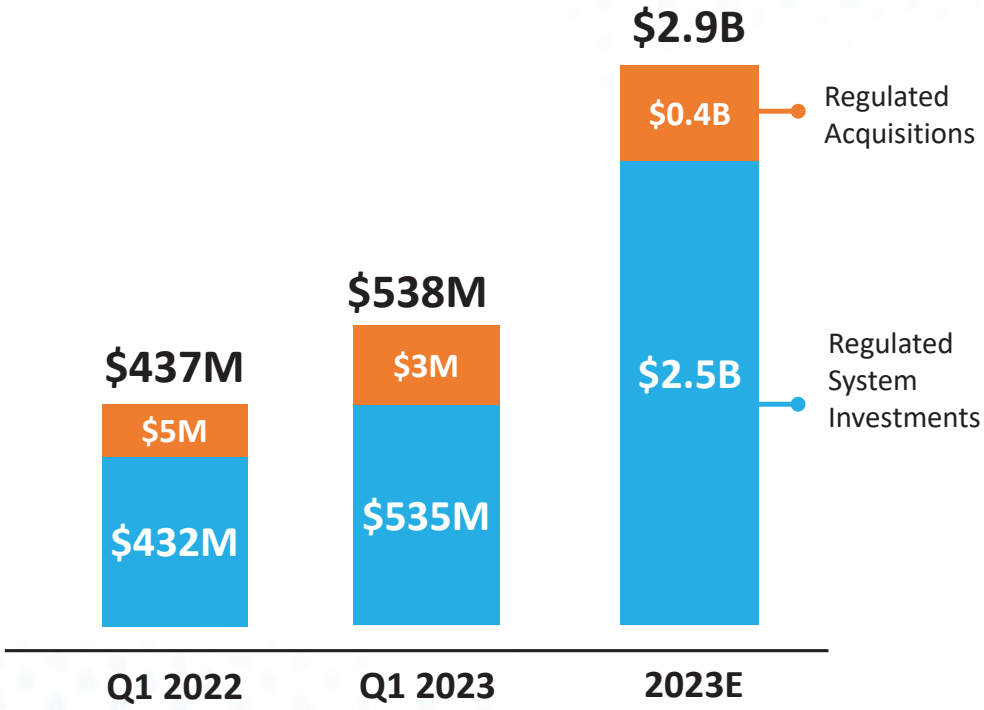
7-9% EPS CAGR Target

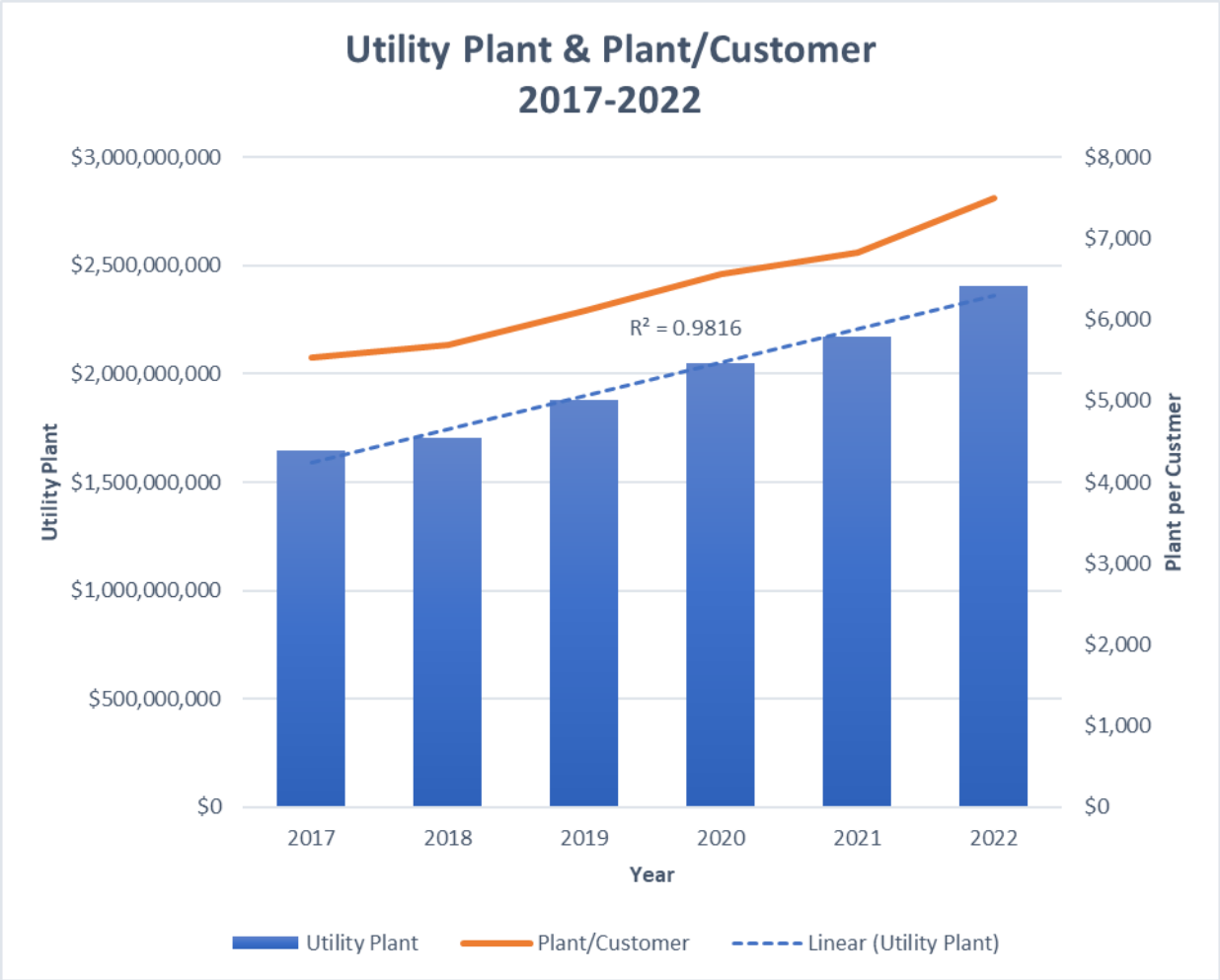
Business Mix

100%
Regulated and
Regulated-Like Earnings



Capital Investment




Utility Plant & Plant/Customer
2017-2022
$3,000,000,000
$2,500,000,000
$2,000,000,000
$1,500,000,000
$1,000,000,000
$500,000,000
$0
Utility Plant
$8,000
$7,000
$6,000
$5,000
$4,000
$3,000
$2,000
$1,000
$0
Plant per Custmer
R² = 0.9816
2017
2018
2019
2020
2021
2022
Year
Utility Plant
Plant/Customer
Linear (Utility Plant)

with the allocation methodology associated with the underlying rates that generated the regulatory liability.

4. Low Income Pilot Program

The Company agrees to add the Gary, Indiana service territory as a third location for inclusion in the Low Income Pilot Program ("LIPP"). The Settling Parties agree that the total program cost for the LIPP will be borne evenly (50/50) between the deferred asset and non-deferred contribution established herein.

For every year of the LIPP except for Year One and Two, the Settling Parties agree that the Company will contribute up to $300,000 per year to the LIPP, allocated equally among the three pilot locations (ie, up to $100,000 per location). The actual amount contributed will depend on participation with the requirement that the total contribution not to exceed $300,000 annually, except for Year Two when the total contribution will not exceed $450,000, and will continue until the earlier of the next general rate case filing, or termination of the LIPP. Of the maximum annual contribution amount, an amount not to exceed $150,000 per year will be accrued in a deferred asset, without carrying charges, for recovery in the Company's next general rate case.

The Company's contribution obligation will commence with the commencement of the LIPP; however, in Year One of the LIPP, only the $150,000 deferred asset will be contributed, with the remaining non-deferred portion of the first year's contribution to be made at the time of the second year's contribution. Accordingly, for Year Two of the LIPP, the maximum contribution to be made by the Company could be as high as $450,000, with $300,000 from the Company's non-deferred contribution and $150,000 in the deferred asset. All subsequent annual contributions under this provision will not exceed $300,000.

The Settling Parties have agreed to a reservation of rights with respect to the allocation among customer classes of the deferral, and the Settling Parties may raise any and all arguments concerning the allocation among customer classes of the deferral in the Company's next base rate case.

5. Conservation

Indiana American will conduct a good faith review of market potential and customer impact of a utility-sponsored water conservation program in its service territory. Indiana American agrees such a utility-sponsored water conservation program proposal could include non-behavioral, measure-based conservation efforts, such as device distribution programs, direct installation programs, manufacturer buy down programs, and rebate and voucher programs for water conservation measures and services. Indiana American agrees to meet and discuss preliminary and final findings of its efforts under this Paragraph 5 with interested Settling Parties at mutually agreeable times.

6. Effect of Stipulation In Future Proceedings

As a part of this Stipulation and Settlement Agreement and for purposes of Petitioner's next general rate case and thereafter, the parties stipulate and agree to the following terms and conditions. Other than as stated in this Paragraph 6, the Settling Parties reserve the right to take positions in future cases, including but not limited to, positions that may be inconsistent with the revenue requirements, cost of capital, rate base, cost of service, revenue allocation, rate design, and other matters set forth in this Stipulation and Settlement Agreement:

(a) Information Regarding Capital Projects

LIPP REPORT JANUARY 31, 2020

Q. What is the status of the LIPP?

A. As of the date of this report, the LIPP has been constructed but has not yet been rolled out. The Community Action Agencies were administering LIHEAP and sought verbal authorization from the Indiana Housing & Community Development Agency. Working through those requirements took time and individual customers have not been selected.

Q. What steps has INAW taken to start the LIPP?

A. Beginning in August 2019, INAW staff has been in contact with Community Action Agencies in the affected areas in Indiana. On November 1, 2019, INAW staff met by phone with the Community Action Agency from the Muncie-area. On November 4, 2019 INAW staff met by phone with the Community Action Agency from the Terre Haute-area. On November 6, 2019 INAW staff met by phone with the Community Action Agency from the Gary-area.

Further, a Memorandum of Understanding (MOU) has been drawn up between the Company and the Community Action Agencies, including Northwest Indiana Community Action Corporation (NWICA), Western Indiana Community Action Corporation (WICAA) and Interlocal Community Action Corporation (ICAP).

Q. Is INAW prepared to begin rolling out the LIPP?

A. The internal accounting structure has been set up at INAW and automated letters and bill messages have been drafted. INAW is prepared to proceed internally once the customer lists are sent from the CAA's to the Company.

Q. How does the Company respond to the 9 questions required in this report?

A. Because the roll-out and selection of customers has not yet occurred, there is no data yet to report on the nine questions.

Q. How do you respond to the requirement that "Indiana American is directed to define and include these metrics in its first annual report filed by January 31, 2020."?

A. The main point of the Pilot Program is to gain an understanding of whether the assistance granted to the Low Income customers, as defined by the program, affects their ability to pay their water bill. Ultimately, we are trying to learn whether the discount is making a difference. Lack of payment does impact customers across the state as it drives up uncollectible bills, an expense that is ultimately recovered through rates. Therefore, the metrics that INAW will be tracking are Customer participation (those that accept the offer vs those that remained on the program in subsequent years, those that were removed from the program for non-compliance), Total customer shut-offs (comparison between those in the program and the Indiana American system as a whole), ratio of uncollectible expense to total residential bills, and overall impact of the pilot on all customers (cost/benefit analysis of dollars spent on program in administration and discount to the reduction in uncollectible expense and cost to shut off meters of non-paying customers). As the pilot moves forward and we notice certain behaviors changing, we will reassess the metrics with

the goal of producing information for the Company and the IURC to be evaluate the potential success of a full roll-out of a Low Income Program.

Q. Does this conclude your report?

A. Yes.

DMS 16466740v1

LIPP REPORT FEBRUARY 1, 2021

Q. What is the status of the LIPP?

A. As of the date of this report, the LIPP has been constructed and has been rolled out. The Community Action Agencies were administering LIHEAP and sought verbal authorization from the Indiana Housing & Community Development Agency.

Q. Has the COVID-19 pandemic has an effect on the Low Income Pilot Program?

A. Yes. It is difficult to assess the specific impact that COVID-19 had on the pilot in 2020 because the company was not collecting arrearages, not performing shut-offs until November 2020, and not assessing late fees. The LIPP was designed to study the impact of giving low-income customers a reduced meter charge in order to study that impact on their ability to pay. We are unable to determine the impact at this time.

Q. What steps has INAW taken to start the LIPP?

A. Beginning in August 2019, INAW staff has been in contact with Community Action Agencies in the affected areas in Indiana. On November 1, 2019, INAW staff met by phone with the Community Action Agency from the Muncie-area. On November 4, 2019 INAW staff met by phone with the Community Action Agency from the Terre Haute-area. On November 6, 2019 INAW staff met by phone with the Community Action Agency from the Gary-area.

Further, a Memorandum of Understanding (MOU) has been drawn up between the Company and the Community Action Agencies, including Northwest Indiana Community

Action Corporation (NWICA), Western Indiana Community Action Corporation (WICAA) and Interlocal Community Action Corporation (ICAP).

Q. How does the Company respond to the 9 questions required in this report?

A. The following information and data represents our findings so far in this pilot program:

i. The number of customers who participated in the LIPP that year for each locale;

- Muncie: 201, Terre Haute: 132, NW: 1

Date on program	Muncie	Terre Haute	NW	Grand Total
16-Mar		88		88
17-Mar		3		3
15-Apr		1		1
16-Apr		33		33
30-Apr	92			92
2-Jun	70			70
29-Jun		7		7
31-Aug			1	1
9-Nov	38			38
17-Nov	1			1
Grand Total	**201**	**132**	**1**	**334**

ii. The total dollar amount that was disbursed directly to customers as a result of the LIPP via (a) a bill credit or (b) alternative credit (identifying this alternative);

- During the period of March 2020 and December 2020, a total of $29,852.02 in Bill Credits have been issued in support of this pilot.

iii. The total dollar amount that was expended during the prior year on the LIPP;

- Aside from the Bill Credits listed above, the company spent a small amount on internal labor that was not booked to the LIPP account. Further, we can expect a small amount of postage but have not received a request for reimbursement of that at this time.

iv. The number of Indiana American customers (a) who requested and received assistance in each of the three pilot locations and (b) the number of customers in each of the three locations who requested but were declined assistance;

- Please see the response above for number of participants. All applicants that were identified and met criteria were accepted. The most common reason for one to not be accepted is the name on the account was not the same as what was sent over.

v. The dollar impacts the LIPP had on Petitioner's average bad debt amount in each of the three cities where it was implemented;

- It is difficult to assess the specific impact that the Pilot program had on bad debt amounts in 2020 due to the COVID-19 pandemic because the company was not collecting arrearages, not performing shut-offs until November 2020, and not

assessing late fees. Information on arrearages can be found in our January 27, 2021 COVID report in Cause No. 45380. Information on payment plans can also be found in that same report.

vi. The impact the LIPP had on disconnections in each of the three cities;

- It is difficult to assess the specific impact that the Pilot program had on disconnections in 2020 due to the COVID-19 pandemic because the company was not performing shut-offs until November 2020.

vii. The administrative costs associated with the LIPP that year;

- The administrative costs were not tracked separately though the costs would have been minimal. We intend to use the authorized funding level primarily to cover the discounts given. Minor administration fees would cover postage.

viii. The total value of accounts in arrears for customers considered low income for each of the pilot cities; and

- Indiana American does not track customers based on low income, or LIHEAP. Information on arrearages can be found in our January 27, 2021 COVID report in Cause No. 45380. Information on payment plans can also be found in that same report.

ix. The average dollar amount benefit to the LIPP participants.

- $12.38/monthly, $148.56/yearly

Q. How do you respond to the requirement that "Indiana American is directed to define and include these metrics in its first annual report filed by January 31, 2020, and by January 31 thereafter throughout the life of the LIPP"?

A. The main point of the Pilot Program is to gain an understanding of whether the assistance granted to the Low Income customers, as defined by the program, affects their ability to pay their water bill. Ultimately, we are trying to learn whether the discount is making a difference. Lack of payment does impact customers across the state as it drives up uncollectible bills, an expense that is ultimately recovered through rates. Therefore, the metrics that INAW will be tracking are Customer participation (those that accept the offer vs those that remained on the program in subsequent years, those that were removed from the program for non-compliance), Total customer shut-offs (comparison between those in the program and the Indiana American system as a whole), ratio of uncollectible expense to total residential bills, and overall impact of the pilot on all customers (cost/benefit analysis of dollars spent on program in administration and discount to the reduction in uncollectible expense and cost to shut off meters of non-paying customers). As the pilot moves forward and we notice certain behaviors changing, we will reassess the metrics with the goal of producing information for the Company and the IURC to be evaluate the potential success of a full roll-out of a Low Income Program.

Q. Does this conclude your report?

A. Yes.

LIPP REPORT JANUARY 31, 2022

Q. What is the status of the LIPP?

A. As of the date of this report, the LIPP has been constructed and has been rolled out. The Community Action Agencies were administering LIHEAP and sought verbal authorization from the Indiana Housing & Community Development Agency.

Q. Has the COVID-19 pandemic has an effect on the Low Income Pilot Program?

A. Yes. It is difficult to assess the specific impact that COVID-19 had on the pilot in 2021. The LIPP was designed to study the impact of giving low-income customers a reduced meter charge in order to study that impact on their ability to pay. We are unable to determine the impact at this time.

Q. What steps has INAW taken to start the LIPP?

A. Beginning in August 2019, INAW staff has been in contact with Community Action Agencies in the affected areas in Indiana. On November 1, 2019, INAW staff met by phone with the Community Action Agency from the Muncie-area. On November 4, 2019 INAW staff met by phone with the Community Action Agency from the Terre Haute-area. On November 6, 2019 INAW staff met by phone with the Community Action Agency from the Gary-area.

Further, a Memorandum of Understanding (MOU) has been drawn up between the Company and the Community Action Agencies, including Northwest Indiana Community

Action Corporation (NWICA), Western Indiana Community Action Corporation (WICAA) and Interlocal Community Action Corporation (ICAP).

Q. How does the Company respond to the 9 questions required in this report?

A. The following information and data represents our findings so far in this pilot program:

i. The number of customers who participated in the LIPP that year for each locale;

- In 2021 - Muncie: 203, Terre Haute: 301, Gary: 1

ii. The total dollar amount that was disbursed directly to customers as a result of the LIPP via (a) a bill credit or (b) alternative credit (identifying this alternative);

- During the period of January 2021 and December 2021, a total of $40,485.86 in Bill Credits have been issued in support of this pilot.

iii. The total dollar amount that was expended during the prior year on the LIPP;

- Aside from the Bill Credits listed above, the company spent a small amount on internal labor that was not booked to the LIPP account. Further, we can expect a small amount of postage but have not received a request for reimbursement of that at this time.

iv. The number of Indiana American customers (a) who requested and received assistance in each of the three pilot locations and (b) the number of customers in each of the three locations who requested but were declined assistance;

- Please see the response above for number of participants. All applicants that were identified and met criteria were accepted. The most common reason for one to not be accepted is the name on the account was not the same as what was sent over.

v. The dollar impacts the LIPP had on Petitioner's average bad debt amount in each of the three cities where it was implemented;

- It is difficult to assess the specific impact that the Pilot program had on bad debt amounts in 2021 due to the COVID-19 pandemic because the company was not collecting arrearages, not performing shut-offs until November 2020, and not assessing late fees. Information on arrearages can be found in our January 27, 2022 COVID report in Cause No. 45380. Information on payment plans can also be found in that same report.

vi. The impact the LIPP had on disconnections in each of the three cities;

- It is difficult to assess the specific impact that the Pilot program had on disconnections in 2021 due to the COVID-19 pandemic.

vii. The administrative costs associated with the LIPP that year;

- The administrative costs were not tracked separately though the costs would have been minimal. We intend to use the authorized funding level primarily to cover the discounts given. Minor administration fees would cover postage.

viii. The total value of accounts in arrears for customers considered low income for each of the pilot cities; and

- Indiana American does not track customers based on low income, or LIHEAP. Information on arrearages can be found in our January 2022 COVID report in Cause No. 45380. Information on payment plans can also be found in that same report.

ix. The average dollar amount benefit to the LIPP participants.

- $12.38/monthly, $148.56/yearly

Q. How do you respond to the requirement that "Indiana American is directed to define and include these metrics in its first annual report filed by January 31, 2020, and by January 31 thereafter throughout the life of the LIPP"?

A. The main point of the Pilot Program is to gain an understanding of whether the assistance granted to the Low Income customers, as defined by the program, affects their ability to pay their water bill. Ultimately, we are trying to learn whether the discount is making a difference. Lack of payment does impact customers across the state as it drives up uncollectible bills, an expense that is ultimately recovered through rates. Therefore, the metrics that INAW will be tracking are Customer participation (those that accept the offer vs those that remained on the program in subsequent years, those that were removed from the program for non-compliance), Total customer shut-offs (comparison between those in the program and the Indiana American system as a whole), ratio of uncollectible expense

to total residential bills, and overall impact of the pilot on all customers (cost/benefit analysis of dollars spent on program in administration and discount to the reduction in uncollectible expense and cost to shut off meters of non-paying customers). As the pilot moves forward and we notice certain behaviors changing, we will reassess the metrics with the goal of producing information for the Company and the IURC to be evaluate the potential success of a full roll-out of a Low Income Program.

Q. Does this conclude your report?

A. Yes.

(1) the number of customers who participated in the LIPP that year for each locale;

(2) the total dollar amount, regardless of funding source, that was disbursed directly to customers that year as a result of the LIPP via (a) a bill credit or (b) alternative credit (identifying this alternative);

(3) the total dollar amount, regardless of funding source, that was expended during the prior year on the LIPP;

(4) the number of Indiana American customers (a) who requested and received assistance in each of the three pilot locations and (b) the number of customers in each of the three locations who requested but were declined assistance;

(5) the dollar impacts the LIPP had on Petitioner's average bad debt amount in each of the three cities where it was implemented;

(6) the impact the LIPP had on disconnections in each of the three cities;

(7) the administrative costs associated with the LIPP that year;

(8) the total value of accounts in arrears for customers considered low income for each of the pilot cities; and

(9) the average dollar amount benefit to the LIPP participants.

2022 LIPP REPORT, JANUARY 31, 2023

Q. What is the status of the LIPP?

A. As of the date of this report, the LIPP had been constructed and rolled out and continues today. The Community Action Agencies were administering LIHEAP and sought verbal authorization from the Indiana Housing & Community Development Agency.

Q. Has the COVID-19 pandemic had an effect on the Low Income Pilot Program?

A. Yes. It is difficult to assess the specific impact that COVID-19 had on the pilot in 2021. The LIPP was designed to study the impact of giving low-income customers a reduced meter charge in order to study that impact on their ability to pay. We are unable to determine the impact at this time.

Q. What steps has INAW taken to start the LIPP?

A. Beginning in August 2019, INAW staff has been in contact with Community Action Agencies in the affected areas in Indiana. On November 1, 2019, INAW staff met by phone with the Community Action Agency from the Muncie-area. On November 4, 2019 INAW staff met by phone with the Community Action Agency from the Terre Haute-area. On November 6, 2019, INAW staff met by phone with the Community Action Agency from the Gary area.

Further, a Memorandum of Understanding (MOU) has been drawn up between the Company and the Community Action Agencies, including Northwest Indiana Community Action Corporation (NWICA), Western Indiana Community Action Corporation (WICAA) and Interlocal Community Action Corporation (ICAP).

Q. How does the Company respond to the nine questions required in this report?

A. The following information and data represent our findings so far in this pilot program:

i. The number of customers who participated in the LIPP that year for each locale;

- Terre Haute: 376

ii. The total dollar amount that was disbursed directly to customers as a result of the LIPP via (a) a bill credit or (b) alternative credit (identifying this alternative);

- During the period of January 2022 through December 2022, a total of $20,546.67 in Bill Credits have been issued in support of this pilot.

iii. The total dollar amount that was expended during the prior year on the LIPP;

- Aside from the Bill Credits listed above, the company spent a small amount on internal labor that was not booked to the LIPP account. Further, we can expect a small amount of postage but have not received a request for reimbursement of that at this time.

iv. The number of Indiana American customers (a) who requested and received assistance in each of the three pilot locations and (b) the number of customers in each of the three locations who requested but were declined assistance;

- Please see the response above for number of participants. All applicants that were identified and met criteria were accepted. The most common reason for one to not be accepted is the name on the account was not the same as what was sent over.

v. The dollar impacts the LIPP had on Petitioner's average bad debt amount in each of the three cities where it was implemented;

- It is difficult to assess the specific impact that the Pilot program had on bad debt due to the COVID-19 pandemic because the company was not collecting arrearages, not performing shut-offs until November 2020, and not assessing late fees. Information on arrearages can be found in our January 27, 2021 COVID report in Cause No. 45380. Information on payment plans can also be found in that same report.

vi. The impact the LIPP had on disconnections in each of the three cities;

- It is difficult to assess the specific impact that the Pilot program had on disconnections due to the COVID-19 pandemic.

vii. The administrative costs associated with the LIPP that year;

- The administrative costs were not tracked separately though the costs would have been minimal. We intend to use the authorized funding level primarily to cover the discounts given. Minor administration fees would cover postage.

viii. The total value of accounts in arrears for customers considered low income for each of the pilot cities; and

- Indiana American does not track customers based on low income, or LIHEAP. Information on arrearages can be found in our January, 2022 COVID report in

Cause No. 45380. Information on payment plans can also be found in that same report.

ix. The average dollar amount benefit to the LIPP participants.

- $12.38/monthly, $148.56/yearly

Q. On December 20, 2022, Michelle Funk, Principal Utility Analyst Water-Wastewater Division of the Indiana Utility Regulatory Commission, sent an email asking Indiana American the following: "For INAW's next LIPP Compliance Filing Report . . ., would you please break out by pilot year the number of LIPP participants in each service area?" Please respond.

A.

Report Date		1/31/2020	2/1/2021	1/31/2022	1/31/2023*
Program Year		2019	2020	2021	2022
Locations	Terre Haute		132	301	376
	Muncie		201	203	0
	Gary / Northwest		1	1	0
		N/A	334	505	376

*Estimated filing date at time of preparation.

Q. How do you respond to the requirement that "Indiana American is directed to define and include these metrics in its first annual report filed by January 31, 2020, and by January 31 thereafter throughout the life of the LIPP"?

A. The main point of the Pilot Program is to gain an understanding of whether the assistance granted to the Low Income customers, as defined by the program, affects their ability to pay their water bill. Ultimately, we are trying to learn whether the discount is making a

difference. Lack of payment does impact customers across the state as it drives up uncollectible bills, an expense that is ultimately recovered through rates. Therefore, the metrics that INAW will be tracking are Customer participation (those that accept the offer vs those that remained on the program in subsequent years, those that were removed from the program for non-compliance), Total customer shut-offs (comparison between those in the program and the Indiana American system as a whole), ratio of uncollectible expense to total residential bills, and overall impact of the pilot on all customers (cost/benefit analysis of dollars spent on program in administration and discount to the reduction in uncollectible expense and cost to shut off meters of non-paying customers). As the pilot moves forward and we notice certain behaviors changing, we will reassess the metrics with the goal of producing information for the Company and the IURC to be evaluate the potential success of a full roll-out of a Low Income Program.

Q. Does this conclude your report?

A. Yes.

DMS 25222101v1

NORTHWEST INDIANA COMMUNITY ACTION

Memorandum of Understanding

for Information Sharing between Northwest Indiana Community Action Corporation (NWICA) Energy Assistance Programs and the Indiana American Water Company

This Memorandum of Understanding outlines the working relationship between Northwest Indiana Community Action Corporation (NWICA) Energy Assistance Programs and the Indiana American Water Company INAW.

NWICA Energy Assistance Programs (EAP) agrees to the following:

- NWICA agrees to referring LIHEAP – EAP qualified Gary Residents to the Indiana American Water Low-Income Pilot Assistance for water rate discounts. Only approved LIHEAP applicants that sign a release of information disclosure will be shared with Indiana American Water Company.

- The Pilot duration is over 3 years within NWICA's City of Gary service area. The first year $50,000, second year $150,000 and the third year at $100,000 as funding is available.

- NWICA agrees to inform qualified LIHEAP (EAP) Gary Residents that The Indiana American Water Company may grant a water utility discount for qualified LIHEAP applicants, that are Indiana American Water customers, residing in the city of Gary Indiana on a first come first serve basis. Those LIHEAP approved applicants wanting to participant in the water discount will be required to complete and sign a disclosure to release their name, address, and phone number to Indiana American Water.

- By the tenth (10th) of each month, beginning March 10, 2020; NWICA will forward a list of Gary LIHEAP qualified applicant names, addresses, and phone numbers to the Indiana American Water Company.

- The LIHEAP contact information will be tracked via spreadsheet and shared via secured methods only.

- Information will be shared securely with Indiana American Water Company representative Justin Mount via email at Justin.A.Mount@amwater.com .

- City of Gary approved LIHEAP applicants with billing and service inquiries will be referred to INAW customer service center at 1-800-492-8373.

NORTHWEST INDIANA COMMUNITY ACTION

The Indiana American Water Company agrees to the following:

- Use the confidential contact information provided by NWICA Energy Assistance Program for intended purpose to benefit EAP approved applicants with water bill discount to LIHEAP qualified City of Gary Residents.

- The confidential information submitted to the Indiana American Water Company will only be used for the intended purpose and will not be sold or distributed beyond this agreement.

- INAW will refer questions regarding LIHEAP - Energy Assistance Program eligibility questions to NWICA's Resource Connections Call Center at 1-800-826-7871 option # 1.

- Bill credits will be issued to qualified LIHEAP – Energy Assistance approved applicants in accordance with the Indiana Utility Regulatory Commission's order approving the Low-Income Pilot Assistance.

Neither the Indiana American Water Company, nor Northwest Indiana Community Action EAP is liable for any failure or delay in performance due to any cause beyond its reasonable control.

This agreement shall be governed by and construed in accordance with the laws of Indiana.

This memorandum shall be effective February 1, 2021 to December 31, 2021 and may be extended, modified, or terminated by mutual agreement of both parties upon written notice.

In acknowledgement of both parties' agreement and pledge to each other in service to the community, Northwest Indiana Community Action Agency and The Indiana American Water Company hereby affix their respective signatures.

K a Butts — 2/23/2021

Indiana American Water Company — Date

Jennifer Malone — 3/4/2021

Northwest Indiana Community Action — Date

ICAP
INTERLOCAL COMMUNITY ACTION PROGRAM, INC.
615 W. S.R. 38 • P.O. Box 449 • New Castle, IN 47362 • Phone (765) 529-4403 • Fax (765) 593-2510
Serving Delaware, Fayette, Hancock, Henry, Rush and Wayne Counties

Memorandum of Understanding
for Information Sharing between Interlocal Community Action Corporation (ICAP) Energy Assistance Programs and the Indiana American Water Company

This Memorandum of Understanding outlines the working relationship between Interlocal Community Action Corporation (ICAP) Energy Assistance Programs and the Indiana American Water Company (INAW).

ICAP Energy Assistance Programs (EAP) agrees to the following:

- ICAP agrees to referring LIHEAP – EAP qualified Muncie Residents to the Indiana American Water Low-Income Pilot Assistance for water rate discounts. Only approved LIHEAP applicants that sign a release of information disclosure will be shared with Indiana American Water Company.

- The Pilot duration is over 3 years within NWICA's City of Muncie service area. The first year $50,000, second year $150,000 and the third year at $100,000 as funding is available.

- ICAP agrees to inform qualified LIHEAP (EAP) Muncie Residents that The Indiana American Water Company may grant a water utility discount for qualified LIHEAP applicants, that are Indiana American Water customers, residing in the city of Muncie Indiana on a first come first serve basis. Those LIHEAP approved applicants wanting to participant in the water discount will be required to complete and sign a disclosure to release their name, address, and phone number to Indiana American Water.

- By the tenth (10th) of each month, beginning March 10, 2020; ICAP will forward a list of Muncie LIHEAP qualified applicant names, addresses, and phone numbers to the Indiana American Water Company.

- The LIHEAP contact information will be tracked via spreadsheet and shared via secured methods only.

- Information will be shared securely with Indiana American Water Company representative Kari Britto, Sr. Manager Operations.

- City of Muncie approved LIHEAP applicants with billing and service inquiries will be referred to INAW customer service center at 1-800-492-8373.

ICAP
INTERLOCAL COMMUNITY ACTION PROGRAM, INC.
615 W. S.R. 38 • P.O. Box 449 • New Castle, IN 47362 • Phone (765) 529-4403 • Fax (765) 593-2510
Serving Delaware, Fayette, Hancock, Henry, Rush and Wayne Counties

The Indiana American Water Company agrees to the following:

- Use the confidential contact information provided by ICAP Energy Assistance Program for intended purpose to benefit EAP approved applicants with water bill discount to LIHEAP qualified City of Muncie Residents.
- The confidential information submitted to the Indiana American Water Company will only be used for the intended purpose and will not be sold or distributed beyond this agreement.
- INAW will refer questions regarding LIHEAP - Energy Assistance Program eligibility questions to NWICA's Information and Assistance Call Center at 1-800-826-7871 option # 1.
- Bill credits will be issued to qualified LIHEAP – Energy Assistance approved applicants in accordance with the Indiana Utility Regulatory Commission's order approving the Low-Income Pilot Assistance.

Neither the Indiana American Water Company, nor Interlocal Community Action EAP is liable for any failure or delay in performance due to any cause beyond its reasonable control.

This agreement shall be governed by and construed in accordance with the laws of Indiana.

This memorandum shall be effective February 1, 2020 to December 31, 2020 and may be extended, modified, or terminated by mutual agreement of both parties upon written notice.

In acknowledgment of both parties' agreement and pledge to each other in service to the community, Interlocal Community Action Agency and The Indiana American Water Company hereby affix their respective signatures.

Indiana American Water Company — Date: 2/7/2020

Interlocal Community Action — Date: 2/4/2020

WICAA

Western Indiana Community Action Agency, Inc.
Serving Our Community Since 1964

Community Services Block Grant
•
Energy Assistance Program
•
Foster Grandparent Program
•
Medical Assistance Program
•
Retired and Senior Volunteer Program
•
Family Development Program
•
Vigo County Head Start Program
•
Weatherization Program
•
Women, Infants & Children Program

Memorandum of Understanding

for Information Sharing between Western Indiana Community Action Agency, Inc. (WICAA) Energy Assistance Programs and the Indiana American Water Company

This Memorandum of Understanding outlines the working relationship between Western Indiana Community Action Agency, Inc. (WICAA) Energy Assistance Program and the Indiana American Water Company (INAW).

WICAA Energy Assistance Programs (EAP) agrees to the following:

- WICAA agrees to referring LIHEAP – EAP qualified Terre Haute residents to the Indiana American Water Low-Income Pilot Assistance for water rate discounts. Only approved LIHEAP applicants that sign a release of information disclosure will be shared with Indiana American Water Company.

- The Pilot duration is over 3 years within WICAA's City of Terre Haute service area. The first year $50,000, second year $150,000 and the third year at $100,000 as funding is available.

- WICAA agrees to inform qualified LIHEAP (EAP) Terre Haute Residents that the Indiana American Water Company may grant a water utility discount for qualified LIHEAP applicants, that are Indiana American Water customers, residing in the city of Terre Haute Indiana on a first come first served basis. Those LIHEAP approved applicants wanting to participate in the water discount will be required to complete and sign a disclosure to release their name, address, and phone number to Indiana American Water.

- By the tenth (10th) of each month, beginning March 10, 2020; WICAA will forward a list of Terre Haute LIHEAP qualified applicant names, addresses, and phone numbers to the Indiana American Water Company.

- The LIHEAP contact information will be tracked via spreadsheet and shared via secured methods only.

- Information will be shared securely with Indiana American Water Company representative Kari Britto, Sr. Manager Operations.

- City of Terre Haute approved LIHEAP applicants with billing and service inquiries will be referred to INAW customer service center at 1-800-492-8373.

Western Indiana Community Action Agency, Inc.

The Indiana American Water Company agrees to the following:

- Use the confidential contact information provided by the WICAA Energy Assistance Program for intended purpose to benefit EAP approved applicants with water bill discount to LIHEAP qualified City of Terre Haute residents.
- The confidential information submitted to the Indiana American Water Company will only be used for the intended purpose and will not be sold or distributed beyond this agreement.
- INAW will refer questions regarding LIHEAP - Energy Assistance Program eligibility questions to WICAA's Energy Assistance Program at 1-812-234-3517.
- Bill credits will be issued to qualified LIHEAP – Energy Assistance approved applicants in accordance with the Indiana Utility Regulatory Commission's order approving the Low-Income Pilot Assistance.

Neither the Indiana American Water Company, nor Western Indiana Community Action Agency, Inc. EAP is liable for any failure or delay in performance due to any cause beyond its reasonable control.

This agreement shall be governed by and construed in accordance with the laws of Indiana.

This memorandum shall be effective February 1, 2020 to December 31, 2020 and may be extended, modified, or terminated by mutual agreement of both parties upon written notice.

In acknowledgment of both parties' agreement and pledge to each other in service to the community, Western Indiana Community Action Agency, Inc. and the Indiana American Water Company hereby affix their respective signatures.

2/7/2020

Indiana American Water Company — Date

1-30-2020

Western Indiana Community Action Agency, Inc. — Date