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Median Household Income for Homeowners is a poor metric to use in measuring the affordability of water bills.

NOTE TO READERS

ON-LINE DELIVERY

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Improved Water Affordability Attributable to Increases in Median Homeowner Incomes May Simply Reflect Decreasing Housing Affordability

The American Water Company (AWC), in rate cases throughout the nation for its operating companies (e.g., Pennsylvania American Water Co., Illinois American Water Co., Missouri American Water Co.) has in the past year been routinely advancing the claim that the rates for its water service are not only affordable, but that they have become more affordable over time.

In support of this claim, AWC compares its bills to the Median Household Income for Homeowners (MHI-HO) over time. It notes that the Bill-to-Income Ratio (BTI Ratio) given changes in the MHI-HO have declined over time.

AWC uses homeowner income in its effort to restrict its comparison of bills and incomes to those households who are "direct" customers of the utility. The Company asserts that renters tend to have their water bills included as part of their rent and would thus not be directly affected by increases in AWC bills. According to AWC, rents are generally not cost-based, but instead are limited by market forces.

AWC, of course, has another objective in restricting its comparison to MHI-HO. The median income of homeowners is nearly universally significantly higher than the median income of tenants. Indeed, MHI-HO tends to be higher than the median income for all households. Consider the comparison in the Table below of median incomes for the three states mentioned above (PA, IL, MO). Using the higher median incomes for homeowners will, correspondingly,

result in a lower BTI Ratio by which to measure the affordability of AWC rates.

State	All	Owners	Renters
PA	\$73,824	\$90,396	\$45,926
IL	\$80,306	\$98,752	\$50,095
MO	\$68,545	\$84,050	\$42,843

Quite aside from this skewed incentive for AWC to use MHI-HO as the income basis for its affordability analysis, advocates should not accept, without further inquiry, the notion that renters will necessarily not be direct customers of AWC’s water utilities. It cannot merely be assumed that being a renter means the household is renting a unit in a multi-family building.

The data in the Table below again is based on the same three states (PA, IL, MO). “1-family” homes include both 1-family attached and 1-family detached homes. The data shows that in Pennsylvania and Missouri, nearly 40% of rental homes are 1-family homes, while, in Illinois, nearly one quarter are.

State	Total (Renter)	1-Family (Renter)	2-Family (Renter)	Pct 1-Family (Renter)
PA	1,626,438	590,437	171,167	36.3%
IL	1,654,539	387,524	155,728	23.4%
MO	798,230	314,487	64,322	39.4%

If one includes two-family homes, also, in the population that is likely to be individually metered (and thus a direct customer of the AWC utilities), the percentage of renters who should be included is even higher.

Questioning Why MHI-HO is Increasing as Fast as It Is

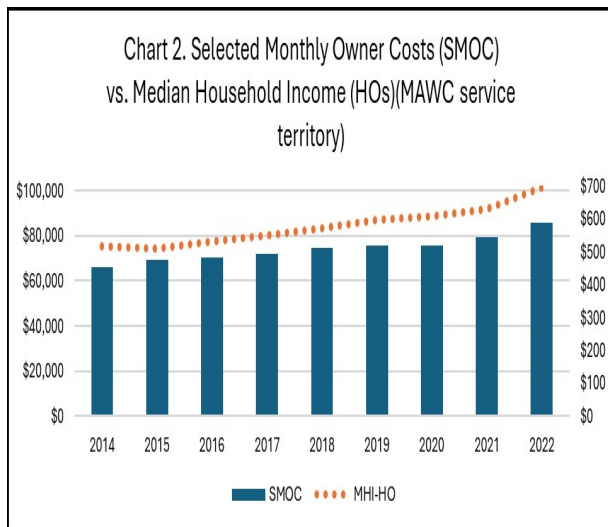
It is particularly inappropriate to use the Median Household Income of homeowners (“MHI-HO”) as a basis for assessing the affordability of water service over time. When one considers the growth in MHI-HO over time, it would also be necessary to consider *why* MHI-HO is growing as it is and whether such growth represents a real improvement in financial circumstances. In fact, the growth in MHI-HO frequently does not represent an improvement in financial circumstances, but instead represents a growth in the underlying cost of housing.

As a general rule, becoming a homeowner requires a household to have income that is sufficiently high so that the home purchase price is no more than 30% of income.¹ To the extent that housing values in a particular jurisdiction sharply increase, therefore, it requires an ever-increasing income for a household to afford to become a homeowner. The question is not merely one of the “affordability” of housing. The question is one of gaining access to the financing necessary to purchase the home with which to begin.

¹ The 30% standard applies across housing costs broadly – housing is generally considered “affordable” where the occupant is “paying not more than 30 percent of gross income for housing costs, *including utilities.*” Mia Chapman, *What is Affordable Housing?*, Nat’l League of Cities (Jan. 8, 2024), <https://www.nlc.org/article/2024/01/08/what-is-affordable-housing/>; *see also* Nat’l Foundation for Credit Counseling, *How Much of Your Income Should Be Spent on Housing?* (“Housing costs should be no more than 30% of your gross income[,] includ[ing] ... utilities like gas, electricity, water, and internet.”)

The Missouri testimony examined the zip codes that comprise the MAWC service territory. In doing so, the testimony examined both the Median Household Income (Homeowners) (“MHI-HO”) for each year from 2014 through 2022 and the Selected Monthly Owner Costs (“SMOC”) reported by the Census Bureau by year for the same time period. The testimony calculated the growth in MHI-HO along with the growth in housing values. It found that the increase in SMOC (for households with mortgages) was matched by a corresponding substantial growth in the MHI-HO in that same time period (and vice versa).

The data is set forth in the Chart below. As is evident, even though MHI-HOs remained relatively constant as housing costs remained constant, when housing costs began to trend upward in 2016, so, too, did the corresponding MHI-HOs. When housing values in the MAWC service territory jumped substantially in 2021 and 2022, the corresponding MHI-HO jumped substantially as well.



The Missouri testimony concluded that AWC’s analysis reaches the unreasonable conclusion that as homeownership becomes less and less affordable in the MAWC service territory, water

bills will correspondingly become more and more affordable given that higher incomes would be needed to become a homeowner.

Declining Homeownership Affordability.

The Table appended below presents the number (and percent) of homeowners in the MAWC service territory, disaggregated by homeowners’ annual incomes, for the years 2014 through 2022. The data supports the conclusions reached above and helps to explain why MHI-HO has been increasing in the MAWC service territory.

As housing prices spiraled in the MAWC service territory, lower-income households were priced out of the housing market, leaving homeownership to be increasingly the province of higher income households. For example, on the one hand, while fewer than one-third of homeowners in 2014 had income of \$150,000 or more, more than half had an income this high in 2022. On the other hand, while more than one-fifth (21.0%) of homeowners in the MAWC service territory had income less than \$35,000 in 2014, by 2022, only 13% did.

Even moderate-income households are being priced out of the homeowner market in the MAWC service territory. While, in 2014, nearly half (47.3%) of homeowners had income between \$35,000 and \$100,000, only 39.7% did by 2022.

The absolute numbers show the trends as well. The total number of homeowners in the MAWC service increased from 581,493 in 2014 to 603,960 in 2022. During that same time period, however, the total number of homeowners:

- With incomes less than \$35,000 decreased by nearly 41,500 (122,064 –

80,595 = 41,469) (a decline of more than one-third);

- With income between \$35,000 and \$100,000 decreased by more than 35,000 ($275,110 - 239,629 = 35,487$) (a decline of more than one-eighth); and
- With income more than \$100,000 increased by nearly 100,000, an increase of more than 50%.

In sum, it is clear that, when measured by reference to median homeowner income in the zip codes comprising the MAWC service territory, MAWC water bills may only appear to be affordable over time because housing is become increasingly less affordable, thus driving lower income homeowners out of becoming homeowners (the population which comprise the “direct” customers of MAWC).

The Bill-to-Income Ratios for homeowners instead reflect the increasing unaffordability of housing in the MAWC service territory. The AWC conclusion that the Company’s water bills have been, and will continue to be, affordable has no basis in data involving water bills. It instead merely reflects the increasing unaffordability of homeownership.

Summary

Overall, basing an assessment of water affordability on the MHI-HO has the impact of asserting that as owner-occupied housing in a community becomes increasingly less affordable, thereby limiting ownership to increasingly higher income households in that community, water service becomes increasingly more affordable when measured by bills as a percentage of homeowner income. That conclusion does not reasonably flow, given that what is *really* being measured is only the affordability of water to an increasingly wealthier population.

Even if calculations based on MHI-HO are correct as a matter of arithmetic, the policy conclusions which are asserted based on these calculations do not reasonably follow.

Persons interested in obtaining more information about assessing the affordability of water bills in a community (or utility service territory) can write:

roger [at] fsconline.com

Homeowner Income by Year (2014 – 2022) (MAWC Service Territory)							
Year	Total Hos	Total Less than \$20,000	\$20,000 - \$34,999	\$35,000 to \$49,999	\$50,000 to \$74,999	\$75,000 to \$99,999	\$100,000 or more
2014	581,493	52,067	69,997	73,456	114,024	87,630	184,319
		9.0%	12.0%	12.60%	19.60%	15.10%	31.7%
2015	577,790	50,441	68,252	73,555	113,809	87,304	184,609
		8.7%	11.8%	12.70%	19.70%	15.10%	31.9%
2016	576,355	47,846	66,128	72,080	112,266	87,274	190,761
		8.2%	11.5%	12.50%	19.50%	15.10%	33.1%
2017	579,662	45,259	63,590	70,308	112,040	86,769	201,696
		7.9%	11.0%	12.10%	19.30%	15.00%	34.8%
2018	580,445	42,907	59,982	67,795	107,514	87,287	214,960
		7.5%	10.3%	11.70%	18.50%	15.00%	37.0%
2019	584,151	40,673	57,543	64,950	105,958	86,820	228,207
		6.9%	9.9%	11.10%	18.10%	14.90%	39.1%
2020	592,487	39,021	55,791	64,514	105,601	88,825	238,735
		6.6%	9.5%	10.90%	17.80%	15.00%	40.3%
2021	600,918	37,850	51,729	60,502	105,140	88,154	257,543
		6.3%	8.6%	10.10%	17.50%	14.70%	42.9%
2022	603,960	34,920	45,675	56,788	97,054	85,781	283,742
		5.8%	7.6%	9.40%	16.10%	14.20%	47.0%

Fisher, Sheehan and Colton, Public Finance and General Economics (FSC) provides economic, financial and regulatory consulting. The areas in which *FSC* has worked include energy law and economics, fair housing, local planning and zoning, energy efficiency planning, community economic development, poverty, regulatory economics, and public welfare policy.