

2023

NEW HAMPSHIRE WATER & WASTEWATER RATES REPORT



ABOUT THIS REPORT

This report is a resource in a series on New Hampshire water and wastewater rates, funded by the New Hampshire Department of Environmental Services (NH DES), and compiled by the Environmental Finance Center (EFC) at the University of North Carolina at Chapel Hill.

In addition to this report is an accompanying set of [Tables](#) of rate structures and monthly bill amounts. Furthermore, with the online, interactive [Rates Dashboard](#), users can compare utilities against various attributes such as geographic location, system characteristics, customer demographics, financial indicators, and benchmarks.

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4 Myths

About Water Pricing



1

MYTH: High Rates are Bad

FACT: Higher rates do not necessarily reflect poor or inefficient management. Some utilities may not be charging enough to properly maintain assets or have not re-examined rate structures.



2

MYTH: Comparing Rates is Simple

FACT: Rates alone do not tell the entire story. Rates should reflect the cost of providing service and can vary based on many factors. Comparing rates is really just a starting point for more analysis.



3

MYTH: Pricing is Simple

FACT: Utilities employ a variety of pricing structures and should be thoughtful in designing those structures to meet their needs, objectives, and priorities as they evolve over time.



4

MYTH: Promoting Conservation Requires Increasing Block Rate Structures

FACT: Many different types of pricing structures can be employed to encourage conservation, not just increasing block rate. Utilities should aim to focus on all aspects of pricing, not just rate structure design.



For more information on The Four Myths of Water Pricing, visit the original blog post at <http://efc.web.unc.edu/2015/02/12/myths-about-water-rate-setting/>

INTRODUCTION

Between May and June 2023, the EFC and NH DES conducted a survey of rate-charging water and wastewater utilities in New Hampshire.

Of the 156 utilities surveyed, 138 responded. Overall, utilities from all ten counties in the state participated, providing their rate schedules. This resulted in an 88.46% response rate from utilities, covering about 8 million of all New Hampshire citizens served by community water systems.

Water and wastewater rate setting is one of a local government's most important environmental and public health responsibilities.

This report aims to provide utility professionals and public officials with an up-to-date, detailed survey of current statewide rate structures and trends, and thus assist in the protection of public health, improvement of economic development, and promotion of sustainability in New Hampshire.

Water and wastewater **rates** ultimately determine how much **revenue** a community has to maintain **vital infrastructure**.

BY THE NUMBERS



51

utilities serving
WATER ONLY



26

utilities serving
WASTEWATER ONLY



62

utilities serving
WATER AND WASTEWATER

78%

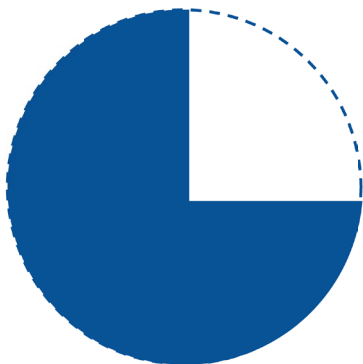
MUNICIPALITY

12%

PRECINCT/DISTRICT

10%

FOR-PROFIT



Of the **For-Profit** and
Precinct/District utilities, about
three out of four provide
water only



THE MAJORITY
of utilities are owned by *local*
governments

WHAT DO RATE STRUCTURES LOOK LIKE?

BASE CHARGES

Considerable variation exists in how utilities model rate structures, but almost all use a combination of **base charges** and **volumetric charges** to determine billing for their services.

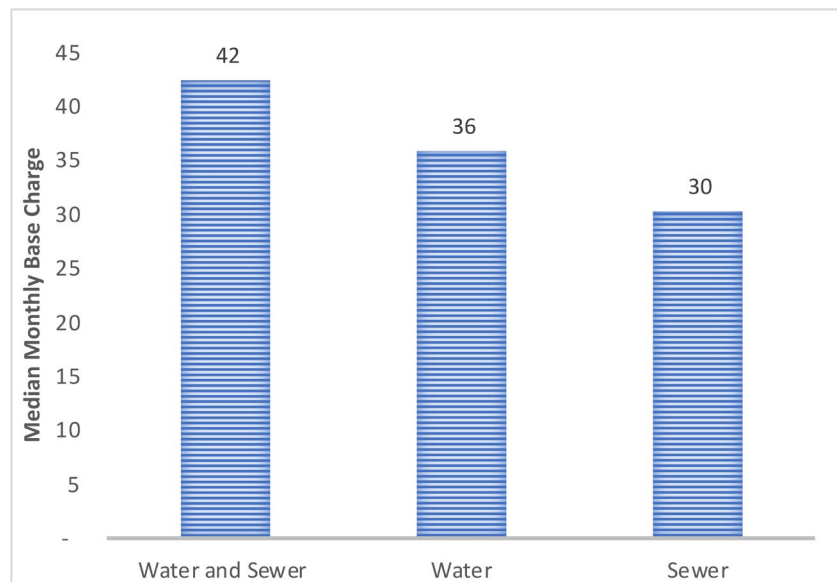
Base charges do not vary from month to month regardless of consumption. These charges can be a constant, universal amount for all customers, or vary based on customer class (i.e. residential vs. commercial) or meter size. Base charges sometimes feature a *consumption allowance*, an included amount of usage that the customer is not separately charged for.

Only 27.9% of inside water rate structures at all pipe sizes with base charges include a consumption allowance. Standardized to monthly billing, the median consumption allowance included with a base charge is 10 thousand gallons or 13.37 cubic feet.

In New Hampshire **91.58%** of inside water rate structures and **88.97%** of wastewater rate structures **include a base charge**

Benefits of base charges: Contributes to revenue stability by charging a consistent minimum amount for all customers.

Volumetric-charge-only rate structures can make consistent revenue difficult to predict and lead to unexpected shortfalls when customer use changes.



Median Monthly Base Charge for Rates at 5/8ths Pipe (Residential)

CHARGING FOR VOLUME

Volumetric (variable) charges are based on the volume used after exceeding the consumption allowance included in the base charge (if any). In New Hampshire 10.68% of residential water rate structures *only* charge customers a base charge or a flat fee, so all customers pay a single fixed price for service, regardless of how much volume they use. On the opposite end of the rate structure spectrum, almost 90% of water rate structures in New Hampshire charge for volumetric units used.

WHAT DO RATE STRUCTURES LOOK LIKE?

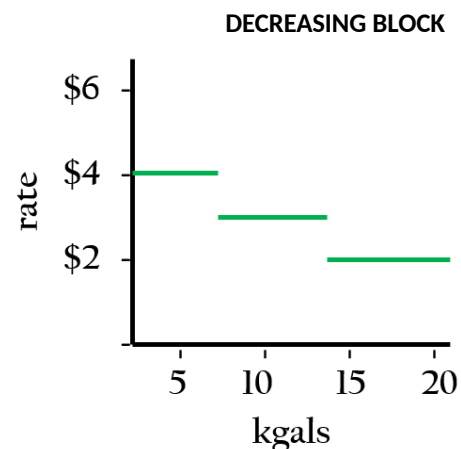
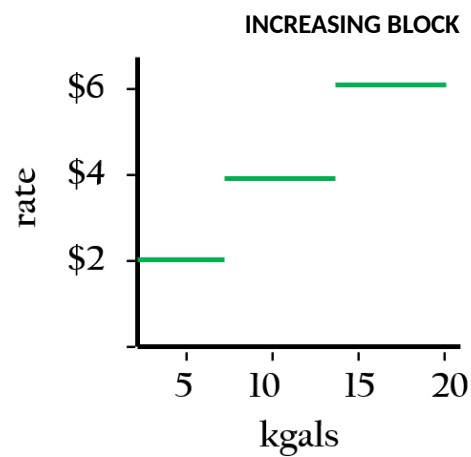
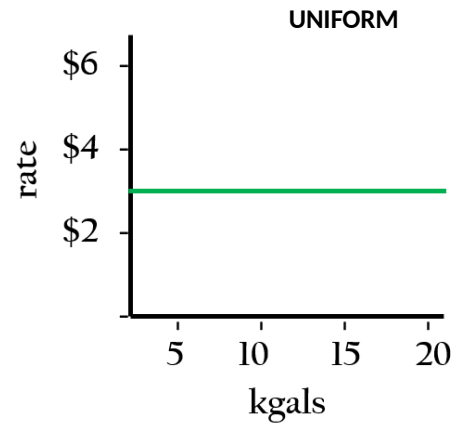
WAYS TO CHARGE FOR VOLUME

As mentioned, most rate structures are a combination of a fixed base charge plus a volumetric charge. Three common ways to charge for volume are uniform, increasing block, and decreasing block rates.

With a **uniform rate** structure, the rate does not change as the customer consumes more.

The rate increases in an **increasing block** rate structure as the customer uses more. This structure is often employed by utilities that want to encourage conservation by making higher volumes of consumption more expensive.

The rate per unit decreases with greater consumption in a **decreasing block** structure. This type of rate structure may be used to encourage economic development by high-volume users such as commercial businesses.



WHAT IS THE MOST COMMON VOLUMETRIC RATE STRUCTURE ?

In New Hampshire the majority (56%) of residential water and wastewater rate structures use a **uniform rate** to charge for volume. Standardized to thousands of gallons, the average uniform rate is **\$8.33 for water** and **\$9.67 for wastewater** services.

WHEN WERE RATES LAST CHANGED?

The **MAJORITY** of utilities have updated rates since **AT LEAST 2022**.

About **2 IN 4** utilities have not updated their rates since **2021** or earlier.

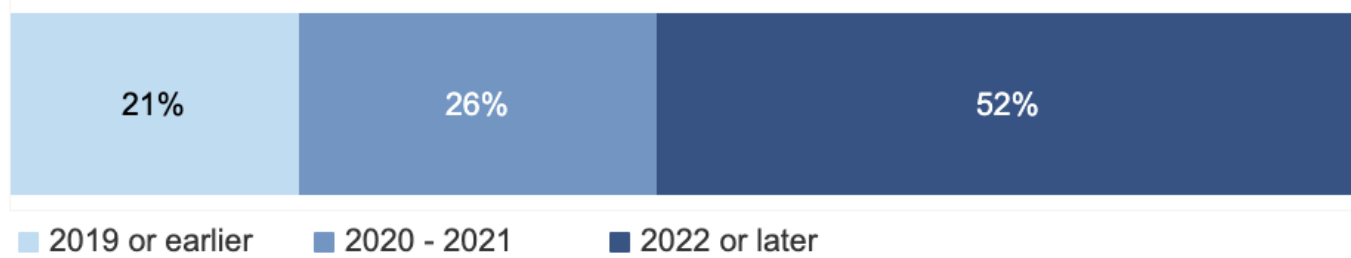


In New Hampshire, **most utilities** are actively evaluating and modifying their rate structures every one to two years. **The EFC recommends that utilities review their rates at least every two years, at the minimum, to keep pace with inflation.** An annual or biennial review gives utilities the opportunity to evaluate if their current rates are enough to cover the necessary operating expenses and depreciation, not to mention savings goals for capital planning, emergencies, or other funds.

Utilities that modestly raise rates at more frequent intervals accumulate more revenue over time than those that implement less frequent, but more drastic rate increases. Customers are also less likely to balk at more gradual, periodic rate increases than a one-time price hike.

The calendar year when sampled rate structures were first put into effect is shown below for 138 rate structures.

Percent of Rate Structures by Effective Date Year



WHAT ARE UTILITIES CHANGING?

New Hampshire's Average Bills*

Residential (6,000 GALS)

Commercial (50,000 GALS)

\$62.70 | **\$752.70**

MONTH

YEAR

WATER



\$538 | **\$6,452**

MONTH

YEAR

WASTEWATER

\$70.60 | **\$847.40**

MONTH

YEAR

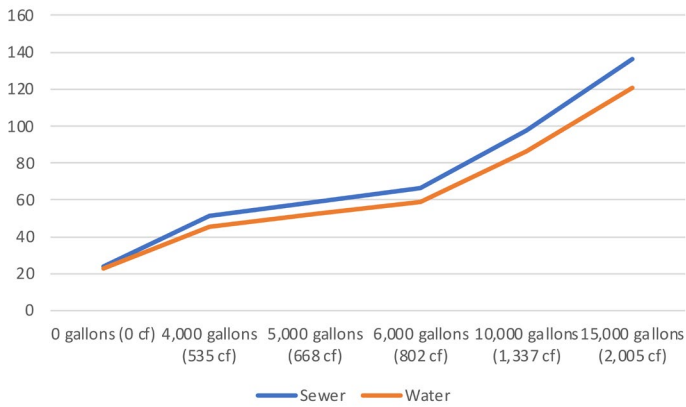


\$412 | **\$4,941**

MONTH

YEAR

Average Residential Water and Sewer Bills (Monthly)

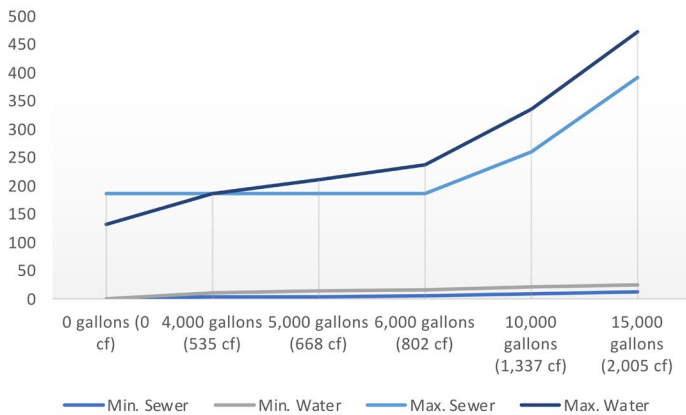


*The bills modeled are inside the service area

RANGE OF BILLS

As volume increases, the average wastewater bill tends to rise at a greater rate than the average water bill. At zero consumption, water bills are almost equal to sewer bills, but at 6,000 gallons there is a \$7.52 difference in the average price.

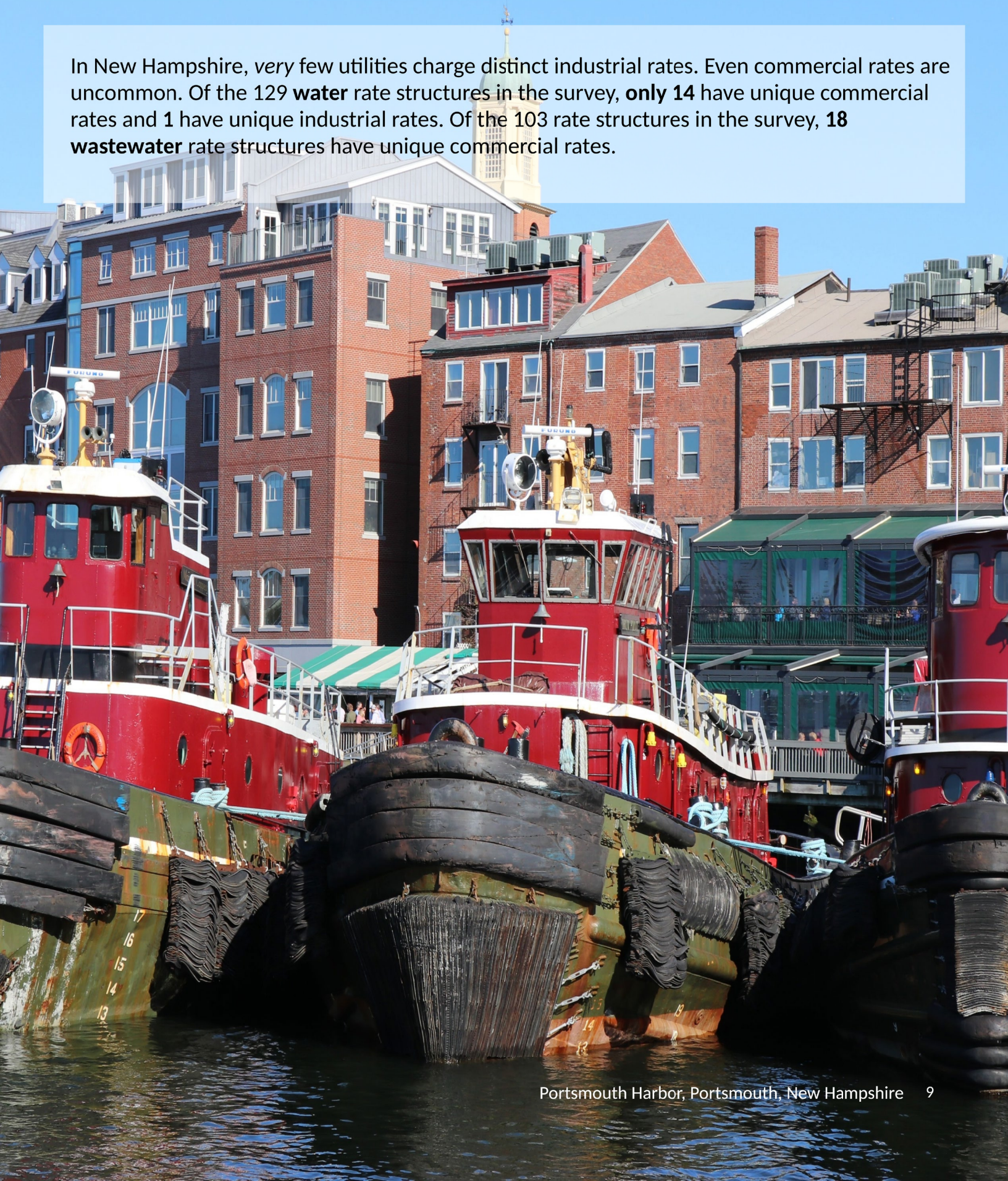
Max & Min Sewer and Water Charges (Monthly and Residential)



While reporting the average bill is helpful for understanding the “big picture” for water and wastewater bills, it does not show the total distribution of bills. The graph to the left shows the Minimum and Maximum bills for Residential Water and Sewer.

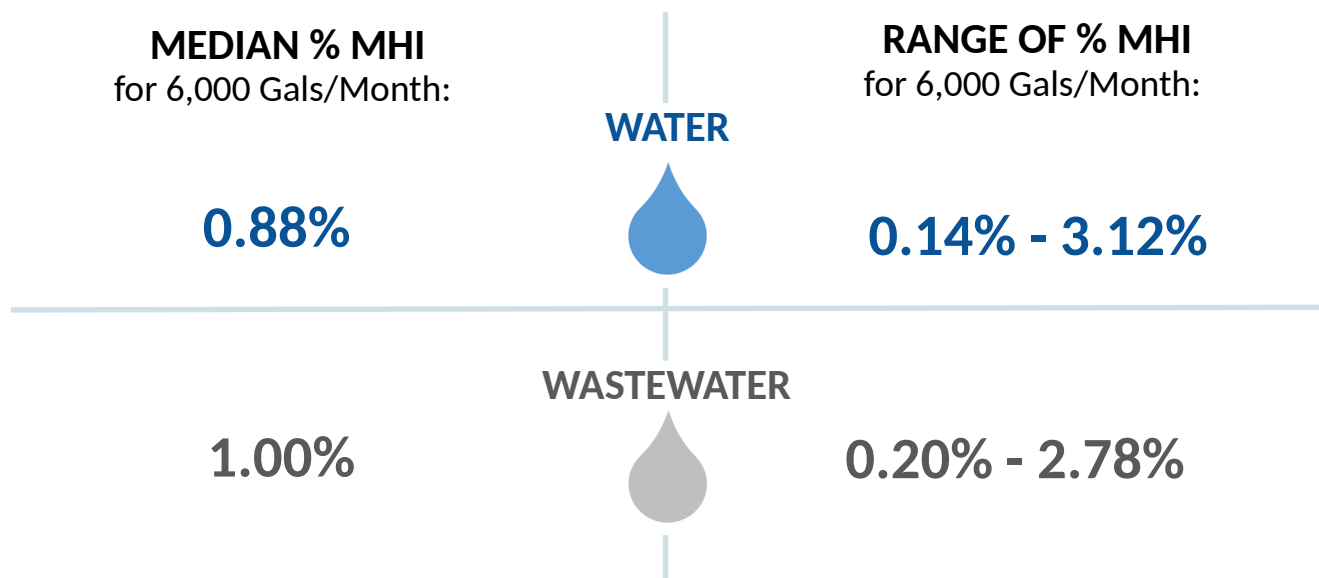
WHAT ABOUT INDUSTRIAL RATES?

In New Hampshire, very few utilities charge distinct industrial rates. Even commercial rates are uncommon. Of the 129 **water** rate structures in the survey, **only 14** have unique commercial rates and 1 have unique industrial rates. Of the 103 rate structures in the survey, **18 wastewater** rate structures have unique commercial rates.

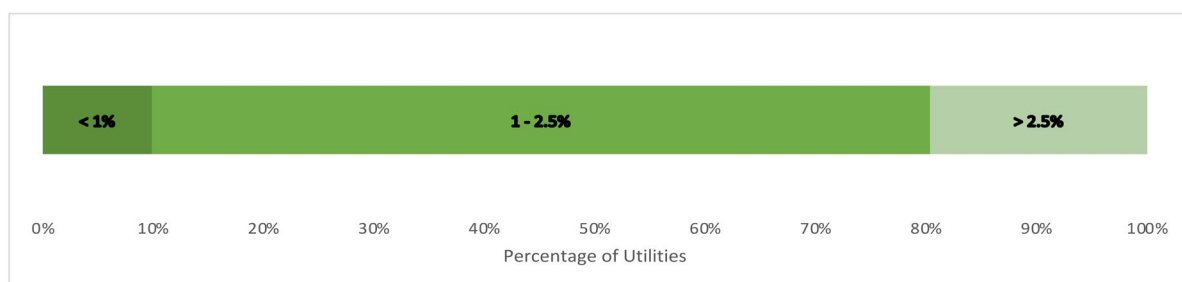


HOW AFFORDABLE ARE RESIDENTIAL BILLS?

Assessing rate affordability remains a challenge because there is no one true, universal measure of affordability. The most commonly used indicator, **Percent Median Household Income**, or “**Percent MHI**,” calculates how a year’s worth of water and wastewater bills, in this case, 6,000 gallons/month, compares to the MHI of the community served by the utility. MHI is provided by the most recent 5-year estimates of the US Census Bureau’s American Community Survey.



Based on results from the 2023 rates survey and 2017-2021 American Community Survey 5-year Estimates, the median percent MHI for annual combined water and wastewater bills ranges from 0.53% to 4.28%, with an average of **2%**. However, **about 20%** of utilities serving both water and wastewater annually charge **over 2.5%** of their community’s MHI for combined services.



As all communities have a range of income brackets, it is important to keep in mind that what may seem like a small percentage of the community’s MHI can have a proportionally larger impact on lower-income populations. For a more in-depth look at the affordability of water and wastewater services in a community, the EFC offers the free, Excel-based [Residential Rates Affordability Assessment Tool](#), available for download on their website.

DO PRICE REFLECT THE TRUE COST OF SERVICE?

Utilities sometimes fall into the trap of pricing services based on what their customers have always paid, rather than focusing on the bottom line of their balance sheets. This year **102 municipally-owned utilities** out of the total 156 utilities (65.4%) provided their most recent annual financial reports to the survey. While statewide conclusions cannot be drawn from this limited dataset, there are some notable trends. First, some essential definitions:

WHAT IS OPERATING RATIO?

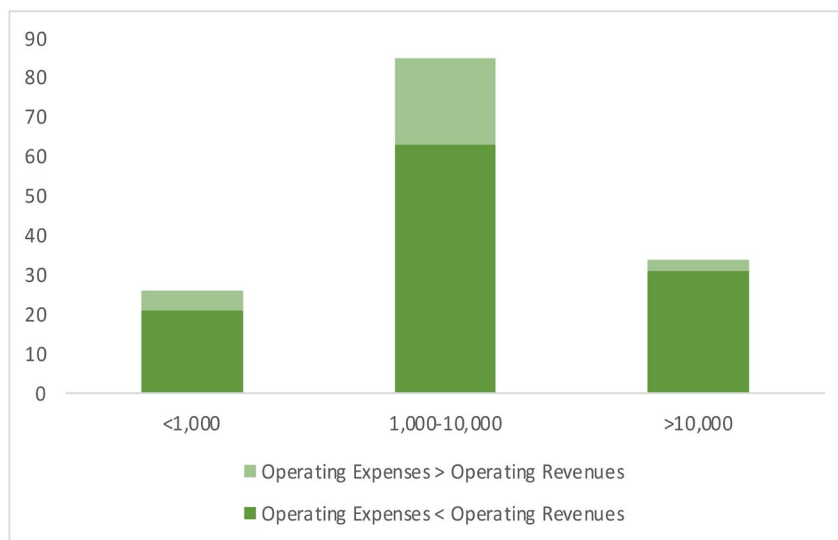
Operating ratio, also known as cost recovery ratio, is a financial benchmark that determines if an entity is operating at a loss, gain, or just breaking even. The ratio is simply the division of operating revenues by operating expenses, which can include or exclude depreciation. A utility's operating ratio must be *at least 1.0* to break even.

WHY INCLUDE DEPRECIATION?

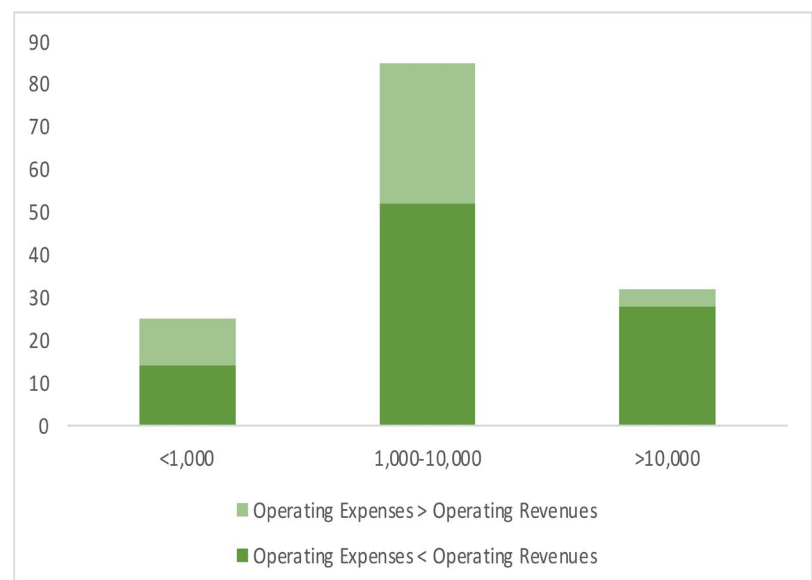
Whenever possible, depreciation should be included in operating expenses to account for the inevitable cost of replacing equipment and infrastructure at the end of its expected useful life. Depreciation allows costs to be figuratively

parceled out over time, avoiding a sudden, enormous expense when the time comes to replace assets. Consider the differences in the graphs below with and without depreciation factored into operating expenses.

Proportion of Utilities Operating Ratio ≥ 1 Excluding Depreciation



Proportion of Utilities Operating Ratio ≥ 1 Including Depreciation



DO PRICE REFLECT THE TRUE COST OF SERVICE?

Without accounting for depreciation, **36 out of 102** utilities with financial data (35%) generated enough revenue to recover operating costs (operating ratio of 1.0 or greater). Of the utilities that were not able to recover expenses, the vast majority served less than 10,000 people.

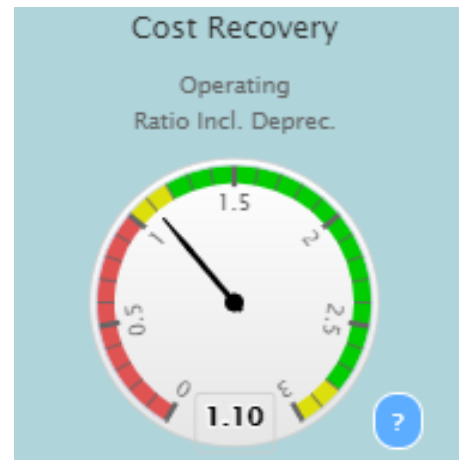
With depreciation included, **46 of the 102** (45%) utilities generated enough revenue to cover operating expenses—a drop from 2020.

All utilities face the issue of generating sufficient revenue to pay for the high fixed costs of providing safe and reliable services. However, smaller utilities must spread out those high fixed costs over a smaller customer base.

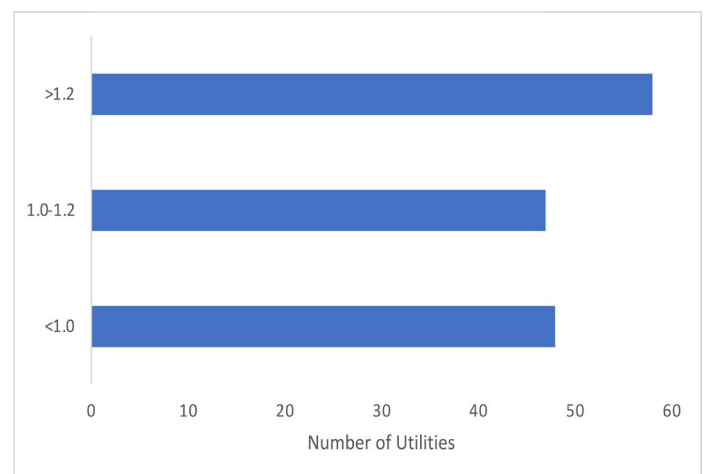
WHAT IS CONSIDERED HEALTHY?

The Cost Recovery dial on the [Rates Dashboard](#) uses red, yellow, and green colored bands to give the viewer a simplified idea of the health of the utility's operating ratio at a glance.

While it is clear that being “in the red” is not a good position to be in, there is no universal standard for what constitutes

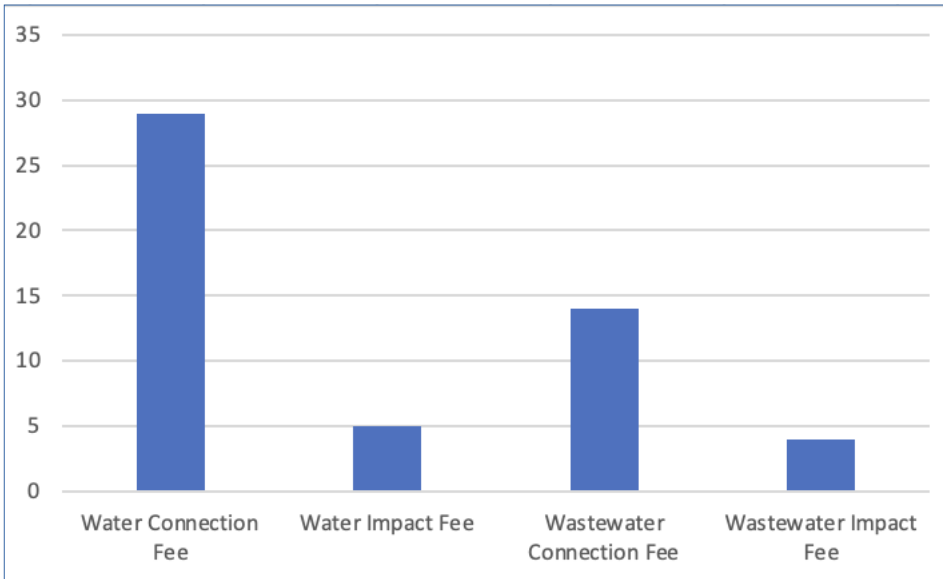


a healthy operating ratio beyond 1.0. Generally, as the Cost Recovery dial shows in the green band above, an operating ratio including depreciation of **at least 1.2** allows utilities to account for day-to-day operations and maintenance expenses, as well as for future capital costs. In New Hampshire, 32 utilities that provided financial information have an operating ratio of 1.2 or greater



WHAT ONE-TIME FEES DO UTILITIES CHARGE?

Connection and impact fees are one-time charges associated with either connecting to an existing system or offsetting increased demands on the system. Besides charging rates for service, one-time fees are an important revenue option for utilities, particularly for operating as a self-sufficient enterprise fund.

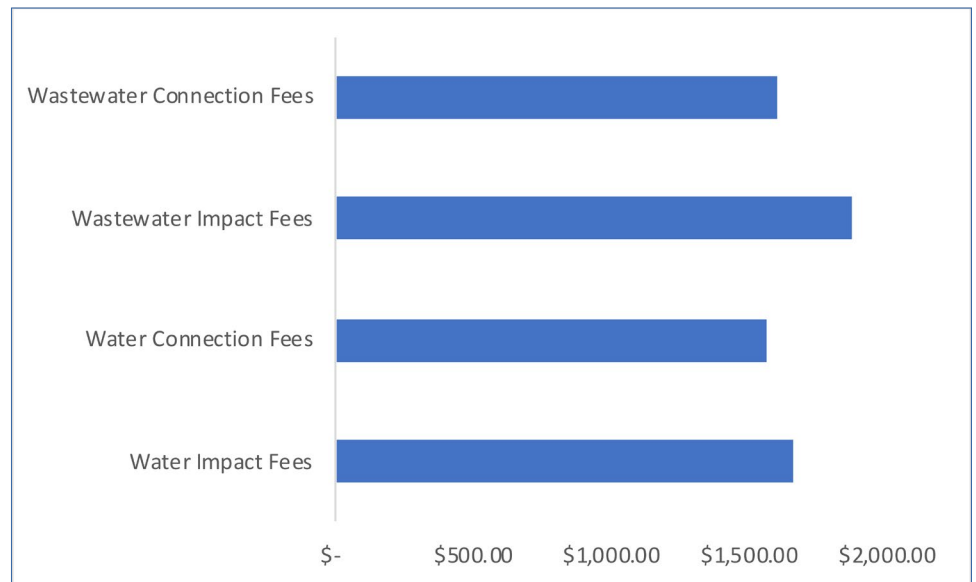


There is a clear trend for connection fees over impact fees. As shown at left, connection fees are used by utilities, almost 6 times more than impact fees for water service, and 3 times more for wastewater.

Of those serving both water and wastewater, 88% charge connection fees for both services. 72% of utilities providing only one service charge a connection fee for that service.

Very few utilities charge impact fees alone. Impact fees could be less prevalent due to their abstract purpose, which can be harder for customers to understand, and for utilities to quantify.

As shown at right, the average impact fee is about the same price of a connection fee for the same service type. However, it is important to note that in years past (with higher levels of collection), Impact Fees were significantly lower in both water and wastewater.



Similarly to rates for service, wastewater fees are on average greater than those for water. This is in line with the greater costs associated with providing wastewater service compared to water service.

INSIGHTS

With data covering the majority of all rate-charging utilities in the state, the 2023 Water and Wastewater Rates Survey can offer high-level insights into current rate-setting trends and practices in New Hampshire.

ONE-TIME FEES

Many utilities do not charge customers when they connect to the system for the first time. By scouring rate sheets – of the 129 Water utilities, 33 included a one-time fee on their rate sheet, and of the 103 sewer utilities, only 20 mentioned One-time fees. One-time fees are an opportunity to recover the costs of materials, labor, and increased capacity on the system when new users are added. Check here that your utility is included if you charge one-time fees.

FINANCIAL STABILITY

22% of utilities **have not updated** their rates within the last five years. All utilities should regularly review their rate structures to ensure they continue to serve their priorities and maintain pace with inflation. Of the 30 utilities that responded to the add-on questionnaire,

COMMERCIAL AND INDUSTRIAL RATES

The **lack of commercial and industrial rates** in New Hampshire suggests that those customer classes are not a priority or customers are adequately served through a universal customer class. For communities that want to encourage those types of business activities, it may be worth considering if rate structures specifically geared towards promoting commercial and/or industrial use could be a viable tool for economic development.

ADDITIONAL RESOURCES

All of the following free resources are available at:

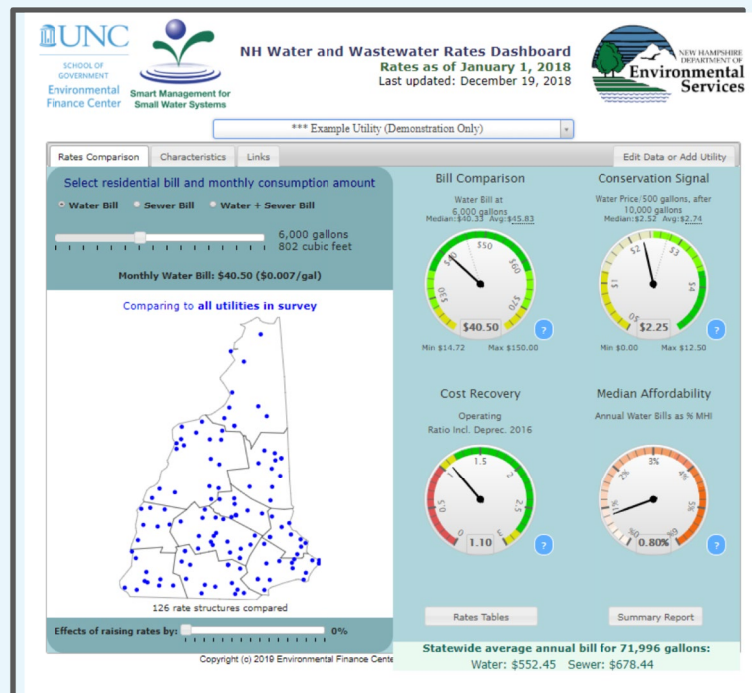
<https://efc.sog.unc.edu/dashboards/>

2023 Water and Wastewater Rates Dashboard

Downloadable **tables of rates** and rate structures for residential, commercial, and irrigation customer classes for water and wastewater

Downloadable **tables of connection and impact fees** for water and wastewater

Tableau tool with standardized **rate sheets** for all utilities in the survey



QUESTIONS?



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ACKNOWLEDGMENTS



Image: *Floating* by Nicholas Erwin, courtesy of [Creative Commons](#). Bath, New Hampshire.

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We would also like to thank our partners in New Hampshire:

