



2022 Financial Trends in Water Report

November 2022

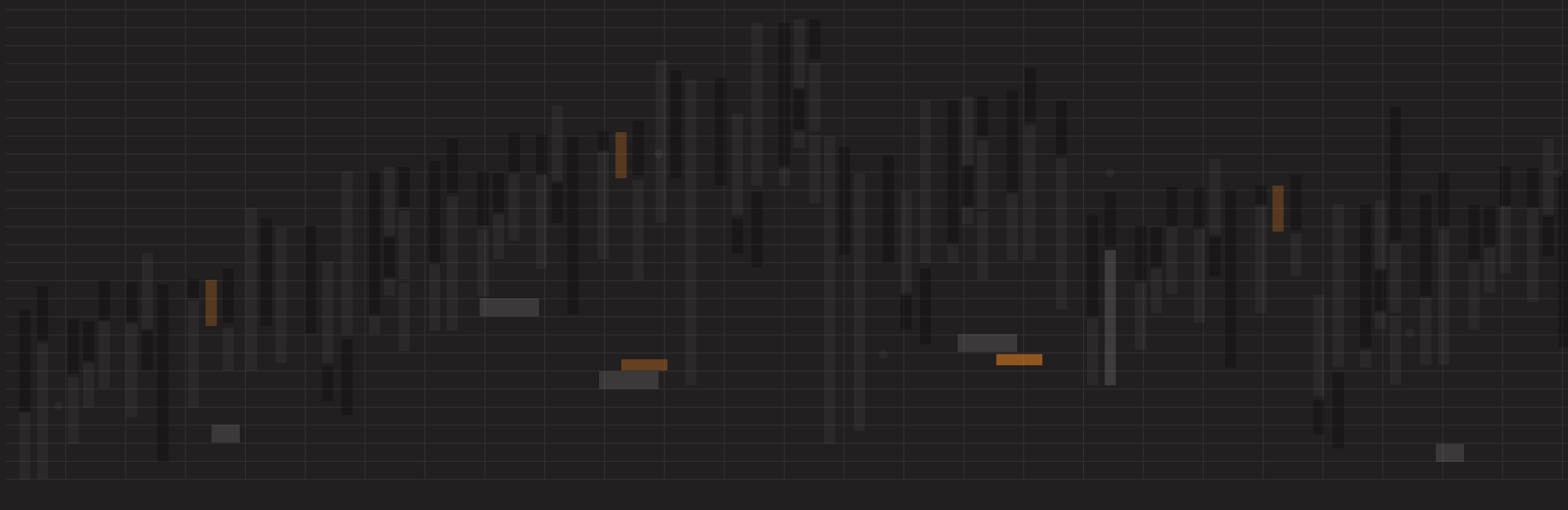




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An aerial photograph of a river delta, showing a complex network of water channels and land. The image is overlaid with a light blue grid. The text "Introduction to Report" is positioned in the lower-left quadrant, underlined.

Introduction to Report

About Our 2022 Financial Trends in Water Report

Data-driven decisions lead to better plans and better actions. That's why ten years ago we created UtilitiWise, a financial benchmarking database that includes data from more than 500 public utilities that publish audited financial results. The data aids us in identifying and validating industry patterns that we see working with utilities. We hope that providing these data insights can help other utilities to evaluate their performance, inform their decision-making, and support the development of financial policies and targets.

Utility managers are under pressure to make sound investment decisions and build greater financial resiliency into their organizations, while providing the highest level of service at the lowest possible cost. Our team at Stantec appreciates the unique challenges these leaders face having helped hundreds of communities develop strategies, systems, and analytical tools that balance sustainability and affordability.

As you will see in the report, utilities have realized improvements in many aspects of their financial performance over the past several years. However, given current inflationary and economic pressures, utilities are generally facing greater challenges that will place upward pressure on utility rates in the near-term. These findings and more are discussed in the 2022 Financial Trends in Water Report.

If you have any questions, feel free to contact me at Andrew.Burnham@stantec.com.

Sincerely,



Andrew Burnham
Vice President, Stantec



5 Key Takeaways

Cash on hand has increased across all regions and utilities of all sizes.

Revenues have steadily increased, but the level of increase varies widely by region.

Operating expenses have increased each year, but recent increases have been notably higher.

Capital investment spending has increased modestly, yet remaining asset life has slightly decreased.

Debt has increased, yet debt coverage has improved.

Click the number to the left to show important considerations for each takeaway:



Explanation of Content Sources and Methodology

In the United States, there are over 148,000 water utilities, serving 90 percent of Americans.¹ Water and sewer utilities are essential because they supply clean water and sanitary disposal of wastewater to residents, businesses, and industries in a cost-effective, sustainable manner. Utilities may be government-operated as a separate enterprise or investor-owned.

City governments, as well as many investor-owned utilities, publish audited Comprehensive Annual Financial Reports containing the three basic financial statements for their utility funds: statement of net position, statement of revenues, expenses, and changes in net position, and statement of cash flows. UtilitiWise data uses these audited financial statements because they are widely available, generally consistent across all utilities, and are independently audited. Over the past several years, Stantec has collected **70+** data points from **2012-2021** audits for over **500** water and sewer utilities across the United States, totaling over **350,000** data points, which are summarized in this report.

The information was aggregated based on geography and size of utility and was used to calculate several key performance indicators commonly used in evaluating utility systems. This was done with an intent of identifying industry trends and the likely drivers of those trends.

Source:

¹United States Environmental Protection Agency, Information about Public Water Systems, November 2021.



About the Authors

About Stantec

#1

International design firm
for wastewater
*Engineering News Record,
August 2022*

#2

International design firm
for water
*Engineering News Record,
August 2022*

#9

Top 500 design firms
*Engineering News Record,
May 2022*

#1

Most sustainable corporation
in North America
*Corporate Knights,
January 2022*

Net Zero

Carbon neutral for 2022, net
zero for 2030
Stantec's Operational Pledge

Our water business includes:

Conveyance

Industrial Water

Management & Technology Consulting

Solid Waste Management

Wastewater Treatment

Water Resources

Water Treatment

Wet Weather Flow
& Urban Stormwater

Management & Technology Consulting Services and Geography:

Asset Management

Business Technology

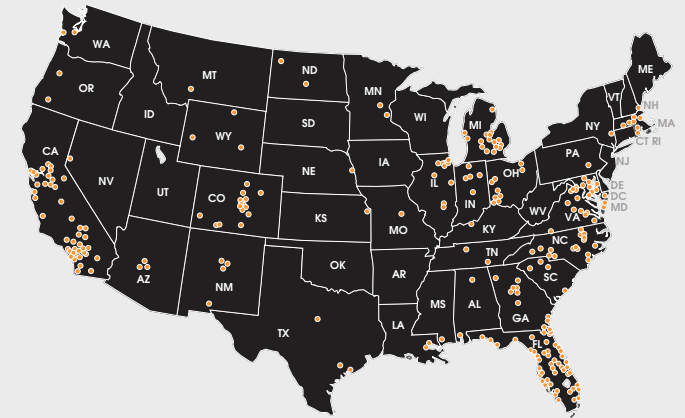
Digital Transformations

Economic/Fiscal Impact

Enterprise Automation

Financial Services

Funding Support



375+ Communities
>30% of U.S. Population

Prepared by Industry Leaders



Andrew Burnham
Vice President

As the leader of Management & Technology Consulting Services at Stantec, Andy has extensive experience in water resources financial management, having led over 500 studies for 200+ communities. He has supported the issuance of \$4 billion of debt for projects in the past five years. Andy is an active member of the American Water Works Association (AWWA) and is a contributing author to several of its rate-making manuals, as well as a committee report on cash reserves.



William Ziebertz
Director

Bill is an economist and managing consultant with decades of experience in economic, business process, financial planning, and socio-economic issues facing local governments. He is a past member of AWWA's Board of Directors, past chair of AWWA's Rates and Charges Committee, and a contributing author to AWWA's Manual M1 *Principles of Water Rates, Fees, and Charges*, and the Water Environment Federation's Manual of Practice No. 27 *Financing and Charges for Wastewater Systems*.



Amy Broughton
Senior Principal

Amy supports complex infrastructure projects and transformative business practices through funding initiatives. Recently, Amy has helped nine applicants successfully apply for over \$2B in U.S. Environmental Protection Agency (EPA) Water Infrastructure Finance and Innovation Authority (WIFIA) funding. She has also been a part of 30+ California State Revolving Fund (SRF) projects for critical water and wastewater projects and securing \$66M for 100+ EPA Brownfield Grants.



Emily Lambert
Data Specialist

Emily has a background in accounting and focuses on project management, procurement, delivery, and reporting. Emily is an independent reviewer for various management and technology-related deliverables and performs detailed reviews of all proposals, contracts, and schedules. Emily retrieves, compiles, and performs quality assurance reviews of the annual audited financial data for the 500+ utilities included in Stantec's UtilitiWise database.



Deborah Kloeckner
Manager

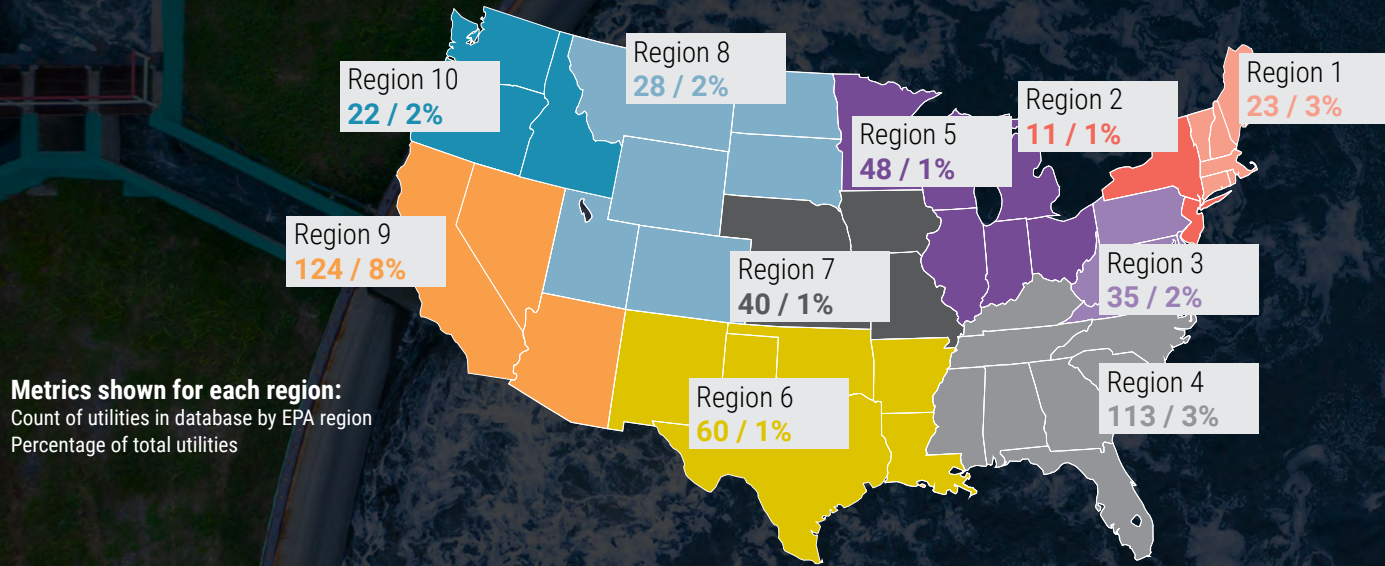
Deborah is a rate consultant with a background in economic analysis and financial forecasting. She works primarily with water, wastewater, and stormwater utilities in major communities like New York City and the City of Detroit performing financial planning, cost allocation, and rate design studies. She works with utilities to develop rates that are equitable, affordable, and sustainable, so that the community will have quality utility service today and in the future.

An aerial photograph of a water treatment facility. A large, circular, dark-colored tank dominates the center-right of the frame, with turbulent water inside. To its left, a rectangular structure with a walkway and railings is visible. The surrounding area is green grass. The entire image is overlaid with a dark blue grid pattern.

Overview of Utilities in Database

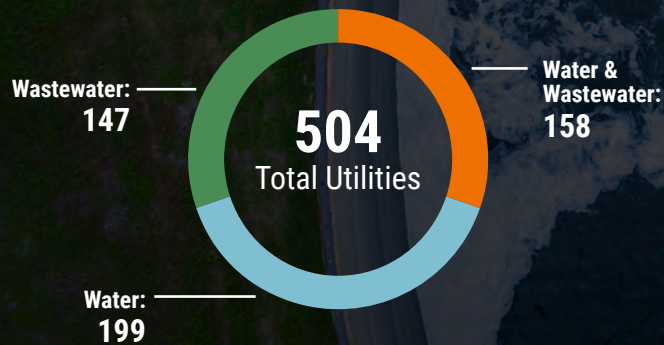
Profile of Utilities

The UtilitiWise database sorts utilities in two ways: by region (as defined by the U.S. EPA) and by size (based on total sales in 2021). The map below identifies the 10 EPA regions and indicates the percentage of community water systems represented in each region.¹ For each utility in UtilitiWise, data was collected for each year from 2012-2021.

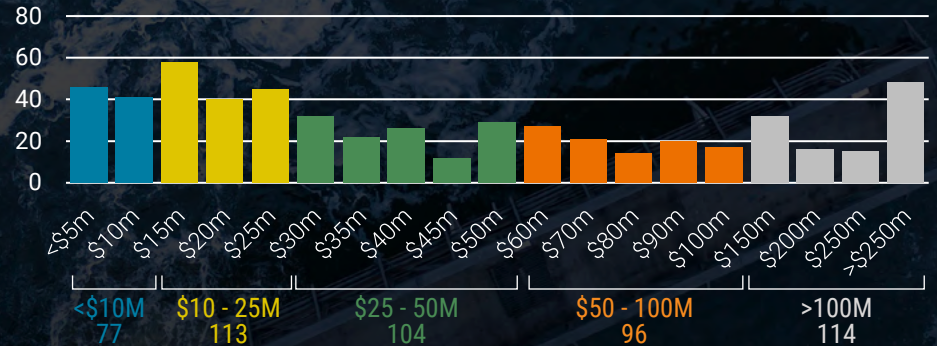


Metrics shown for each region:
 Count of utilities in database by EPA region
 Percentage of total utilities

Count of Utilities by Type



Count of Utilities by Size (2021 Sales)



Source:
¹United States Environmental Protection Agency, Safe Drinking Water Information System Federal Reports Search, May 2017.

**Cash
on Hand**

Why have reserves?

Reserve balances for utility systems are funds set aside for working capital, a specific expenditure, capital project, or legal covenant. These balances are maintained in order to meet short-term cash flow requirements and, at the same time, minimize the risk associated with meeting financial obligations and operational and capital needs under adverse conditions.

Many utilities and rating agencies, as well as the investment community as a whole, place a significant emphasis on having sufficient reserves available for potentially adverse conditions. The rationale related to the maintenance of adequate reserves is twofold. First, it helps to assure a utility will have adequate funds available to meet its financial obligations during unusual periods (i.e. when revenues are unusually low and/or expenditures are unusually high). Second, it provides funds that can be used for emergency repairs or replacements to the system that can arise because of natural disasters or unanticipated system failures.

Certain types of reserves, such as debt-related reserves, are often considered restricted reserves as they are required by a legal covenant and/or are restricted for a specific purpose. Unrestricted reserves are established based on formal or informal policies and can be designated for specific purposes or made available for a variety of purposes. Unrestricted reserves are used in the calculation of days cash on hand evaluated by the industry and shown in this report.

Source:

American Water Works Association, Rates and Charges Committee Whitepaper, *Cash Reserve Policy Guidelines*, 2018.

Cash on Hand Analysis



Days Cash on Hand Calculation: Current plus non-current unrestricted cash & investments divided by annual operations & maintenance cost divided by 365

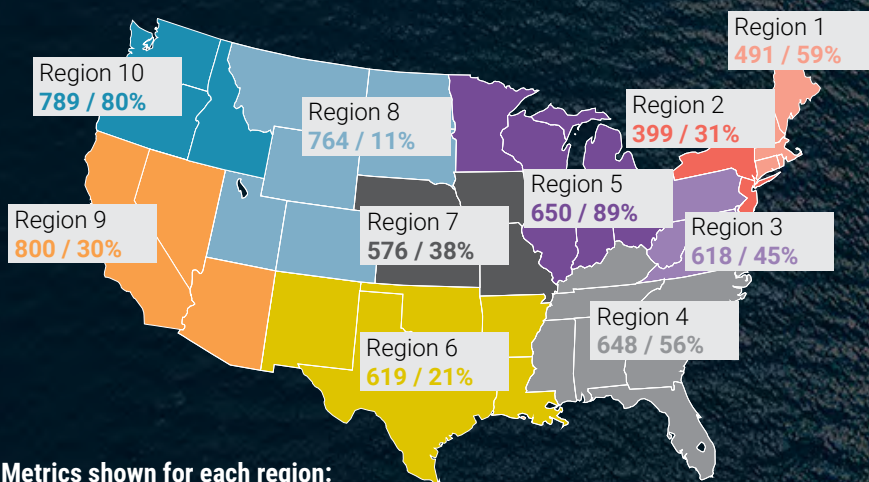
Takeaway



Utilities in all regions and of all sizes increased days cash on hand between 2012-2021. Based on our experience, this is commonly due to a number of factors, including, but not limited to:

- More debt financing of capital due to low interest rates or supplemental funding sources
- Completing asset management plans and setting aside cash for future capital projects
- Evaluation of reserve policies to better reflect risk
- Conservative budgeting of revenues and operating expenses
- Inability to fully execute identified capital plans

Days Cash on Hand Trend by Region



Metrics shown for each region:

2021 UtilitiWise Average Days Cash on Hand
10-Year Total Percentage Change in Days Cash on Hand

Days Cash on Hand Trend by Size

Utility Size (2021 Sales)	2021 UtilitiWise Average Days Cash on Hand	10-Year Total Percentage Change in Days Cash on Hand
< \$10 million	633	41%
\$10 – 25 million	660	44%
\$25 – 50 million	669	56%
\$50 – 100 million	652	10%
> \$100 million	688	41%

Evaluating Cash on Hand

The type and level of reserves maintained by utility systems vary significantly. Some systems will establish separate accounts and policies for each identified type of reserve, while others will aggregate all their reserves into a single account and policy. Moreover, reserve levels and policies vary substantially because of unique considerations, such as legal covenants, location and size of the utility, age and type of infrastructure, customer profiles, etc. The calculation of days cash on hand is based on all unrestricted reserves.

Shown on the right are days cash on hand thresholds by rating for the three public finance rating agencies: Moody's, Standard & Poor's (S&P), and Fitch.

In addition to achieving high ratings for borrowing, utilities are advised to build cash reserves to provide flexibility for capital investment funding. Cash can eliminate the need to issue debt. Also, debt and government funding programs may have timing constraints or delays, requiring adequate reserves to cover upfront planning, design, and construction costs. Effectively planning for these possibilities through cash management strategies can empower the utility to be deliberate and opportunistic.

It is important to note that rating agencies consider many factors in addition to days cash on hand and that days cash on hand alone is not an indicator of a utility's rating.

Moody's and S&P Calculation for Days Cash on Hand: Unrestricted cash and liquid investments times 365 divided by operating and maintenance expenses, expressed in days

Moody's Rating	Aaa	Aa	A	Baa	Ba	B and below
Days Cash on Hand ¹	>250 days	250 days - 150 days	150 days - 35 days	35 days - 15 days	15 days - 7 days	<7 days
S&P Financial Risk	Extremely Strong	Very Strong	Strong	Adequate	Vulnerable	Highly Vulnerable
Days Cash on Hand ²	>150 days	150 days - 90 days	90 days - 60 days	60 days - 30 days	30 days - 15 days	<15 days

Fitch's Calculation for Liquidity Cushion: Current cash available plus available borrowing capacity, divided by average daily cash operating expenses

Fitch Financial Profile	Neutral	Risky
Liquidity Cushion ³	>90 Days	<90 Days

Source:

¹Moody's, U.S. Municipal Utility Revenue Debt Methodology, April 2022.

²Standard & Poor's Global Ratings, U.S. Public Finance: U.S. Municipal Water, Sewer, and Solid Waste Utilities: Methodology and Assumptions, April 2022.

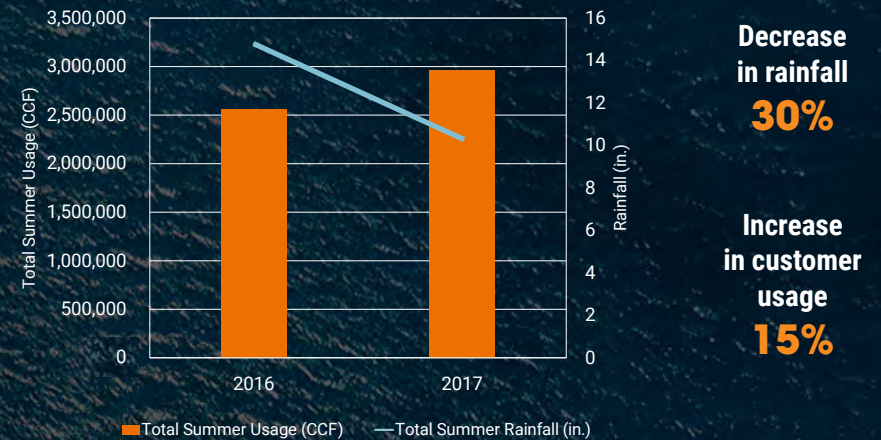
³Fitch Ratings, Inc., U.S. Water and Sewer Rating Criteria, March 2021.

Case Study: Cash on Hand Reserve Policies

As part of a comprehensive cost of service and rate design study, Stantec helped the City of Bismarck, North Dakota develop a reserve policy based on an analysis of the City's cash flow requirements, revenue volatility, capital needs, and fiscal objectives. The table below demonstrates the components of the reserve calculation while the graphic demonstrates how the rate stabilization reserve was calculated based on summer rainfall and water use.

Reserve Type	Reserve Level	Description
Emergency Capital Replacement	\$1,033,095	Average replacement cost of critical asset
Emergency Capital Equipment Cost	\$100,000	Cost of replacing key piece of equipment
General Contingency	\$400,294	Contingency and revenue volatility (percentage of expenses)
Liquidity	\$987,025	45 days of operating expenses
Rate Stabilization Reserve	\$1,207,494	Revenue at risk based on weather patterns
Total Recommended Reserve	\$4,165,367	190 days of operating expenses

Rate Stabilization Reserve Calculation

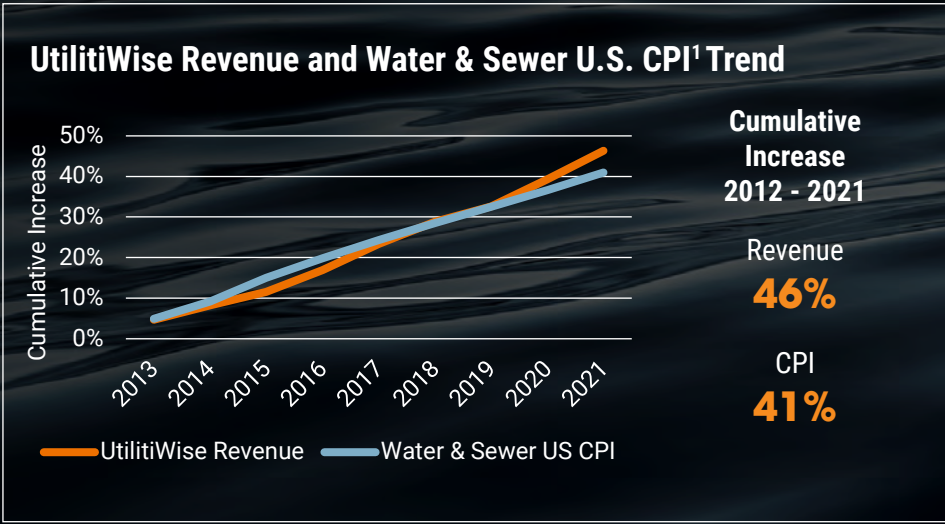


High-low year variance in customer usage: 402,498 CCF	Tier 3 rate per CCF: \$3.00	Rate Stabilization Reserve: \$1,207,494
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Revenues

Revenue Analysis

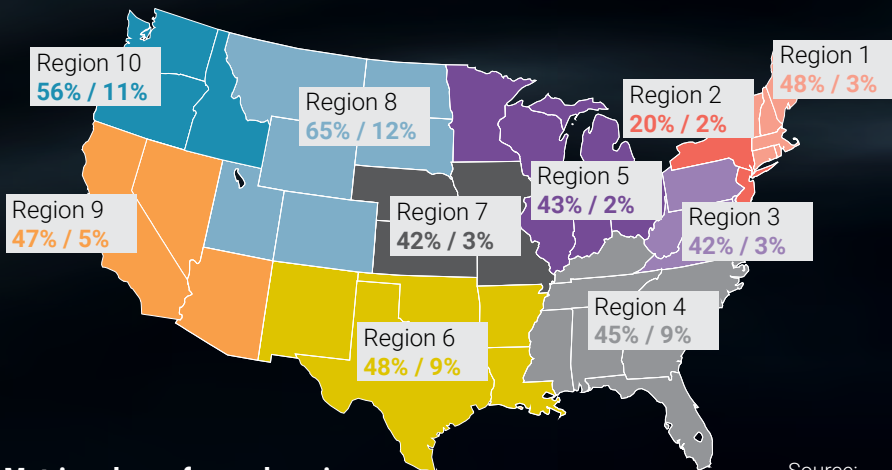


Takeaway

↓
Rate increases are the primary driver for revenue increases across the utility industry, with overall revenue increasing at approximately the same rate as water and sewer rate increases, based on the Water & Sewer U.S. CPI index. Although populations have increased across all regions of the U.S., contributing to organic revenue growth, this increase is offset by conservation trends and declining water use per account.

As shown, the Water & Sewer U.S. CPI index started to level off in 2020 and 2021 largely due to economic concerns during the COVID-19 pandemic. Additionally, utilities experienced significant revenue variability depending on their circumstances during that same time period.

Revenue and Population Trend² by Region



Metrics shown for each region:

- 10-Year Total Percentage Change in Revenue
- 10-Year Total Percentage Change in U.S. Census Population

Conservation Trends³

1999-2016
↓ **22%**
Decrease in indoor household water use

2016 & Beyond
↓ **35%**
Future conservation potential for indoor and outdoor use

Source:

¹United States CPI: Water & Sewerage Maintenance Series, 2012 average – 2021 average.

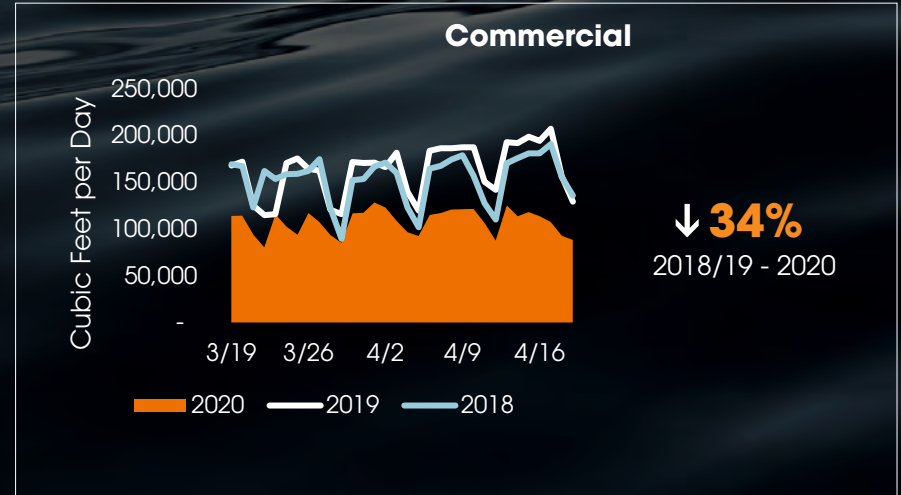
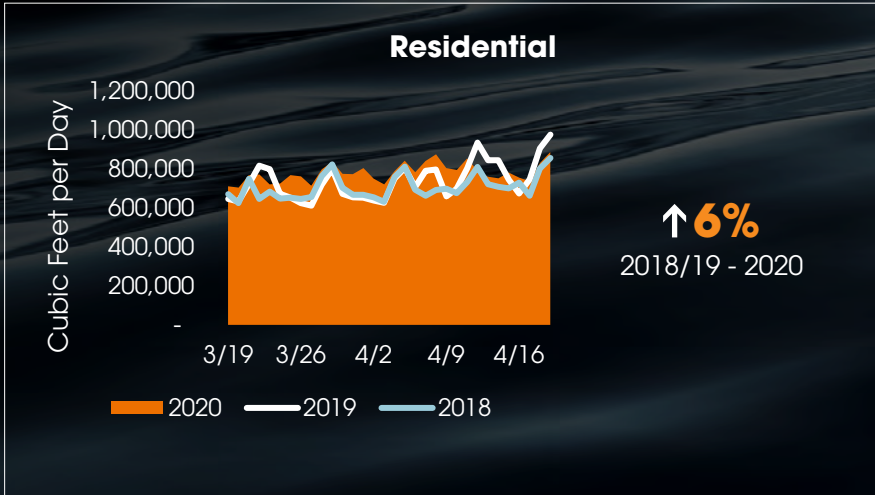
²U.S. Census Bureau, Annual Estimates of the Resident Population for the United States, July 1, 2012 – July 1, 2021.

³The Water Research Foundation, *Residential End Uses of Water, Version 2, 2016*.

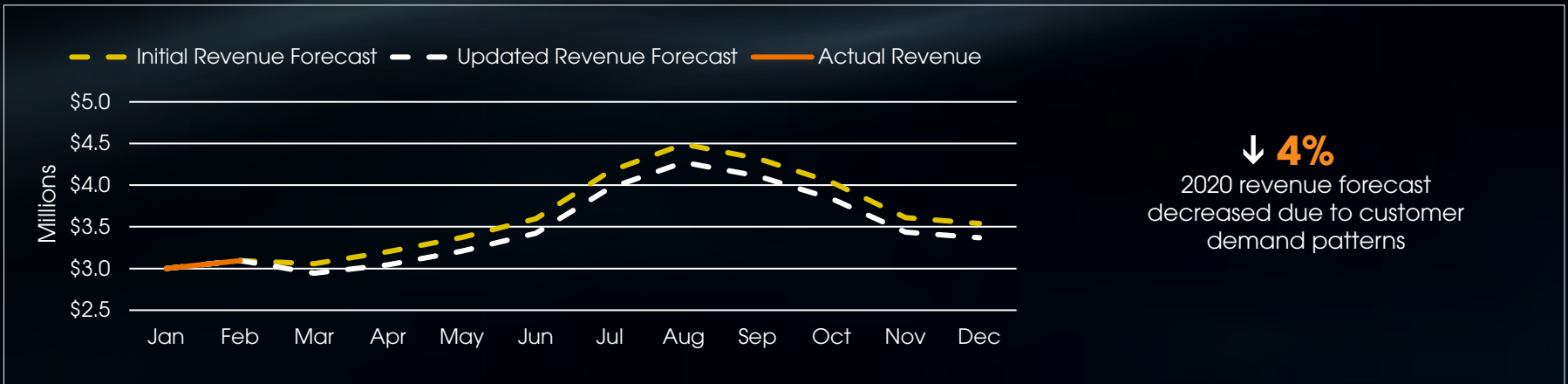
Case Study: Revenue Volatility During the COVID-19 Pandemic

Using daily Automated Metering Infrastructure (AMI) data, the City of Olathe, Kansas updated its demand forecasting model to project revenues from water usage during the COVID-19 pandemic. The below graphics demonstrate the residential and commercial water use during the pandemic compared to the previous years and the 2020 revenue forecast based on the detailed analysis.

Customer Data from March and April 2018 and 2019 Compared to 2020



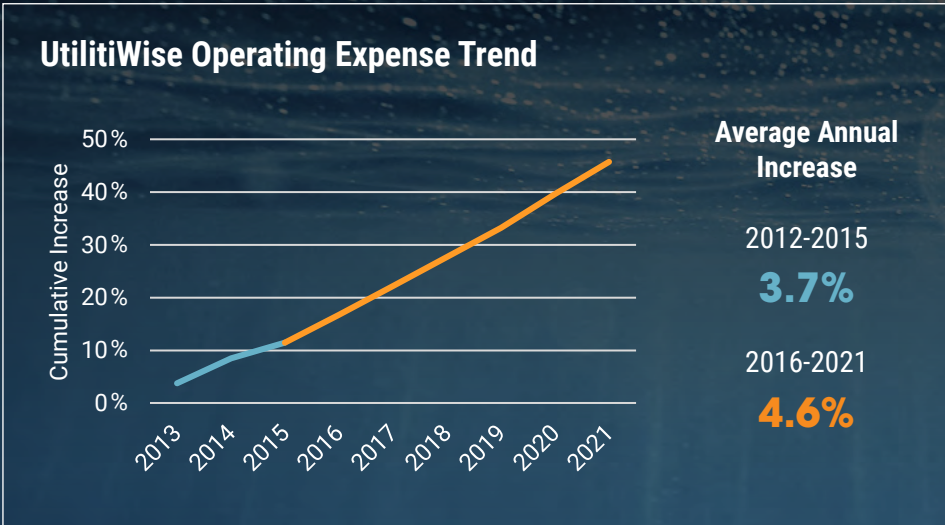
Revenue Forecast Updated Based on Customer Demand Patterns



Operating Expenses

Operating Expense Analysis

UtilitiWise Operating Expense Trend



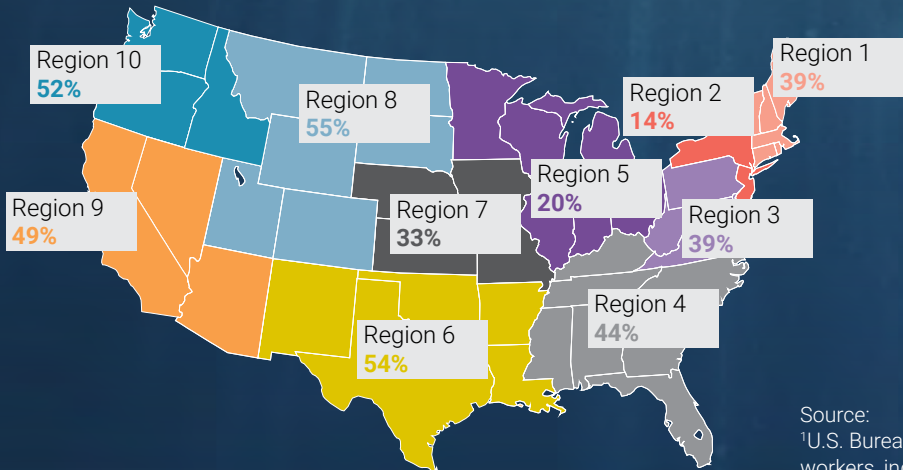
Takeaway

↓
The exact drivers of operating expenses vary by region and can often be utility-specific. The cumulative increase in operating expenses is 46% over the 10-year period of 2012-2021. However, individual utilities will have variability in their own operating expense trends depending on a number of factors, including, but not limited to:

- Level of service
- Changes in population
- Local, regional, and national inflation trends

Certain expense pressures, such as requirements for pension contributions, may be experienced by all public utility systems.

Operating Expense Trend by Region



Metric shown for each region:
10-Year Total Percentage Change in Operating Expenses

10-Year Total Percentage Change 2012-2021

Labor Costs¹
Salaries **+23%**
Benefits **+41%**

Materials Costs²
Construction Materials **+47%**
Electricity **+32%**
Chemicals **+8%**

Source:

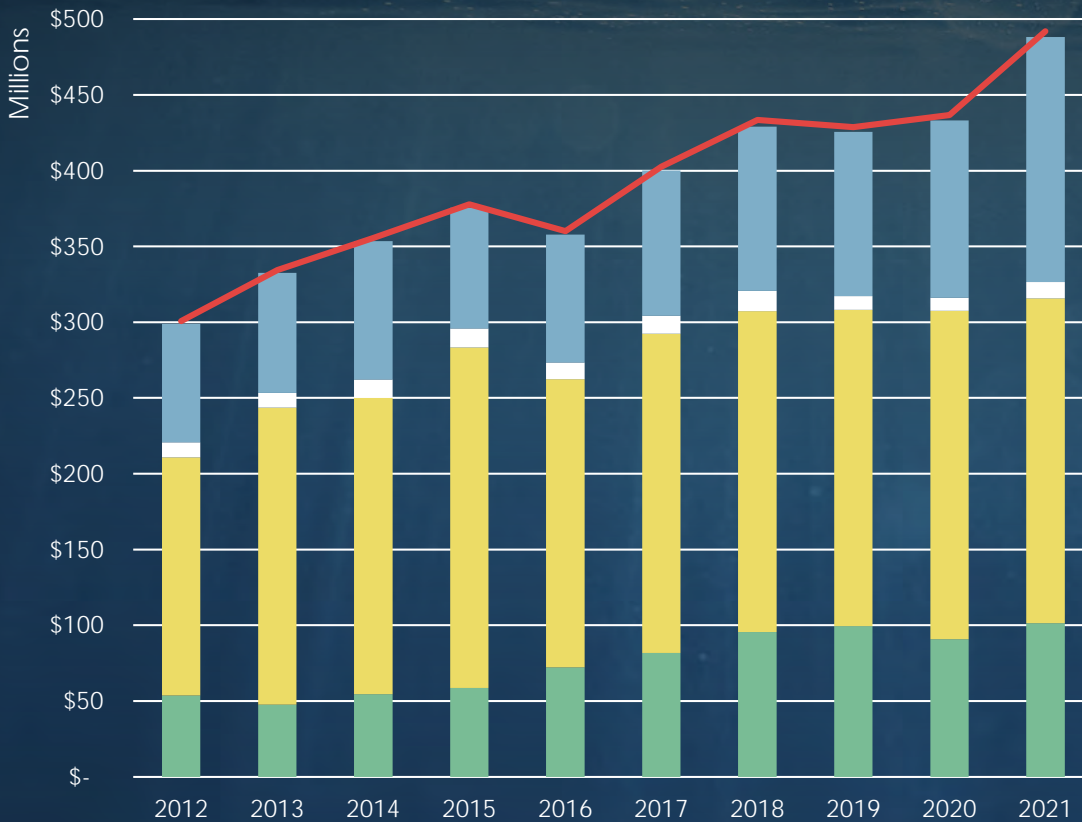
¹U.S. Bureau of Labor Statistics National Compensation Survey, Wages and salaries for private industry workers, index, 2012 average - 2021 average.

²Federal Reserve Economic Data, Producer Price Index for Construction Materials, Electric Power Generation: Utilities, and Chemicals and Allied Products: Water-Treating Compounds, 2012 average - 2021 average.

Case Study: Understanding Operating Cost Drivers

The City of San Diego Water Utility has seen a 64% increase in total operating costs over the ten-year period of 2012-2021. Operating cost trends shown on the previous page, such as salaries, benefits, chemicals, and electricity, are a driver of overall cost increases. However, purchased water expenses also contributed to the city's overall cost increases and are a good example of how utility-specific drivers may contribute to the operating expense trends of individual systems.

Operating Costs by Year and Type of Expense¹



Total Operating Expenses **+64%**

Contractual Services **+107%**

Energy & Utilities² **+9%**

Materials & Supplies² **+36%**

Salaries & Benefits **+89%**

Source:

¹City of San Diego, California FY 2012 – FY 2021 Comprehensive Annual Financial Reports.

²Energy & utilities costs are based on actuals for FY 2012 – FY 2017 per budget documents and are subtracted from the materials & supplies category of operating expenses for these years.

Capital Investments

Infrastructure Spending Needs

C-

Water infrastructure grade

D+

Wastewater infrastructure grade

In 2021, the American Society of Civil Engineers gave the U.S. a C- report card grade for water infrastructure and a D+ for wastewater infrastructure. The report identifies the total funding needs in 2020-2029 for water, wastewater, and stormwater of \$1.045 trillion, with a funding gap of \$434 billion.¹

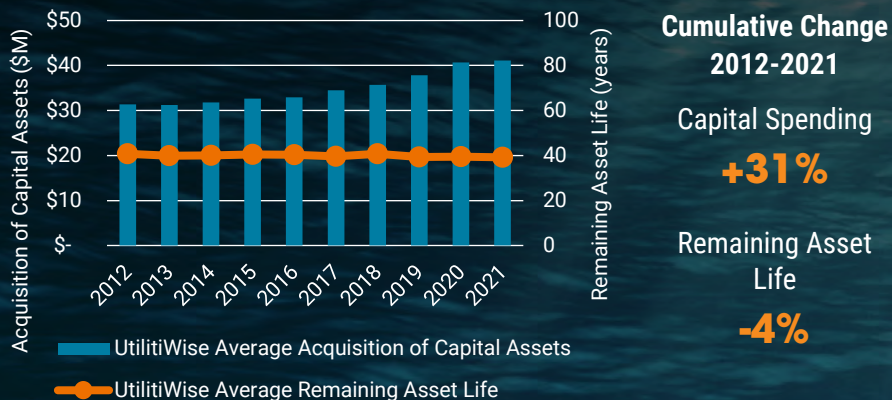
The report recommended the following, among other things, to improve the grades for water and wastewater infrastructure: increasing state funding availability, increasing utility rates, and improving asset planning.¹ While individual utilities will have different levels of historical and projected infrastructure spending, the water industry needs to increase capital spending to improve these grades.

Source:

¹American Society of Civil Engineers, 2021 Report Card for America's Infrastructure.

Capital Assets & Investment Analysis

UtilitiWise Capital Spending and Remaining Asset Life



Remaining Asset Life Calculation: Net capital assets divided by annual depreciation

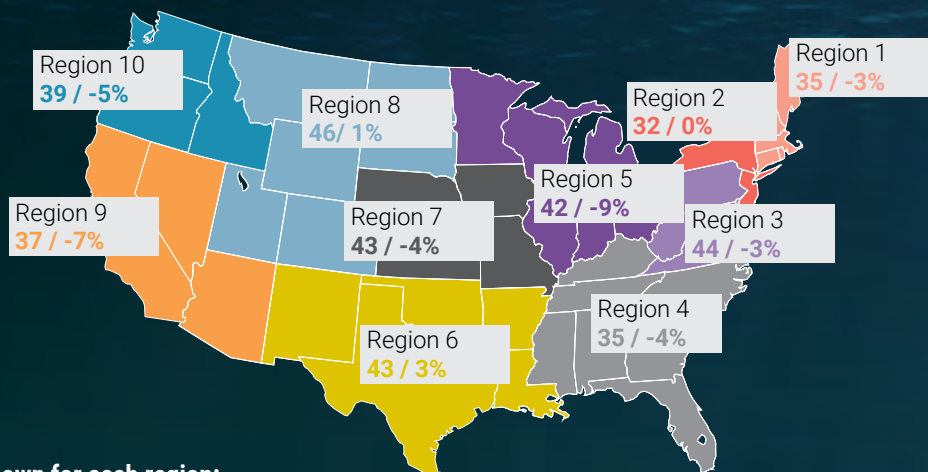
Takeaway

↓
Acquisition of capital assets has increased on average, however remaining asset life is decreasing in many regions. Part of the reason for this apparent discrepancy is because the increase in capital spending has only kept pace with increasing construction costs and has not allowed utilities to make progress toward improving the age of their infrastructure.

Construction Cost Index¹

30%
2012-2021
Cumulative Cost Increase

Remaining Asset Life and Trend by Region



Remaining Asset Life and Trend by Size

Utility Size (2021 Sales)	2021 UtilitiWise Average Remaining Asset Life (years)	10-Year Total Percentage Change in Remaining Asset Life
< \$10 million	37	-2%
\$10 – 25 million	35	-12%
\$25 – 50 million	40	-3%
\$50 – 100 million	40	-5%
> \$100 million	39	-4%

Metrics shown for each region:

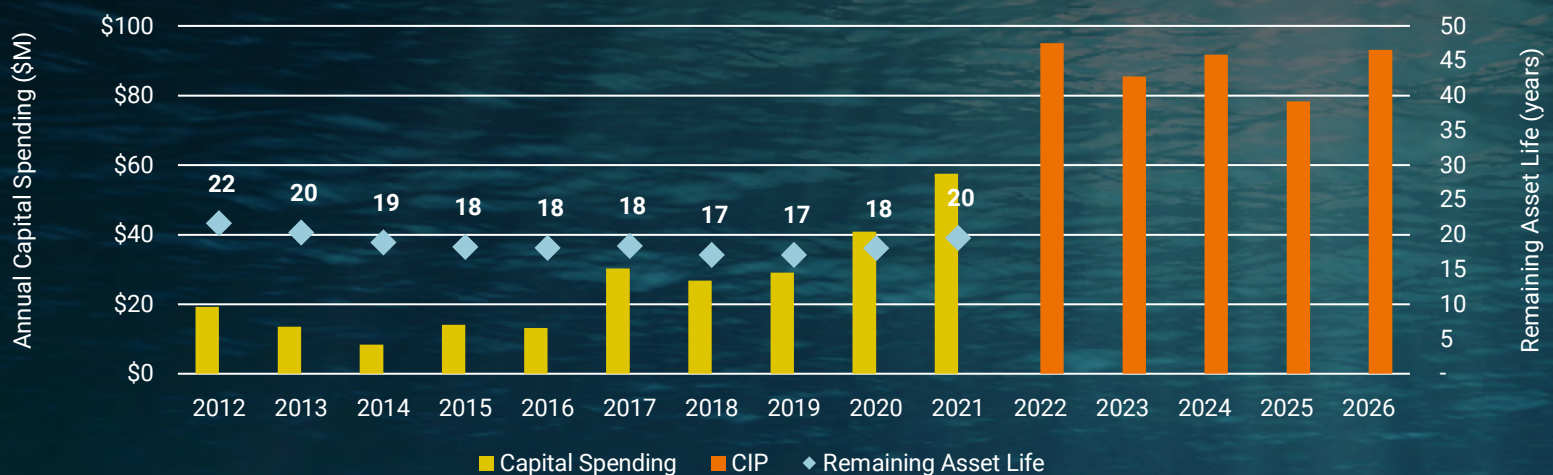
- 2021 UtilitiWise average Remaining Asset Life (years)
- 10-Year Total Percentage Change in Remaining Asset Life

Source:
¹ENR Construction Cost Index annual average 2012-2021.

Case Study: Observations of Historical and Planned Capital Investment

The City of Tempe, Arizona has gradually increased capital spending and plans to spend more in the future. The graphic below demonstrates the city's historical and projected future capital spending. The city's remaining asset life has increased as a result of recent capital spending trends. Future increases in capital spending will likely result in continued increases in remaining asset life.

Historical Capital Spending and Future Projection^{1,2}

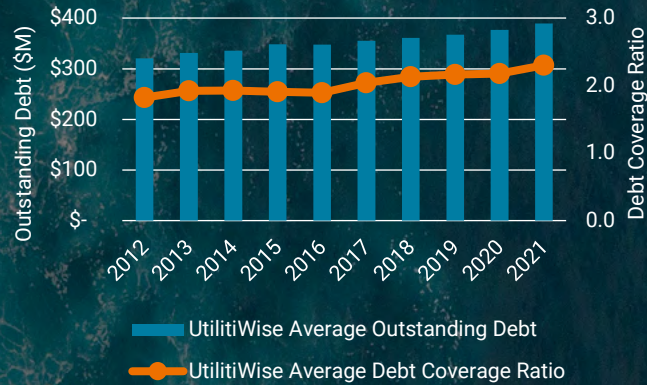


Source:
¹City of Tempe, Arizona FY 2012 – FY 2020 Comprehensive Annual Financial Reports.
²City of Tempe, Arizona 2022 5-Year Capital Improvement Plan.

Debt

Debt Analysis

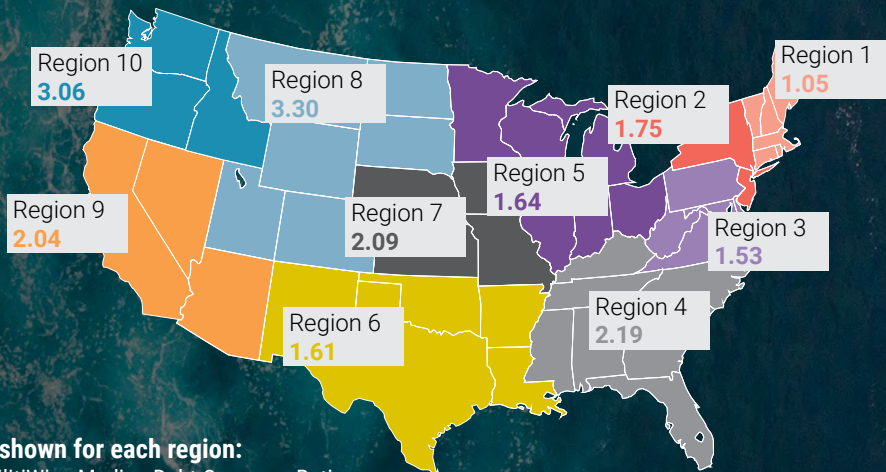
UtilitiWise Outstanding Debt and Coverage



Cumulative Change 2012-2021
Debt Coverage 15%
Outstanding Debt 19%

Debt Coverage Ratio Calculation: Operating income less depreciation expense, divided by principal and interest payments

Debt Coverage by Region

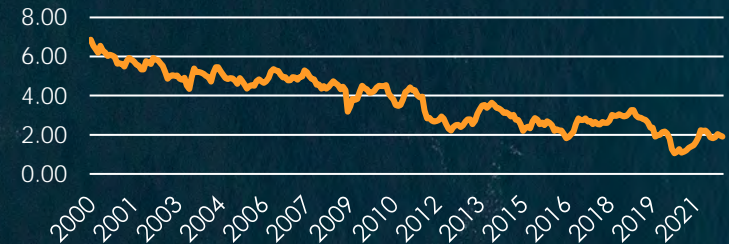


Metric shown for each region:
 2021 UtilitiWise Median Debt Coverage Ratio

Takeaway

↓
 By region, revenues have increased at fundamentally the same rate of increase as operating expenses, while total outstanding debt has increased. Therefore, what appears to be contributing to increased debt coverage during this time period are utilities taking advantage of lower cost financing – State Revolving Fund (SRF) and Water Infrastructure Finance and Innovation Act (WIFIA) loans – and continuing to pay off, as well as refinance, older, higher cost debt.

Interest Rates¹



Debt Coverage by Size

Utility Size (2021 Sales)	2021 UtilitiWise Median Debt Coverage Ratio
< \$10 million	2.11
\$10 – 25 million	2.22
\$25 – 50 million	1.95
\$50 – 100 million	1.99
> \$100 million	1.67

Source:
¹Federal Reserve Economic Data, Market Yield on U.S. Treasury Securities at 20-Year Constant Maturity.

Case Study: Using Low-interest Debt to Fund Capital Programs

Stantec helped the Springfield Water and Sewer Commission in Springfield, Massachusetts apply for Water Infrastructure Finance and Innovation Act (WIFIA) funding and reduce immediate-term rate pressure. The graphics below demonstrate the composition of funding before and after applying for WIFIA, the debt service payments by loan type and year, and the interest rate assumptions for each type of debt. Springfield was able to reduce debt service pressure by refinancing existing revenue bonds and taking advantage of low-interest loans, such as State Revolving Fund (SRF) and WIFIA.

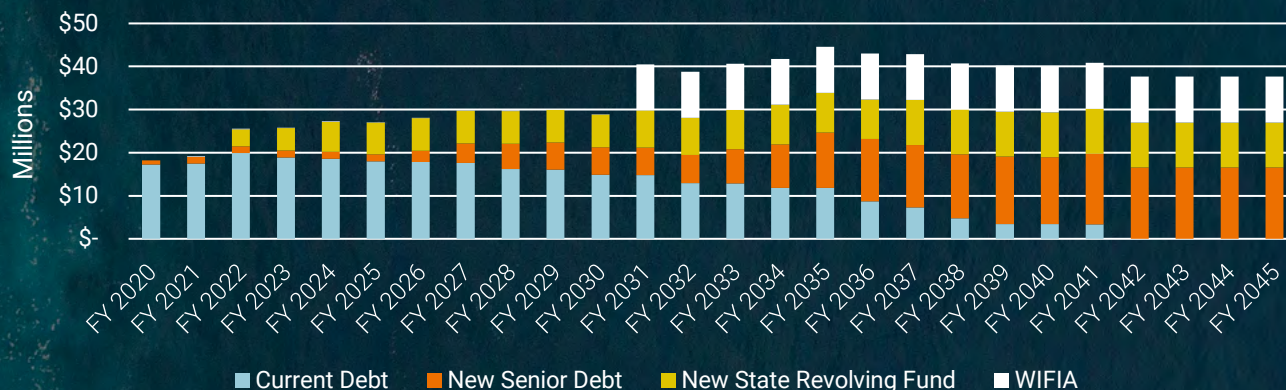


Annual Debt Service by Loan Type

Interest rate assumptions for future borrowing

Senior Debt: **4.00%**
 State Revolving Fund: **2.00%**
 WIFIA: **1.50%**

Interest rate assumptions for future borrowing as of September 2020



Evaluating Debt Coverage

Utilities may have debt coverage requirements based on bond covenants, loan documents, or agreements with other lenders. These requirements may be based on senior-lien debt service, subordinate debt service, and/or total debt service. The calculation of debt coverage that rating agencies focus on and that are included in this report are based on total debt service.

Shown on the right are debt service coverage thresholds by rating for the three public finance rating agencies: Moody's, Standard and Poor's (S&P), and Fitch.

In addition to achieving high ratings for borrowing, Stantec advises utilities to set rates based on debt service coverage targets that are higher than what is required by bond covenants. This allows a utility to have sufficient revenues for debt service payments in the event that future projections of revenues and expenses do not occur as predicted. This could be due to weather conditions, unanticipated capital requirements or operating cost increases, natural disasters, or other circumstances.

It is important to note that rating agencies consider many factors in addition to debt service coverage and that debt service coverage alone is not an indicator of a utility's rating.

Source:

¹Moody's, U.S. Municipal Utility Revenue Debt Methodology, April 2022.

²Standard & Poor's Global Ratings, U.S. Public Finance: U.S. Municipal Water, Sewer, and Solid Waste Utilities: Methodology and Assumptions, April 2022.

³Fitch Ratings, Inc., U.S. Water and Sewer Rating Criteria, March 2021.

Moody's and S&P Calculation for Debt Service Coverage: Net revenues divided by debt service expense

Moody's Rating	Aaa	Aa	A	Baa	Ba	B and below
Debt Service Coverage ¹	>2.00x	2.00x - 1.70x	1.70x - 1.25x	1.25x - 1.00x	1.00x - 0.70x	<0.70x

S&P Financial Risk	Extremely Strong	Very Strong	Strong	Adequate	Vulnerable	Highly Vulnerable
Debt Service Coverage ²	>1.60x	1.60x - 1.40x	1.40x - 1.20x	1.20x - 1.10x	1.10x - 1.00x	<1.00x

Fitch's Calculation for Coverage of Full Obligations: Funds available for debt service plus fixed service expense plus net transfers, divided by total annual debt service plus fixed service expense

Fitch's Financial Profile	Neutral	Risky
Coverage of Full Obligations ³	>1.00x	<1.00x

An aerial photograph of a dense forest, showing a mix of green and yellowish-green trees. A light blue grid is overlaid on the entire image. The word "Conclusions" is written in white, bold, sans-serif font, underlined, in the lower-left quadrant of the image.

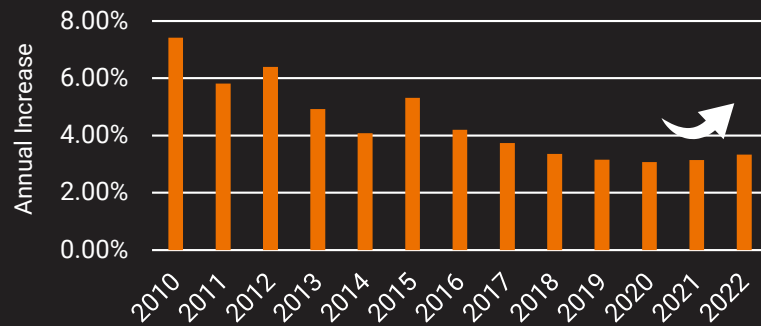
Conclusions

2022 and Beyond

2022 data shows **substantial increases in capital and operating costs**, while utilities continue to implement **modest rate increases**, perhaps as a result of economic concerns stemming from the pandemic and/or use of federal funds. 2022 financial statements will reveal how utilities responded to these pressures – did they use available reserves? Increase borrowing for their capital programs? Defer certain capital projects or maintenance programs? Going forward, we expect utilities will need to adopt **higher levels of rate increases** in response to interest rate increases for debt financing and other inflationary trends.

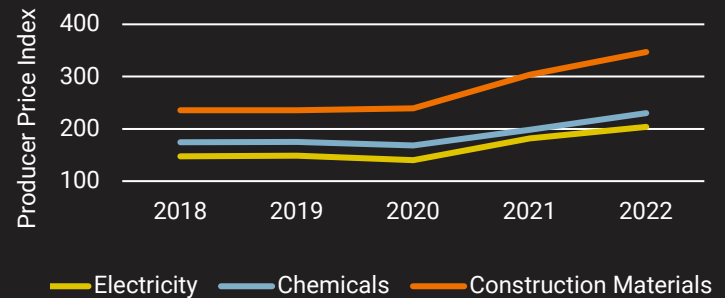
Rate Revenues

2020 and 2021 were lower than increases seen in the past 10 years.¹



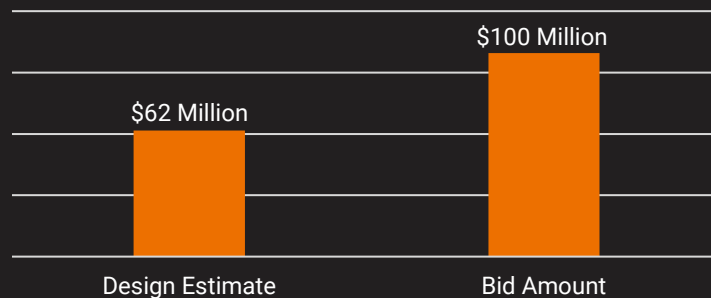
Operating Expenses

Electricity, chemicals, and construction materials increased from 2020-2022 by 45%, 37%, and 45%, respectively.²



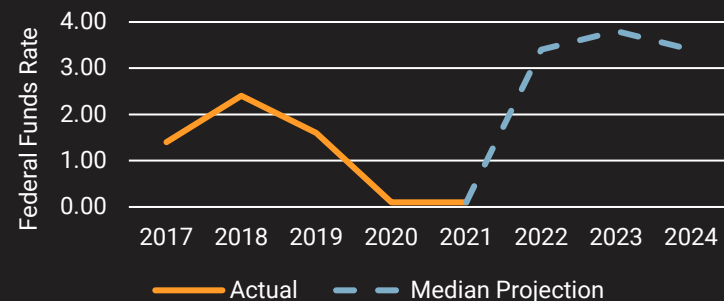
Capital Costs

Utilities like St. Petersburg, Florida are experiencing capital costs over 50% higher than recent estimates due to labor shortages and material cost increases.



Long-Term Borrowing

Interest rates are projected to increase in the next few years.³



Source:

¹United States CPI: Water & Sewerage Maintenance Series, 2012 average – 2022 average

²Federal Reserve Economic Data, Producer Price Index for Construction Materials, Electric Power Generation, and Chemicals and Allied Products: Water-Treating Compounds, 2018 (Jan-Dec) – 2022 (Jan-Jul).

³Federal Reserve, Federal Open Market Committee, June 15, 2022: FOMC Projections materials.



For questions or requests for
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