

Memo



To: Mayor and City Council

From: John Dunn

A handwritten signature in blue ink that reads 'John R. Dunn'. The signature is written in a cursive style and is placed over a light blue, dotted rectangular background.

Date: April 15, 2022

Subject: Sewer Rate Workshop

Mayor and Council:

At your workshop next Tuesday evening, I will share with you the rationale supporting a recommended five percent (5%) sewer rate adjustment that would be effective for bills due on or after July 1, 2022.

The presentation will include a review of recent trends in water and sewer rates in Ames, across Iowa, and throughout the US. I will share the projected balances in the Sewer Fund over the next ten years based on the anticipated operating and capital expenses, and a likely pattern of rate increases that would be needed to fully fund the anticipated expenses. Finally, I will make the staff recommendation to move forward with a five percent increase in sewer rates on July 1. Note that no adjustment to water rates are proposed for the coming year.

As a preview to the discussion, I have attached a set of slides that graphically present the current and projected rates. I will present a subset of these slides at the April 19 workshop.

I look forward to discussing with you the plan to meet the financial needs of the water and sewer utilities as we strive to fulfill the expectations of our community into the future.



FY 2022-23 Water & Sewer Rates

April 19, 2022



Outline

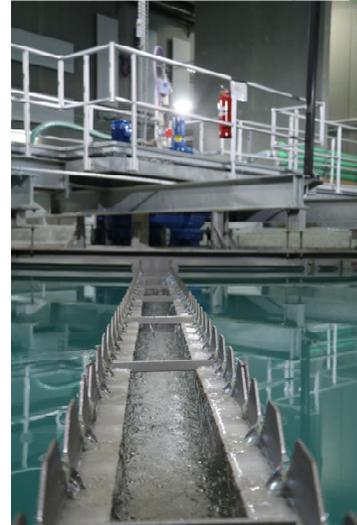
- National & State-wide Trends in Rates
- Projected Need for Revenue Increase
- Translating Revenue Needs to Rates
- Customer Perspective
- Council Direction



National and State Trends

Data sources include:

- **2020 Cost of Clean Water Index**
National Association of Clean Water Agencies
- **2021 Water and Wastewater Rate Survey**
American Water Works Association
- **2021 Iowa Water and Wastewater Rate Survey**
City of Ames Water and Pollution Control



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National Trends

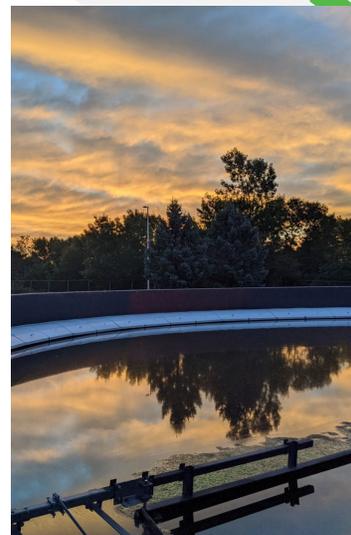
2020 Cost of Clean Water Index, NACWA

Average annual wastewater bill has doubled nationally in last 16 years (*\$527 in 2020 versus \$262 in 2004*)

Average national wastewater sewer charges increased by 2.9% from 2019 to 2020

2.4x the rate of inflation

(2020 was the 19th consecutive year that sewer rates nationally have outpaced inflation)



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National Trends

2021 Water & Wastewater Rate Survey, American Water Works Association

- Water utilities continue to shift away from declining block rate structures (12%) and towards inclining block structures (47%)
- Wastewater utilities are predominately uniform block structures
- Monthly billing intervals are most common (68.3%), followed by bi-monthly (14.9%) and quarterly (12.6%)
- Charges were highest in the Northeast. Water charges were lowest in the South, and wastewater charges were lowest in the West.



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National Trends

2016-2021

Water

National Average Annual Increase: 3.7%

Sewer

National Average Annual Increase: 4.5%

Average Annual Increase in CPI: 2.6%



Sources: [2016 Water and Wastewater Rate Survey, AWWA/Raftelis Financial Consultants](#)
[2021 Water and Wastewater Rate Survey, AWWA/Raftelis Financial Consultants](#)

Nationwide average for residential service, 1,000 cf/mo., 5/8" meter,

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Iowa Trends

Percent of Iowa Utilities serving >10,000 with a rate increase in past two years:

- Drinking Water: 77% (30 of 39)
 - More than 5%: 46% (18 of 39)
 - More than 10%: 26% (10 of 39)

- Wastewater: 75% (32 of 43)
 - More than 5%: 58% (25 of 43)
 - More than 10%: 28% (12 of 43)

2019 versus 2021 Iowa Water & Sewer Rate Survey, City of Ames, Iowa

Iowa vs. National Trends

2016-2021

<u>Water</u>	
National Average Annual Increase:	3.7%
Iowa Average Annual Increase:	4.5%
<u>Sewer</u>	
National Average Annual Increase:	4.5%
Iowa Average Annual Increase:	6.3%
Average Annual Increase in CPI:	2.6%



*Iowa Sources: 2016 Water and Sewer Rate Survey, City of Ames, IA
2021 Water and Sewer Rate Survey, City of Ames, IA*

Iowa average for residential service, 600 cf/mo., 5/8" meter,

Recent Rate Adjustments in Ames

	Water	Sewer
FY 17/18	--	--
FY 18/19	3.5%	3%
FY 19/20	7%	--
FY 20/21	2%	5%
FY 21/22	6%	--
Annual Average	3.7%	1.6%



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Ames vs. Iowa & National Trends

2016-2021

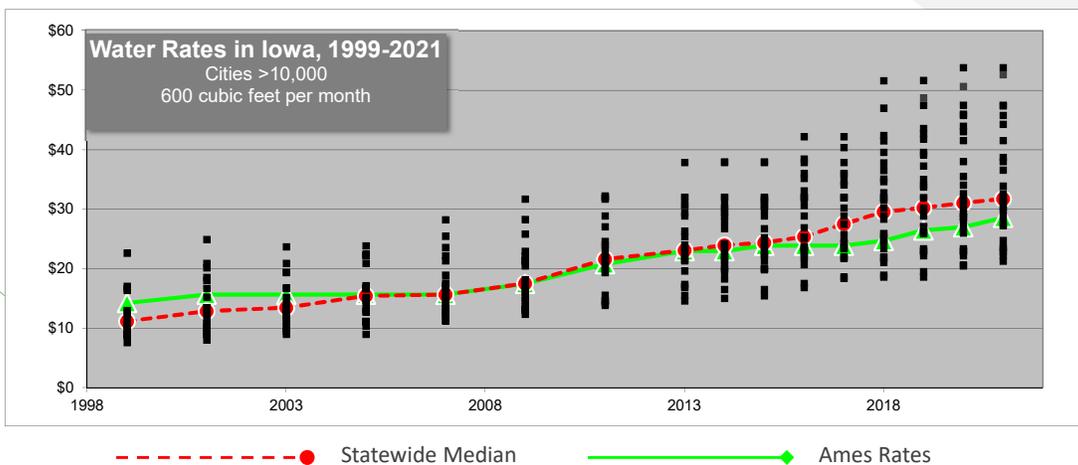
<u>Water</u>	
National Average Annual Increase:	3.7%
Iowa Average Annual Increase:	4.5%
Ames Average Annual Increase:	3.7%
<u>Sewer</u>	
National Average Annual Increase:	4.5%
Iowa Average Annual Increase:	6.3%
Ames Average Annual Increase:	1.6%
Average Annual Increase in CPI:	2.6%



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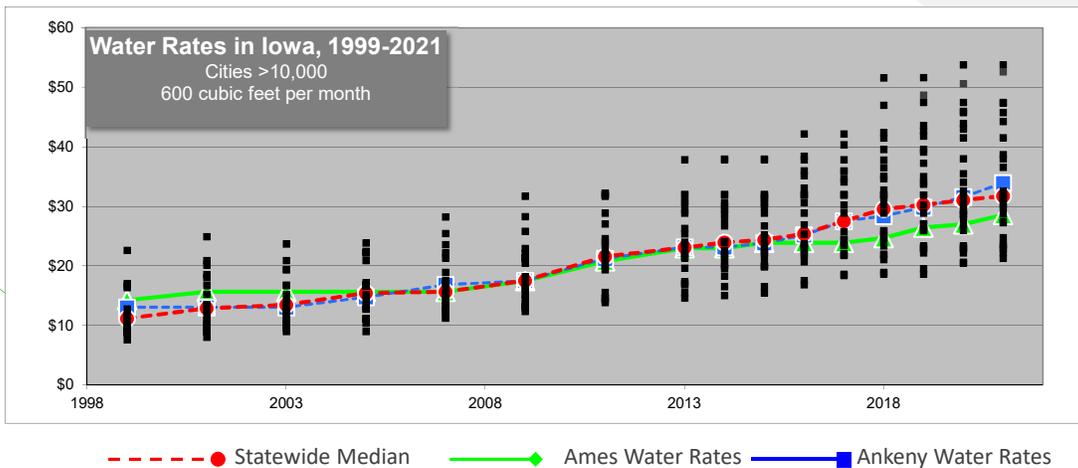
Iowa Trends in Water Rates

1999-2020, Cities with population >10,000 with lime softening, 600 cf per month



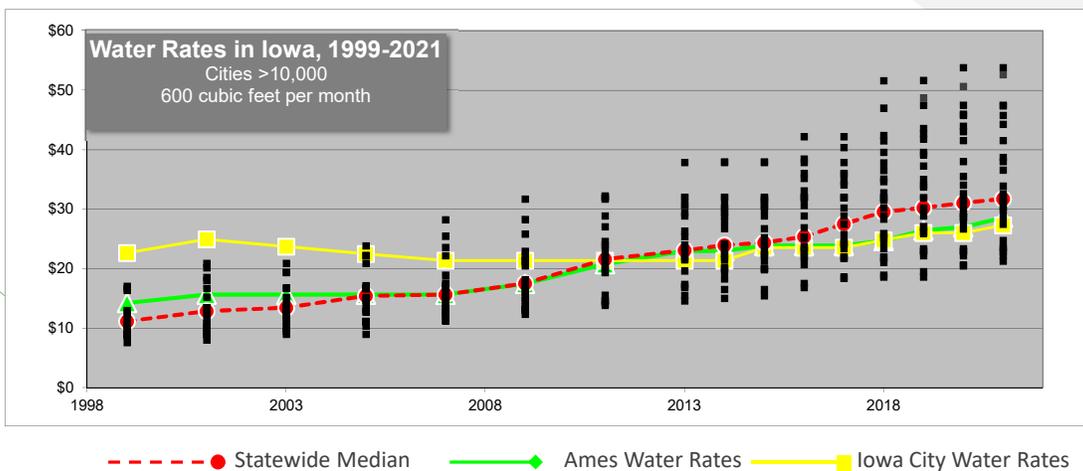
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Ames vs. Ankeny



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Ames versus Iowa City

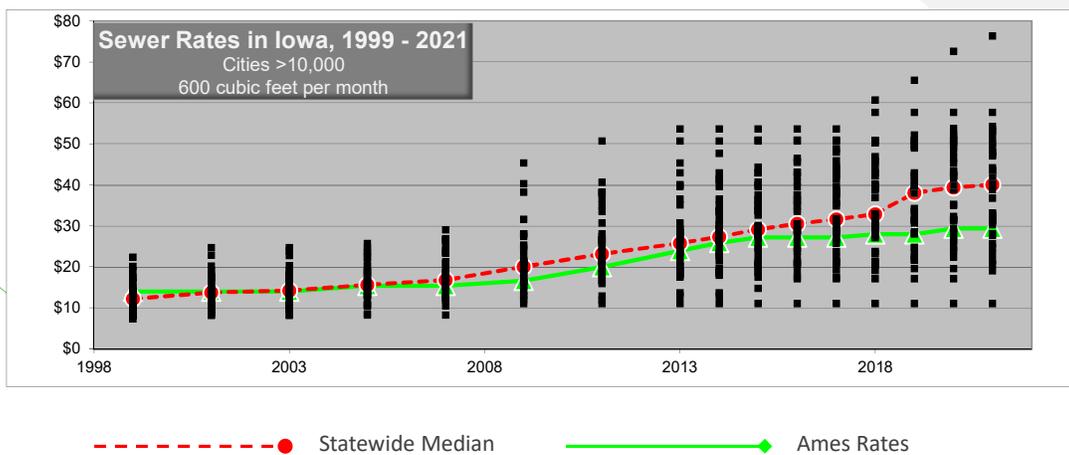


*** Ames is at the 30th percentile, based on 2021 rates ***

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Iowa Trends in Sewer Rates

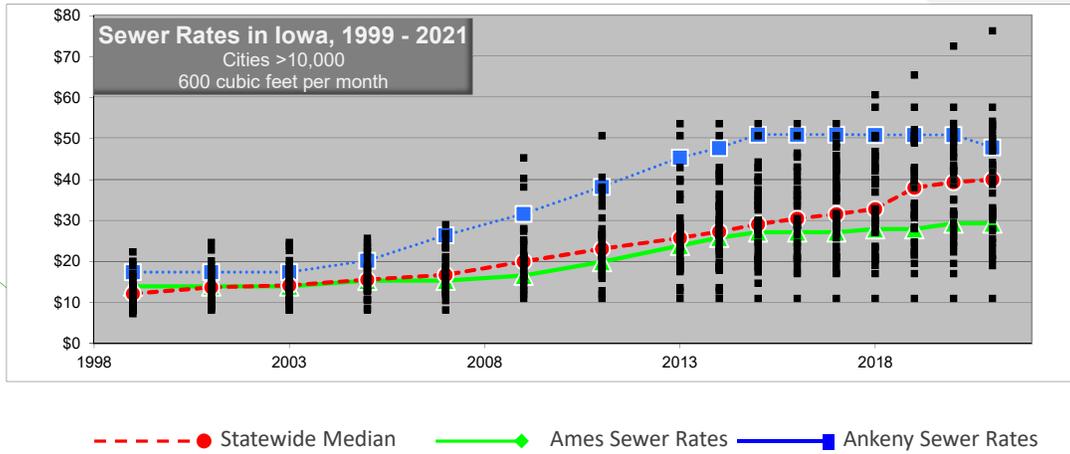
1999-2021, Cities with population >10,000, 600 cf per month



*** Ames is at the 21st percentile, based on 2021 rates ***

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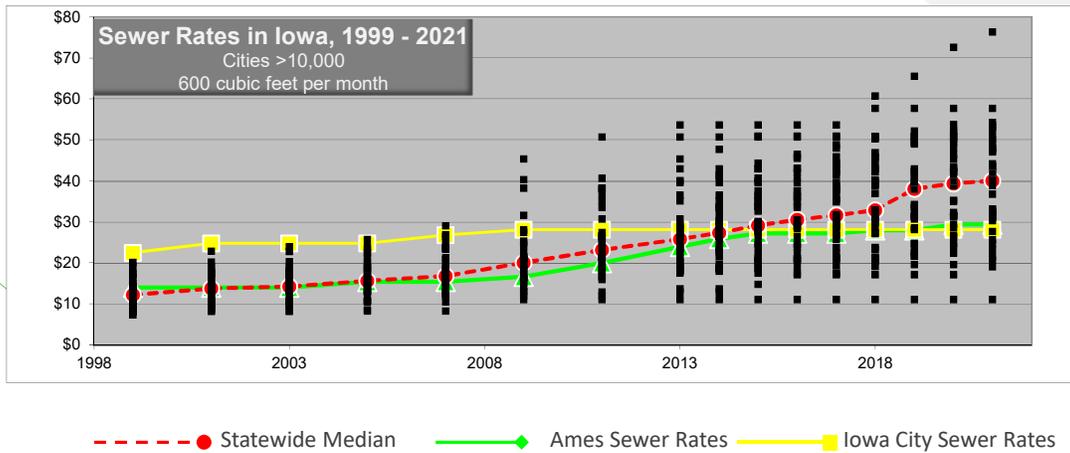
Ames versus Ankeny



*** Ames is at the 21st percentile, based on 2021 rates ***

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Ames versus Iowa City



*** Ames is at the 21st percentile, based on 2021 rates ***

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Current Water Rates (\$/cf)

	<u>Existing</u>
Winter	
All customers; all consumption	\$0.0243
Summer	
Residential	
Block 1 (First 1,000 cf)	\$0.0243
Block 2 (Next 1,500 cf)	\$0.0428
Block 3 (Over 2,500 cf)	\$0.0644
Irrigation & Yard Water	
Block 1 (First 2,000 cf)	\$0.0350
Block 2 (Next 3,000 cf)	\$0.0644
Block 3 (Over 5,000 cf)	\$0.1072
Non-Residential	
All consumption	\$0.0318
Non-Peaking Industrial	
All consumption	\$0.0243



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Current Sewer Rates

	<u>Existing</u>
Minimum Charge	
All customers, per month	\$11.58
Prorated Minimum	\$4.45
Consumption, per 100 cubic feet	
All customers, all consumption	\$2.96



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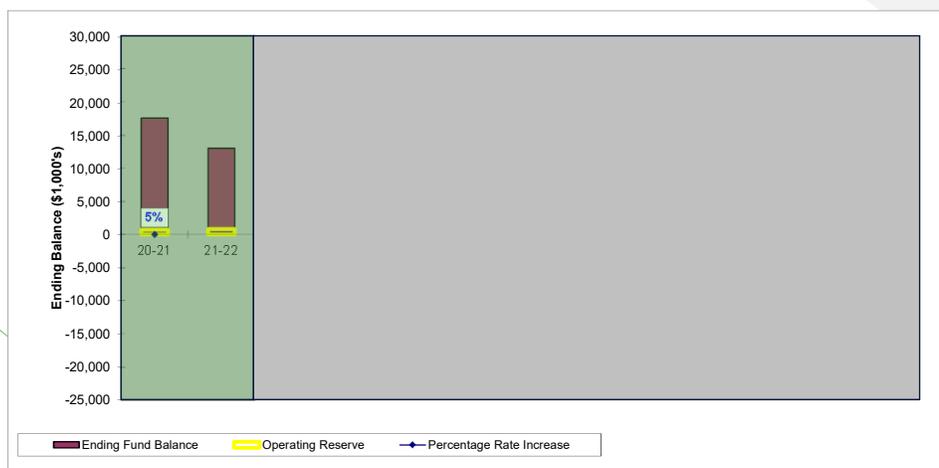
Forces Driving Capital Expenses

- Nutrient Reduction Modifications
- Infrastructure Renewal/ Replacement
- What's not impacting rates: Ames Plan 2040 – \$9.4 million in American Rescue Plan Act funding

PROJECT STATUS:	Scope Change	Cost Change	City of Ames, Iowa Capital Improvement Plan
NUTRIENT REDUCTION MODIFICATIONS			
DESCRIPTION/JUSTIFICATION In early 2013, the Iowa Department of Natural Resources (IDNR) released the Iowa Nutrient Reduction Strategy. This strategy will require the State's 100 largest municipal wastewater facilities to install "technically and economically feasible process changes for nutrient removal." A feasibility study was completed in early 2019 that identified the City's desired approach to meet the nutrient standards. The cost estimates shown below are built around a "Conventional Activated Sludge – Biological Nutrient Removal" treatment scheme, implemented over a 25-year period.			
COMMENTS The Iowa Nutrient Reduction Strategy lays out a schedule for point source discharges (including the Ames WPCF) based on the National Pollutant Discharge Elimination System (NPDES) permit renewal cycle for each facility. The City submitted a plan to the Iowa Department of Natural Resources in early 2019 that identified the schedule for established reduction of all pollutants. The schedule details a specific schedule for the modifications.			
WPC HEADWORKS MODIFICATIONS			
DESCRIPTION/JUSTIFICATION The project includes a complete replacement of the entire headworks system beginning in FY 2023/24. This work will likely be combined with the Nutrient Reduction Modifications project into a single bid package to try to capture some design and construction coordination and economies of scale.			
COMMENTS The headworks of the Water Pollution Control (WPC) facility is where the very first treatment steps take place, including the capture and removal of rags and large debris, as well as the removal of heavy sand and grit. These materials can plug downstream valves and equipment and are extremely abrasive to pumps and piping. A long-range facility needs assessment completed in 2012 provided a prioritized schedule of structural and equipment replacement needs. This work was identified in that assessment. The scope change comes from moving the fee alarm replacement from the Facility Improvements Project into this project (the combined net cost did not change). The cost breakdown for individual items: 2023/24 - 2024/25: \$200,000 (Total: \$41,150,000)			
SANITARY SEWER SYSTEM IMPROVEMENTS			
DESCRIPTION/JUSTIFICATION This is the annual program for rehabilitation/reconstruction of deficient sanitary sewers and disconnected manholes at various locations throughout the city. Most of the problem areas are in sewers that can be bundled into a construction package for cost efficiency, or in problem areas deeper than City crews are equipped to handle. This program therefore, provides for those repairs by outside firms. The goal of this program is to identify and remove major sources of effluent violation as a means of lowering the peak wet weather flow at the treatment plant.			
COMMENTS System improvement locations have been identified through the Sanitary Sewer System Evaluation (SSSE) field investigation completed over the last several years. Through manhole inspections, sonar testing, and trenching, sewer structural defects (ratings of "4" or "5") have been identified as problem areas within this program. It is highly recommended by national standards to fix structural defects with ratings of "5" within 12 months. According to national standards, structural defects with ratings of "4" are necessary to be fixed within five years. It was originally estimated that the system would need \$2.7 million in improvements over 10 years to replace the infrastructure with ratings of "4" or "5". The program implemented in FY 2019/20 has sewer construction costs have inflated at a higher rate than anticipated, resulting in a total of \$12.8 million.			
AMES PLAN 2040 SANITARY SEWER UTILITY INFRASTRUCTURE			
DESCRIPTION/JUSTIFICATION This new program involves installation of public sanitary sewer infrastructure into priority areas shown in the Growth Plan 2040. By installing the sanitary sewer system proactively, it opens the development ability for lands in the adopted growth areas. Design ahead of construction installation takes several months followed by a couple months for Iowa DNR permitting and two months for bidding and approval of contract and bond.			
COMMENTS The American Rescue Plan Act (ARPA) of 2021, which was signed into law on March 11, 2021, provides \$150 million in additional funding for state and local governments. The local funding portion is approximately \$150 million, equally divided between states and counties. The City of Ames is slated to receive approximately \$14.3 million. Eligible uses include revenue replacement for the provision of government services to the extent of the reduction in revenue due to the COVID-19 public health emergency and investments in water, sewer, and broadband infrastructure. After revenue replacement, there will be approximately \$12.26 million available for infrastructure investment.			

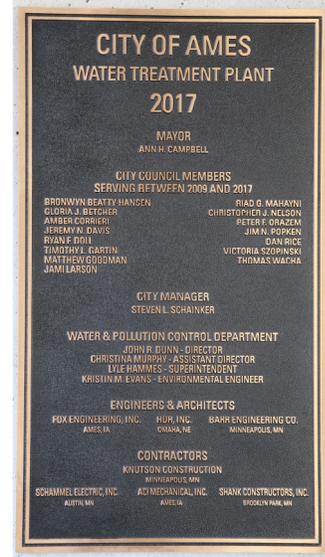
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Sewer Fund Rate Model – No Adjustments



Guiding Philosophy on Rates

- Rate increases should be done with smaller percentage increases on a more frequent basis, as opposed to larger increases on a less frequent basis.
- Slowly grow the operating reserve in each Fund over time until it reaches 25% of the Fund’s annual operating expenses



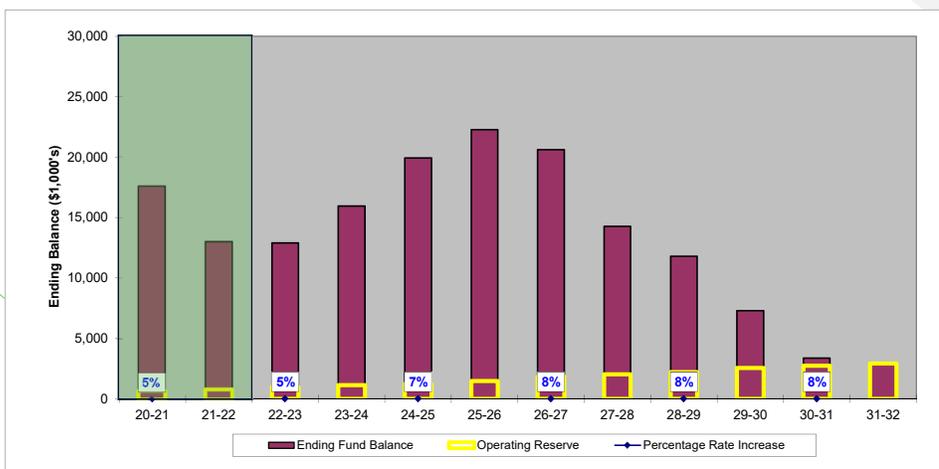
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Water and Sewer Rate Projections

	Last Year	Current Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31	31-32
Water Fund	2%	6%		8%		8%		9%		8%		8%
Sewer Fund	5%		5%		7%		8%		8%		8%	



Sewer Fund Rate Model



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Iowa Trends

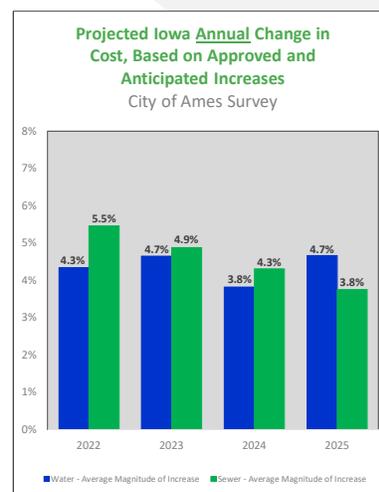
Water

- Over the next four years between 43% and 50% of utilities anticipate a rate increase in any given year

Sewer

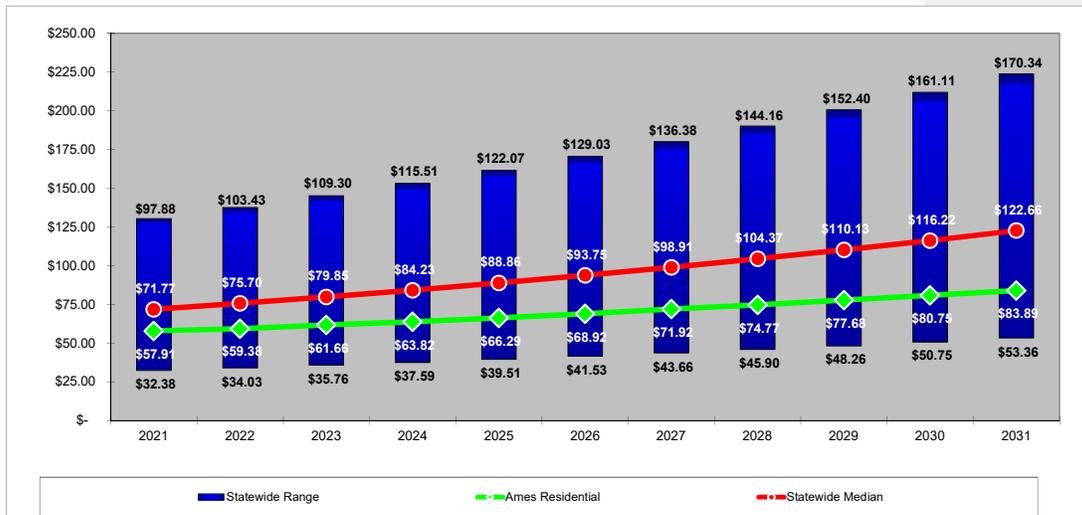
- Over the next four years between 26% and 40% of utilities anticipate a rate increase in any given year

2021 Iowa Water & Sewer Rate Survey, City of Ames, Iowa



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Rate Projections vs. Statewide Trends



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Proposed Sewer Rates

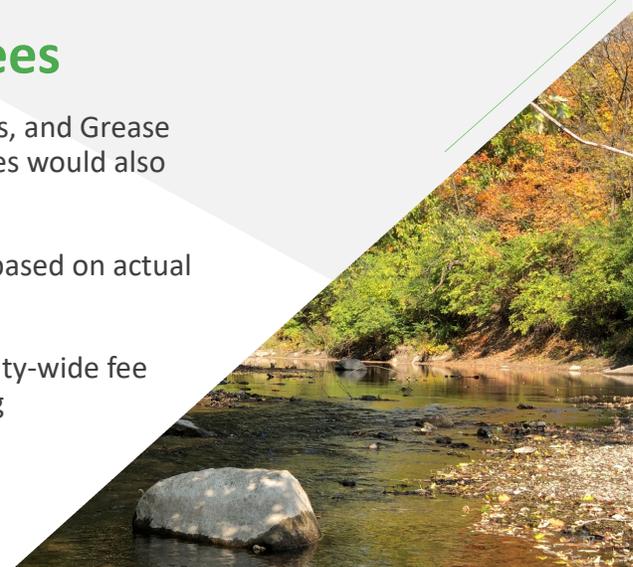
	<u>Existing</u>	<u>5.0% Increase</u>	<u>Total</u>
Minimum Charge All customers, per month	\$11.58	\$0.58	\$12.16
Prorated Minimum	\$4.45	\$0.22	\$4.67
Consumption, per 100 cubic feet All customers, all consumption	\$2.96	\$0.15	\$3.11



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Associated Rates and Fees

- High strength surcharge rates; Fats, Oils, and Grease (FOG) rates; and laboratory analysis fees would also increase by 5%
- Meter setting fees would be adjusted based on actual cost recovery
- These would happen as a part of the City-wide fee schedule adjustment later in the spring



Sample Customer Bill

Median Use Residential

Includes both Sewer and Storm Water adjustments

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
600 kWh and 600 cf	\$81.10	\$4.95	\$28.57	\$29.34	\$143.96
Electric ECA	-\$4.50				-\$4.50
Totals	\$76.60	\$4.95	\$28.57	\$29.34	\$139.46
Increase Due to Rate Change	\$0.00	\$0.25	\$0.00	\$1.47	\$1.72
Totals	\$76.60	\$5.20	\$28.57	\$30.81	\$141.18
% Impact on Total Bill					1.23%

Recommended Action & Timeline

- Direct staff to prepare an ordinance to:
 - Adjust **Sewer Rates by 5%**
 - New rates **effective for bills mailed on or after July 1, 2022**
- Timeline
 - First reading on **April 26**
 - Second reading on **May 10**
 - Third reading and adoption on **May 24**



Questions & Direction

Sample Customer Bill

Minimal Use Residential

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
100 kWh and 100 cf	\$20.45	\$4.95	\$15.72	\$14.54	\$55.66
Electric ECA	-\$0.75				-\$0.75
Totals	\$19.70	\$4.95	\$15.72	\$14.54	\$54.91
Increase Due to Rate Change	\$0.00	\$0.25	\$0.00	\$0.73	\$0.98
Totals	\$19.70	\$5.20	\$15.72	\$15.27	\$55.89
% Impact on Total Bill					1.78%

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Sample Customer Bill

Median Use Residential

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
600 kWh and 600 cf	\$81.10	\$4.95	\$28.57	\$29.34	\$143.96
Electric ECA	-\$4.50				-\$4.50
Totals	\$76.60	\$4.95	\$28.57	\$29.34	\$139.46
Increase Due to Rate Change	\$0.00	\$0.25	\$0.00	\$1.47	\$1.72
Totals	\$76.60	\$5.20	\$28.57	\$30.81	\$141.18
% Impact on Total Bill					1.23%

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Sample Customer Bill

Large Residential

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
1,000 kWh and 1,000 cf	\$129.62	\$4.95	\$38.85	\$41.18	\$214.60
Electric ECA	-\$7.50				-\$7.50
Totals	\$122.12	\$4.95	\$38.85	\$41.18	\$207.10
Increase Due to Rate Change	\$0.00	\$0.25	\$0.00	\$2.06	\$2.31
Totals	\$122.12	\$5.20	\$38.85	\$43.24	\$209.41
% Impact on Total Bill					1.12%

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Sample Customer Bill

Small Commercial (GP)

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
2,000 kWh and 600 cf	\$254.40	\$4.95	\$33.37	\$29.34	\$322.06
Electric ECA	-\$15.00				-\$15.00
Totals	\$239.40	\$4.95	\$33.37	\$29.34	\$307.06
Increase Due to Rate Change	\$0.00	\$0.25	\$0.00	\$1.47	\$1.72
Totals	\$239.40	\$5.20	\$33.37	\$30.81	\$308.78
% Impact on Total Bill					0.56%

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Sample Customer Bill

Small Commercial (GP)

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
5,000 kWh and 1,000 cf	\$612.60	\$4.95	\$46.85	\$41.18	\$705.58
Electric ECA	-\$37.50				-\$37.50
Totals	\$575.10	\$4.95	\$46.85	\$41.18	\$668.08
Increase Due to Rate Change	\$0.00	\$0.25	\$0.00	\$2.06	\$2.31
Totals	\$575.10	\$5.20	\$46.85	\$43.24	\$670.39
% Impact on Total Bill					0.35%

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Sample Customer Bill

Small Commercial (GP)

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
10,000 kWh and 3,000 cf	\$1,209.60	\$9.90	\$127.39	\$100.38	\$1,447.27
Electric ECA	-\$75.00				-\$75.00
Totals	\$1,134.60	\$9.90	\$127.39	\$100.38	\$1,372.27
Increase Due to Rate Change	\$0.00	\$0.50	\$0.00	\$5.02	\$5.52
Totals	\$1,134.60	\$10.40	\$127.39	\$105.40	\$1,377.79
% Impact on Total Bill					0.40%

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Sample Customer Bill

Commercial (LP)

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
20,000 kWh and 5,000 cf	\$2,181.81	\$9.90	\$194.79	\$159.58	\$2,546.08
Electric ECA	-\$150.00				-\$150.00
Totals	\$2,031.81	\$9.90	\$194.79	\$159.58	\$2,396.08
Increase Due to Rate Change	\$0.00	\$0.50	\$0.00	\$7.98	\$8.48
Totals	\$2,031.81	\$10.40	\$194.79	\$167.56	\$2,404.56
% Impact on Total Bill					0.35%

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Sample Customer Bill

Commercial (LP)

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
60,000 kWh and 15,000 cf	\$6,221.55	\$14.85	\$558.10	\$455.58	\$7,250.08
Electric ECA	-\$450.00				-\$450.00
Totals	\$5,771.55	\$14.85	\$558.10	\$455.58	\$6,800.08
Increase Due to Rate Change	\$0.00	\$0.75	\$0.00	\$22.78	\$23.53
Totals	\$5,771.55	\$15.60	\$558.10	\$478.36	\$6,823.61
% Impact on Total Bill					0.35%

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Sample Customer Bill

Commercial (LP)

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
100,000 kWh and 20,000 cf	\$10,284.95	\$44.55	\$779.20	\$603.58	\$11,712.28
Electric ECA	-\$750.00				-\$750.00
Totals	\$9,534.95	\$44.55	\$779.20	\$603.58	\$10,962.28
Increase Due to Rate Change	\$0.00	\$2.25	\$0.00	\$30.18	\$32.43
Totals	\$9,534.95	\$46.80	\$779.20	\$633.76	\$10,994.71
% Impact on Total Bill					0.30%

ORDINANCE NO.

AN ORDINANCE TO AMEND THE MUNICIPAL CODE OF THE CITY OF AMES, IOWA, BY AMENDING SECTION 28.304(3) THEREOF, FOR THE PURPOSE OF ESTABLISHING SEWER RATES REPEALING ANY AND ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT TO THE EXTENT OF SUCH CONFLICT; AND ESTABLISHING AN EFFECTIVE DATE.

BE IT ENACTED, by the City Council for the City of Ames, Iowa, that:

Section One. The Municipal Code of the City of Ames, Iowa shall be and the same is hereby amended by amending Section 28.304(3) as follows:

“Sec. 28.304. SEWER RATES ESTABLISHED.

...

(3) For each monthly billing on or after July 1, 2022, each customer shall be charged a minimum monthly charge. The minimum charge for each location shall be twelve dollars and sixteen cents (\$12.16). The minimum monthly charge may be prorated, based on a 30-day billing period, for the customer’s initial and/or final bills, provided that in no case shall the prorated minimum monthly charge be less than four dollars and sixty-seven cents (\$4.67). In addition, for all water metered beginning with the first cubic foot each month, each user shall pay three dollars and eleven cents (\$3.11) per 100 cubic feet. (Ord. No. 3168, Sec. 1, 4-28-92; Ord. No. 3326, Sec. 2, 5-9-95; Ord. No. 3834, 5-24-05; Ord. No. 3956, 06-10-08; Ord. No. 4037, 5-11-10; Ord. No. 4144, 5-14-13; Ord. No. 4814, 5-27-14; Ord. No. 4215, 5-12-15; Ord. No. 4351, 5-8-18; Ord. 4408, 4-14-2020).”

Section Two. All ordinances, or parts of ordinances, in conflict herewith are hereby repealed to the extent of such conflict, if any.

Section Three. This ordinance shall be in full force and effect from and after its passage and publication as required by law.

Passed this _____ day of _____, _____.

Diane R. Voss, City Clerk

John A. Haila, Mayor