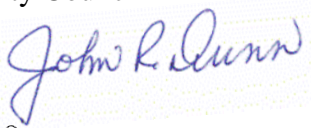




To: Mayor and City Council

From: John Dunn 

Date: March 2, 2018

Subject: Water & Sewer Rates

Thank you for the opportunity to present the staff recommendation of revenues necessary to support the planned operating and capital budgets for the Water and Sewer Funds. The *Ames Municipal Code* requires that the Director of Water and Pollution Control “...review and recommend to the City Council revisions of the rates and charges established...at intervals appropriate to provide for the funding needs of the utility.”

As you know, both utilities are facing significant expenses in the coming years. The proposed projects are a combination of the need to provide capacity for our growing community, the need to respond to new and anticipated regulatory requirements, and the need to re-invest in the infrastructure of these two utilities that are so essential to our way of life.

To help you prepare for the discussion, I have attached a copy of the presentation I plan to cover at your meeting on March 6. You will see that the discussion will include recommended adjustments to both the Water and Sewer Funds effective July 1, 2018. I look forward to meeting with you to discuss the exciting future of the water and sewer utilities as we seek to meet the needs and expectations of our community.



Agenda

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





National & State-Wide Trends



National and State Trends

Data sources include:

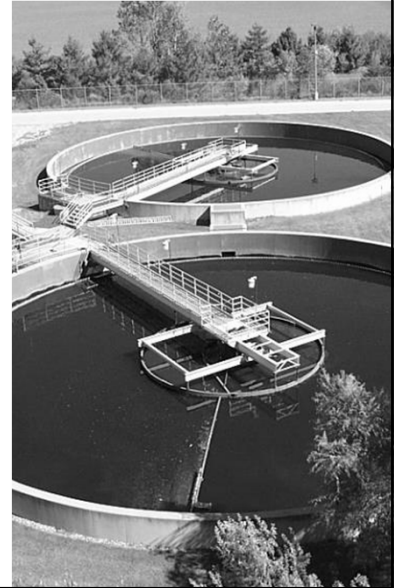
- **2016 Cost of Clean Water Index**
National Association of Clean Water Agencies
- **2016 Water and Wastewater Rate Survey**
American Water Works Association
- **2017 Iowa Water and Wastewater Rate Survey**
City of Ames Water and Pollution Control



National Trends

2016 Cost of Clean Water Index, NACWA

- Average annual wastewater bill has doubled in the past 14 years
- Wastewater utilities expect charges to increase from 3.9% to 4.7% per year for the next 5 years
- Nationally, the average increase in 2016 was twice the rate of inflation
(15th consecutive year that sewer rates nationally have outpaced inflation)



National Trends

2016 Water & Wastewater Rate Survey, American Water Works Association

- 88% of Drinking Water Utilities have increased rates in the past two years
- 85% of Wastewater Utilities have increased rates in the past two years.
- Lowest costs for both water and sewer were in the Midwest



National Trends

2012 to 2016

Average Annual Increase in Water Rates: 5.89%

Average Annual Increase in Sewer Rates: 4.41%

Average Annual Increase in CPI: 1.13%

Source: 2016 Water and Wastewater Rate Survey, AWWA/Raftelis Financial Consultants



Recent Rate Adjustments in Ames

	Water	Sewer
FY 13/14	6%	9%
FY 14/15	--	8%
FY 15/16	4%	5%
FY 16/17	--	--
FY 17/18	--	--
Annual Average	2.00%	4.40%



Ames Trends vs. National Trends

Water

National Average Annual Increase: 5.89%

Ames Average Annual Increase: 2.00%

Sewer

National Average Annual Increase: 4.41%

Ames Average Annual Increase: 4.40 %

Average Annual Increase in CPI: 1.13%

National Data: 2012 – 2016

Ames Data: 2013 – 2017



Ames Trends vs. Iowa Trends

Water

Iowa Average Annual Increase: 3.98%

Ames Average Annual Increase: 2.00%

Sewer

Iowa Average Annual Increase: 4.61%

Ames Average Annual Increase: 4.40 %

Average Annual Increase in CPI: 1.13%

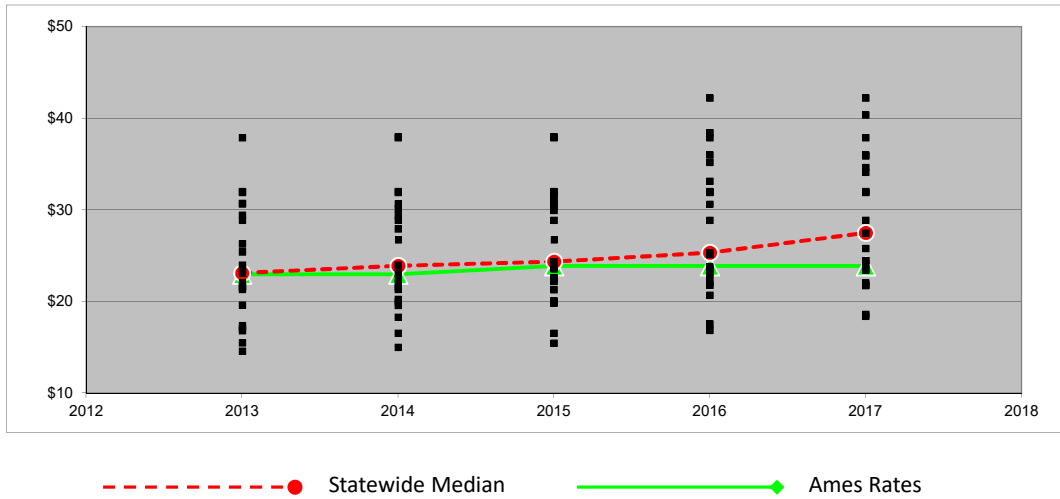
Iowa Data: 2013 – 2017

Ames Data: 2013 – 2017



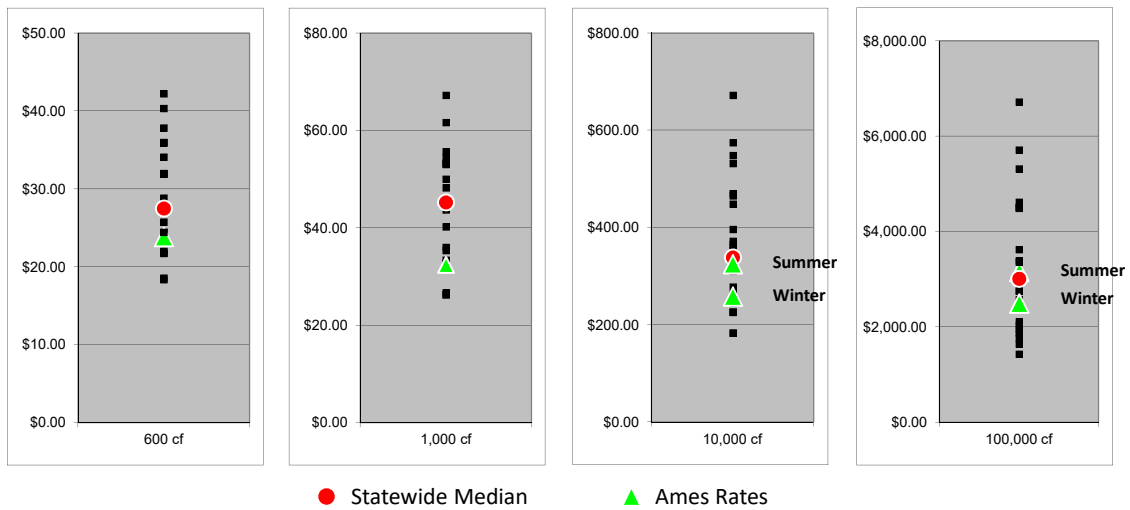
Iowa Trends in Water Rates

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



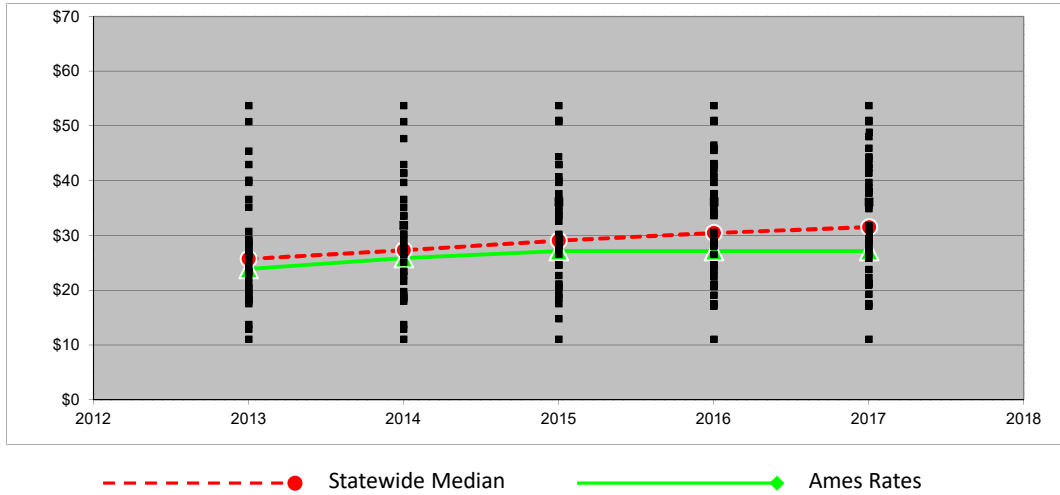
Comparing Across Demand Thresholds

Cities with population >10,000 with lime softening, 2017



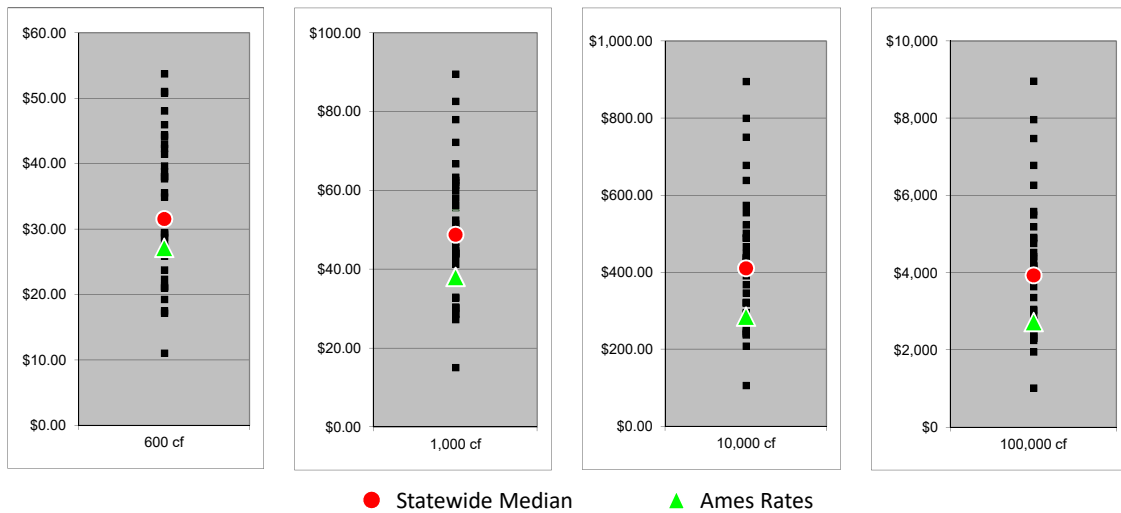
Iowa Trends in Sewer Rates

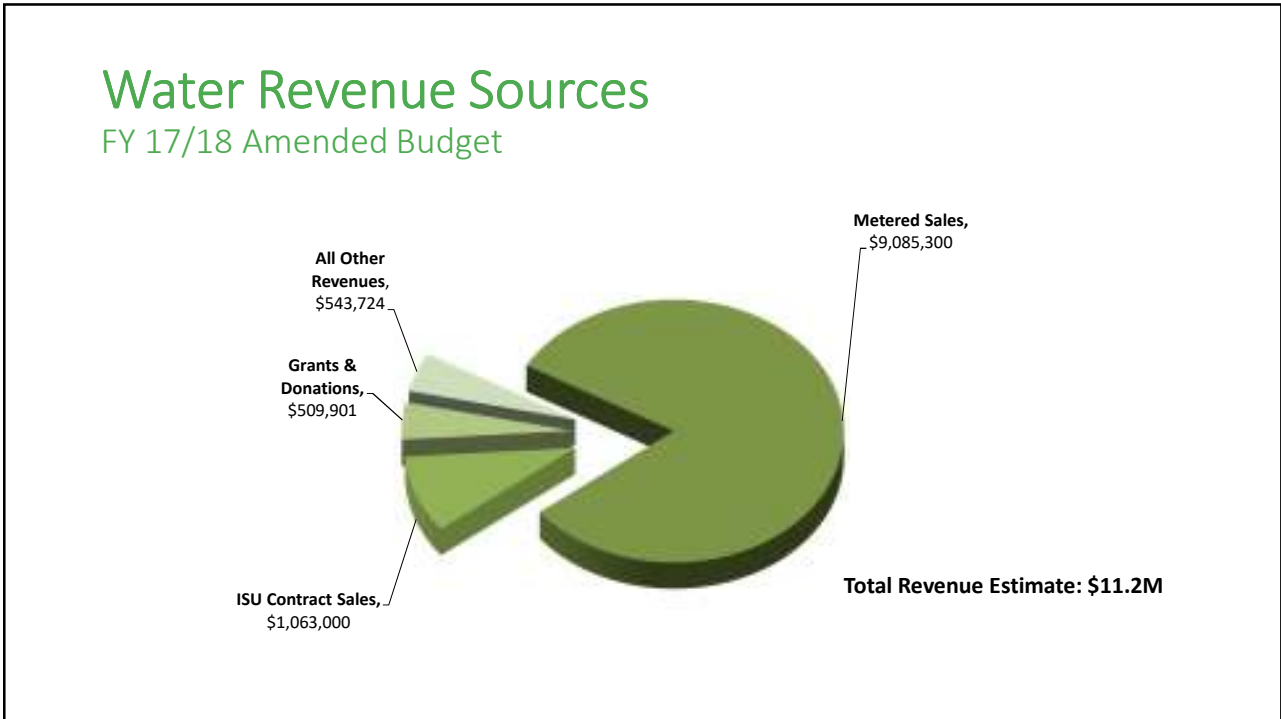
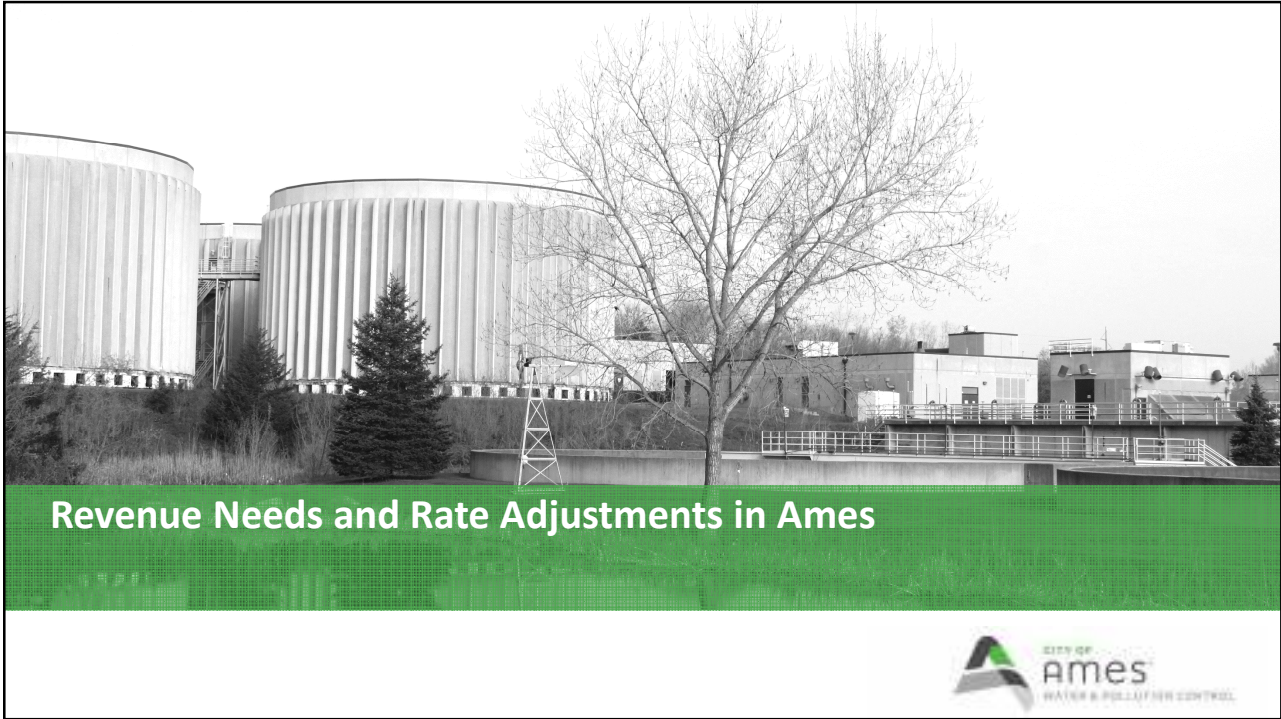
Cities with population >10,000, 600 cf per month



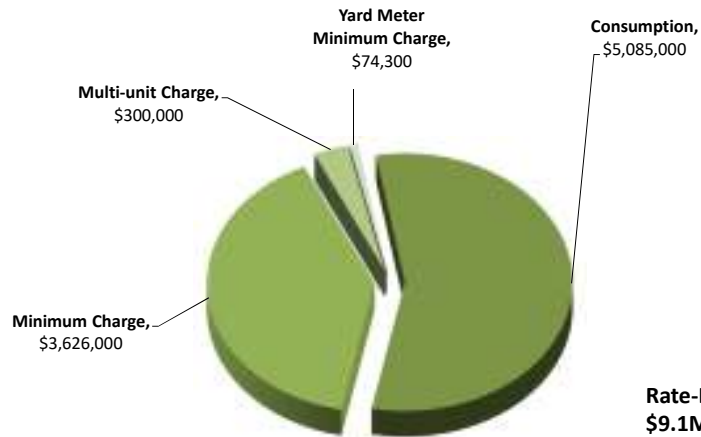
Comparing Across Demand Thresholds

Cities with population >10,000, 2017





Water Rate-Derived Revenue



Current Water Rates

Winter	\$0.0215
All customers; all consumption	
Summer	
Residential	
Block 1 (First 1,000 cf)	\$0.0215
Block 2 (Next 1,500 cf)	\$0.0379
Block 3 (Over 2,500 cf)	\$0.0570
Irrigation & Yard Water	
Block 1 (First 2,000 cf)	\$0.0310
Block 2 (Next 3,000 cf)	\$0.0570
Block 3 (Over 5,000 cf)	\$0.0949
Non-Residential	\$0.0281
All consumption	
Non-Peaking Industrial	\$0.0215
All consumption	



Water Fund Rate Model

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	WATER FUND SUMMARY			Actual	Adjusted	Requested									
2	(in \$1000s)														
3															
4	(Rate Adjustments)														
5															
6	Beginning Balance			16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28
7	All Funds			20,480	23,366	13,871	10,601	7,258	3,566	-1,579	-4,067	-5,979	-9,064	-13,513	-17,666
8															
9															
10	Revenues														
11	Metered Sales			9,333	9,085	9,132	9,177	9,223	9,269	9,316	9,362	9,409	9,456	9,503	9,551
12	Contract Sales														
13	ISU			935	1,063	967	1,203	1,276	1,318	1,467	1,372	1,551	1,787	1,737	1,555
14	ISU Cap				396	582	573	572	571	570	573	609	608	611	650
15	Rural Water			4	4	4	4	4	4	4	4	4	4	4	4
16	Grant Proceeds			27	393	0		678							
17	LHD In-kind				117										
18	Transfers			150	0	0									
19	Interest			195	150	150	80	54	27	-12	-31	-45	-68	-101	-132
20	All Other			235	398	401	405	408	411	414	418	421	424	428	431
21	Audit/Adjustments			-91	0	0									
22	Total Op Revenue			10,788	11,607	11,236	11,441	12,215	11,600	11,759	11,698	11,949	12,211	12,182	12,058
23															
24	Jointly Funded Projects														
25	Local Option Sales Tax				60										
26	Park Development Fund				40										
27	Electric Utility Fund				65										
28	Sewer Utility Fund							335							
29	Jointly Funded Projects			0	165	0	0	0	335	0	0	0	0	0	0
30															
31	Bond Proceeds														
32	Abated GO Bonds			1,115											
33	Total Bond Proceeds			1,115	0	0	0	0	0	0	0	0	0	0	0
34															
35	Total Revenues			11,903	11,772	11,236	11,441	12,215	11,935	11,759	11,698	11,949	12,211	12,182	12,058
36															

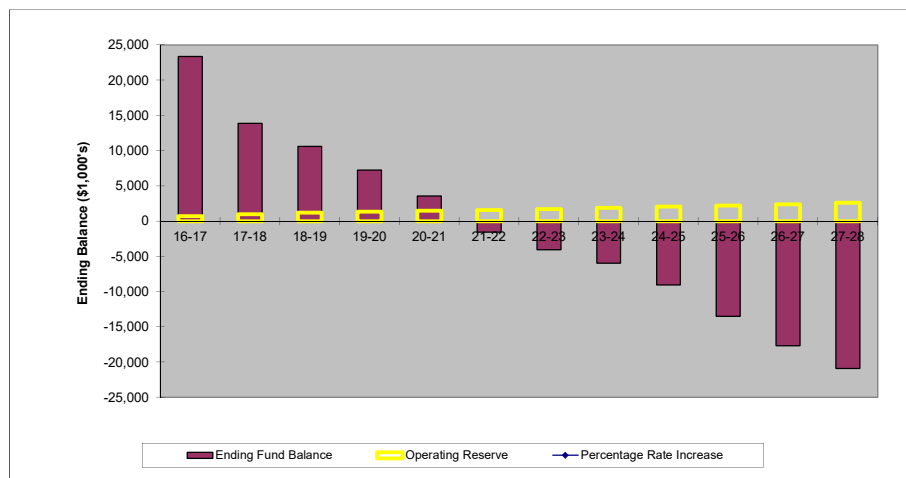
Water Fund Rate Model (continued)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	WATER FUND SUMMARY			Actual	Adjusted	Requested									
2	(in \$1000s)														
3															
4	(Rate Adjustments)														
5															
6	Beginning Balance			16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28
7	All Funds			28,480	23,366	13,871	10,601	7,258	3,566	-1,579	-4,067	-5,979	-9,064	-13,513	-17,666
8															
9															
10	EXPENSES														
11	Operating Expenses														
12	WMP Admin			377	410	431	444	458	472	497	502	518	534	550	567
13	WMP Lab			195	212	210	225	232	239	246	254	262	270	278	287
14	Water Operations			2,610	2,846	2,834	3,025	3,119	3,215	3,315	3,416	3,524	3,635	3,746	3,862
15	WMP Marketing			475	654	695	706	726	750	774	798	822	846	874	901
16	PW Subtotal			1,356	1,376	1,407	1,440	1,475	1,507	1,542	1,577	1,613	1,651	1,688	1,727
17	Out Service			359	418	429	440	452	464	477	490	503	516	530	544
18	Transfers														
19	Debt Service			1,329	3,195	4,476	4,357	4,351	4,895	4,876	4,901	4,895	4,277	4,297	4,505
20	Finance Subtotal			136	143	147	152	157	161	166	172	177	182	188	194
21	Support Subtotal			269	396	406	421	434	447	460	475	489	504	520	535
22	Audit/Adjustments														
23	Total Operating Expenses			7,937	9,637	11,136	11,210	11,403	11,342	11,546	11,705	12,193	12,415	12,672	13,123
24															
25	Debt Service Detail														
26	SAP														
27	New WTP			845	2,740	4,836	3,972	3,905	3,950	3,945	3,936	3,828	3,820	3,820	3,812
28	East Industrial Tank										29	268	268	267	267
29	Source Water Expand												28	266	
30	SWS Reserve														96
31	G.O. Bonds														
32	FY 07/08 - Well Line			55	55	54									
33	FY 08/09 - Well Line			247	255	259	257	257							
34	Fixed Services			67	66	66	67	66	66	67	67				
35	Northern Growth			61	61	61	61	61	61	61	61	61	61	61	61
36	Eastern Growth			61	61	61	61	61	61	61	61	61	61	61	61
37	Total Debt Service			1,329	3,195	4,476	4,357	4,351	4,895	4,876	4,901	4,895	4,277	4,297	4,505
38															

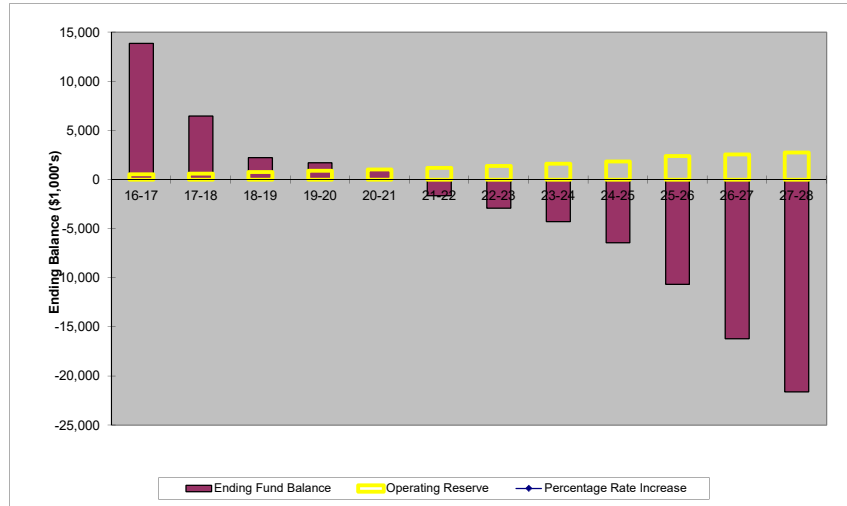
Water Fund Rate Model (continued)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1 WATER FUND SUMMARY				Actual / Adjusted / Requested												
2 (in \$1000s)																
3																
4 (Rate Adjustments)																
5		16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28			
6 Beginning Balance																
7 All Funds		28,450	23,305	13,871	13,801	7,258	3,866	-1,879	-4,867	-8,979	-8,864	-13,815	-17,866			
8																
9																
10 CP Expenses - Cash & GO Bonds																
11 WTP		905	7,499	1,545	1,324	2,670	3,815	877	0	1,816	2,421	1,836	334			
12 Fleet																
13 PW Dep & Cost		805	4,111	1,825	2,250	1,825	1,825	1,825	1,825	1,825	1,825	1,825	1,825			
14 Total CP Expenses		1,850	11,610	3,370	3,574	4,894	5,708	2,702	1,825	2,841	4,246	3,663	2,159			
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Water Fund Rate Model (continued)



Sewer Fund Rate Model



Developing Rate Recommendations

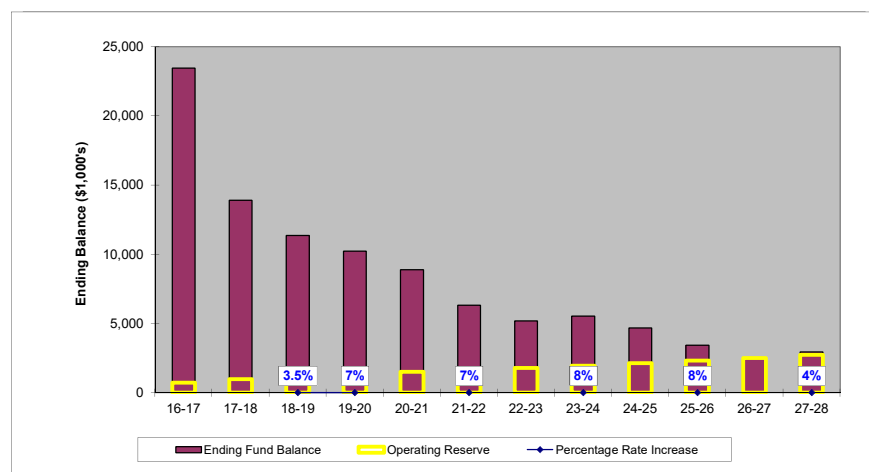
CITY OF Ames
WATER & POLLUTION CONTROL

Guiding Philosophy on Rates

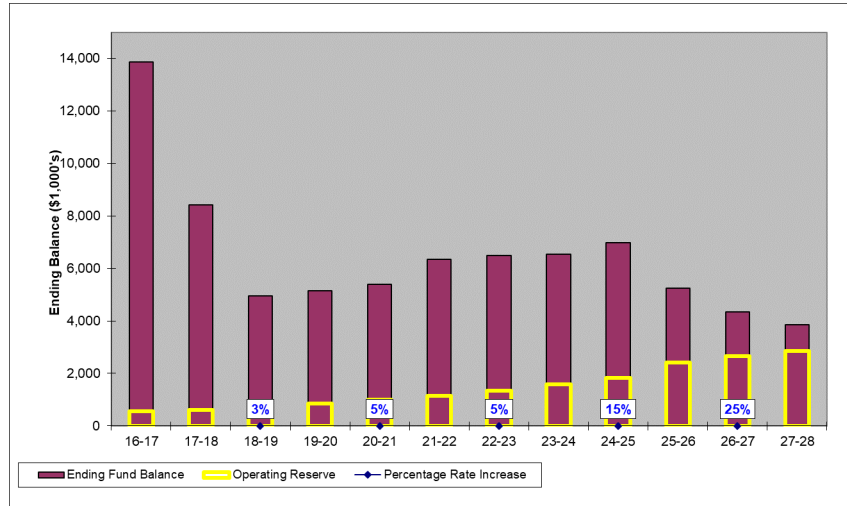
- Rate increases should be done with smaller percentage increases on a more frequent basis, as opposed to larger increases on a less frequent basis.
- Slowly grow the operating reserve in each Fund over time until it reaches 25% of the Fund's annual operating expenses



Water Fund Rate Model



Sewer Fund Rate Model



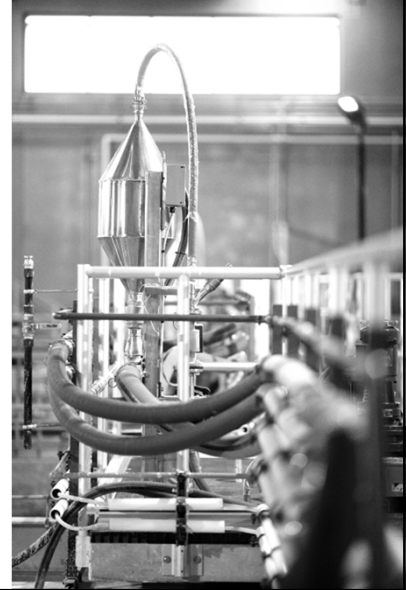
Water and Sewer Rate Projections

	Last Year	Current Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28
Water Fund			3.5%	7%		7%		8%		8%		4%
Sewer Fund			3%		5%		5%		15%		25%	



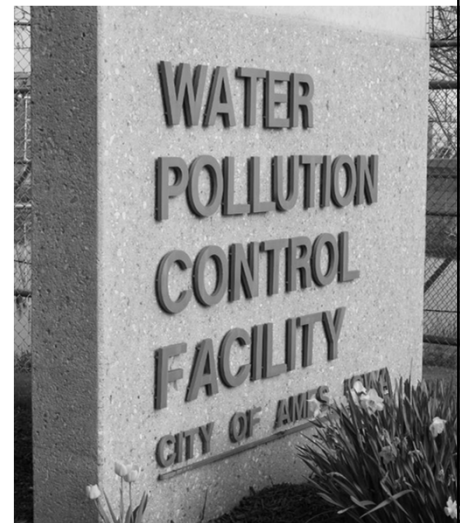
Revised Water Rates

	<u>Existing</u>	<u>3.5% Increase</u>	<u>Proposed</u>
Winter			
All customers; all consumption	\$0.0215	\$0.0008	\$0.0222
Summer			
Residential			
Block 1 (First 1,000 cf)	\$0.0215	\$0.0008	\$0.0222
Block 2 (Next 1,500 cf)	\$0.0379	\$0.0013	\$0.0392
Block 3 (Over 2,500 cf)	\$0.0570	\$0.0020	\$0.0590
Irrigation & Yard Water			
Block 1 (First 2,000 cf)	\$0.0310	\$0.0011	\$0.0321
Block 2 (Next 3,000 cf)	\$0.0570	\$0.0020	\$0.0590
Block 3 (Over 5,000 cf)	\$0.0949	\$0.0033	\$0.0982
Non-Residential			
All consumption	\$0.0281	\$0.0010	\$0.0291
Non-Peaking Industrial			
All consumption	\$0.0215	\$0.0008	\$0.0222



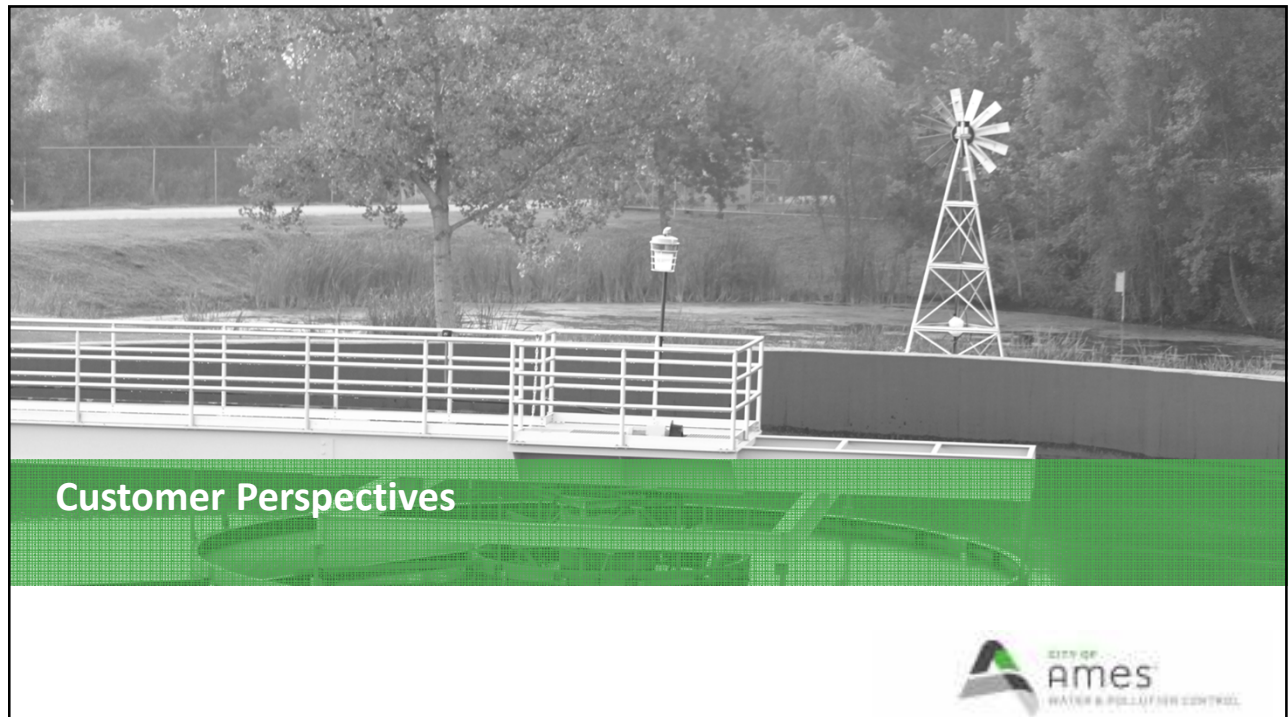
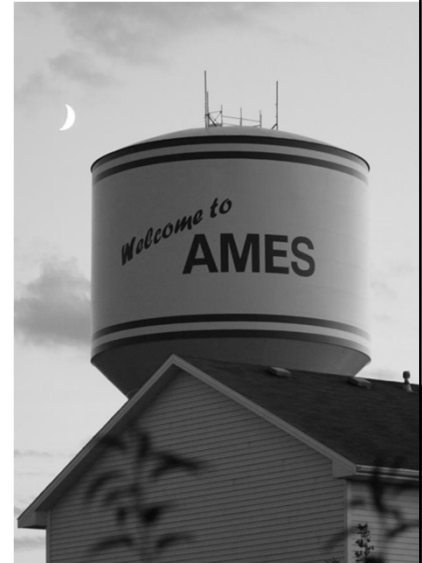
Revised Sewer Rates

	<u>Existing</u>	<u>3.0% Increase</u>	<u>Proposed</u>
Minimum Charge			
All customers, per month	\$10.71	\$0.32	\$11.03
Prorated Minimum	\$4.12	\$0.12	\$4.24
Consumption, per 100 cubic feet			
All customers, all consumption	\$2.74	\$0.08	\$2.82



Associated Rates and Fees

- Water:
 - Minimum bills, multiple dwelling unit fees would also adjust by 3.5%
 - Meter setting fees would be adjusted based on actual cost recovery
- Sewer:
 - High strength surcharge, hauled waste, laboratory sampling and analytical fees would also adjust by 3.0%



Sample Customer Bill – Median Residential

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
600 kWh and 600 cf	\$81.10	\$4.95	\$23.88	\$27.15	\$137.08
Electric ECA	-\$2.34				-\$2.34
Totals	\$78.76	\$4.95	\$23.88	\$27.15	\$134.74
Increase Due to Rate Change	\$0.00	\$0.00	\$0.84	\$0.81	\$1.65
Totals	\$78.76	\$4.95	\$24.72	\$27.96	\$136.39
% Impact on Total Bill					1.22%

Sample Customer Bill – Small Commercial

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
5,000 kWh and 1,000 cf	\$612.60	\$4.95	\$39.08	\$38.11	\$694.74
Electric ECA	-\$19.50				-\$19.50
Totals	\$593.10	\$4.95	\$39.08	\$38.11	\$675.24
Increase Due to Rate Change	\$0.00	\$0.00	\$1.37	\$1.14	\$2.51
Totals	\$593.10	\$4.95	\$40.45	\$39.25	\$677.75
% Impact on Total Bill					0.37%

Sample Customer Bill – Commercial

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
60,000 kWh and 15,000 cf	\$6,221.55	\$14.85	\$465.43	\$421.71	\$7,123.54
Electric ECA	-\$234.00				-\$234.00
Totals	\$5,987.55	\$14.85	\$465.43	\$421.71	\$6,889.54
Increase Due to Rate Change	\$0.00	\$0.00	\$16.29	\$12.65	\$28.94
Totals	\$5,987.55	\$14.85	\$481.72	\$434.36	\$6,918.48
% Impact on Total Bill					0.42%



Council Direction



Recommended Direction & Timeline

- Direct staff to prepare an ordinance to
 - Adjust **Water Rates by 3.5%** and
 - Adjust **Sewer Rates by 3.0%**,
 - New rates **effective July 1, 2018**

- Timeline
 - First reading on April 10
 - Second reading on April 27
 - Third reading and adoption on May 8



Additional Rate Samples

(Informational only - Will not be covered in the presentation)



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	\$13.13	\$13.45	\$51.98
Electric ECA	-\$0.39				-\$0.39
Totals	\$20.06	\$4.95	\$13.13	\$13.45	\$51.59
Increase Due to Rate Change	\$0.00	\$0.00	\$0.46	\$0.40	\$0.86
Totals	\$20.06	\$4.95	\$13.59	\$13.85	\$52.45
% Impact on Total Bill					1.67%

Sample Customer Bill – Median Residential

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
600 kWh and 600 cf	\$81.10	\$4.95	\$23.88	\$27.15	\$137.08
Electric ECA	-\$2.34				-\$2.34
Totals	\$78.76	\$4.95	\$23.88	\$27.15	\$134.74
Increase Due to Rate Change	\$0.00	\$0.00	\$0.84	\$0.81	\$1.65
Totals	\$78.76	\$4.95	\$24.72	\$27.96	\$136.39
% Impact on Total Bill					1.22%

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	\$32.48	\$38.11	\$205.16
Electric ECA	-\$3.90				-\$3.90
Totals	\$125.72	\$4.95	\$32.48	\$38.11	\$201.26
Increase Due to Rate Change	\$0.00	\$0.00	\$1.14	\$1.14	\$2.28
Totals	\$125.72	\$4.95	\$33.62	\$39.25	\$203.54
% Impact on Total Bill					1.13%

Sample Customer Bill – Small Commercial (GP)

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
1,000 kWh and 1,000 cf	\$129.62	\$4.95	\$32.48	\$38.11	\$205.16
Electric ECA	-\$3.90				-\$3.90
Totals	\$125.72	\$4.95	\$32.48	\$38.11	\$201.26
Increase Due to Rate Change	\$0.00	\$0.00	\$1.14	\$1.14	\$2.28
Totals	\$125.72	\$4.95	\$33.62	\$39.25	\$203.54
% Impact on Total Bill					1.13%

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	\$27.84	\$27.15	\$314.34
Electric ECA	-\$7.80				-\$7.80
Totals	\$246.60	\$4.95	\$27.84	\$27.15	\$306.54
Increase Due to Rate Change	\$0.00	\$0.00	\$0.97	\$0.81	\$1.78
Totals	\$246.60	\$4.95	\$28.81	\$27.96	\$308.32
% Impact on Total Bill					0.58%

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	\$39.08	\$38.11	\$694.74
Electric ECA	-\$19.50				-\$19.50
Totals	\$593.10	\$4.95	\$39.08	\$38.11	\$675.24
Increase Due to Rate Change	\$0.00	\$0.00	\$1.37	\$1.14	\$2.51
Totals	\$593.10	\$4.95	\$40.45	\$39.25	\$677.75
% Impact on Total Bill					0.37%

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	\$106.26	\$92.91	\$1,418.67
Electric ECA	-\$39.00				-\$39.00
Totals	\$1,170.60	\$9.90	\$106.26	\$92.91	\$1,379.67
Increase Due to Rate Change	\$0.00	\$0.00	\$3.72	\$2.79	\$6.51
Totals	\$1,170.60	\$9.90	\$109.98	\$95.70	\$1,386.18
% Impact on Total Bill					0.47%

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	\$162.46	\$147.71	\$2,501.88
Electric ECA	-\$78.00				-\$78.00
Totals	\$2,103.81	\$9.90	\$162.46	\$147.71	\$2,423.88
Increase Due to Rate Change	\$0.00	\$0.00	\$5.69	\$4.43	\$10.12
Totals	\$2,103.81	\$9.90	\$168.15	\$152.14	\$2,434.00
% Impact on Total Bill					0.42%

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	\$465.43	\$421.71	\$7,123.54
Electric ECA	-\$234.00				-\$234.00
Totals	\$5,987.55	\$14.85	\$465.43	\$421.71	\$6,889.54
Increase Due to Rate Change	\$0.00	\$0.00	\$16.29	\$12.65	\$28.94
Totals	\$5,987.55	\$14.85	\$481.72	\$434.36	\$6,918.48
% Impact on Total Bill					0.42%

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	\$649.86	\$558.71	\$11,538.07
Electric ECA	-\$390.00				-\$390.00
Totals	\$9,894.95	\$44.55	\$649.86	\$558.71	\$11,148.07
Increase Due to Rate Change	\$0.00	\$0.00	\$22.75	\$16.76	\$39.51
Totals	\$9,894.95	\$44.55	\$672.61	\$575.47	\$11,187.58
% Impact on Total Bill					0.35%