



To: Mayor and City Council Members

From: John Dunn

Date: March 6, 2015

Subject: March 10, 2015 Presentation on Water and 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. You will see that the discussion will include recommended adjustments to both the Water and Sewer Funds effective July 1, 2015, and a request for direction on a future increase in the operating reserve balance. 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.

Water and Pollution Control Department  
March 10, 2015

## **FY 15/16 WATER AND SEWER RATES**



## **Agenda**

- National and State-wide Trends in Rates
- Projected Need for Revenue Increases in Ames
- Translating Revenue Increases to Rate Increases
- Fund Reserve Balances
- Customer Perspective
- Council Direction



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## NATIONAL & STATE TRENDS



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## Sources of Information

- ❑ **2015 NACWA Financial Survey** –  
National Association of Clean Water Agencies
- ❑ **2013 Water and Wastewater Interim Rate Survey** –  
American Water Works Association
- ❑ **2015 Water Rates and Sewer Service Charges Survey** –  
City of Ames, Iowa



## National Trends

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### 2015 NACWA Financial Survey – Key Findings

- ❑ Projected capital needs increased 10% compared to 2011
- ❑ Rate increases slowed in past three years, but continue to outpace inflation by more than double
- ❑ Most utilities (90%) adjust rates annually or biennially
- ❑ Consent Decrees account for approximately 10% of all wastewater expenditures
  - More than half of all consent decrees nationally are due to nutrients



## National Trends

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### 2013 Interim Water and Wastewater Rate Survey - American Water Works Association

- ❑ 194 drinking water utilities responded to the survey
  - 166 (86%) have increased water rates in the past two years
  - 40 (21%) had increases of greater than 20%
- ❑ 133 wastewater utilities responded to the survey
  - 118 (89%) have increased sewer rates in the past two years
  - 32 (24%) had increases of greater than 20%



## National Trends in Rates

### 2006 to 2012

Average Annual Increase in Water Rates:	8.0%
Average Annual Increase in Sewer Rates:	9.0%
Average Annual Increase in CPI:	2.2%



## Recent Rate Adjustments in Ames

	Water	Sewer
FY 08/09	--	8%
FY 09/10	10%	--
FY 10/11	10%	9%
FY 11/12	8%	10%
FY 12/13	4.2%	10%
FY 13/14	6%	9%
FY 14/15	--	8%



## National Trends in Rates

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### 2006 to 2012

Average Annual Increase in Water Rates:	8.0%
Ames Average Annual Increase:	6.7%
Average Annual Increase in Sewer Rates:	9.0%
Ames Average Annual Increase:	7.7%



## Iowa Trends in Rates

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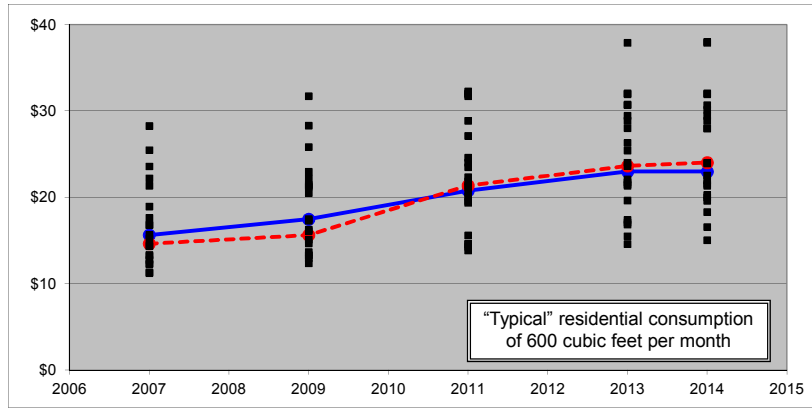
### 2007 to 2014

Median Annual Increase in Water Rates:	9.2%
Ames Average Annual Increase:	6.7%
Median Annual Increase in Sewer Rates:	8.7%
Ames Average Annual Increase:	9.8%



# Iowa Water Rate Comparison

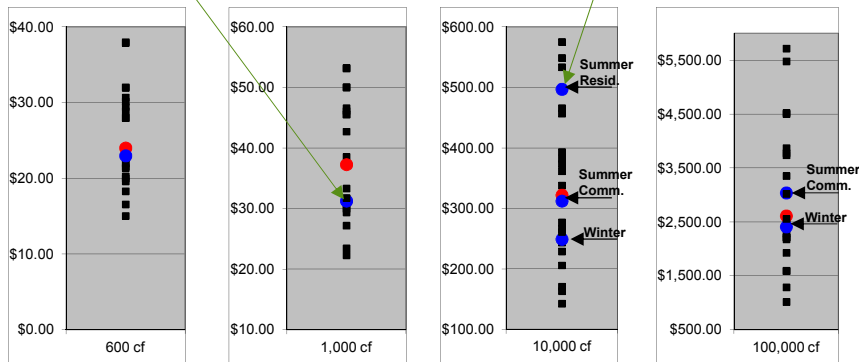
Cities >10,000 Population with Softening Plants



## Comparing Across Demand Thresholds

During the summer of 2014, 94.9% of all bills were less than 1,000 cf.

Of the 64,082 residential water bills generated during the summer of 2014, only 4 (0.006%) used >10,000 cf.

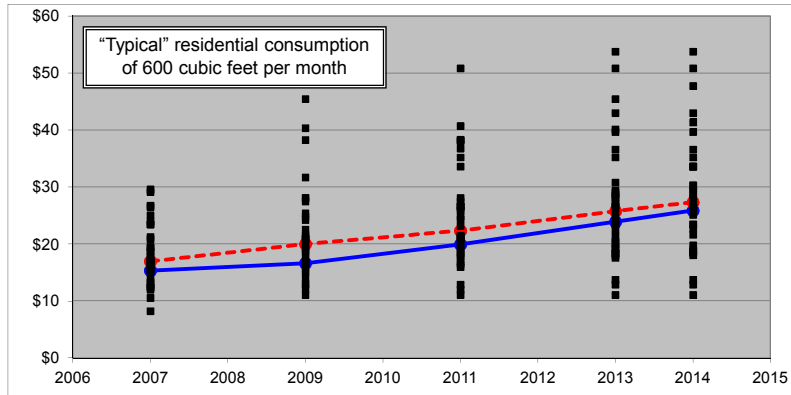


● - State-wide Median (2015)    ● - Ames (2015)

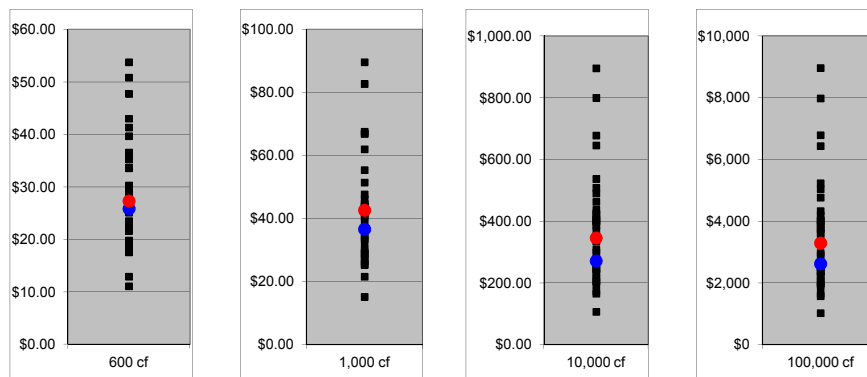


# Iowa Sewer Rate Comparison

Cities >10,000 Population



# Comparing Across Demand Thresholds – Sewer



● - State-wide Median (2015) ● - Ames (2015)

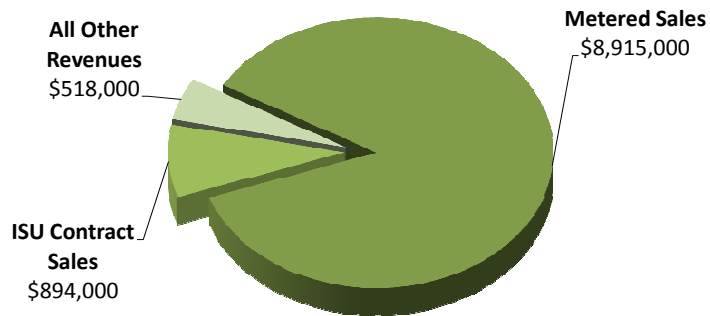




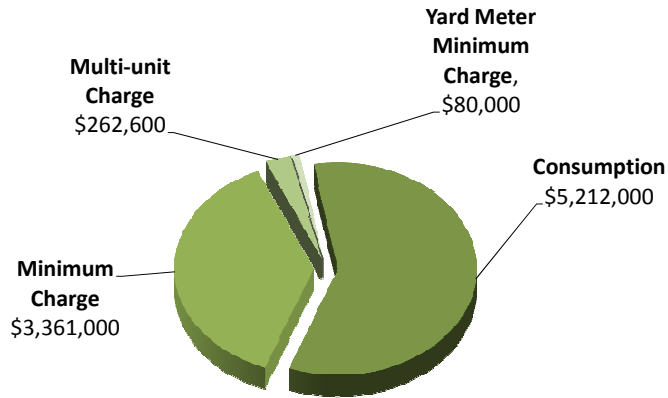
## WATER RATE ADJUSTMENTS - 2015



### Water Revenue Categories - FY 2014/15 Estimates



## Water Revenue Categories - FY 2014/15 Estimates



## Current Rates – Water Consumption

	<u>Charge per cubic foot</u>
<b>Winter</b> (All customers, all consumption)	\$0.0207
<b>Summer</b>	
<b>Residential</b>	
Block 1 (First 1,000 cf)	0.0207
Block 2 (Next 1,500 cf)	0.0365
Block 3 (Over 2,500 cf)	0.0548
<b>Irrigation and Yard Water</b>	
Block 1 (First 2,000 cf)	0.0298
Block 2 (Next 3,000 cf)	0.0548
Block 3 (Over 5,000 cf)	0.0913
<b>Non-Residential</b>	
All Consumption	0.0270
<b>Non-peaking Industrial</b>	
All Consumption	0.0207

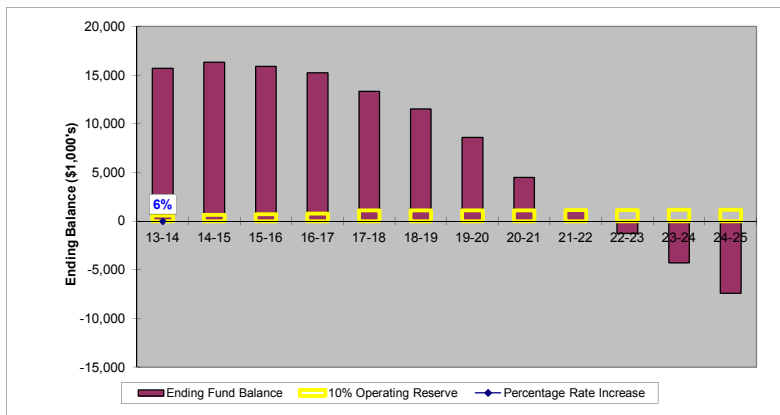


# Annual Fund Projections

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
<b>Revised Balance</b>	12,910	12,741	12,634	12,526	12,417	12,307	12,196	12,084	11,971	11,857	11,742
<b>All Funds</b>	9,821	12,434	14,348	15,740	14,727	13,822	9,947	9,231	7,820	5,277	3,270
<b>Revenues</b>											
General Sales	0,088	0,099	0,549	9,047	9,120	9,744	9,822	10,490	10,079	11,410	12,400
Contract Sales											
ISU	609	648	7,204	9,171	1,889	7,341	1,233	7,399	1,483	1,631	1,417
Rural Water	2	0	0	0	0	0	0	0	0	0	0
WPA/C&I	447	131	0	0	0	0	0	0	0	0	0
Grants											
Interest	236	350	367	364	364	364	364	364	364	364	364
All Other											
Auto/Equipment											
Fee											
<b>Total Revenue</b>	9,502	9,151	10,174	10,701	10,963	17,539	12,714	12,221	12,494	13,549	14,177
<b>Total Revenues</b>	9,221	9,151	10,174	10,701	10,963	17,539	12,714	12,221	10,484	13,347	14,177
<b>Expenses</b>											
Operation Expenses											
Water Dept Salaries	7,403	7,530	7,720	7,880	4,541	4,507	4,370	4,050	4,746	4,943	5,143
P/W Subtotal	7,151	7,199	7,200	7,229	7,240	7,217	7,134	7,131	7,359	7,387	7,417
Cost Shared	307	181	354	400	418	430	443	451	470	484	499
Transfers	12	21	10	10	10	10	10	10	10	10	10
Dept Services	289	391	900	7,136	4,109	4,900	4,710	4,711	4,429	4,419	4,411
Insurance Subtotal	141	147	145	23	152	131	141	140	149	154	159
Support Subtotal	240	240	240	257	268	280	292	300	318	331	347
Auto/Equipment											
<b>Total Operating Expenses</b>	8,748	8,301	8,668	7,334	10,896	11,238	11,314	11,505	11,475	11,729	12,347
CP Expenses - Faith Based											
WPA	324	322	1,080	3,338	1,710	1,104	478	741	2,340	2,011	1,184
P/W Eng & Det	602	2,388	1,048	1,943	1,214	1,015	1,015	1,011	1,015	1,311	1,076
<b>Total CP Expenses</b>	842	2,690	2,128	4,281	2,924	2,173	1,493	2,430	2,361	3,326	2,199
<b>ENDING BALANCE (all funds)</b>	12,494	14,341	15,740	14,727	11,923	2,747	5,225	7,621	5,274	3,277	2,402
Operating Reserve %	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Minut Charging Balance	476	600	660	731	1,080	1,124	1,180	1,241	1,314	2,050	2,634
<b>AVAILABLE BALANCE</b>	12,910	12,741	15,080	13,996	10,733	8,324	7,875	6,069	2,436	1,961	853



# Projected Water Fund Balance



## Previous Council Guidance on Rates

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- ❑ Rate increases should be done with smaller percentage increases on a more frequent basis, as opposed to larger increases on a less frequent basis.
  
- ❑ Maintain a 10% operating reserve  
(Approximately five weeks of expenses)



## Operating Reserve

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- ❑ For FY 14/15:
  - \$649,000 in Water Fund
  - \$534,000 in Sewer Fund
  
- ❑ Is this an adequate reserve?



## Purpose of an Operating Reserve

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“To mitigate against current and future risks (e.g. revenue shortfalls and unanticipated expenses) and to ensure stable services and fees.”

*Government Finance  
Officers Association (GFOA)  
Best Practices*



## GFOA Best Practices

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“...Under no circumstances should the target for working capital be less than 45 days worth of annual operating [and depreciation] expenses and other working capital needs.”

*Government Finance  
Officers Association (GFOA)  
Best Practices*



## Considerations

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- Support from general government
- Cash Cycles / variations in cash position
- Customer Concentration
- Control over rates
- Debt position
- Control over expenses / fixed versus variable



## Risk of Unanticipated Expenses

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- Emergency Basin Liner Repairs (2013)**  
\$550,000
- Failure of Standby Generator**  
\$750,000
- Failure of Sanitary Sewer under I-35**  
\$750,000
- Water Main Failure under Squaw Creek**  
\$785,000
- Arc Flash Explosion in Switchgear**  
\$1,300,000
- Catastrophic Failure of Trickling Filter Media**  
\$1,600,000 per filter



## Operating Reserve Benchmarks

Ames	10% of Annual Operating Budget
Ankeny	50% of Annual Operating Budget
Boone	25% of Annual Revenue
Council Bluffs	50% of Annual Operating Budget
Iowa City	30% of Annual Operating Expenses and Transfers plus Depreciation
Johnston	40% of Annual Operating Budget
Newton	25% of annual operating budget
Urbandale	25% of Annual Operating Budget
West Des Moines Water Works	25% of Annual O&M budget (currently \$2.55MM)



## Proposed Revision to Operating Reserve Guidelines

- ❑ Stay with 10% of Annual Operating Expenses through FY 17/18
- ❑ Begin in FY 18/19 increasing by 2% per year until at 25% of Annual Operating Expenses inclusive of debt service

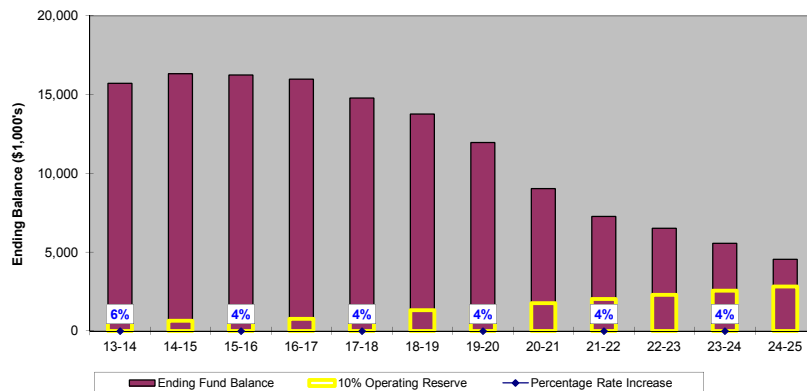


## Comparative Impact on Water Rates

Year	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25
10% Reserve	4%		4%		2%		3%		3%	
25% Reserve	4%		4%		4%		4%		4%	



## Projected Water Fund Balance

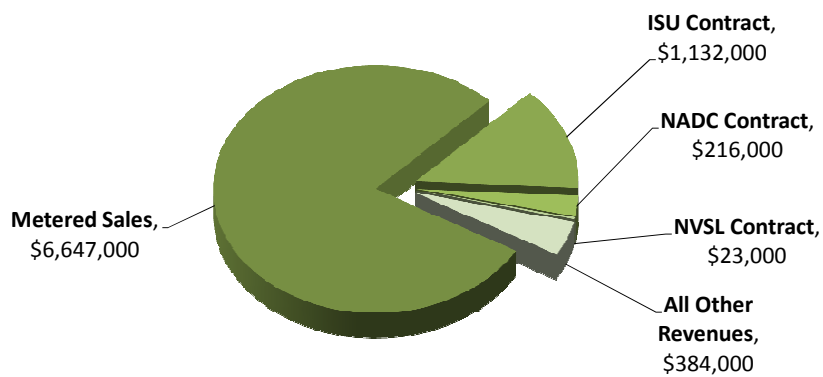




## SEWER RATE ADJUSTMENTS - 2015



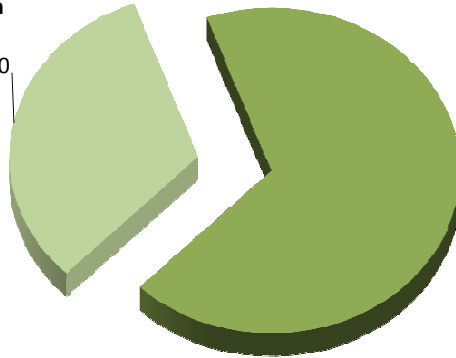
### Sewer Revenue Categories - FY 2014/15 Estimates



## Sewer Revenue Categories - FY 2014/15 Estimates

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Minimum  
Charge,  
\$2,136,000



Consumption,  
\$4,511,000



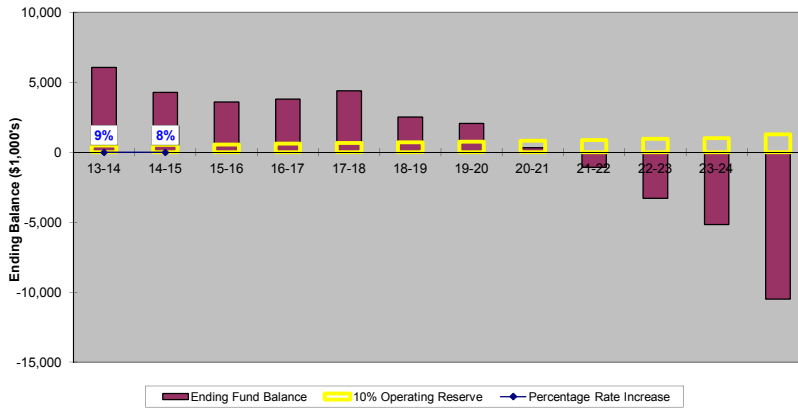
## Current Rates - Sewer

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- ❑ Minimum Bill:  
\$10.20 per month per customer account
  
- ❑ Consumption:  
\$0.0261 per cubic foot



# Projected Sewer Fund Balance

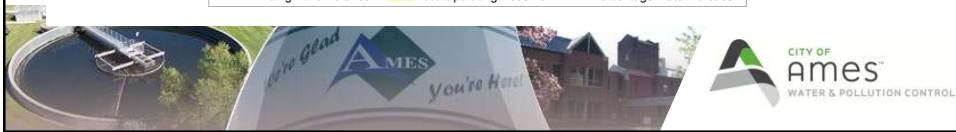
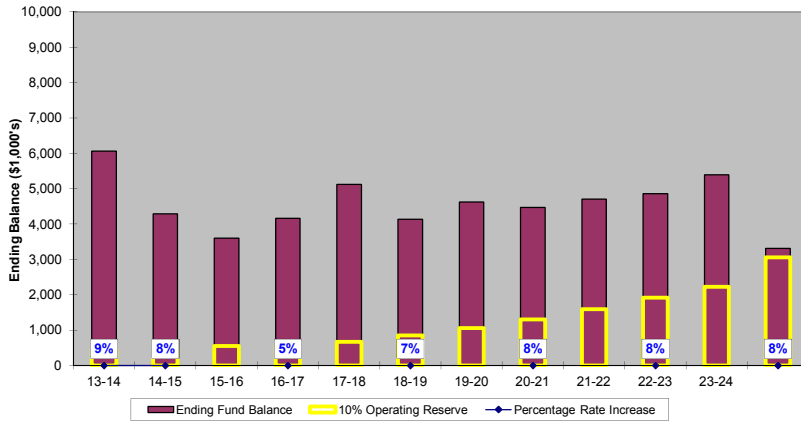


# Comparative Impact on Sewer Rates

Year	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25
10% Reserve		5%		6%		6%		8%		8%
25% Reserve		5%		7%		8%		8%		8%



# Projected Sewer Fund Balance



# CUSTOMER PERSPECTIVE



## Combined Pattern of Rate Adjustments

Year	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25
Water	4%		4%		4%		4%		4%	
Sewer		5%		7%		8%		8%		8%



## Combined Pattern of Rate Adjustments

Year	15-16	16-17	17-18	18-19
Water	4%		→	4%
Sewer	5%	←		7%
Electric		5% ECA	4% Rates	



## Sample Customer Bill – Median Residential

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
600 kWh and 600 cf	\$75.86	\$3.45	\$22.98	\$25.86	\$130.25
07/01/15 Rate Change	\$0.00	\$0.00	\$0.92	\$1.29	\$2.21
Totals	\$75.86	\$3.45	\$23.90	\$27.15	\$132.36
<b>% Impact on Total Bill</b>					<b>1.62%</b>



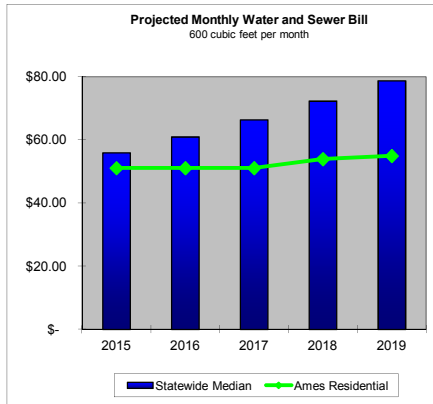
## Sample Customer Bill – Non-residential

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
10,000 kWh and 3,000 cf	\$1,128.00	\$6.90	\$102.12	\$88.50	\$1,325.52
07/01/15 Rate Change	\$0.00	\$0.00	\$4.08	\$4.43	\$8.51
Totals	\$1,128.00	\$6.90	\$106.20	\$92.93	\$1,334.03
<b>% Impact on Total Bill</b>					<b>0.64%</b>

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
100,000 kWh and 20,000 cf	\$9,537.73	\$10.35	\$624.48	\$532.20	\$10,704.76
07/01/15 Rate Change	\$0.00	\$0.00	\$24.98	\$26.61	\$51.59
Totals	\$9,537.73	\$10.35	\$649.46	\$558.81	\$10,756.35
<b>% Impact on Total Bill</b>					<b>0.48%</b>



## Combined Water and Sewer Bill – 2018 Projection



**Ames:**

Water	\$25.85
Sewer	29.05
<b>Combined</b>	<b>\$54.90</b>

**State Median**

Water	\$37.22
Sewer	39.02
<b>Combined</b>	<b>\$76.24</b>



## STAFF RECOMMENDATION AND COUNCIL DIRECTION



## Recommended Rate Adjustments

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4% Across-the-board increase in Water

5% Across-the-board increase in Sewer

Effective for bills mailed on or after July 1, 2015



## Operating Reserve Guidance

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Remain at 10% of Operating Expenses through FY 17/18

Begin increasing at 2% per year beginning in FY 18/19  
until reaching 25%





# Timeline

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- ❑ First Reading – April 14  
Second Reading – April 28  
Third Reading & Adoption – May 12
  
- ❑ Effective for Meter Reads  
beginning in June 2015
  
- ❑ Appears on Utility Bills Mailed  
on and after July 1, 2015



Water and Pollution Control Department  
March 10, 2015

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## **FY 15/16 WATER AND SEWER RATES**



## Supplemental Information

The slides that follow are for reference only, and will not be covered in the presentation unless there are questions.



### Current Water Rates – Minimum Charge, \$/mo.

<u>Size of Meter</u>	<u>Monthly Charge</u>
5/8" or 5/8" x 3/4"	10.56
3/4"	21.12
1"	42.24
1-1/2"	84.48
2"	168.96
2", battery of 2	327.26
2", battery of 3	485.63
3"	337.84
4"	570.08
6"	950.13
8"	1,900.26
10"	2,850.39



## Current Water Rates – Multi-unit Charges, \$

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**Multiple dwellings** – Multiple dwellings (such as in a mobile home park) may be serviced from a single water meter. However, there is a surcharge added to the minimum bill charge.

5/8" meter serving 2 or more dwelling units	3.04/month/unit
3/4" meter serving 4 or more dwelling units	3.04/month/unit
1" meter serving 8 or more dwelling units	3.04/month/unit
1-1/2" meter serving 16 or more dwelling units	3.04/month/unit
2" meter serving 30 or more dwelling units	90.96/month
for the first 30 units plus \$4.72/month per unit for each additional unit in excess of 30 units	
3" or larger meter serving any number of dwelling units	4.18/month/unit



## Current Water Rates – Yard Meter Minimum Charge, \$/mo.

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Size of Meter	Monthly Charge
5/8" or 5/8" x 3/4"	4.00
3/4"	6.21
1"	8.65
1-1/2"	11.93
2"	15.86
3"	20.63
4"	25.65
6"	30.72
8"	35.79
10"	40.48



## Current Sewer Rates

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**Existing**

**Consumption**

All customers; all consumption, \$ per cubic foot

**0.0261**

**Minimum Charge**

All customers, \$ per month

**10.20**



## Sample Customer Bills

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		Electric Summer	Storm Water	Water Summer	Sewer	Total
Minimal Residential	Electric / Water Use					
	100 kWh and 100 cf	\$19.31	\$3.45	\$12.63	\$12.81	\$48.20
	07/01/15 Rate Change	\$0.00	\$0.00	\$0.51	\$0.64	\$1.15
	Totals	\$19.31	\$3.45	\$13.14	\$13.45	\$49.35
<b>% Impact on Total Bill</b>						<b>2.39%</b>
		Electric Summer	Storm Water	Water Summer	Sewer	Total
Median Residential	Electric / Water Use					
	600 kWh and 600 cf	\$75.86	\$3.45	\$22.98	\$25.86	\$128.15
	07/01/15 Rate Change	\$0.00	\$0.00	\$0.92	\$1.29	\$2.21
	Totals	\$75.86	\$3.45	\$23.90	\$27.15	\$130.36
<b>% Impact on Total Bill</b>						<b>1.72%</b>



## Sample Customer Bills

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
1,000 kWh and 1,000 cf	\$121.10	\$3.45	\$31.26	\$36.30	\$192.11
07/01/15 Rate Change	\$0.00	\$0.00	\$1.25	\$1.82	\$3.07
Totals	\$121.10	\$3.45	\$32.51	\$38.12	\$195.18
<b>% Impact on Total Bill</b>					<b>1.60%</b>

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
2,000 kWh and 600 cf	\$237.60	\$3.45	\$26.76	\$25.86	\$293.67
07/01/15 Rate Change	\$0.00	\$0.00	\$1.07	\$1.29	\$2.36
Totals	\$237.60	\$3.45	\$27.83	\$27.15	\$589.70
<b>% Impact on Total Bill</b>					<b>0.80%</b>



## Sample Customer Bills

Electric / Water Use	Electric Summer	Storm Water	Water Summer	Sewer	Total
5,000 kWh and 1,000 cf	\$589.00	\$3.45	\$37.56	\$36.30	\$666.31
07/01/15 Rate Change	\$0.00	\$0.00	\$1.50	\$1.82	\$3.32
Totals	\$571.50	\$3.45	\$39.06	\$38.12	\$652.13
<b>% Impact on Total Bill</b>					<b>0.51%</b>

Electric / Water Use	Summer	Water	Summer	Sewer	Total
10,000 kWh and 3,000 cf	\$1,128.00	\$6.90	\$102.12	\$88.50	\$1,360.52
07/01/15 Rate Change	\$0.00	\$0.00	\$4.08	\$4.43	\$8.51
Totals	\$1,128.00	\$6.90	\$106.20	\$92.93	\$1,334.03
<b>% Impact on Total Bill</b>					<b>0.64%</b>



## Sample Customer Bills

	Electric / Water Use					Total
	Electric Summer	Storm Water	Water Summer	Sewer		
Commercial (LP) 20,000 kWh and 5,000 cf	\$2,027.57	\$6.90	\$156.12	\$140.70	\$2,331.29	
07/01/15 Rate Change	\$0.00	\$0.00	\$6.24	\$7.04	\$13.28	
Totals	\$2,027.57	\$6.90	\$162.36	\$147.74	\$12,344.57	
<b>% Impact on Total Bill</b>	<b>0.57%</b>					

	Electric / Water Use					Total
	Electric Summer	Storm Water	Water Summer	Sewer		
Commercial (LP) 60,000 kWh and 15,000 cf	\$5,771.27	\$10.35	\$447.24	\$401.70	\$6,630.56	
07/01/15 Rate Change	\$0.00	\$0.00	\$17.89	\$20.09	\$37.98	
Totals	\$5,771.27	\$10.35	\$465.13	\$421.79	\$6,668.54	
<b>% Impact on Total Bill</b>	<b>0.57%</b>					



## Sample Customer Bills

	Electric / Water Use					Total
	Electric Summer	Storm Water	Water Summer	Sewer		
Commercial (LP) 100,000 kWh and 20,000 cf	\$9,537.73	\$10.35	\$624.48	\$832.20	\$10,704.76	
07/01/15 Rate Change	\$0.00	\$0.00	\$24.98	\$26.61	\$51.59	
Totals	\$9,537.73	\$10.35	\$649.46	\$558.81	\$10,756.35	
<b>% Impact on Total Bill</b>	<b>0.48%</b>					

