

Forsyth County
Water and Wastewater
Rate Study

Board of County
Commissioners
Work Session

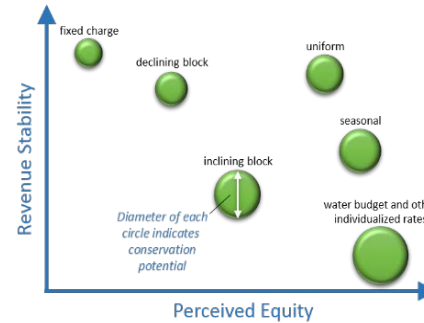
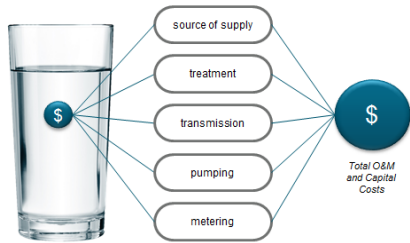
June 26, 2018



Rate Design Objectives

- Sufficient
- Implementable
- **Equitable**
- Stable (revenues)
- Predictable (prices)
- Forward looking
- **Responsive**
(reflective of usage)
- Affordable
- Consistent (with Utility policies)
- Manageable
- **Conservation inducing**
- **Defensible**
- Competitive

Rate Study Process



Revenue Requirements

- Demand/Customer Forecast
- Revenues
- Operating Costs
- Capital Costs
- Financial Policies & Funding Options
- Cash Flow Projections
- Forecasting Model

Cost Allocation

- Define Customer Classes
- Distribute Costs Fairly
- Compare to Current Rev.
- Update Misc. Fees

Rate Design

- Set Objectives & Identify Options
- Measure Affordability
- Quantify Impacts & Compare to others

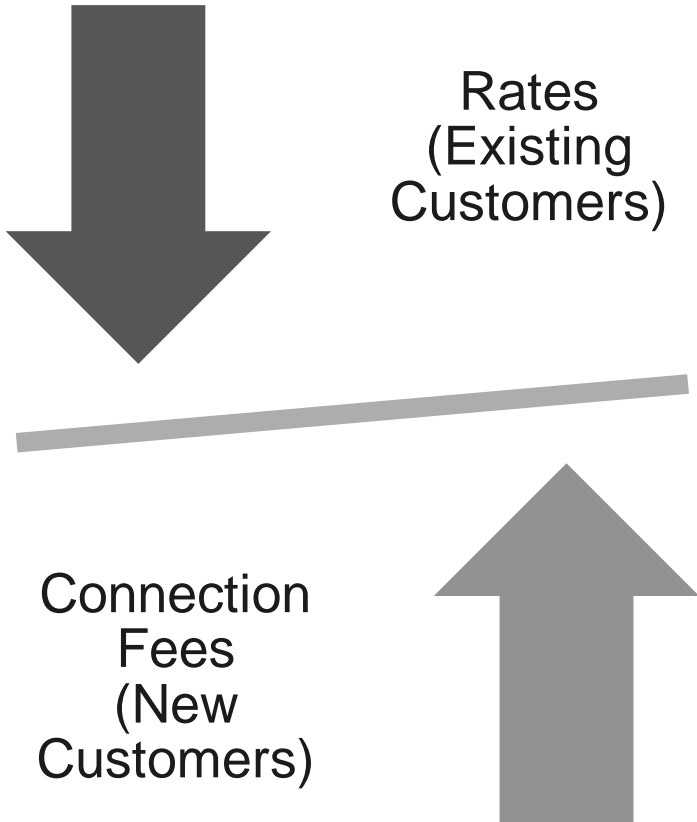
Presentations & Documents

- Resolutions/Ord.
- Billing Practices
- Presentations
- Draft & Final Reports

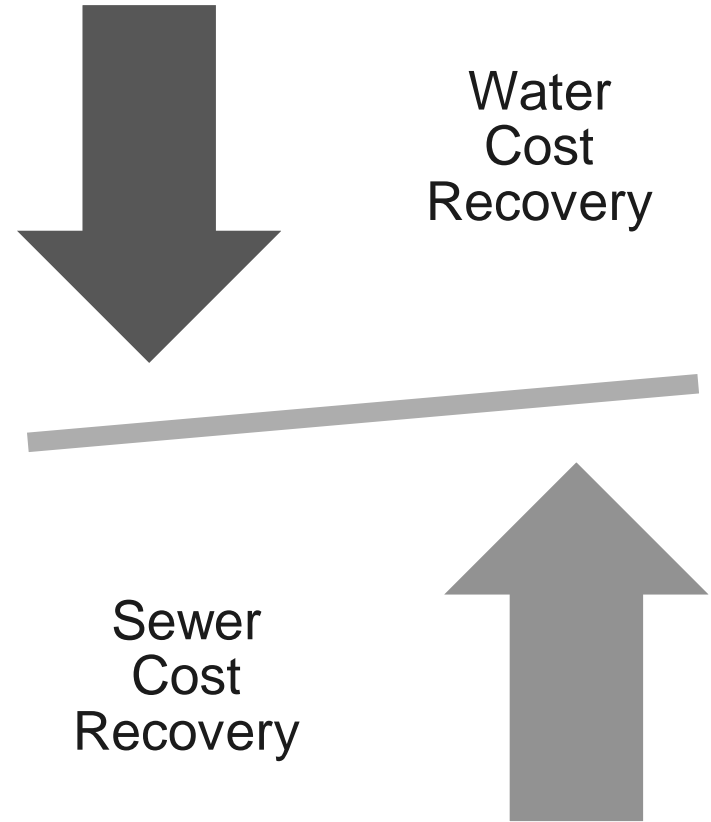
Our approach is defensible and uses AWWA and WEF guidelines.

Balancing Decisions

Rates & Connection Fees



Water & Sewer



Water and Sewer Cost-of-Service Study

Test Year FY 2018

Description	Water	Sewer
Current Rate Revenue	\$ 27,534,490	\$ 19,916,257
Total Rate Revenue Req. under COS	\$ 21,662,024	\$ 25,788,723
Over/(Under) Recovery	\$ 5,872,466	\$ (5,872,466)

Smoothed Rate Increases

Water: 3.5% annual increases
 Sewer: 30% increase, then 5.0% annual increases

SUMMARY



ROLL CALC SAVE

Forsyth County Water and Sewer

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Water Rate Plan	0.00%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Sewer Rate Plan	0.00%	30.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Reuse Rate Plan	0.00%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
DSC With Connect. Fees	2.32	2.46	2.23	2.26	1.92	1.97	1.84	1.88	1.79	1.86	1.90
DSC Without Connect. Fees	1.28	1.49	1.42	1.48	1.40	1.46	1.38	1.44	1.39	1.46	1.51
Water Total Cost Recovery %	76.5%	93.9%	122.2%	121.5%	124.4%	119.9%	104.2%	112.6%	115.7%	129.1%	117.4%
Sewer Total Cost Recovery %	32.3%	43.4%	83.2%	83.6%	82.1%	84.7%	98.1%	91.0%	89.0%	82.0%	88.4%
Avg Bill (5,000 gal)	\$59.80	\$70.95	\$74.06	\$77.36	\$80.82	\$84.41	\$88.16	\$92.11	\$96.21	\$100.51	\$104.98

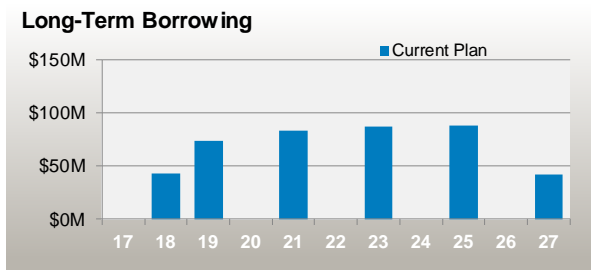
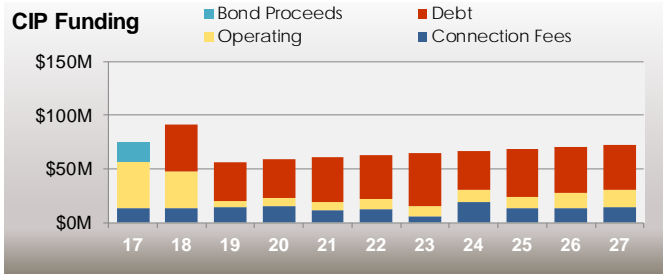
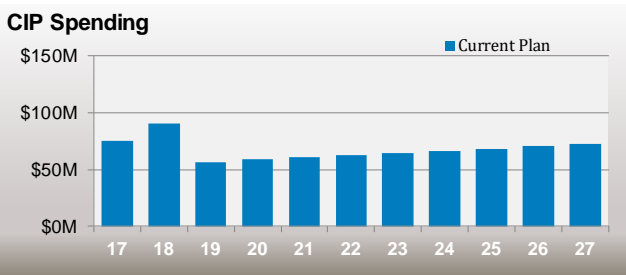
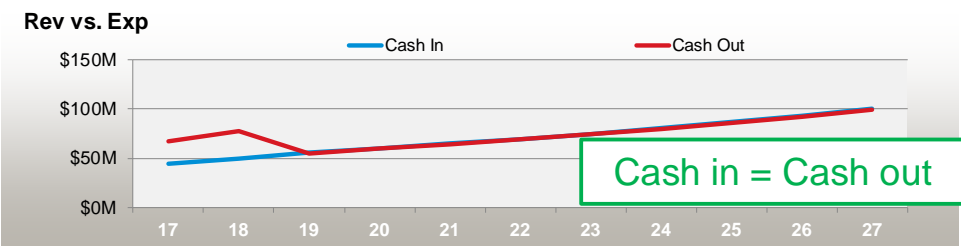
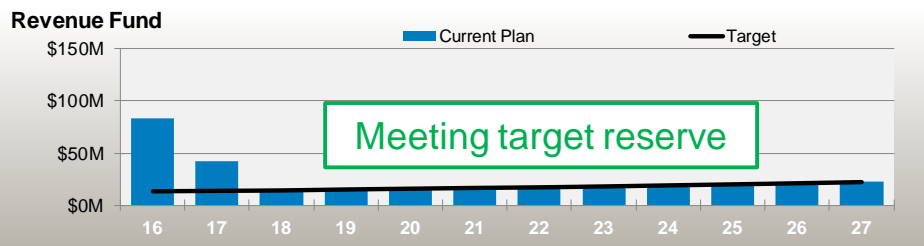
Cumulative Rate Change	
FY 2022	FY 2027
41.15%	75.55%
Cumulative New Debt Service Pmt.	
FY 2022	FY 2027
\$11,099,998	\$23,717,830

Scenario Testing

WTR/WW EXP Basis Volume

Sufficient coverage

Date of 2018 Adj. 4/1/2018



Recommended Water – 3.5% Increase

2018 Fixed Charge					
Meter Size	Residential	Irrigation	Commercial	Hydrant	Reuse
5/8"	\$ 12.42	\$ 12.42	\$ 12.42	\$ 31.05	\$ 12.42
1"	15.53	15.53	15.53	31.05	15.53
1 1/2"	20.70	20.70	20.70	31.05	20.70
2"	31.05	31.05	31.05	31.05	31.05
3"	93.15	93.15	93.15	31.05	93.15
4"	129.38	129.38	129.38	31.05	129.38
6"	258.75	258.75	258.75	31.05	258.75
8"	465.75	465.75	465.75	31.05	465.75

2018 Volumetric Rate					
Customer Class	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5
Residential	\$ 3.50	\$ 4.73	\$ 6.63	\$ 9.41	\$ 13.65
Irrigation	7.00	10.50	14.00	17.50	17.50
Commercial	3.85	3.85	3.85	3.85	3.85
City \$ Etowah	Match City rate	Match City rate	Match City rate	Match City Rate	Match City rate
Hydrant	4.69	4.69	4.69	4.69	4.69
Reuse	2.33	2.33	2.33	2.33	2.33

Residential Water Rate Change

Water Rate Change	
Description	Increase
Base Charge – 5/8” Meter	\$ 0.42
	Per 1,000 gallons
Tier 1 (1,000 – 6,000 gallons)	\$ 0.10
Tier 2 (6,000 – 12,000 gallons)	0.20
Tier 3 (12,000 – 24,000 gallons)	0.97
Tier 4 (24,000 – 36,000 gallons)	1.48
Tier 5 (over 36,000 gallons)	3.65

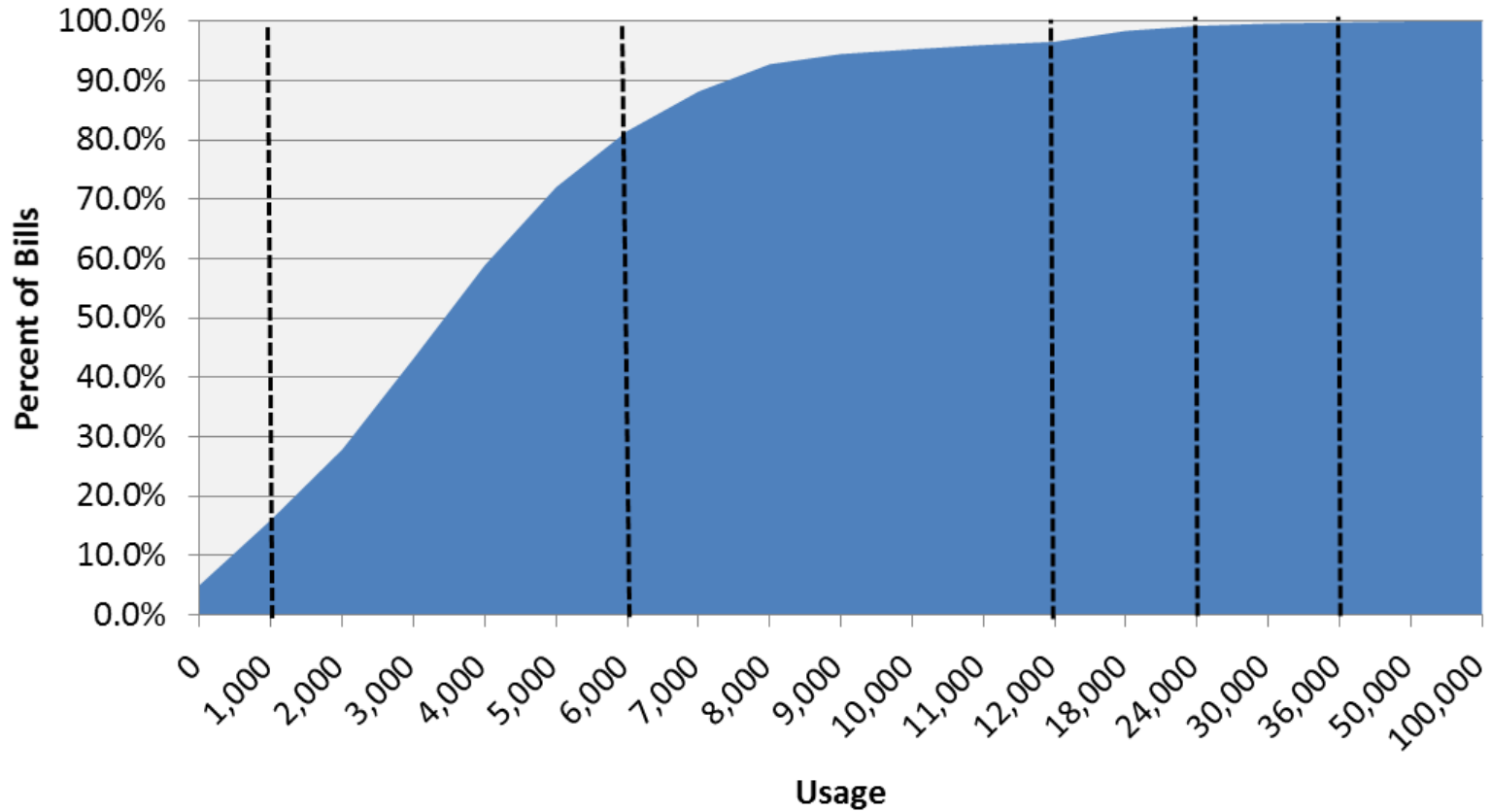
Recommended Sewer – 30.0% Increase

2018 Recommended Rates		
Customer Class	Monthly Fixed Charge	Volumetric Rate (\$ per 1,000 gallons)
Residential	\$ 13.00	\$ 6.29
Commercial	\$ 26.00	\$ 6.29

Sewer Rate Change	
Description	Increase
Base Charge – 5/8” Meter	\$ 3.00
Unit Rate per 1,000 gallons	1.45

Percent of Bills in Tiers

Residential, 5/8-inch Meter



Typical Water Monthly Bill

Residential 5/8" 5,000 gallons

Water System Name	Fixed	Volume	Total
Etowah Water & Sewer Authority (Dawson County)	\$ 25.50	\$ 34.02	\$ 59.52
Paulding County	6.00	41.15	47.15
Henry County Water and Sewer Authority	12.64	24.35	36.99
Dawsonville	20.00	16.80	36.80
Douglasville (Douglas County Water & Sewer Authority)	11.14	23.95	35.09
City of Atlanta	6.56	27.98	34.54
Rockdale County Water & Sewer Authority	14.63	18.11	32.74
Gwinnett County	7.50	24.60	32.10
Cherokee County Water and Sewerage Authority	9.00	17.95	26.95
Forsyth County (Recommended Alternative 1 FY 2018)	12.42	14.00	26.42
Clayton County Water Authority	10.05	16.10	26.15
Forsyth County (Existing)	12.00	13.60	25.60
Cobb County	7.00	16.71	23.71
City of Gainesville	6.17	16.90	23.07
Fulton County	7.25	15.25	22.50
City of Cumming (outside City limits)	10.72	11.60	22.32
City of Cumming (inside City limits)	8.22	9.85	18.07
DeKalb County	2.84	13.56	16.40

Typical Sewer Monthly Bill

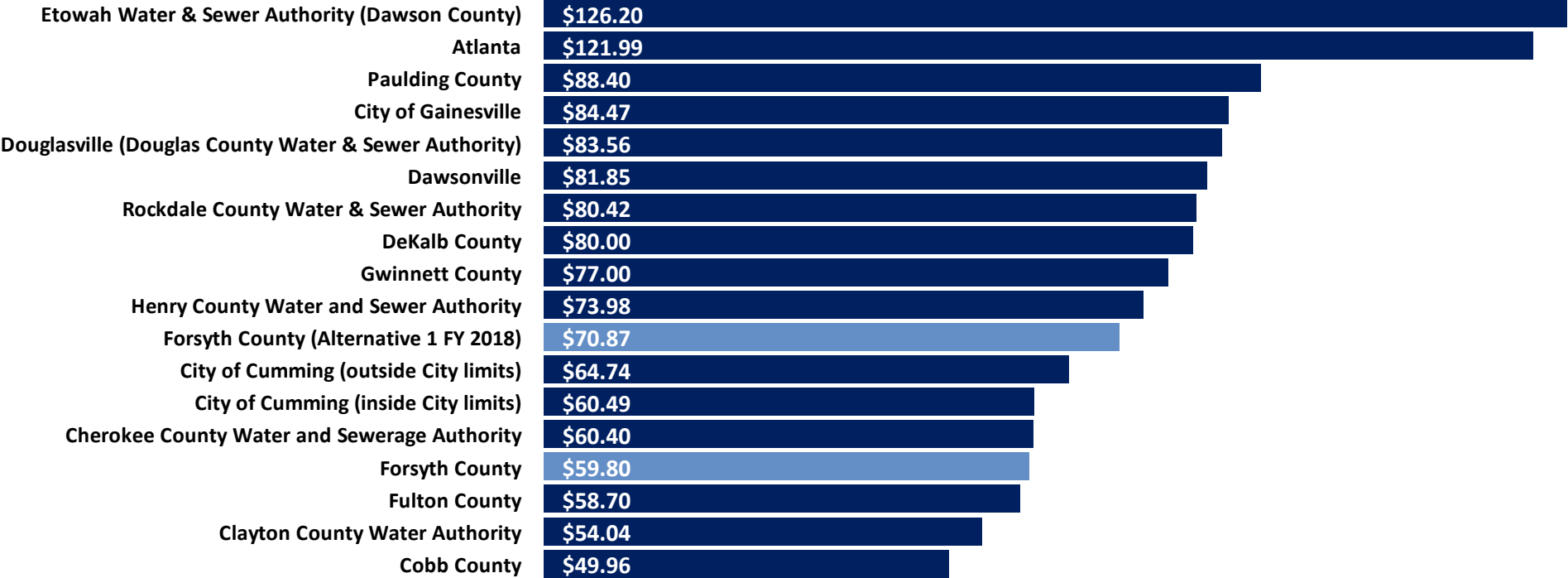
Residential 5/8" 5,000 gallons

Sewer System Name	Fixed	Volume	Total
City of Atlanta	\$ 6.56	\$ 80.89	\$ 87.45
Etowah Water & Sewer Authority (Dawson County)	25.50	41.18	66.68
DeKalb County	6.90	56.70	63.60
City of Gainesville	12.00	49.40	61.40
Douglasville (Douglas County Water & Sewer Authority)	6.22	42.25	48.47
Rockdale County Water & Sewer Authority	14.63	33.05	47.68
Dawsonville	23.00	22.05	45.05
Gwinnett County	5.00	39.90	44.90
Forsyth County (Recommended FY 2018)	13.00	31.45	44.45
City of Cumming (inside City limits)	8.22	34.20	42.42
City of Cumming (outside City limits)	8.22	34.20	42.42
Paulding County	2.50	38.75	41.25
Henry County Water and Sewer Authority	12.64	24.35	36.99
Fulton County	7.25	28.95	36.20
Forsyth County (Existing)	10.00	24.20	34.20
Cherokee County Water and Sewerage Authority	12.60	20.85	33.45
Clayton County Water Authority	10.73	17.16	27.89
Cobb County	-	26.25	26.25

Typical Combined Monthly Bill

Residential 5/8" 5,000 gallons

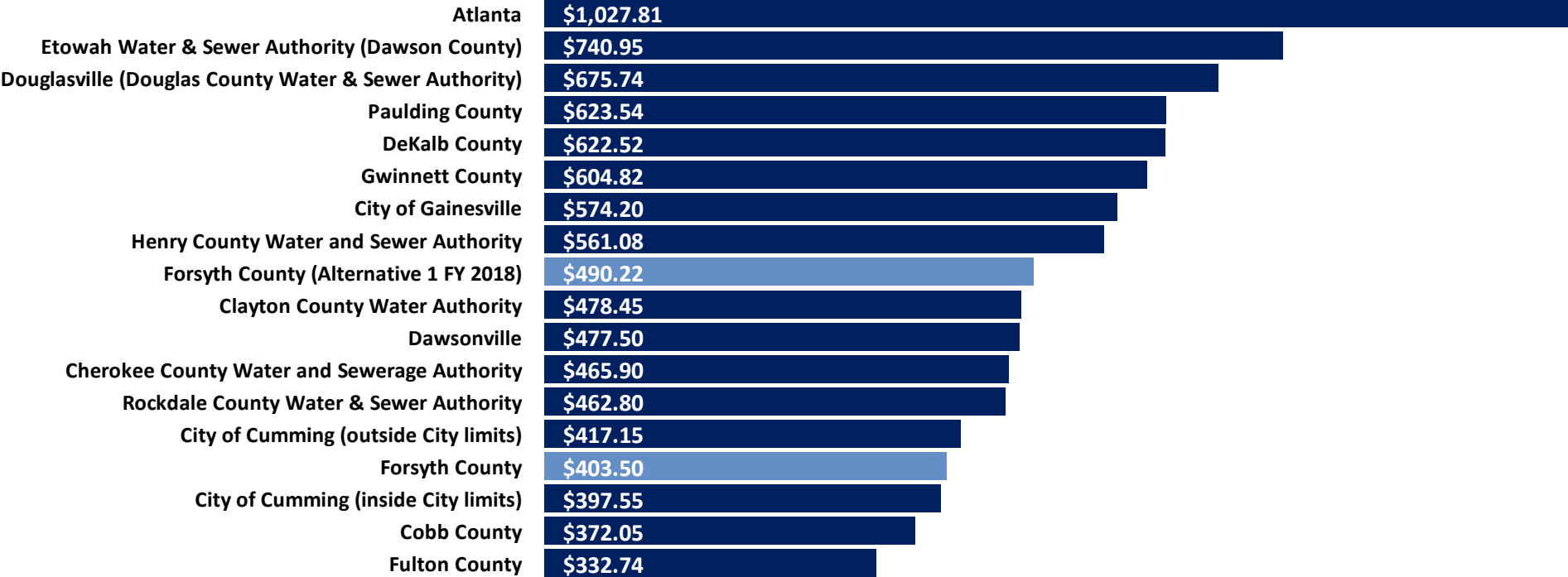
Combined Water & Sewer Bill Survey at 5,000 Gallons per Month



Typical Combined Monthly Bill

Residential 5/8" 36,000 gallons

Combined Water & Sewer Bill Survey at 36,000 Gallons per Month



Connection Fees

Growth Pays for Growth

Water

- Capital costs with asset life greater than 10 years
 - Supply
 - Treatment
 - Transmission / Distribution
- System asset value nets out outstanding principal on related debt

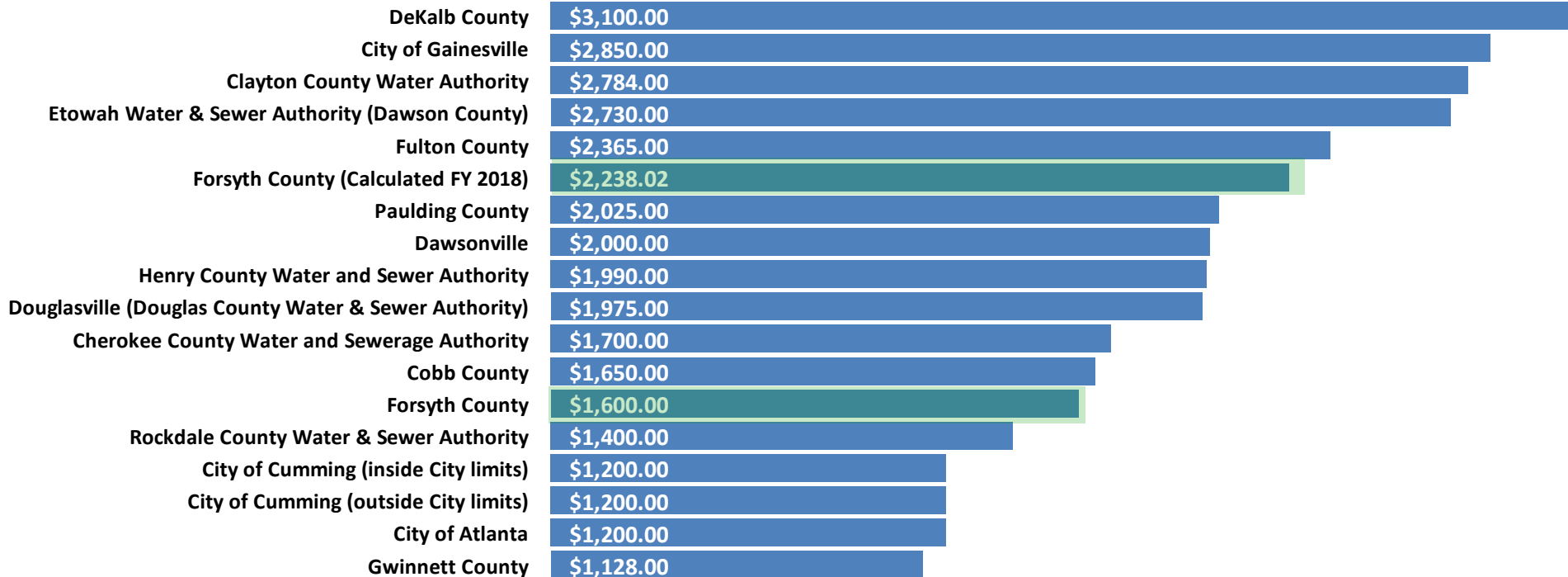
Sewer

- Capital costs with asset life greater than 10 years
 - Treatment
 - Collection
- System asset value nets out outstanding principal on related debt

Water Connection Fee

Existing Fee for 5/8" Meter	Recommended Fee for 5/8" Meter	Difference
\$ 1,600	\$ 2,238	\$ 638

Water Connection Fees



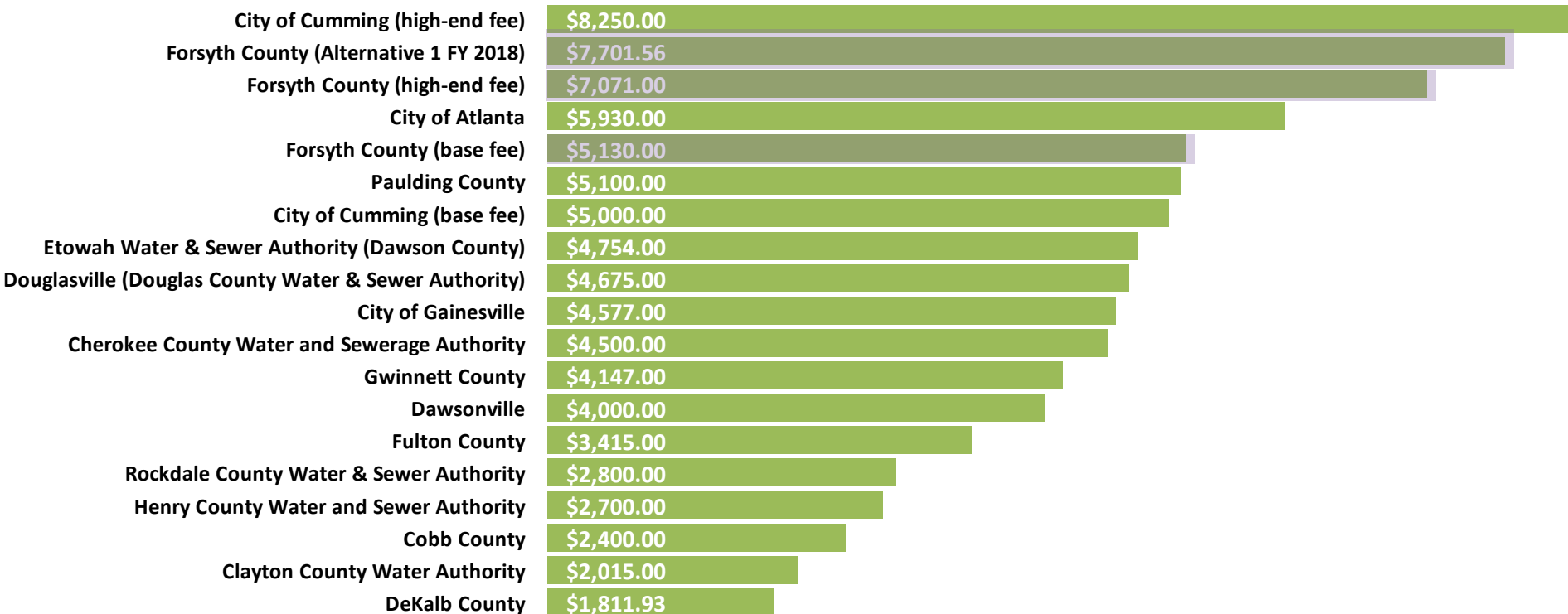
Sewer Connection Fee

Existing Base Fee for 5/8" Meter	Existing Low Fee Average ¹	Existing High Fee Average ²	Existing Overall Average	Recommended Base Fee for 5/8" Meter
\$ 5,130	\$ 5,913	\$ 6,957	\$ 6,435	\$ 7,702

¹Existing low fee average includes: James Creek basin, Shakerag WRF, and Hampton.

²Existing high fee average includes: Castleberry Road, Mullinax Road Outfall Sewer Line, and City of Cumming/Baldrige Creek.

Sewer Connection Fees



Ancillary Fees

Fire Protection Charge

- Add fixed monthly charge
- Keep volumetric rate per 1,000 gallons

Other Ancillary Fees

- Minimal changes recommended