

Water and Sewer Budget/Operational Presentation



Public Services

Overview

- Current operational funding by division
- Current projects and 5 year project plan
- Funding sources
 - Water/Sewer rates and fees
- Areas of concern
- Future large-scale projects
- Financial Plan (Eric Olmedo)



Divisional Funding

Water Sewer Enterprise Fund

Operational Administration – \$2.6 million (\$1.2M in PTRWA)

Ward Water Treatment – \$3.1 million

Eastside Wastewater Treatment - \$2.8 million

Westside Wastewater Treatment – \$1.6 million

Residuals Management – \$1.4 million

Laboratory – \$0.9 million

Maintenance – \$3.0 million

Mains (Sewer Collection & Water Distribution) – \$4.1 million

Total Budget: \$19.5 million with 138 employees

Regional Water Agreement

- Piedmont Triad Regional Water Authority (PTRWA)
- Annual Average 2.28 Million gallons / day
- PTRWA Permitted for 12 Million gallons / day
- \$845,000 annual payments for water
- \$310,000 in membership dues
- 19% Partner of the Authority with 2 Board Members



Ward Water Treatment Plant



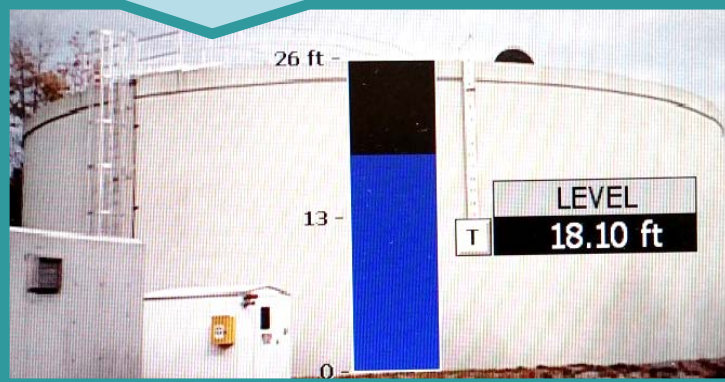
- Annual Avg 12.39 MGD (FY14-15)
- Permitted for 24 MGD
- Safe Yield for Lakes 22 MGD
- 2 Source Water Lakes: Arnold Koonce Lake and Oak Hollow Lake
- **\$48 million upgrade 2022-2023**
(Built in 1980's)

Remote Storage Tanks

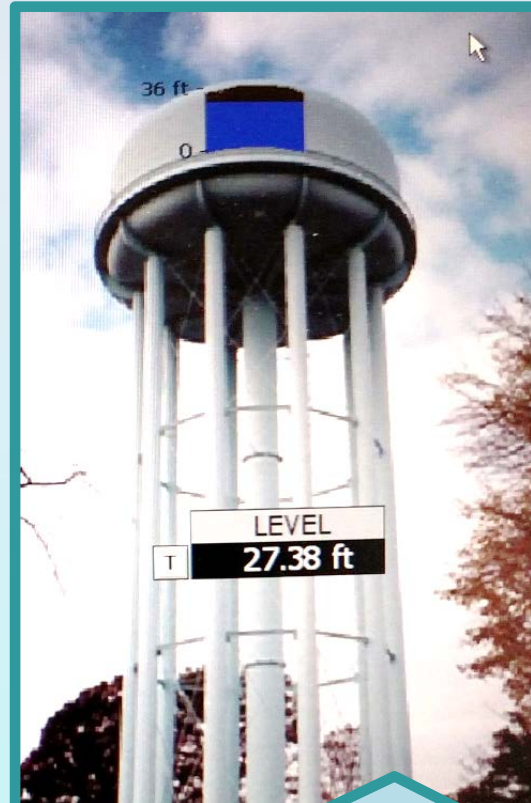
Upgrades for water demand, fire flow protection, and age of tanks.

Expansion due to new service area

Sandy Ridge Reservoir



I-74 Elevated Storage Tank



Lexington Elevated Storage Tank

Needs replacement by 2025

Ward Elevated Storage Tank

\$3.4 M – Under Contract
(Built 1929)

Wastewater Treatment Plant



2004 upgrade
\$60 million

2025 upgrade
\$100 million

Partnership

Eastside Wastewater Treatment Plant *26 MGD*

High Point
21.3 MGD

Archdale
2.5 MGD

Jamestown
2.0 MGD

Sedgefield
0.225 MGD

Wastewater Treatment Plant

Westside Plant



Phase 2

Phase 1

Phase 3

- Extended Aeration (upgrading to BNR)
- Permitted 6.2 MGD (currently 3.5 MGD)
- Upgrading to 8.2/10 MGD: \$50 million
- \$1.5 million stream restoration prior to upgrade

Lift Station Upgrades

- 23 Lift Stations
- **2021/2022 Upgrades**
 - (required based on future regulations)
 - **Riverdale: \$40 million**
 - **Waterview: \$10 million**



Water & Sewer Mains



- ~ 650 Miles Sewer Pipe
 - ~ 620 Miles Water Pipe
 - ~ 6,000 CHP Maintained Hydrants
 - ~ 41,500 Customer Accounts
- The lines are old, breaking more frequently. In a normal year there are approximately 30 sewer line breaks and 200 water line breaks.



Life Cycle Water/Sewer Lines Replacement

Mainline Pipes Replaced or Rehabbed Each Year	Water	Sewer
Total Miles of Pipe over the City	613	671
Replacement Target	50 years	50 years
Annual Replacement Target	2.0%	2.0%
% of Existing Pipeline Rehabbed/Replaced - 5 year avg	0.18%	0.12%
Replacement Schedule based on current % replaced	556 years	833 years
Average \$ to replace 1 mile (in pavement)/foot	\$200	\$200
1 Mile = 5,280 feet	5,280	5,280
Cost to replace 1 Mile of Water/Sewer Line	\$1,056,000	\$1,056,000

Note: Information from NC Benchmarking Project & CHP Lawson financial system

5-Year Projects Funding Plan

Projects & Funding Source	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	Total Planned
PAYG - Enterprise Funds						
Line Replacements	\$3,300,000	\$2,750,000	\$2,750,000	\$2,750,000	\$2,750,000	\$14,300,000
Demolition of Kearns WTP	\$1,250,000					\$1,250,000
Master Plan/Monitoring/Meter CO HVAC/Pumps/Electrical/ Outfall Upgrades	\$675,000	\$250,000	\$250,000	\$300,000	\$300,000	\$1,775,000
New Water/Sewer Lines	\$200,000	\$540,000	\$300,000	\$300,000	\$300,000	\$1,640,000
Sludge Removal/Tank Maintenance	\$400,000	\$475,000	\$475,000	\$475,000	\$762,500	\$2,587,500
PAYG - Enterprise Funds	\$6,350,000	\$4,265,000	\$4,325,000	\$3,825,000	\$5,812,500	\$24,577,500
Revenue Bonds						
Pump/Drives/Electrical/Lift Station/ WWTP Upgrades	\$22,000,000				\$1,800,000	\$23,800,000
Water/Sewer Utilities Relocation	\$3,062,800	\$800,000	\$3,400,000			\$7,262,800
New Water/Sewer Lines	\$2,890,000	\$2,700,000	\$8,550,000		\$8,600,000	\$22,740,000
Line Replacements		\$1,500,000	\$28,000,000	\$3,000,000		\$32,500,000
Equipment Upgrades				\$2,500,000	\$8,000,000	\$10,500,000
Alternatives - Future Projects				\$4,300,000	\$4,500,000	\$8,800,000
Revenue Bonds	\$27,952,800	\$5,000,000	\$39,950,000	\$9,800,000	\$22,900,000	\$105,602,800
Total CIP Fund	\$34,302,800	\$9,265,000	\$44,275,000	\$13,625,000	\$28,712,500	\$130,180,300

Tap/Meter Fees

Effective 1997

Meter Fees	Current Price	Current Cost	Suggested Price
Water Service and Meter			
5/8" Water meter installed	\$ 130	\$ 340	\$ 350
5/8" Water tap (service line, meter setter and box)	\$ 980	\$ 2,166	\$ 2,170
5/8" Meter set in parallel with an existing meter (meter, setter and box)	\$ 350	\$ 473	\$ 475
1" meter installed	\$ 170	\$ 396	\$ 400
1" water tap (service line, meter setter, and box) For residential home only	\$ 1,040	\$ 2,222	\$ 2,225
1 1/2" meter only (box & yoke - an additional \$200)	\$ 500	\$ 325	\$ 325
2" meter only (box & yoke - an additional \$315)	\$ 1,055	\$ 445	\$ 445
3" meter with by-pass	\$ 2,450	\$ 2,762	\$ 2,775
4" meter with by-pass	\$ 2,930	\$ 3,057	\$ 3,100
Meter Set by Contractor on Private Property			
5/8" meter, box and yoke	\$ 270		\$ 360
1" meter, box and yoke	\$ 390		\$ 475
1 1/2" meter, box and yoke	\$ 865		\$ 695
2" meter, box and yoke	\$ 1,260		\$ 830
Hydrant Meter			
Application Fee	\$ 50		\$ 50
5/8" hydrant meter deposit - refundable	\$ 200		\$ 200
3" hydrant meter deposit - refundable	\$ 800		\$ 800
Sewer Service Line with Clean-out			
4" sewer tap	\$ 1,010	\$ 1,809	\$ 1,825
Charge for additional trench for water and sewer when not necessary	\$ 875	N/A	Actual Cost
4" sewer clean-out	\$ 155	\$ 219	Actual Cost
6" sewer clean-out	\$ 195	\$ 259	Actual Cost

Tap/Meter Fees Comparison

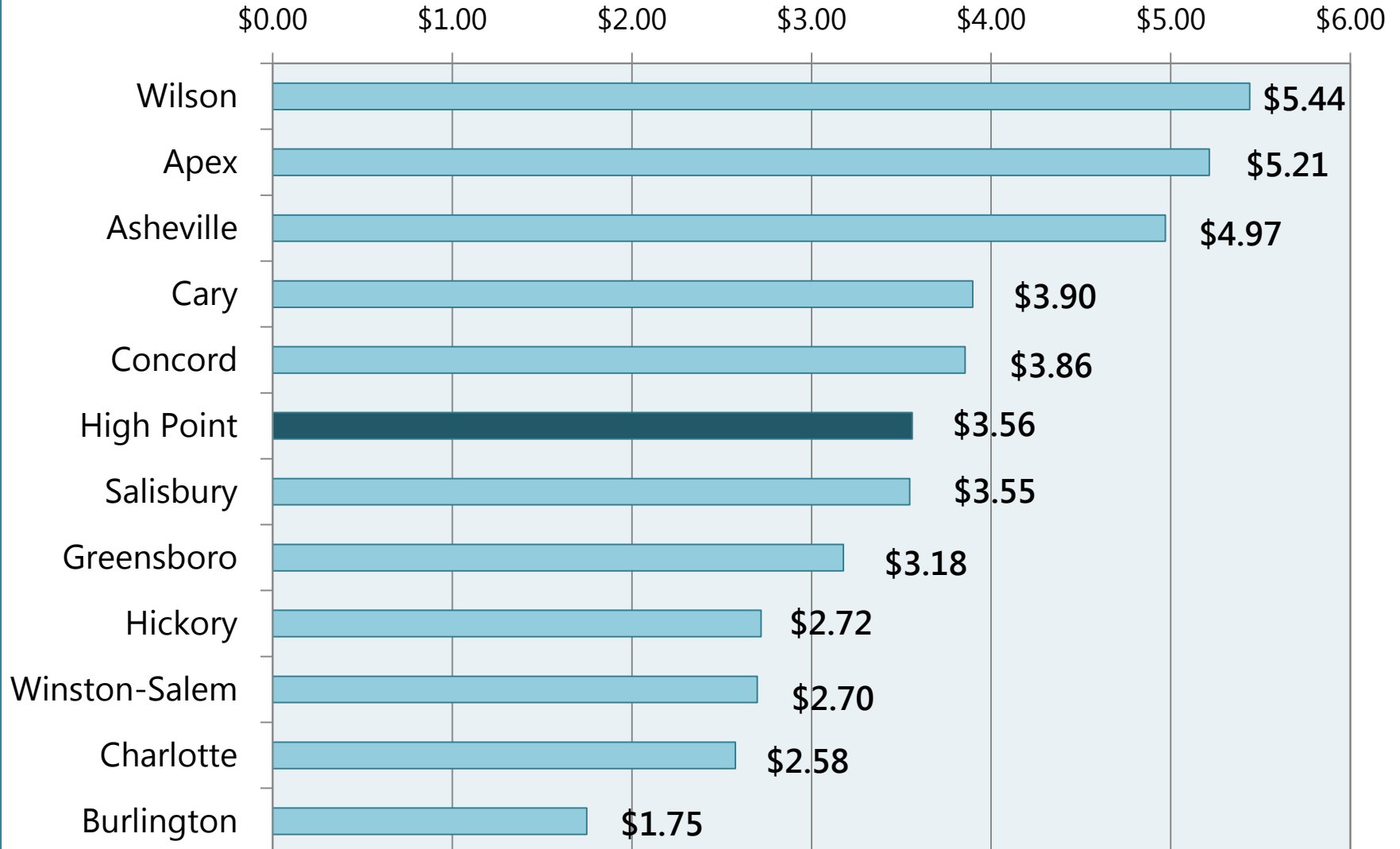
(Residential Customer)

Water		Sewer	
Winston-Salem			
3/4" Meter	\$50	4" Connection	\$1,300
3/4" Connection	\$825		-
Water Assessment Fee (110 lf x \$21)	\$2,310	Sewer Assessment Fee (110 lf x \$45)	4,950
	<u>\$3,185</u>		<u>\$6,250</u>
Total Charge - Water and Sewer		\$9,435	
Greensboro			
5/8" Meter	\$185	4" Connection	-
Tap Fee - new residence	Contractor		-
Capacity Fee	\$980	Capacity Fee	\$990
	<u>\$1,165</u>		<u>\$990</u>
Total Charge - Water and Sewer		\$2,155	
City of High Point			
3/4" Meter	\$130	4" Connection	\$1,010
Tap Fee	\$980		-
Capacity Fee	-	Capacity Fee	-
	<u>\$1,110</u>		<u>\$1,010</u>
Total Charge - Water and Sewer		\$2,120	

Benchmarking Data from UNC

Cost to Produce 1,000 Gallons of Billed Water

(Median = \$3.62/1,000 gals)





High Point

Rates Comparison

Financial Benchmarks

Characteristics

Links

Edit Data or Add Utility

Select residential bill and monthly consumption amount

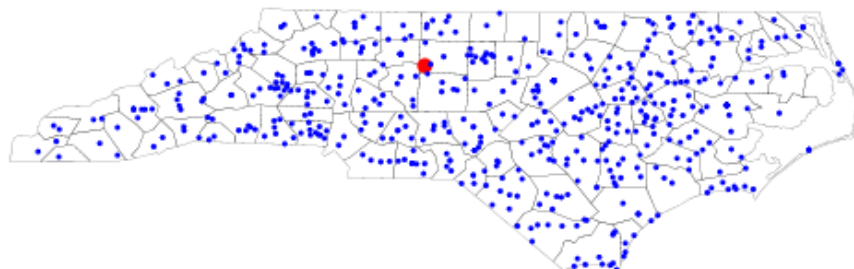
- Water Bill**
- Sewer Bill
- Water + Sewer Bill



Monthly Water Bill: \$25.41

Select comparison group: All Utilities

Comparing to all utilities in survey

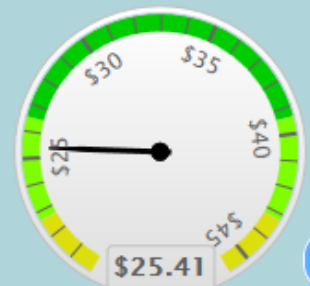


510 rate structures compared

Effects of raising rates by: 0%

Bill Comparison

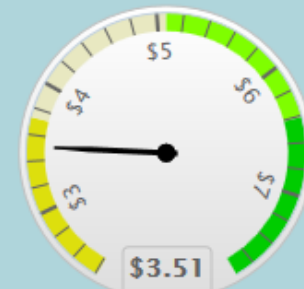
Water Bill at
5,000 gallons
Median: \$31.26



Min \$10.00 Max \$107.70

Conservation Signal

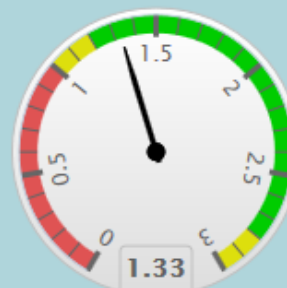
Water Price/1,000 Gallons, after
10,000 Gallons
Median: \$4.50



Min \$0.00 Max \$20.00

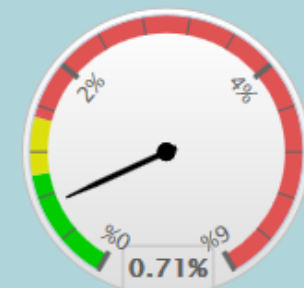
Cost Recovery

Operating
Ratio Incl. Deprec. 2014



Affordability

Water Bills as % MHI





High Point

Rates Comparison

Financial Benchmarks

Characteristics

Links

Edit Data or Add Utility

Select residential bill and monthly consumption amount

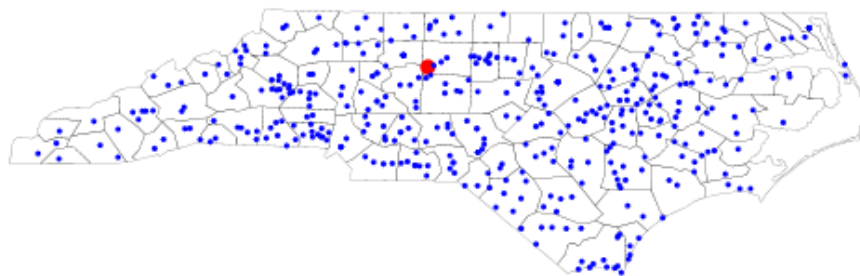
Water Bill Sewer Bill Water + Sewer Bill



Monthly Sewer Bill: \$42.64

Select comparison group: All Utilities

Comparing to all utilities in survey

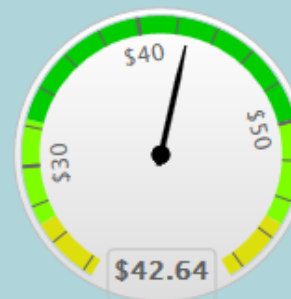


424 rate structures compared

Effects of raising rates by: 0%

Bill Comparison

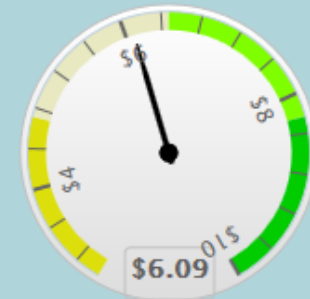
Sewer Bill at
5,000 gallons
Median: \$38.60



Min \$9.20 Max \$110.61

Conservation Signal

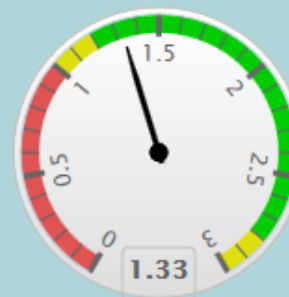
Sewer Price/1,000 Gallons, after
10,000 Gallons
Median: \$5.60



Min \$0.00 Max \$33.00

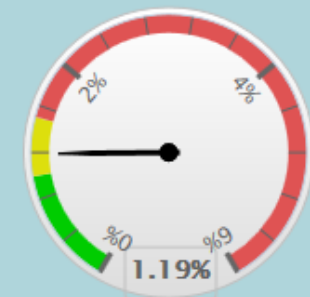
Cost Recovery

Operating
Ratio Incl. Deprec. 2014



Affordability

Sewer Bills as % MHI





High Point

Rates Comparison

Financial Benchmarks

Characteristics

Links

Edit Data or Add Utility

Select residential bill and monthly consumption amount

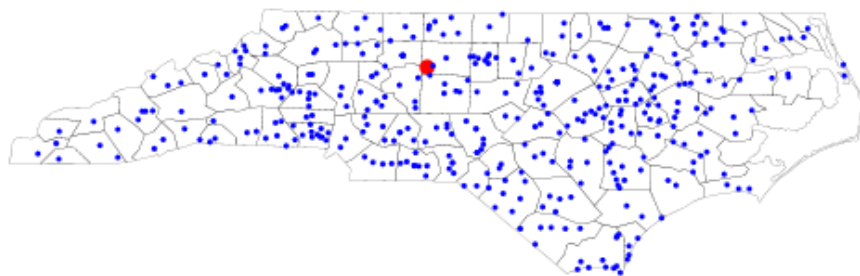
Water Bill Sewer Bill Water + Sewer Bill



Monthly Water & Sewer Bill: \$68.05

Select comparison group: All Utilities

Comparing to all utilities in survey

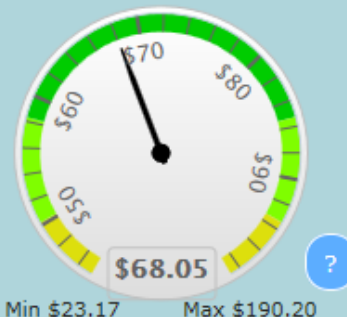


387 rate structures compared

Effects of raising rates by: 0%

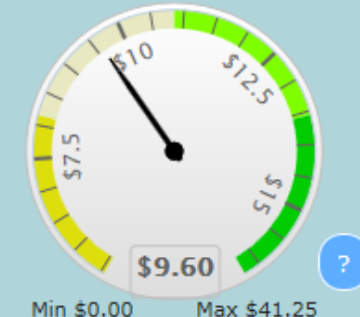
Bill Comparison

Water & Sewer Bill at
5,000 gallons
Median: \$67.98



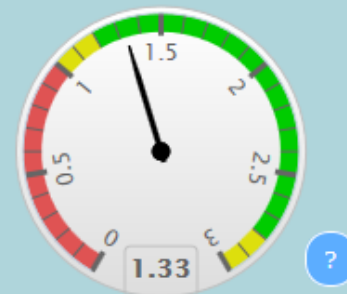
Conservation Signal

Water & Sewer Price/1,000
Gallons, after 10,000 Gallons
Median: \$10.00



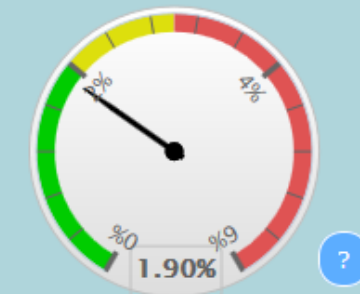
Cost Recovery

Operating
Ratio Incl. Deprec. 2014



Affordability

Water & Sewer Bills as % MHI



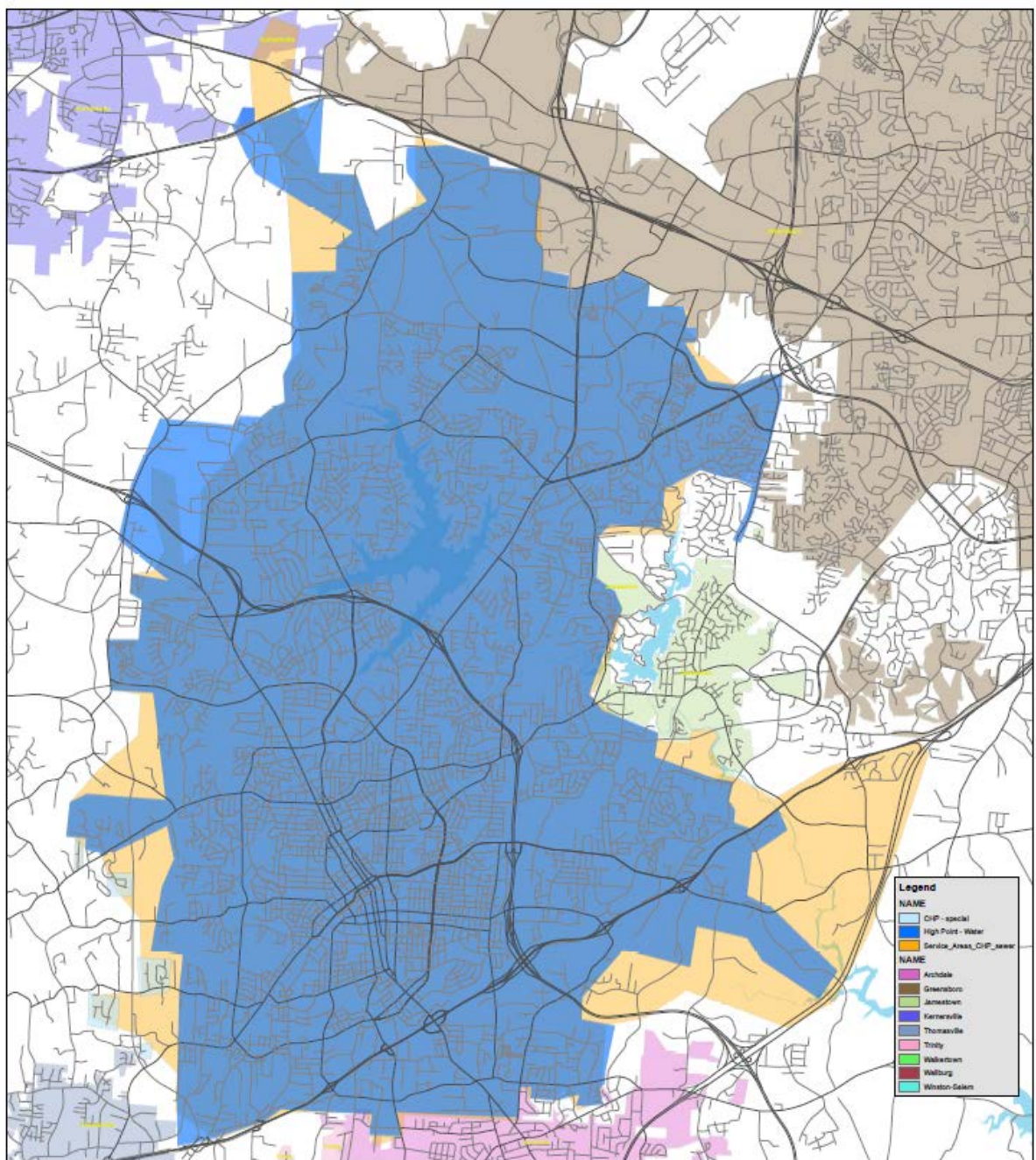


Areas of Concern

- Revenue: growth rate around 1% per year
 - Need larger customer base
- Future Compliance: changes by DWQ and EPA
- Manpower:
 - Current staff is aging out
 - Inability to obtain trained staff replacements
 - FY16-17 requested apprentice positions for future vacancies
- Expanded service area and additional maintenance requirements
- Service to private developments



Service Area



Future Large-Scale Projects

- Ward Water Plant rehab: **\$48 million**
- Eastside Wastewater Treatment BNR upgrade: **\$100 million**
- Biosolids disposal
- Lift station upgrades
 - Riverdale: **\$40 million**
 - Waterview: **\$10 million**
- Interbasin transfers
- PTRWA plant upgrade (48 MGD): **\$40 million**
 - Transmission line from new plant to City: **\$10-20 million**
- Water distribution and collection system upgrades



Historical Rate Increases

FISCAL YEAR	EFFECTIVE DATE	WATER % CHANGE	SEWER % CHANGE
FY 2007	10/1/2006	4.90%	4.90%
FY 2008	11/8/2007	4.85%	4.85%
FY 2009	10/1/2008	5.90%	5.90%
FY 2010	10/1/2009	5.00%	5.00%
FY 2011	10/1/2010	4.90%	4.90%
FY 2012	10/1/2011	4.90%	4.90%
FY 2013	no increase	0.00%	0.00%
FY 2014	no increase	0.00%	0.00%
FY 2015	7/1/2014	3.00%	3.00%
FY 2016	10/1/2015	3.50%	3.50%

CITY OF HIGH POINT WATER & SEWER FUND

SCENARIO 1 - No rate increase, no future debt for capital

	Projections								
	2017	2018	2019	2020	2021	2022	2023	2024	2025
Beginning Balance	23,766,358	19,956,260	18,998,777	18,310,152	19,634,971	17,080,403	16,479,524	17,258,676	17,845,928
Total Operating Revenues	47,813,789	48,234,653	48,712,605	49,218,809	49,697,001	50,194,210	50,697,942	51,200,947	51,712,322
Pay as you Go Financing	(6,350,000)	(4,265,000)	(4,325,000)	(3,825,000)	(6,812,500)	(5,000,000)	(5,000,000)	(5,000,000)	(5,000,000)
Total Revenues	41,463,789	43,969,653	44,387,605	45,393,809	42,884,501	45,194,210	45,697,942	46,200,947	46,712,322
Total Sources of Funds	65,230,147	63,925,913	63,386,381	63,703,961	62,519,472	62,274,613	62,177,466	63,459,623	64,558,249
Personnel	8,872,602	9,290,256	9,743,263	10,191,243	10,669,344	11,175,132	11,704,493	12,255,917	12,836,541
Operating	17,823,958	18,166,409	18,517,588	18,877,788	19,247,319	19,626,503	20,015,680	20,415,208	20,825,465
Operating Capital	171,110	174,874	178,721	182,653	186,672	190,778	194,975	199,265	203,649
Debt Service	18,406,217	17,295,597	16,636,657	14,817,306	15,335,734	14,802,676	13,003,642	12,743,305	12,666,136
Total Expenses	45,273,886	44,927,136	45,076,229	44,068,990	45,439,068	45,795,089	44,918,791	45,613,695	46,531,791
Ending Balance	19,956,260	18,998,777	18,310,152	19,634,971	17,080,403	16,479,524	17,258,676	17,845,928	18,026,459
50% Fund Balance Policy	22,636,943	22,463,568	22,538,115	22,034,495	22,719,534	22,897,544	22,459,395	22,806,847	23,265,895
Amount Above FB Minimum	(2,680,683)	(3,464,791)	(4,227,963)	(2,399,525)	(5,639,131)	(6,418,020)	(5,200,720)	(4,960,920)	(5,239,436)

CITY OF HIGH POINT WATER & SEWER FUND

SCENARIO 2 - 4% rate increase next 3 years.

\$5 million paygo annually, \$105 million in future debt (2016, 2018, 2020)

	Projections								
	2017	2018	2019	2020	2021	2022	2023	2024	2025
Beginning Balance	23,766,358	21,376,722	21,611,553	24,265,843	26,652,783	28,182,063	27,473,630	28,181,185	27,868,779
Current Total Operating Revenues	47,813,789	48,234,653	48,712,605	49,218,809	49,697,001	50,194,210	50,697,942	51,200,947	51,712,322
Oct. 1, 2016 - 4% Rate Increase	1,420,462	1,912,889	1,932,017	1,951,338	1,970,851	1,990,559	2,010,465	2,030,570	2,050,875
Oct. 1, 2017 - 4% Rate Increase	-	1,504,426	2,025,785	2,046,806	2,066,714	2,087,391	2,108,336	2,129,261	2,150,528
Oct. 1, 2018 - 4% Rate Increase	-	-	1,580,112	2,128,678	2,149,383	2,170,886	2,192,670	2,214,431	2,236,549
Pay as you Go Financing	(6,350,000)	(5,000,000)	(5,000,000)	(5,000,000)	(5,000,000)	(5,000,000)	(5,000,000)	(5,000,000)	(5,000,000)
Total Revenues	42,884,250	46,651,967	49,250,519	50,345,630	50,883,949	51,443,047	52,009,413	52,575,208	53,150,274
Total Sources of Funds	66,650,608	68,028,689	70,862,072	74,611,473	77,536,732	79,625,110	79,483,043	80,756,393	81,019,052
Personnel	8,872,602	9,290,256	9,743,263	10,191,243	10,669,344	11,175,132	11,704,493	12,255,917	12,836,541
Operating	17,823,958	18,166,409	18,517,588	18,877,788	19,247,319	19,626,503	20,015,680	20,415,208	20,825,465
Operating Capital	171,110	174,874	178,721	182,653	186,672	190,778	194,975	199,265	203,649
Existing Debt Service	18,406,217	17,295,597	16,636,657	14,817,306	15,335,734	14,802,676	13,003,642	12,743,305	12,666,136
2016 Debt Service (\$35 million issue)	-	1,490,000	1,520,000	2,355,000	2,350,000	2,350,000	2,350,000	2,355,000	2,355,000
2018 Debt Service (\$35 million issue)	-	-	-	1,534,700	1,565,600	2,425,650	2,420,500	2,420,500	2,420,500
2020 Debt Service (\$35 million issue)	-	-	-	-	-	1,580,741	1,612,568	2,498,420	2,493,115
Total Expenses	45,273,886	46,417,136	46,596,229	47,958,690	49,354,668	52,151,480	51,301,859	52,887,614	53,800,406
Ending Balance	21,376,722	21,611,553	24,265,843	26,652,783	28,182,063	27,473,630	28,181,185	27,868,779	27,218,647
50% Fund Balance Policy	22,636,943	23,208,568	23,298,115	23,979,345	24,677,334	26,075,740	25,650,929	26,443,807	26,900,203
Amount Above FB Minimum	(1,260,221)	(1,597,015)	967,728	2,673,438	3,504,729	1,397,890	2,530,255	1,424,971	318,444