



Capital Ordinances and Rates

Board Update (in draft; will be updated at retreat)

November 14, 2019



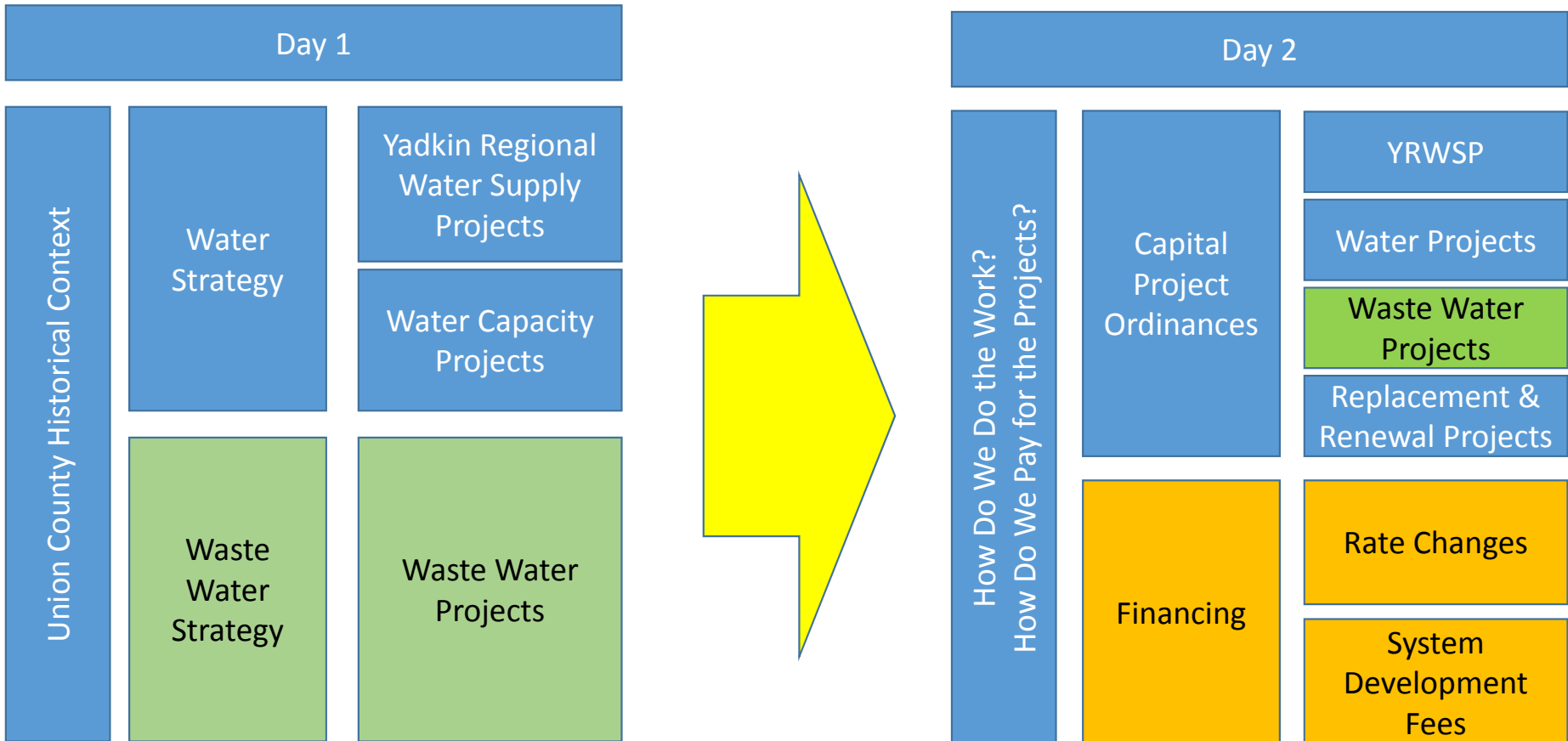


Agenda

- Capital Project Ordinances
- Rates and Fees
- Board Direction through votes
- Next Steps



Objective for Today





What is a Capital Project Ordinance

- G.S. 159-13.2(a)(1) specifies that a **capital project ordinance** may be used to **appropriate revenues** and **authorize expenditures** for a project “financed in whole or in part by the proceeds of bonds or other debt instruments or a project involving the construction or acquisition of a capital asset.”



Four Capital Project Ordinances

1. Yadkin Regional Water Supply Project
2. Water Capacity Capital Projects
3. Waste Water Capital Projects
4. Replacement and Renewal Program

NOTE: CPOs appropriate funds for FY2020 and FY2021.



1. Yadkin Regional Water Supply Project

Ordinance	Appropriated to Date	2020	2021	5 Planning Years (2022-2026)	Program Total
Yadkin	\$49.9 M	\$0.0 M	\$248.7 M	\$4.0 M	\$302.6 M

Purpose of program is to complete design and construction of the Yadkin Regional Water Supply Project: Water Intake/Pumping Station, Raw Water Pipeline, Water Treatment Plant, Finished Water Pipeline.



2. Water Capital Projects

Ordinance	Appropriated to Date	2020	2021	5 Planning Years (2022-2026)	Program Total
Water (8 programs)	\$76.4 M	\$1.6 M	\$7.9 M	\$89.9 M	\$175.8 M

Purpose of program is to design and construct improvements related to production, transmission, storage, and distribution of treated water.



3. Wastewater Capital Projects

Ordinance	Appropriated to Date	2020	2021	5 Planning Years (2022-2026)	Program Total
Waste Water (5 programs)	\$98.1 M	\$13.3 M	\$1.5 M	\$154.8 M	\$267.7 M

Purpose of program is to design and construct improvements related to the collection, conveyance, and treatment of wastewater.



4. Replacement & Renewal Projects

Ordinance	Appropriated to Date	2020	2021	5 Planning Years (2022-2026)	Program Total
Replacement & Renewal (9 programs)	\$58.4 M	\$6.8 M	\$26.0 M	\$66.9 M	\$158.1 M

Purpose of program is to strategically repair and replace water and wastewater infrastructure using the principles of asset management to maintain or improve levels of service, ensure efficient operation, and minimize risks.



Summary of Capital Project Ordinances

Program	Appropriated to Date	2020	2021	5 Planning Years (2022-2026)	Program Total
Yadkin	\$49.9 M		\$248.7 M	\$4.0 M	\$302.6 M
Water	\$76.4 M	\$1.6 M	\$7.9 M	\$89.9 M	\$175.8 M
Waste Water	\$98.1 M	\$13.3 M	\$1.5 M	\$154.8 M	\$267.7 M
Replacement & Renewal	\$58.4 M	\$6.8 M	\$26.0 M	\$66.9 M	\$158.1 M
Total	\$283.0 M	\$21.7 M	\$284.2 M	\$315.7 M	\$904.5 M



Board authorization and appropriation would cover remainder of FY2020 (6 months) and FY2021 (12 months).

For planning purposes only. Not included in the Capital Project Ordinances.



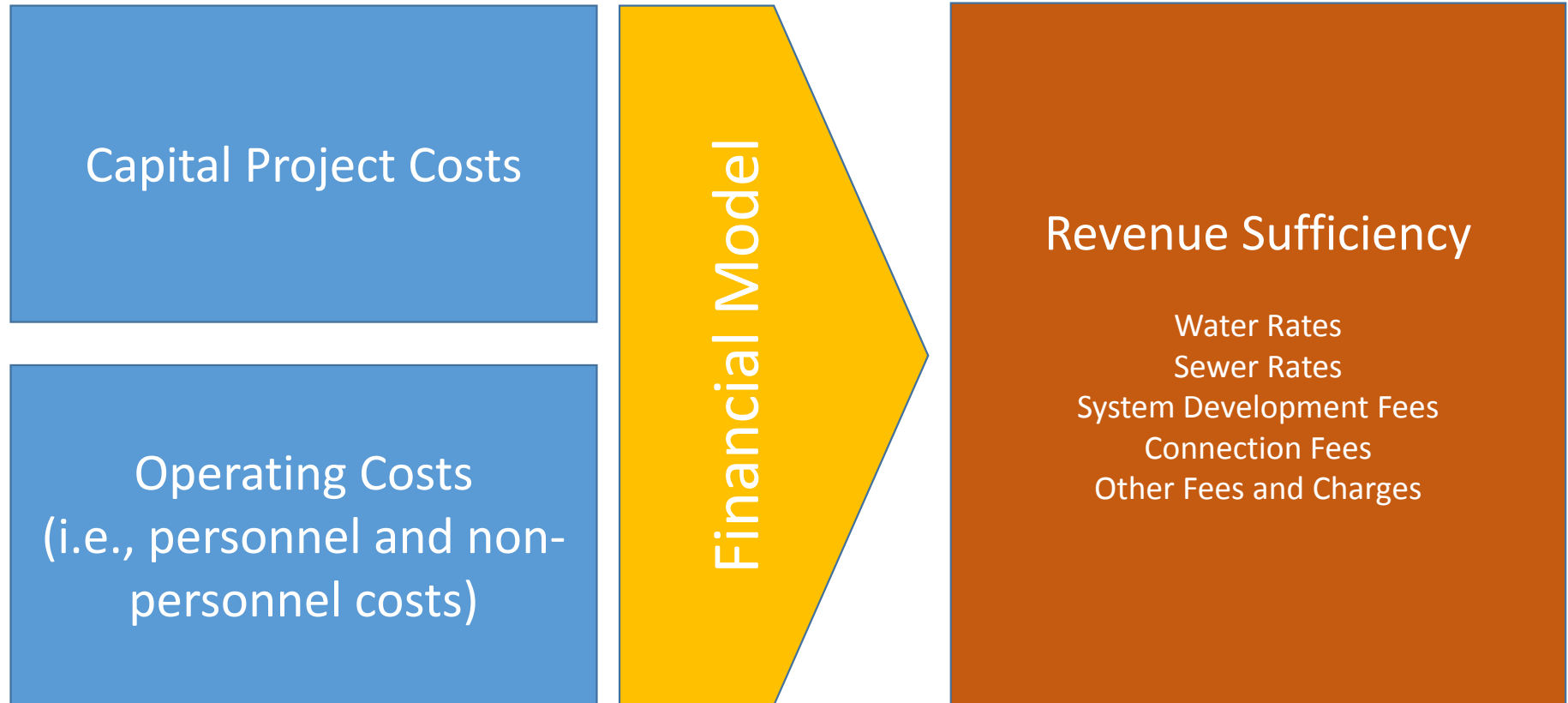
Request to Board of County Commissioners

Adopt Capital Project Ordinances for FY2020 and FY2021 for:

1. Yadkin Regional Water Supply Project
2. Water Capital Projects
3. Waste Water Capital Projects
4. Replacement & Renewal and Other Capital Projects

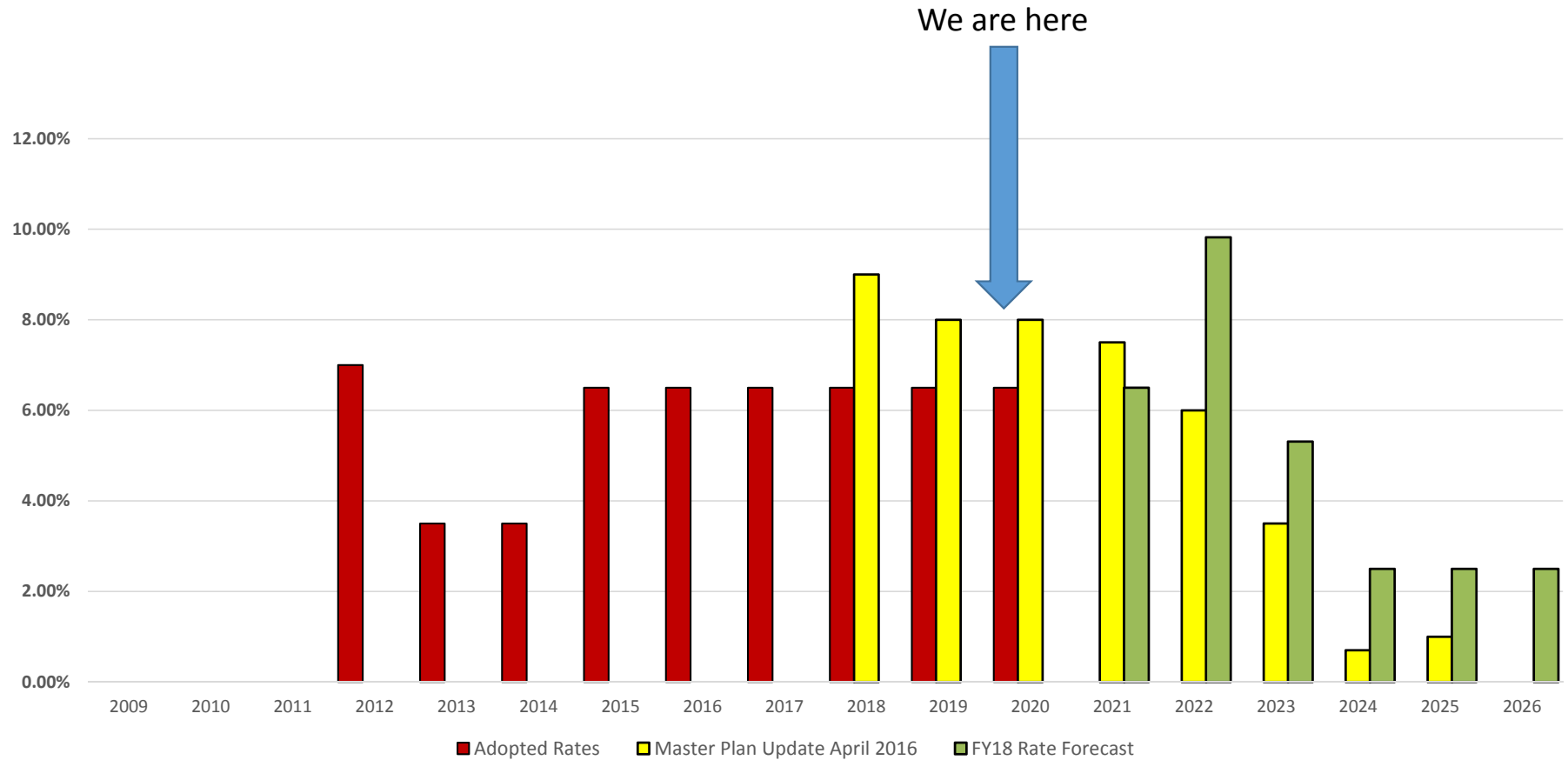


How Do We Pay For This Program?





2018-2020 Rates (Adopted)





Current Rate Model Fails

Does not generate enough revenue to pay for capital and operating expenses.

- Senior Rate Covenant Fails
- Rate Covenant with SDF Fails
- Additional Bonds Test Fails



Working Group

Union County
Public Works



STIFEL

Union County
Manager's Office

Union County
Finance Department



Three Scenarios

- Evaluated Three Scenarios
 - Scenario 1 (Yadkin / Water Line Extensions plus R&R)
 - Scenario 2 (No Future Growth, R&R Only)
 - Scenario 3 (Planned Water and Sewer CIP)
- Assumption
 - Cost escalation at 4.5%
 - Additional escalation for Lower Crooked Creek WRF



Scenario 1

- Build the Yadkin Regional Water Supply Project
- Build Water Line Extensions
- Continue Replacement & Renewal Program

Program	Appropriated to Date	2020	2021	5 Planning Years (2022-2026)	Program Total
Scenario 1	\$283.0 M	\$21.7 M	\$273.4 M	\$144.6 M	\$722.6 M



Scenario 2

- Plan for no future growth in the system (i.e., no new customers)
- Continue Renewal and Replacement Program

Program	Appropriated to Date	2020	2021	5 Planning Years (2022-2026)	Program Total
Scenario 2	\$283.0 M	\$21.7 M	\$35.4 M	\$120.4 M	\$460.4 M



Scenario 3

- Authorize and appropriate the Public Works Capital Improvement Program as presented
- Build the Yadkin Regional Water Supply Project
- Build Water capacity projects, including Water Main and Short Line extensions
- Build Waste Water projects
- Continue Replacement and Renewal Program

Program	Appropriated to Date	2020	2021	5 Planning Years (2022-2026)	Program Total
Scenario 3	\$283.0 M	\$21.7 M	\$284.2 M	\$315.7 M	\$904.5 M



Scenarios Cost Summary (in millions)

Scenario	Appropriated to Date	2020	2021	5 Planning Years (2022-2026)	Program Total
Scenario 1	\$283.0 M	\$21.7 M	\$273.4 M	\$144.6 M	\$722.6 M
Scenario 2	\$283.0 M	\$21.7 M	\$35.4 M	\$120.4 M	\$460.4 M
Scenario 3	\$283.0 M	\$21.7 M	\$284.2 M	\$315.7 M	\$904.5 M

- Different total spending numbers means different revenue sufficiency requirements
- Future rates reflect different revenue needs
- Each scenario incorporates all operating expenses of the Public Works Department



Customer Impact* (in dollars)

Scenario	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Scenario 1	\$76.58	\$88.45	\$102.15	\$105.73	\$109.42	\$113.25	\$117.22
Scenario 2	\$76.58	\$81.55	\$86.85	\$89.90	\$93.03	\$96.29	\$99.66
Scenario 3	\$76.58	\$88.45	\$102.15	\$107.32	\$110.00	\$112.75	\$115.58

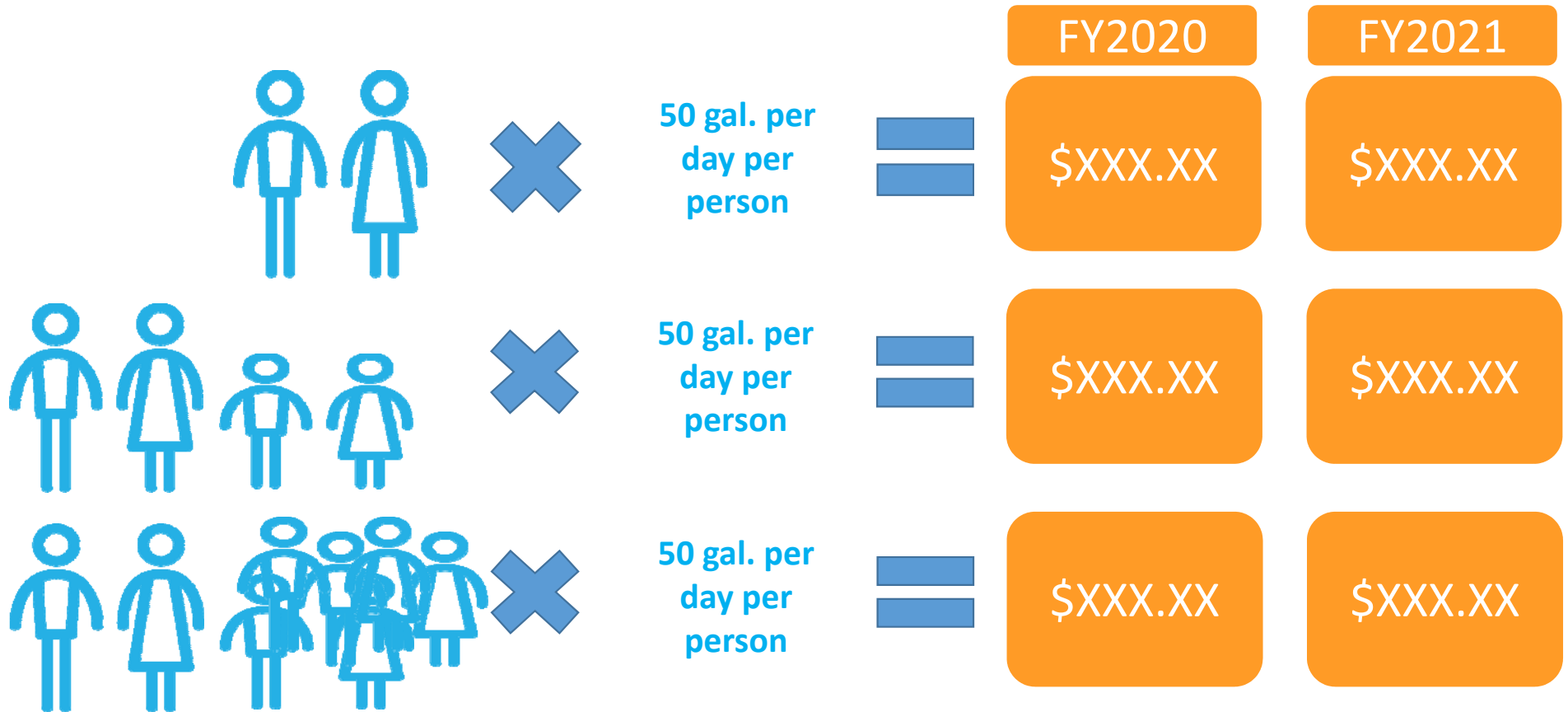
*Total Bill (Water and Sewer) at 5,500 Gallons of Water Usage Monthly

Scenario	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Scenario 1	\$28.01	\$32.36	\$37.37	\$38.68	\$40.03	\$41.42	\$42.88
Scenario 2	\$28.01	\$29.83	\$31.77	\$32.89	\$34.03	\$35.21	\$36.46
Scenario 3	\$28.01	\$32.36	\$37.37	\$38.30	\$39.25	\$40.23	\$41.24

*Water Bill at 5,500 Gallons of Water Usage Monthly



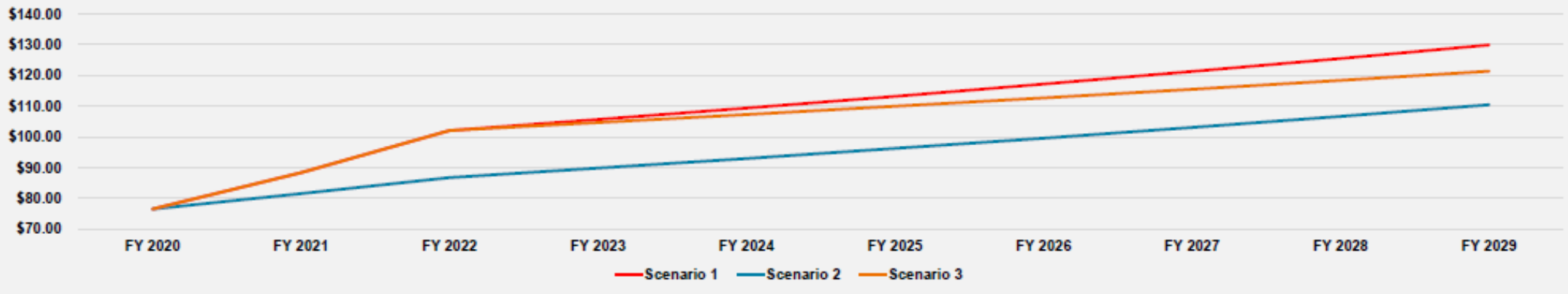
Customer Impact Based on Usage



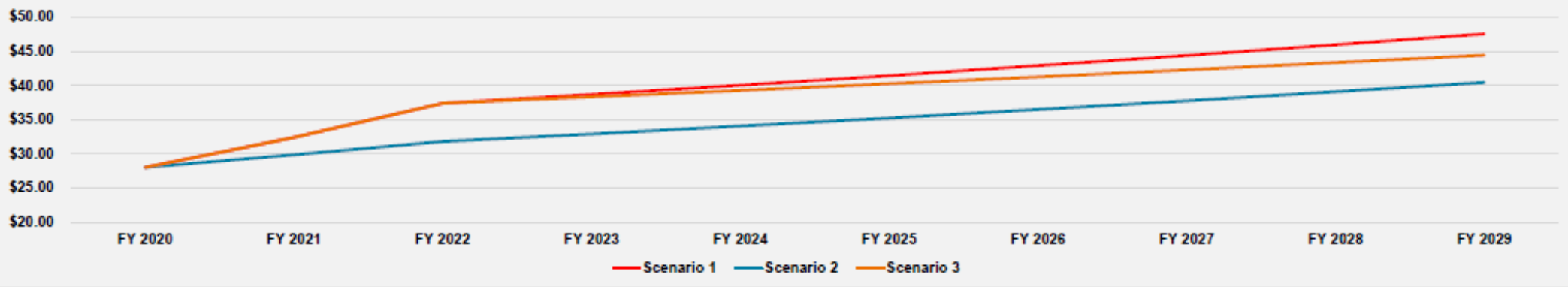


Comparison of the Three Scenarios

CIP Scenarios - Total Bill Impacts



CIP Scenarios - Water Bill Impacts



NOTE: At 5,500 gallons per month



Comparison With Other Water Utilities

Monthly Water Charges Standard Residential Service (3/4" Domestic Meter)				
Utility / Rate Structure	Service Population	3,000 Gallons	5,000 Gallons	15,000 Gallons
Anson County	13,380	\$17.32	\$25.97	\$60.47
Aqua North Carolina	197,680	\$36.74	\$48.40	\$106.70
Asheville	124,300	\$23.84	\$34.88	\$90.10
Cape Fear Public Utility Authority	174,668	\$25.84	\$33.88	\$74.08
Cary	189,600	\$17.77	\$27.45	\$91.66
Charlotte Water	954,644	\$13.94	\$19.56	\$98.33
Davidson County (no water bills)				
Davidson Water	147,455	\$17.75	\$26.75	\$74.50
Durham	262,725	\$16.86	\$25.11	\$89.91
Fayetteville Public Works Commission	206,194	\$20.81	\$26.63	\$70.08
Marshville	2,475	\$25.40	\$33.00	\$71.00
Monroe	31,008	\$19.32	\$24.62	\$51.12
Norwood	4,128	\$28.66	\$38.41	\$87.17
ONWASA	126,761	\$22.00	\$28.22	\$66.15
OWASA	83,300	\$26.87	\$39.91	\$135.66
Raleigh	540,000	\$18.62	\$30.47	\$104.10
Stanly County	14,893	\$34.82	\$58.40	\$176.30
Union County	123,533	\$17.80	\$24.60	\$81.20
Union County (w/ 15.5% inc. effective 1-1-20)	123,533	\$21.80	\$30.10	\$99.50
Wingate	4,201	\$21.10	\$31.20	\$90.20



Comparison With Other Water Utilities

FY18-19 Monthly Wastewater Charges Standard Residential Service				
Utility / Rate Structure	Service Population	3,000 Gallons	5,000 Gallons	15,000 Gallons
Anson County	13,380	\$16.18	\$22.55	\$54.38
Aqua North Carolina	197,680	\$72.04	\$72.04	\$72.04
Asheville (no wastewater bills)				
Cape Fear Public Utility Authority	174,668	\$28.44	\$37.70	\$84.00
Cary	189,600	\$34.27	\$54.95	\$158.35
Charlotte Water	954,644	\$30.49	\$42.92	\$86.24
Davidson County		\$47.60	\$80.65	\$245.89
Davidson Water (no wastewater bills)				
Durham	262,725	\$24.59	\$35.72	\$91.33
Fayetteville Public Works Commission	206,194	\$28.75	\$39.25	\$91.75
Marshville	2,475	\$59.70	\$76.30	\$159.30
Monroe	31,008	\$26.53	\$34.11	\$72.01
Norwood	4,128	\$28.66	\$38.41	\$87.17
ONWASA	126,761	\$39.10	\$51.08	\$110.98
OWASA	83,300	\$32.07	\$45.29	\$111.39
Raleigh	540,000	\$29.53	\$41.64	\$102.20
Stanly County	14,893	\$40.95	\$57.33	\$139.23
Union County	123,533	\$30.60	\$42.60	\$84.60
Union County (w/ 15.5% inc. effective 1-1-20)	123,533	\$37.70	\$52.50	\$126.50
Wingate	4,201	\$46.65	\$56.75	\$107.25

*Union County Sewer Cap @ 12,000 gallons for Residential customers with standard 3/4" meter (max charge of \$104.30 for proposed CY20 rate)



Comparison With Other Water Utilities

FY18-19 Monthly Water & Wastewater Charges
Standard Residential Service (3/4" Domestic Meter)

Utility / Rate Structure	Service Population	3,000 Gallons	5,000 Gallons	15,000 Gallons
Anson County	13,380	\$33.50	\$48.52	\$114.85
Aqua North Carolina	197,680	\$108.78	\$120.44	\$178.74
Asheville (water only)		\$23.84	\$34.88	\$90.10
Cape Fear Public Utility Authority	174,668	\$54.28	\$71.58	\$158.08
Cary	189,600	\$52.04	\$82.40	\$250.01
Charlotte Water	954,644	\$44.43	\$62.48	\$184.57
Davidson County (wastewater only)		\$47.60	\$80.65	\$245.89
Davidson Water (water only)	147,455	\$17.75	\$26.75	\$74.50
Durham	262,725	\$41.45	\$60.83	\$181.24
Fayetteville Public Works Commission	206,194	\$49.56	\$65.88	\$161.83
Marshville	2,475	\$85.10	\$109.30	\$230.30
Monroe	31,008	\$45.85	\$58.73	\$123.13
Norwood	4,128	\$57.32	\$76.82	\$174.34
ONWASA	126,761	\$61.10	\$79.30	\$177.13
OWASA	83,300	\$58.94	\$85.20	\$247.05
Raleigh	540,000	\$48.15	\$72.11	\$206.30
Stanly County	14,893	\$75.77	\$115.73	\$315.53
Union County	123,533	\$48.40	\$67.20	\$165.80
Union County (w/ 15.5% inc. effective 1-1-20)	123,533	\$59.50	\$82.60	\$226.00
Wingate	4,201	\$67.75	\$87.95	\$197.45



Scenarios Rate Summary (in percent)

Scenario	FY2020	CY2020	2021	2022	2023	2024	2025	2026
Scenario 1	6.5	15.5	15.5	3.5	3.5	3.5	3.5	3.5
Scenario 2	6.5	6.5	3.5	3.5	3.5	3.5	3.5	3.5
Scenario 3	6.5	15.5	15.5	2.5	2.5	2.5	2.5	2.5

- Yadkin Project drives rate increases
- Greater rate increases required in future years in a no growth scenario
- Doing masterplanned CIP allows growth in customer base resulting in lower future rate increases
- Future rates will change as we get better information



Request to Board of County Commissioners

Adopt calendar year 2020 rate increase of 15.5% effective January 1, 2020.



System Development Fees

- New legislation effective in 2018
- Requires an analysis every 5 years
- 3 methodologies
- Fees charged at the later of time of connection or plat recordation
 - Delays SDF revenue for new development approx. 3 years
- Fees can only be charged for “New Development”
 - Cannot charge SDFs for new service connections if currently served by well/septic
- June 2018 - Staff recommendation: increase fee to maximum allowed under Combined Methodology
- Board approved recommended methodology, kept fees at current amount



System Development Fees

Calculation Methodology	Water	Sewer	Total
Buy-In	\$2,200	\$2,400	\$4,600
Combined	\$3,300	\$4,440	\$7,740
Incremental	\$4,400	\$6,930	\$11,330
Current Fees	\$1,200	\$3,090	\$4,290



Request to Board of County Commissioners

Adopt System Development Fee rate increase to \$3,300 for water, \$4,440 for waste water for a total of \$7,740.



Discussion on Requested Board Action

1. Adopt Capital Project Ordinances for FY2020 and FY2021
2. Adopt 2020 rate increase of 15.5%
3. Adopt System Development Fee Increase to a total of \$7,740



Next Steps

- Masterplanning efforts
- Rate Structure Review (by Stantec)
- Automated Meter Infrastructure
- Bulk Water/Water Theft Program Update
- Public Works Policy and Procedures Review
- Plus much much more...



Financial Overview

- Major Expenditures
 - Personnel
 - Operating
 - Water Purchases & Wastewater Treatment
 - Chemicals
 - Utilities
 - Maintenance & Repairs
 - Contracted Services
 - Restoration Services
 - Debt
 - LGC, Rating Agencies, Credit Ratings,



Financial Overview

- Revenue Sufficiency / Financial Sustainability (**Economic Viability**)
- Sources of Revenue
 - One-time “Connection” Fees
 - System Development Fees (formerly capacity fees)
 - New Legislation
 - Tap Fees
 - Monthly Service Charges
 - Base Fee (based on meter size) + Volumetric “Rates”
 - Residential & Irrigation Usage – Inclining Block Rate (Conservation Rate)
 - Non-residential/Non-irrigation Usage – Flat Rate



CIP Program

- The adopted Public Works Capital Program consists of twenty one program focusing on:
 - System improvements and expansion (System I&E)
 - System rehabilitation and renewal (System R&R).
- System improvements and expansion projects focus on meeting the future capacity needs of the system based on the current system modeling. By 2020, the maximum day water demand is anticipated to grow to 27.8 million gallons daily and maximum monthly average wastewater flow to 13.2 million gallons daily.
- Rehabilitation and renewal programs are the ongoing infrastructure maintenance projects that ensure the sustainability of the existing infrastructure.
- The FY2019 adopted \$624,594,252 Public Works Capital Program is necessary to meet the needs and anticipated future demands as well as rehabilitation and renewal of current infrastructure.



CIP Ordinances

- Need Board to authorize Public Work's capital program
- Packaged projects into several related CIP ordinances
- This allows us to continue work on maintaining the system while we implement longer term solutions
- Funding for these projects is done through revenue bonds, etc.



Operating Costs

- Capital costs are multi-year investments in infrastructure
- Public Works also has ongoing annual operating expenses
 - These are the people that perform the work
 - And the costs associated with the work (i.e., what are those?)
- Water & Wastewater Operations Fund
 - Enterprise Fund – operates *very much* like a private business
 - Funded by users of the 2 systems
 - Revenue from rates & fees (set by BoG/BoCC) **must** cover all expenditures **and then some!**



Existing Operating Budget

	FY20 BUDGET	FY19 ACTUAL	FY18 ACTUAL
REVENUES	(56,271,494)	(56,958,197)	(52,394,603)
PERSONNEL	12,441,365	10,377,987	8,671,171
OPERATING	23,600,987	17,839,219	17,919,115
CAPITAL	1,808,153	1,163,813	650,564
DEBT	14,181,854	9,663,696	5,723,648
FUND BALANCE CONTR/(APPROP)	272,896	0	0
TRANS TO/(FROM) OTHER FUNDS	3,966,239	10,980,915	16,923,514
Grand Total	0	(6,932,566)	(2,506,590)



How We Pay for Stuff

	FY20 BUDGET	FY19 ACTUAL	FY18 ACTUAL
REVENUES	(56,271,494)	(56,958,197)	(52,394,603)
SERVICE CHARGES	(49,772,562)	(47,570,750)	(43,227,909)
SYSTEM DEVELOPMENT FEES	(2,727,163)	(4,544,575)	(5,642,583)
OTHER REVENUES	(1,910,398)	(2,081,067)	(2,215,199)
INVESTMENT EARNINGS	(1,687,732)	(2,591,335)	(1,093,408)
TAP FEES	(157,626)	(155,345)	(202,555)
PERMIT FEES	(16,013)	(15,125)	(12,950)



Fiscally Healthy

- Manage a Financial Plan
- Comprehensive Rate Study in FY12
 - In conjunction with the FY12 W & WW Master Plan
 - Prior to FY12, no rate increases for more than a decade
- Rate Model updated in FY14, FY17, FY18 & FY19
 - Planning another comprehensive Rate Study in FY20 in conjunction with the new Master Plan



2018 SDF Presentation

- Three Methodologies are allowed in the legislation

Methodology	Description	Use of System Dev. Fee Revenues	Appropriate For
Buy-In Method	Fees are based on cost of constructing existing utility system	Revenues can be used for reimbursement of existing costs & rehab and for expansion related capital projects	System with ample existing capacity to sell
Combined Method	Fees are based on cost of existing system and planned capital improvements	Revenues can <u>only</u> be used for expansion related capital projects	System with existing capacity to sell and with significant growth related capital projects
Incremental Cost Method	Fees are based on planned capital improvements	Revenues can <u>only</u> be used for expansion related capital projects	System with no/very limited existing capacity to sell



2018 SDF Presentation

- Recommended Methodology

Methodology	Description	Use of System Dev. Fee Revenues	Appropriate For
Combined Method	Fees are based on cost of existing system and planned capital improvements	Revenues can <u>only</u> be used for expansion related capital projects	System with existing capacity to sell and with significant growth related capital projects

We recommend that use of the combined method for the calculation of the water and sewer SDF

- The County has capacity to sell in existing water and sewer systems **and**
- Significant capacity expansion projects identified in the capital improvements plan



2018 SDF Presentation

- Calculated Fee by Methodology

Calculation Methodology	Water	Sewer	Total
Buy-In	\$2,200	\$2,400	\$4,600
Combined	\$3,300	\$4,440	\$7,740
Incremental	\$4,400	\$6,930	\$11,330
Current Fees	\$1,200	\$3,090	\$4,290

SDF Analysis reveals that the County could charge an SDF per ERU of up to \$4,400 for water and \$6,930 for sewer



2018 SDF Presentation

Combined Method Fee reduces 2022 rate increase from 10.56% to 8.87% and keeps debt coverage at Board Target

COMBINED METHOD

Fiscal Year	2018	2019	2020	2021	2022	2023	2024
Water & Wastewater Rate Increases	6.50%	6.50%	6.50%	6.50%	8.87%	4.25%	0.00%
Debt Coverage Ratio minimum of 1.20 (Fiscal Policy 1.50)	3.45	3.35	2.09	1.80	1.65	1.61	1.63
Average Bill (<i>5,500 gals</i>)	\$67.63	\$72.02	\$76.71	\$81.69	\$88.92	\$92.70	\$92.70



2018 SDF Presentation

Current Capacity fee structure anticipates a significant rate increase in 2022 and debt coverage below targets

CURRENT CAPACITY FEES

Fiscal Year	2018	2019	2020	2021	2022	2023	2024
Water & Wastewater Rate Increases	6.50%	6.50%	6.50%	6.50%	10.56%	4.30%	0.00%
Debt Coverage Ratio minimum of 1.20 (Fiscal Policy 1.50)	3.45	2.84	1.76	1.53	1.46	1.43	1.45
Average Bill (\$5,500 gals)	\$67.63	\$72.02	\$76.71	\$81.69	\$90.31	\$94.20	\$94.20



2018 SDF Presentation

System Development Fees
will impact the future
service fees charged to our
customers



2018 SDF Presentation

System Development Fees based on the Buy-in Method have only a marginal impact on future rates

BUY-IN METHOD

Fiscal Year	2018	2019	2020	2021	2022	2023	2024
Water & Wastewater Rate Increases	6.50%	6.50%	6.50%	6.50%	10.28%	4.28%	0.00%
Debt Coverage Ratio minimum of 1.20 <i>(Fiscal Policy 1.50)</i>	3.45	2.91	1.81	1.57	1.49	1.46	1.48
Average Bill <i>(5,500 gals)</i>	\$67.63	\$72.02	\$76.71	\$81.69	\$90.09	\$93.94	\$93.94



2018 SDF Presentation

Incremental Cost Method Fee reduces 2022 rate increase from 10.56% to 7.33% and further improves debt coverage

INCREMENTAL COST METHOD

Fiscal Year	2018	2019	2020	2021	2022	2023	2024
Water & Wastewater Rate Increases	6.50%	6.50%	6.50%	6.50%	7.33%	4.26%	0.00%
Debt Coverage Ratio minimum of 1.20 <i>(Fiscal Policy 1.50)</i>	3.45	3.86	2.43	2.09	1.85	1.79	1.81
Average Bill <i>(5,500 gals)</i>	\$67.63	\$72.02	\$76.71	\$81.69	\$87.67	\$91.40	\$91.40



2018 SDF Presentation

- The Water & Sewer District Board of Governors adopted the combined method in June of 2018, but kept System Development Fees at the existing rates.



Other Things In The Pipeline

- A Comprehensive Cost of Service Rate Analysis currently underway to evaluate:
 - Revenue sufficiency
 - Cost of service
 - Allocation of costs
 - Across different classes (or categories) of customers
 - Fixed vs. variable rates
 - Rate design / rate structure (Current Structure is Inclining Block/Conservation Rate)
 - Other miscellaneous fees, charges and related policies/procedures



Union County Rate Trends



THE RECOMMENDED INCREASES STILL EQUATE AN AVERAGE ANNUAL INCREASE OF 3% PER YEAR SINCE 2000 FOR THE AVERAGE CUSTOMER

Historical & Recommended Rates vs. '99 Rates with Annual 3% Increase

