

# System Development Fees

Brunswick Regional Water & Sewer H2GO

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THE **WOOTEN** COMPANY

# Presentation Overview

1. What are (and aren't) System Development Fees (SDFs)?
2. What are the 3 methodologies?
3. How are fees calculated?
4. What are revenues projections?
5. NC Statistics
6. Questions

# OVERVIEW OF SYSTEM DEVELOPMENT FEES

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# System Development Fees

- Allows local governments to charge developers for connection to major arterial, system-wide water and sewer utilities
  - Cover existing assets with adequate capacity to serve new development.
  - Cover new assets needed to expand or upgrade system to serve new development.
- 3 fee calculation methods prescribed in AWWA Manual M1 Chapter VII.2

# System Development Fees

## SDFs ARE NOT:

- Impact Fees
- Capacity Fees
- Availability Fees
- Tap Fees
- Contractual Fees
- User Charges

## SDFs MUST:

- Recover costs for providing the same level of service to new customers.
- Demonstrate direct, reasonable connection to the improvements.
- Reviewed periodically and adjusted (5-10 year period).

# System Development Fees

Quality-Built  
Homes v.  
Town of  
Carthage  
Aug 2016

Other  
Pending  
Lawsuits and  
Financial  
Exposure

NC Home  
Builders  
Assoc. and  
NCLM  
negotiations  
2017

HB 436  
prescribed  
AWWA  
methodology  
July 2017

SDF  
conformance  
July 2018

[NCGA House Bill 436 / Session Law 2017-138](#)

# DOCUMENTATION NEEDS

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Water and  
Sewer  
Consumption

Land Use Plan  
or Zoning Map

SDF

Future  
Development  
Plans

Capital  
Improvements  
Plan

Debt Service  
Schedules

Assets  
Depreciation  
Schedules



# THE 3 METHODOLOGIES

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# Buy-In (Equity) Cost Method

## Overview

- Based on the replacement value of the asset.
- Each customer buys into a portion of the remaining cost of the total capacity.
- Appropriate for slow-growing areas or 'oversized' utilities.
- Cost burden shared by existing and new development.

## Owner's Existing Assets

- ✓ Previous wastewater treatment plant upgrades
- ✓ Previous large pump stations & outfall lines
- ✓ Previous water supply and treatment plant upgrades
- ✓ Previous elevated tanks & transmission lines
- ✓ Existing Debt Service

# Incremental Cost Method

## Overview

- Based on the estimated value of the new asset.
- Each customer buys into a portion of the incremental cost of providing expanded capacity.
- Appropriate for fast-growing areas or 'undersized' utilities.
- Cost burden covered new development.

## Owner's Planned (CIP) Assets

- ✓ New water supply sources
- ✓ New wastewater discharge locations
- ✓ WTP or WWTP expansions
- ✓ Water transmission and sewer outfall improvements

# Combined Cost Method

For situations where existing utilities have remaining service life which are useful to both existing and new development, but new development also requires utility systems expansions or upgrades.

## For BRWS H2GO...

The Incremental Cost Method is appropriate to cover costs of forthcoming capital improvements projects because there is no debt service and all projects are expected to serve new growth in the service area.

# How to Calculate SDFs

Unit Charge =  $\frac{\text{Net Total Cost} \times \% \text{ SDF Eligible} \times \% \text{ Water/Sewer}}{\text{Unit Design Capacity}}$

May include construction, technical services and debt service interest costs.

WTP Upgrade =  $\frac{(\$1,000,000 - \$100,000) \times 100\% \times 100\%}{2,000,000 \text{ GPD}}$

Must discount depreciation, grants, or other outside funding from total cost.

= \$0.45 / gallon

## NEXT STEPS

1. Sum all water/sewer unit charges to calculate \$/gallon capacity.
2. Apply equivalent ratio to the unit charge for different size customers.

# CIP Considerations

## Water Treatment Plant

- \$53M total cost
- 50% credit for 2 MGD expansion (4 MGD total)
- 10 year interest payment
- 25% statute credit
- SDF cost basis \$19M

INCREMENTAL COST METHOD		Project Cost		Project Credit		Net Total Cost		Adjusted Total		Adjusted	
Asset/Project ID	CIP Asset/Project Description	Asset Group	Total Costs	Total Credits	Net Total Cost	Additional Design Capacity (MGD)	per gal Capacity (\$/MGD)	% Stat. Credit	Adjusted Total Net Cost	Incremental Cost	
<b>SEWER</b>											
S04	1,500 GPM Cotton Mills Regional Pump Station and FM from Cotton Mills near Mainline Loop to Commerce Pl	Sewer	\$ 5,384,900	\$ 4,000,000	\$ 1,384,900	0.212	\$ 6,528	25%	\$ 1,038,675	\$ 385M	sewer
S05	1,500 GPM Trout Creek Rd 7MGD Pump Station and FM to Westport from 20' AM	Sewer	\$ 4,813,000	\$ 2,157,500	\$ 2,655,500	0.317	\$ 8,385	25%	\$ 1,818,125	\$ 14M	
S06	New Brunswick Co. 1.175 MGD Sewer Application	Sewer Treat	\$ 31,448,000	\$ -	\$ 31,448,000	1.173	\$ 26,796	25%	\$ 20,986,000	\$ 20M	
<b>WATER</b>											
W01	12" water line extension from Carol Lane, along US17, to existing 12" line on Mable Rd	Water	\$ 1,973,155	\$ -	\$ 1,973,155	2.000	\$ 9,869	25%	\$ 1,479,866	\$ 71M	water
W02	12" water line extension from Johnson Rd to existing 12" on Truitt Street	Water	\$ 862,519	\$ -	\$ 862,519	2.000	\$ 4,313	25%	\$ 646,889	\$ 30M	
W03	12" and 18" water line extension from driveway area to Concessions Pointe west entrance system loop	Water	\$ 3,918,822	\$ -	\$ 3,918,822	2.000	\$ 1,959	25%	\$ 2,939,367	\$ 14M	
W05	2000 Water Distribution System Study - Improvement Group 1, 4B to 4C	Water	\$ 2,150,000	\$ -	\$ 2,150,000	2.000	\$ 1,08	25%	\$ 1,612,500	\$ 80M	
W06	2000 Water Distribution System Study - Improvement Group 1, 4D to 4E	Water	\$ 590,000	\$ -	\$ 590,000	2.000	\$ 2,95	25%	\$ 442,500	\$ 21M	
W07	2000 MGD New Elevated Water Storage Tank - Concessions Pointe service area	Water	\$ 2,700,000	\$ -	\$ 2,700,000	0.750	\$ 3,600	25%	\$ 2,025,000	\$ 10M	
W08	12" water line extension - Mabley Creek to Trout Creek along NC28	Water	\$ 3,250,000	\$ -	\$ 3,250,000	2.000	\$ 1,625	25%	\$ 2,437,500	\$ 12M	
W12	12" water main from Johnson Trail to east 12-inch line on Mable Rd - Brunswick Forest	Water	\$ 185,000	\$ -	\$ 185,000	2.000	\$ 9,250	25%	\$ 138,750	\$ 7M	
W13	12" Connection from Hwy 124 to 12" on 124th Brunswick Forest, SC - Brunswick Forest	Water Treat	\$ 145,000	\$ -	\$ 145,000	2.000	\$ 7,250	25%	\$ 108,750	\$ 5M	
W14	New 4.0 MGD Reverse Osmosis Water Treatment Plant	Water Treat	\$ 49,914,000	\$ 24,957,000	\$ 24,957,000	2.000	\$ 12,478	25%	\$ 18,717,750	\$ 94M	
W15	Expansion of 4.0 MGD Reverse Osmosis Water Treatment Plant, SC - Brunswick Forest	Water Treat	\$ 7,510,000	\$ -	\$ 7,510,000	2.000	\$ 3,755	25%	\$ 5,632,500	\$ 28M	
W16	2000 WWT System	Water	\$ 3,990,000	\$ -	\$ 3,990,000	1.750	\$ 2,280	25%	\$ 2,985,000	\$ 15M	
<b>TOTAL</b>			\$ 117,616,700	\$ 35,114,000	\$ 86,271,700		\$ 68.34		\$ 64,243,275	\$ 512M	total

Item 305: Project credit will be attributed directly to SARTO development (4,000 new connections) which will be collected via \$1,000,000 capital recovery fees included in a franchise provision in the SARTO development agreement.  
 Item 305: 50% of project cost, attributed directly to a new development (1,500 new connections) which will be up-front cost sharing with WSA. 50% of new WTP capacity is for existing water system customers.

## Wastewater Treatment Plant

- \$32M total cost
- 1.175 MGD purchased capacity
- 10 year interest payment
- 25% statute credit
- SDF cost basis \$24M

# Calculated SDFs by Gallon

## Incremental Cost Method

<b>Meter Size</b>	<b>Equivalent Ratio</b>	<b>Water</b>	<b>Sewer</b>	<b>Total</b>
5/8	1.0	\$ 21.12	\$ 30.16	\$ 51.27
1	2.5			128.18
1-1/2	5.0			256.36
2	8.0			410.17
3 compound	16.0			820.34
4 compound	25.0			1,281.79
6 compound	50.0			2,563.57
8 compound	80.0			4,101.71
10 compound	115.0			5,896.21
12 compound	215.0			11,023.35

# Calculated SDFs by Customer

## Incremental Cost Method

<b>Meter Size</b>	<b>Equivalent Ratio</b>	<b>Water</b>	<b>Sewer</b>	<b>Total</b>
5/8 (360 GPD connection)	1.0	\$ 4,400	\$ 6,300	<b>\$ 10,700</b>
1	2.5	11,000	15,750	<b>26,750</b>
1-1/2	5.0	22,000	31,500	<b>53,500</b>
2	8.0	35,200	50,400	<b>85,600</b>
3	16.0	70,400	100,800	<b>171,200</b>
4	25.0	110,000	157,500	<b>267,500</b>
6	50.0	220,000	315,000	<b>535,000</b>
8	80.0	352,000	504,000	<b>856,000</b>
10	115.0	506,000	724,500	<b>1,230,500</b>
12	215.0	946,000	1,354,500	<b>2,300,500</b>



# SDF Fee Comparison

## 2018 Analysis

Meter Size	Total Fee
5/8	\$ 7,784
1	19,460
1-1/2	38,921
2	62,273
3	116,762
4	
6	
8	
10	
12	

## 2020 Update

Meter Size	Total Fee
5/8	\$ 10,700
1	26,750
1-1/2	53,500
2	85,600
3	171,200
4	267,500
6	535,000
8	856,000
10	1,230,500
12	2,300,500

# SDF Implementation Options

1. Hold existing 2018 SDF schedule.
2. Incrementally increase SDF schedule over defined period to cover expected costs.
3. Implement 2020 updated maximum allowable SDF schedule.

*GOAL: Balance SDFs to meet BRWS H<sub>2</sub>GO's capital needs while remaining competitive with its utility neighbors to encourage/discourage economic development in the service area.*

# Local SDF Comparisons

<b>CALCULATED</b>	<b>RESIDENTIAL CUSTOMER</b>		
	Water	Sewer	Total
BRWS H2GO (2020)	\$4,400	\$6,300	<b>\$10,700</b>
Leland (2018)	\$1,792	\$9,835	<b>\$11,627</b>
Brunswick County (2018)	\$2,056	\$5,348	<b>\$7,404</b>

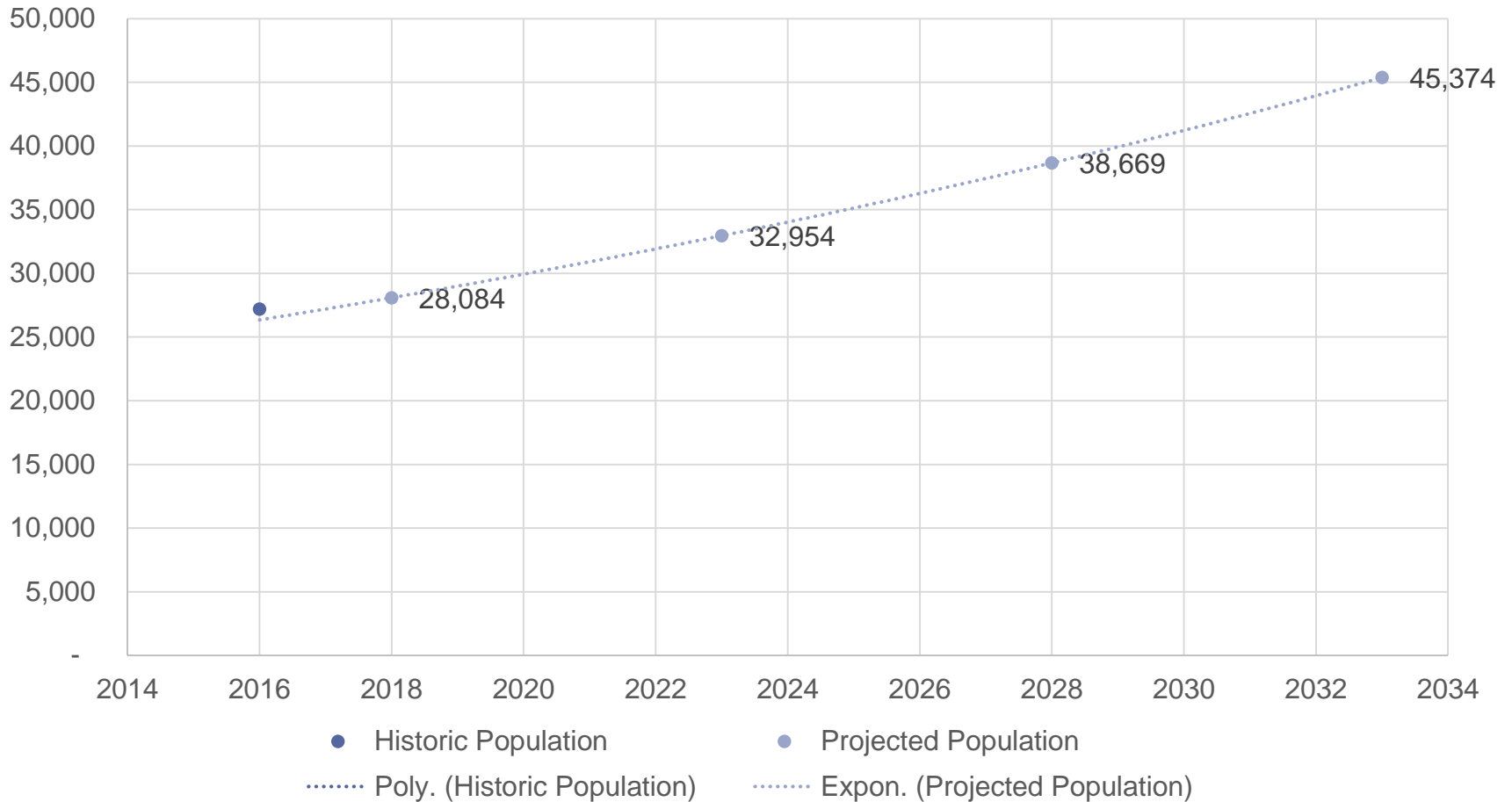
<b>IMPLEMENTED</b>	<b>RESIDENTIAL CUSTOMER</b>		
	Water	Sewer	Total
BRWS H2GO (2018)	\$1,800	\$3,200	<b>\$5,000</b>
Leland (2018)	\$1,148	\$5,962	<b>\$7,110</b>
Brunswick County (2018)	\$1,150	\$4,000	<b>\$5,150</b>

# REVENUE FORECASTING

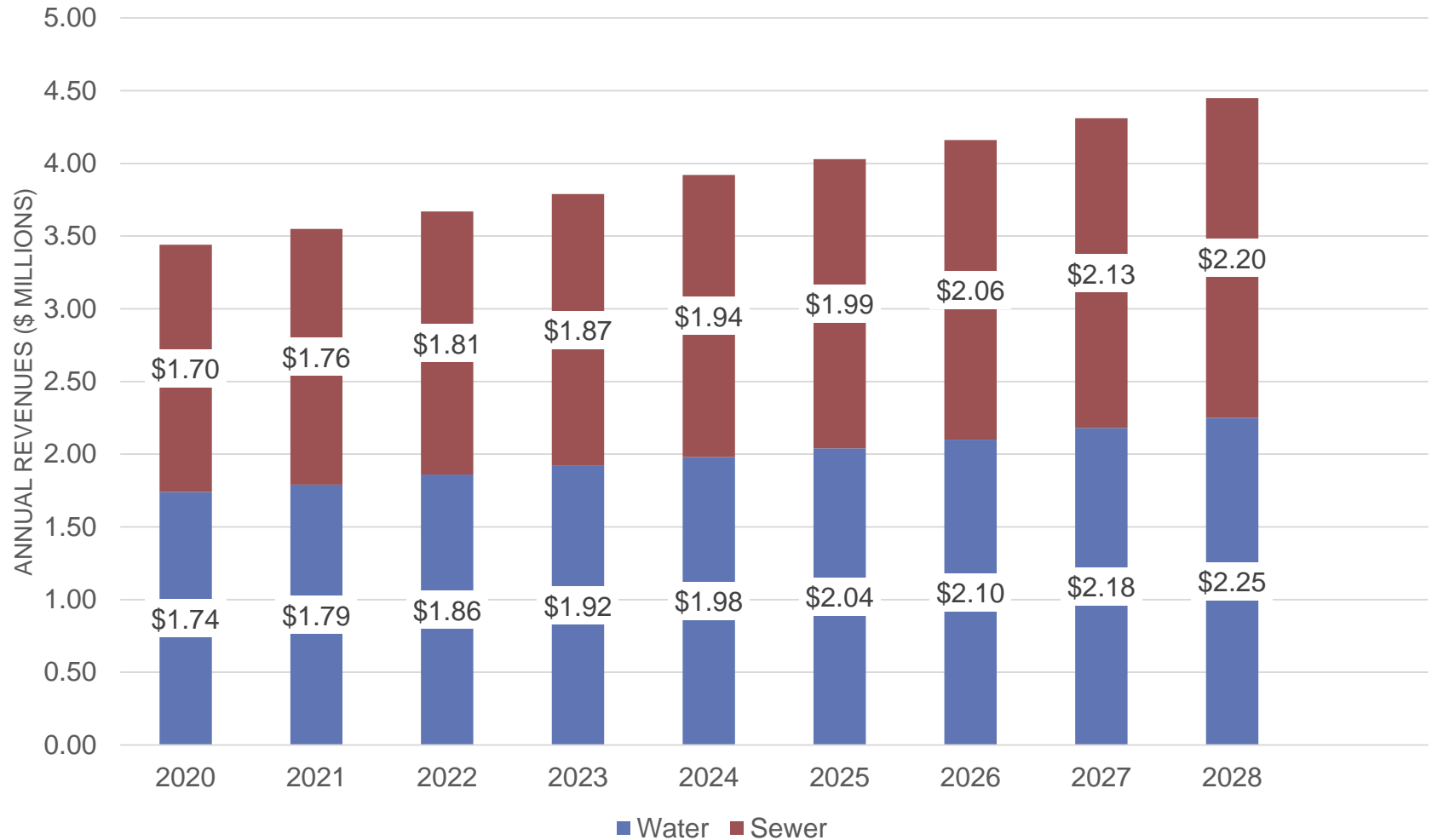
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# Customer Growth Projection

## BRWS H2GO Projected Population



# SDF Maximum Revenue Projections

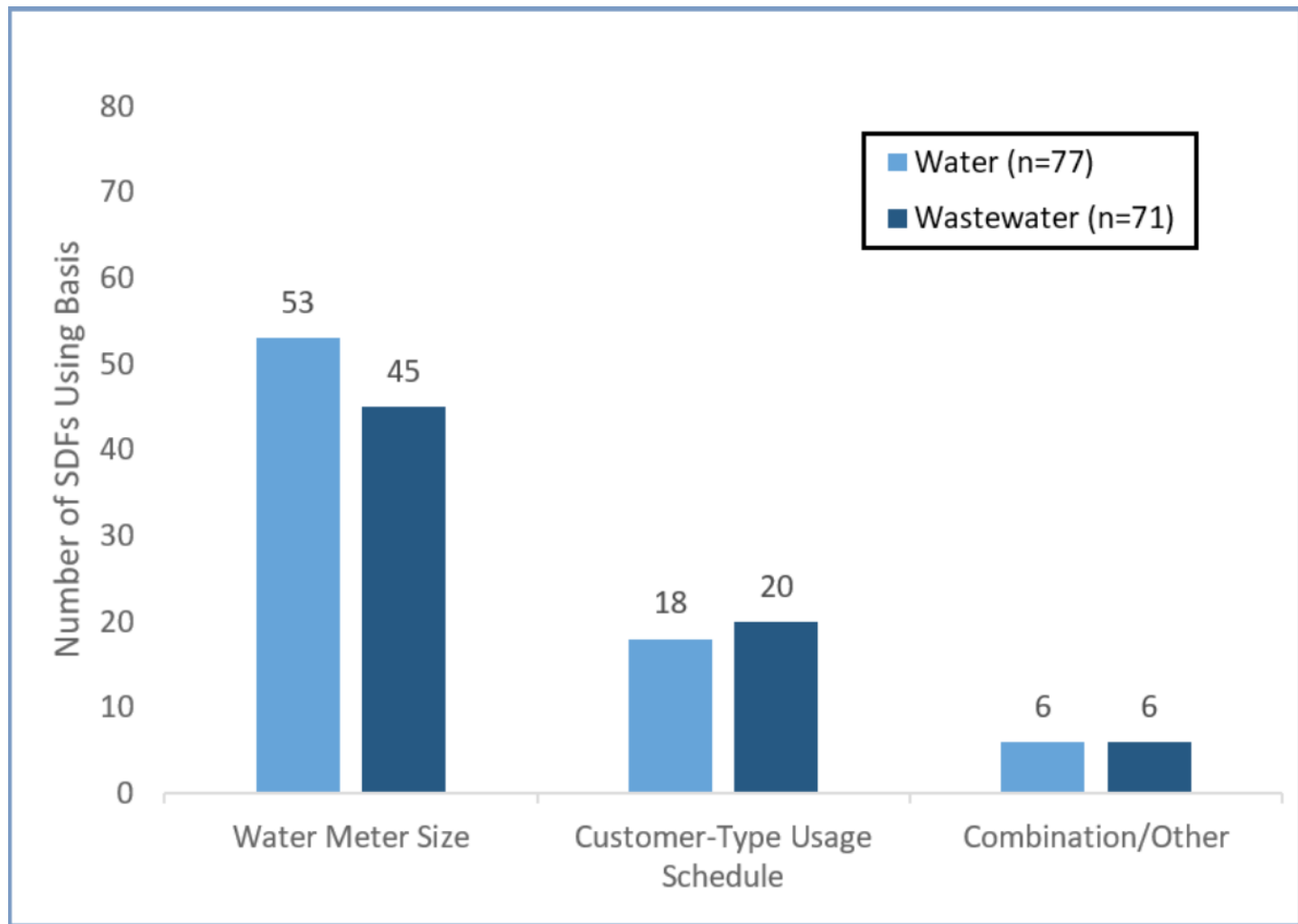


# 2019 NC STATISTICS

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UNC Environmental Finance Center

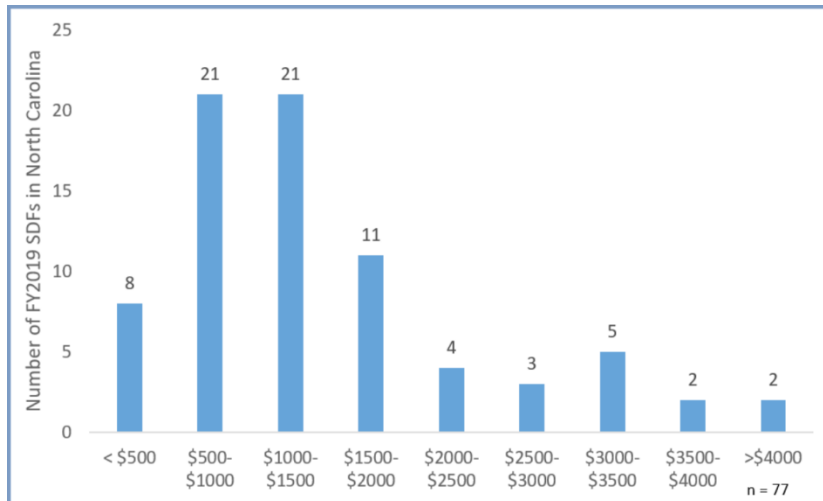
# Fee Assessment by Method



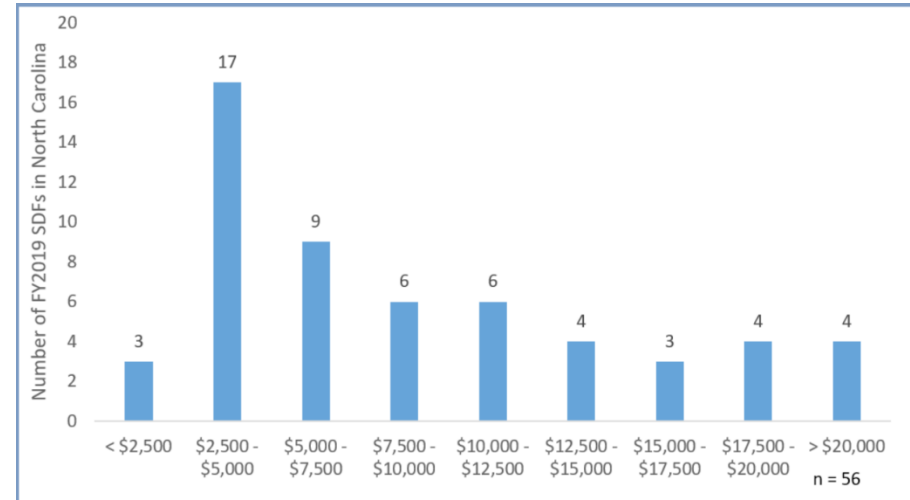


# Water SDFs by Fee Range

## Residential

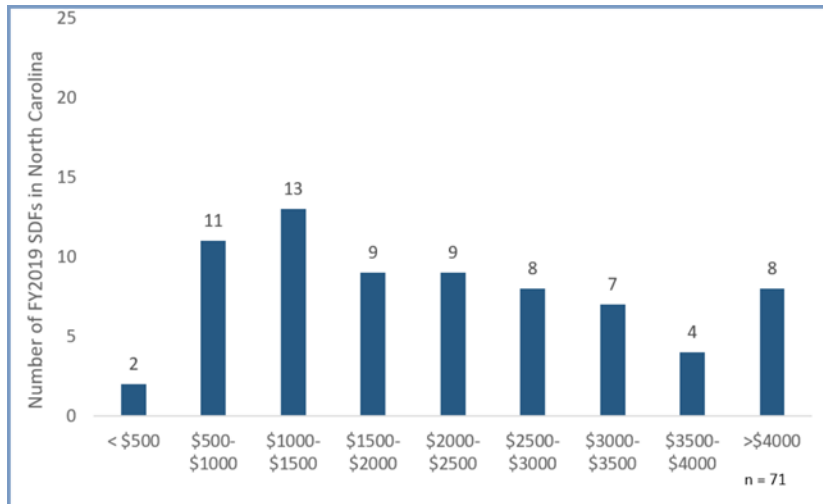


## Commercial

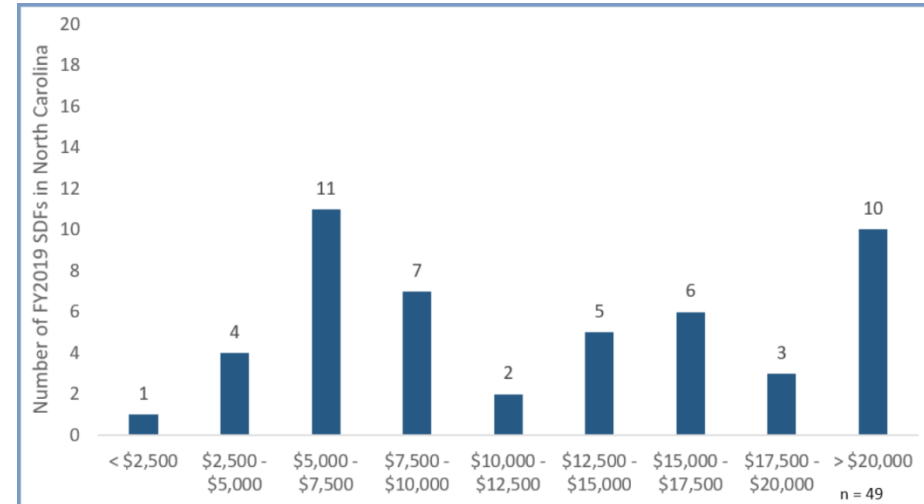


# Wastewater SDFs by Fee Range

## Residential



## Commercial



# Questions



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