

Utility Financial Planning (and Tools/Resources to Assist)

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SCHOOL OF GOVERNMENT
Environmental Finance Center

www.efc.sog.unc.edu

PLANNING



Planning Efforts

Financial plan: a plan to ensure that the performance of the utility fund meets or exceeds identified financial targets and goals.

Asset management plan: a long-range plan identifying how the existing assets will be managed, and when they will be replaced or rehabilitated.

Capital improvement plan: a plan that identifies capital projects to be completed in the next few years.

Disaster / emergency / resiliency plan: identification of risks and vulnerabilities to the utility's functions, and a course of action to mitigate the risks.

Long-range water resources plan: an assessment of water supply needs and/or wastewater demands long in the future (more than 10 years) and the ability of the utility to meet those needs.

Budget

Others?



DWI Grants Specifically Available for Planning

- **Merger/Regionalization Feasibility grant program:**
Provides grants for studies to evaluate the potential consolidation of two or more systems into one system and the potential physical interconnection with another system for regional wastewater treatment or regional water supply.
- **Asset Inventory and Assessment grant program:**
Provides grants for developing asset inventories, condition assessment of critical assets, and other components of a comprehensive asset management programs.



2017-18 NC Water and Wastewater Utility Management Survey

<https://efc.sog.unc.edu/resource/results-2017-2018-north-carolina-water-and-wastewater-utility-management-survey>

227 NC utilities (44%) participated in the survey,
answering questions about planning and
management practices.

Funder

North Carolina Policy Collaboratory

Conducted by



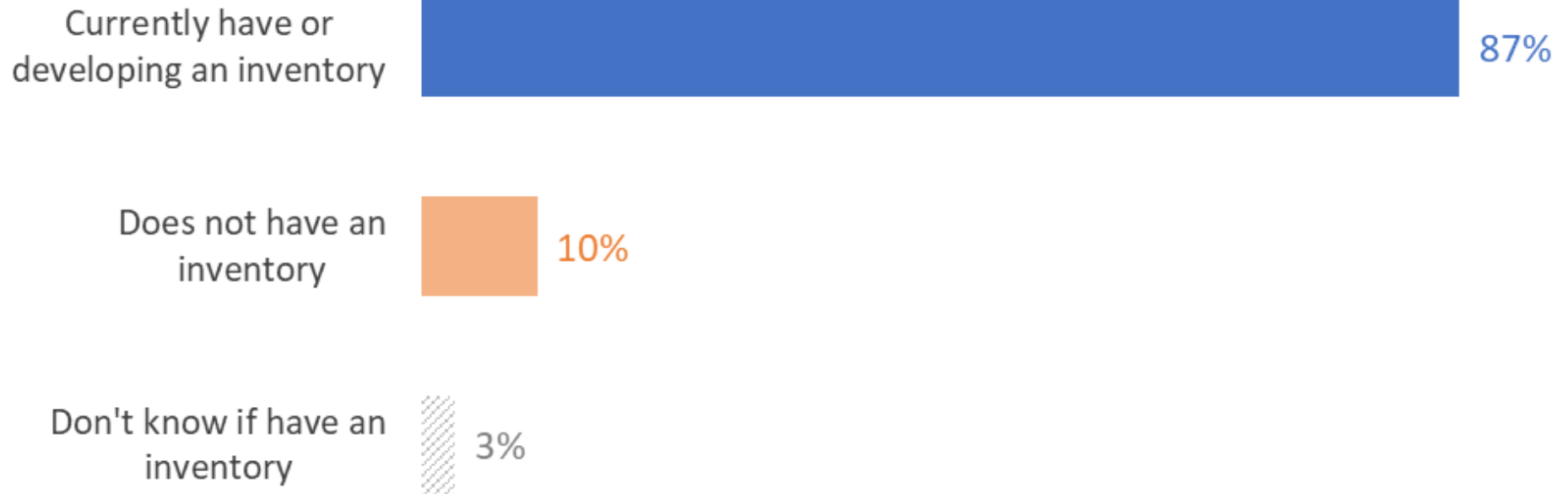
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Asset Management Planning

At least 87% of utilities have an inventory, or are developing one, of the utility's key assets.

n = 215



Source: 2017 North Carolina Water and Wastewater Utility Management Survey conducted by the Environmental Finance Center at the UNC School of Government and the North Carolina League of Municipalities.

Components of Asset Management Plans

Assessments of the individual assets listed on the utility's inventory of key assets.
n = 179 utilities with inventories of assets



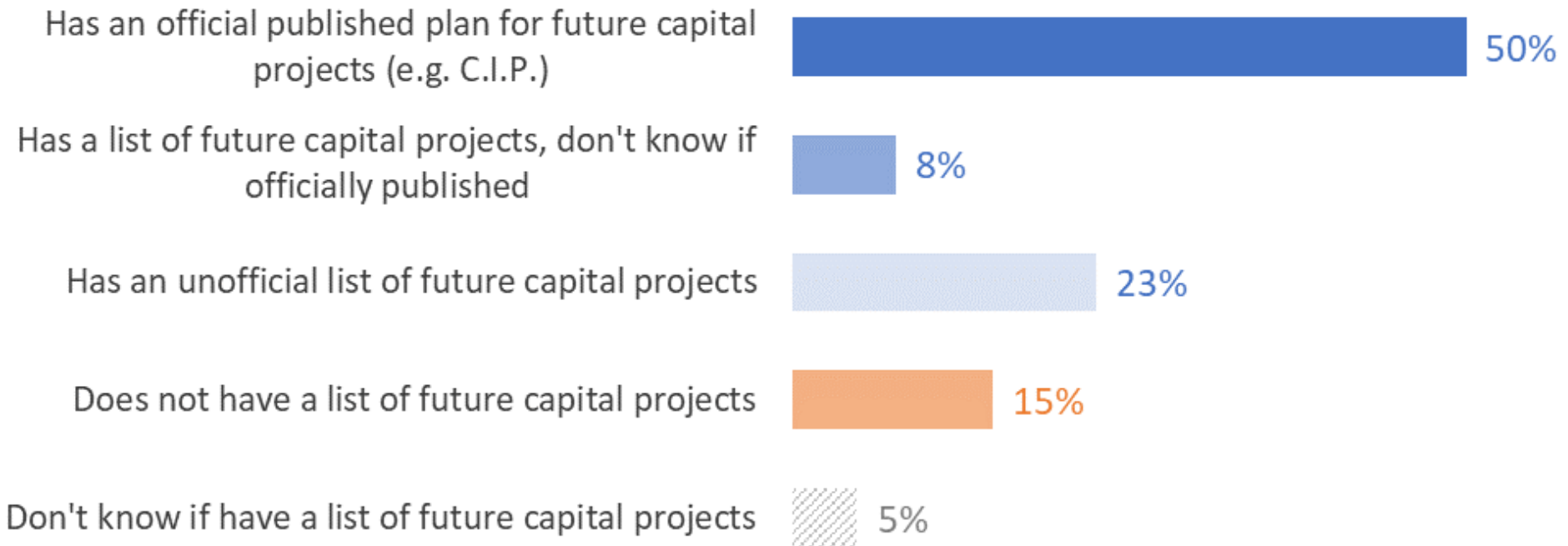
Includes 179 of the 188 utilities that currently have or are developing an inventory of the utility's key assets.

Source: 2017 North Carolina Water and Wastewater Utility Management Survey conducted by the Environmental Finance Center at the UNC School of Government and the North Carolina League of Municipalities.

Capital Planning

At least 80% of utilities have a list of potential future capital projects. Most of these lists are published in official documents such as Capital Improvement Plans.

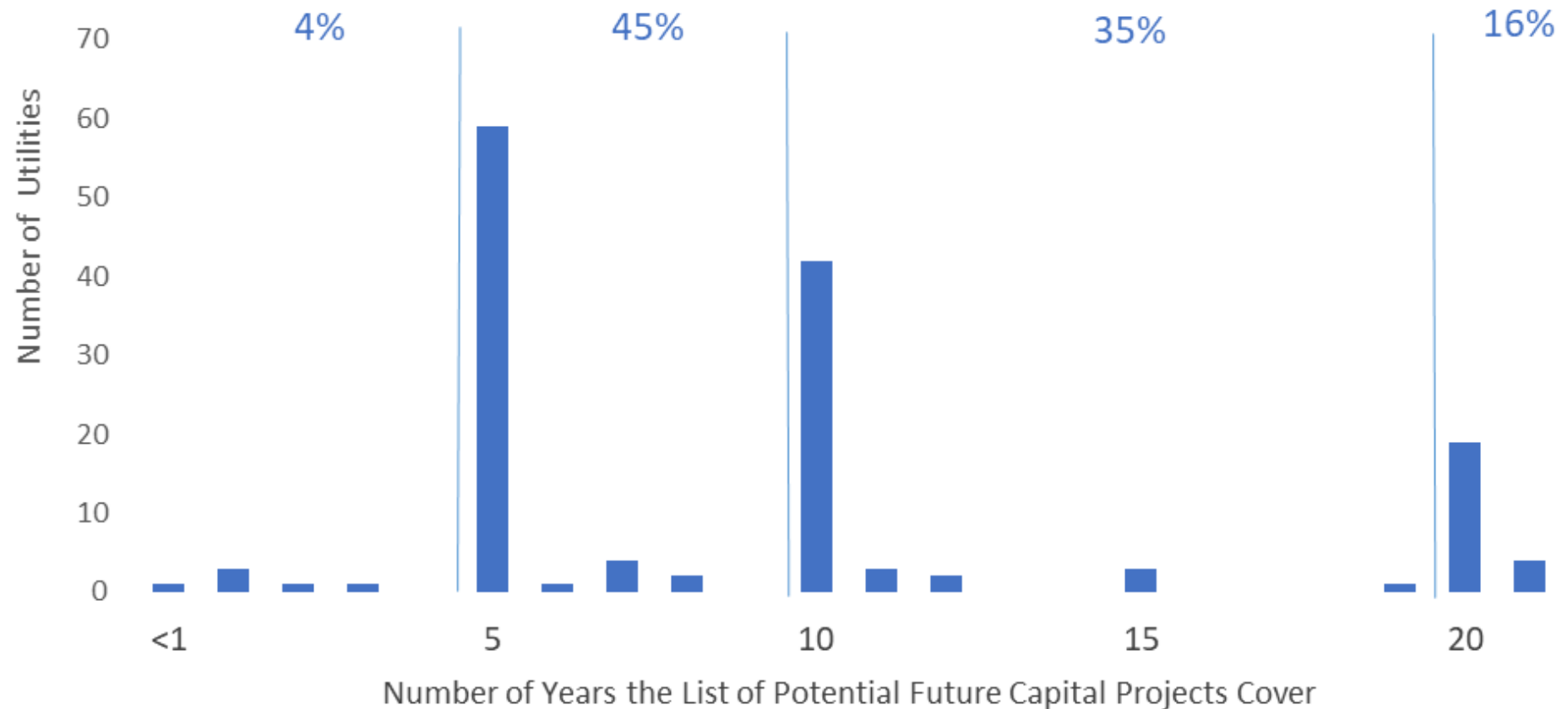
n = 208



Source: 2017 North Carolina Water and Wastewater Utility Management Survey conducted by the Environmental Finance Center at the UNC School of Government and the North Carolina League of Municipalities.

Capital Planning Horizon

51% of the capital planning lists/documents have a long (>10 year) planning period.
n = 146 utilities with lists of future capital projects



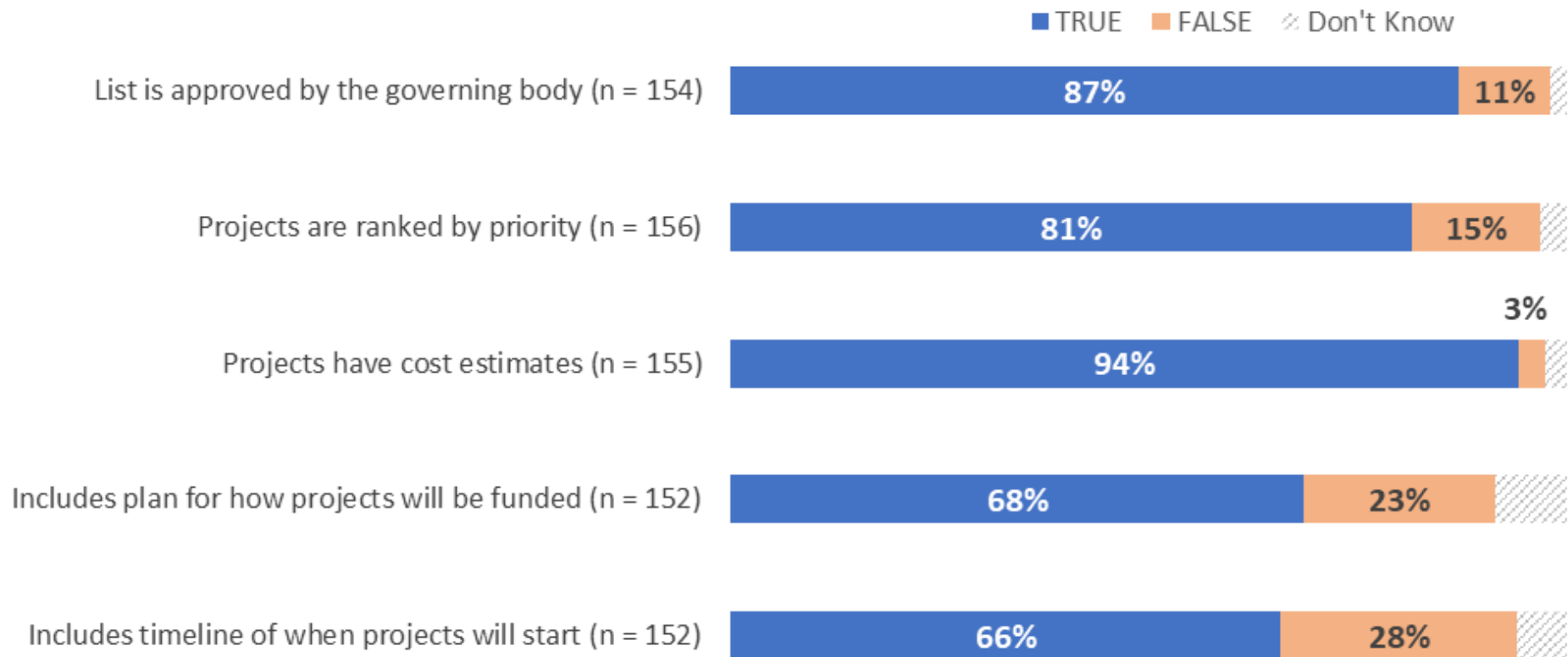
Includes 146 of the 167 utilities that have a list of potential future capital projects.

Source: 2017 North Carolina Water and Wastewater Utility Management Survey conducted by the Environmental Finance Center at the UNC School of Government and the North Carolina League of Municipalities.

Components of Capital Planning

Characteristics of the capital planning lists/documents.

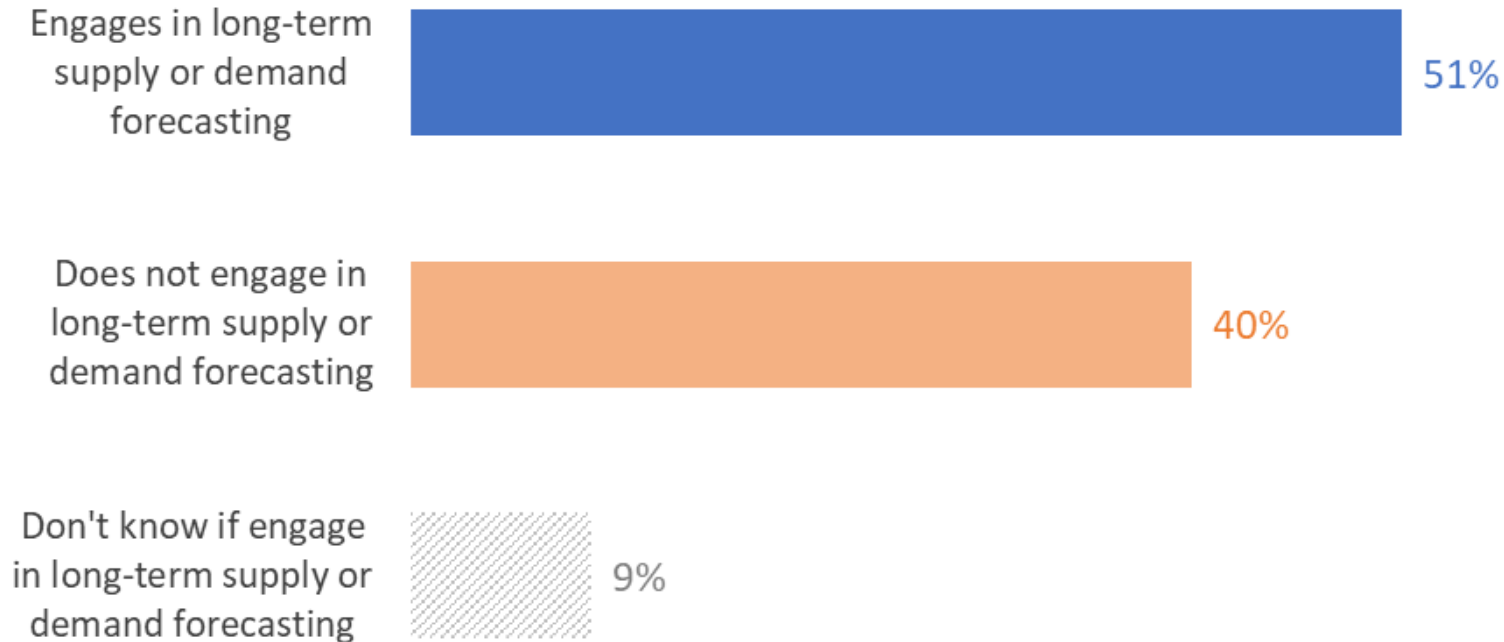
n = 152 - 156 utilities with lists of future capital projects



Numbers in parantheses indicate the number of utilities providing information for each question.

Source: 2017 North Carolina Water and Wastewater Utility Management Survey conducted by the Environmental Finance Center at the UNC School of Government and the North Carolina League of Municipalities.

Long Range W / WW Resources Planning

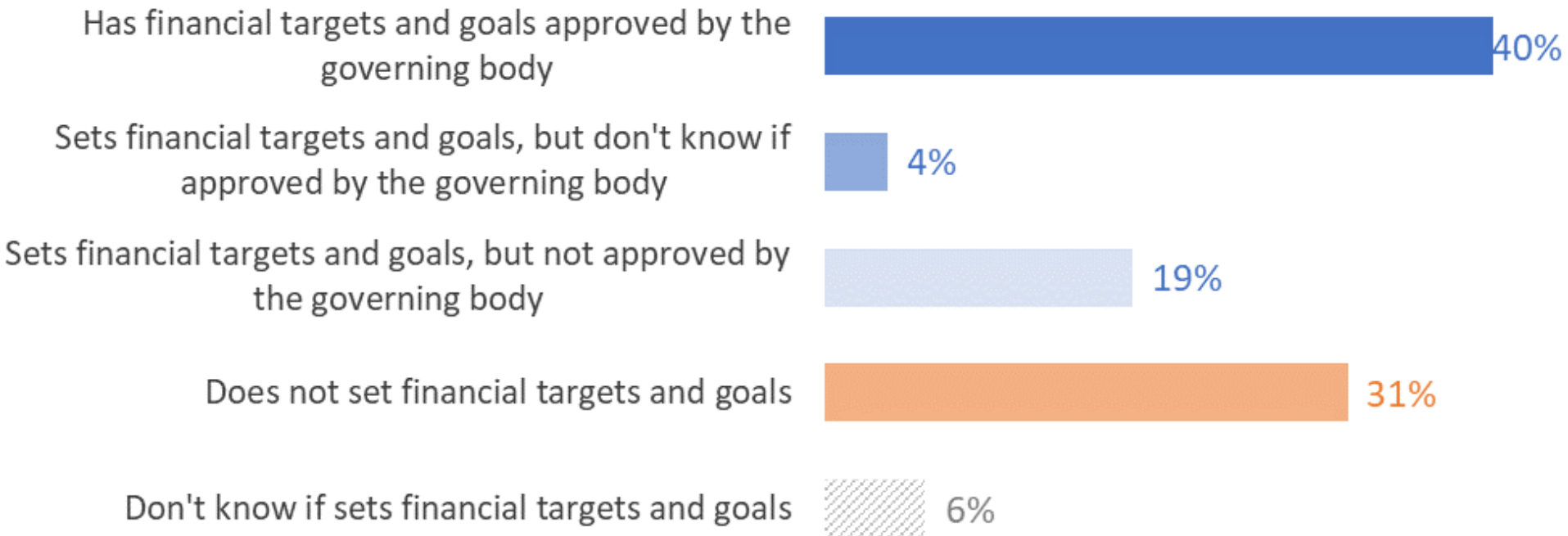


Local Water Supply Plans are required of all local government systems in NC (reported to NC DEQ DWR)

Financial Planning

At least 63% of utilities **set specific financial targets and goals**. Most have the targets and goals approved by the governing body.

n = 216



SETTING FINANCIAL TARGETS



Financial Performance

WATER AND SEWER FUND					
Water and Sewer Revenues					
	Actual	Adopted	Estimated	Adopted	
	FY 2016-17	FY 2017-18	FY 2017-18	FY 2018-19	Change
Investment & Rental Income					
Interest: Investments and Assess.	\$ 1,863,375	\$ 1,978,739	\$ 1,978,739	\$ 1,062,918	-46.28%
Rental Income	158,325	200,000	200,000	200,000	0.00%
Total Investment & Rental Income	\$ 2,021,700	\$ 2,178,739	\$ 2,178,739	\$ 1,262,918	-42.03%
Operating Revenue					
Water & Sewer Sales					
Water & Sewer Sales	\$ 38,178,481	\$ 40,767,159	\$ 38,080,413	\$ 47,355,747	16.16%
Contract Water Sales	1,773,520	116,000	63,733	9,310	-91.97%
Late Fees	65,173	60,000	61,636	61,800	3.00%
Industrial Monitoring	10,605	15,000	10,400	15,300	2.00%
Sewer Surcharge	169,782	142,000	144,928	146,300	3.03%
Suspended Solids	9,551	8,000	6,999	8,160	2.00%
Subtotal	\$ 40,207,112	\$ 41,108,159	\$ 38,368,109	\$ 47,596,617	15.78%
Other Operating Revenues					
Septic Tank Disposal	\$ 50,640	\$ 62,000	\$ 51,000	\$ 62,240	2.00%

Budget



Financial Performance

STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN FUND NET POSITION
PROPRIETARY FUNDS
For The Year Ended June 30, 2015

	Major Enterprise Fund
	Water and Sewer Fund
<i>OPERATING REVENUES:</i>	
Charges for Services	\$324,180
Water and Sewer Taps	1,500
Other Operating Revenues	13,706
Total Operating Revenues	\$339,386
<i>OPERATING EXPENSES:</i>	
Personnel	\$176,759
Water and Sewer Operations	148,499
Depreciation	140,087
Total Operating Expenses	\$465,345

Audited Financial Statement

Financial Policies

- Guidelines for an organization's financial operational and strategic decision making
- Often focused on financial stability and health of the utility
- GFOA recommends local governments adopt and use financial policies



Set Up and Monitor Internal Financial Performance Targets

Set up specific financial performance targets, measure and monitor performance indicators, and adjust financial decisions to maintain success.



Examples of Financial Targets

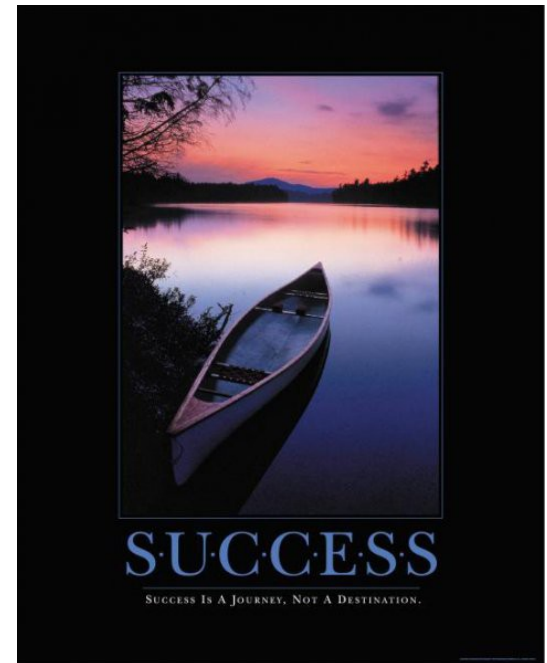
- Minimum Reserves / Cash on Hand
- Working Capital Reserves
- Debt Service Coverage Ratio
- Debt Burden or Debt-Per-Customer
- Cash Financing of Capital Projects
- Rates Affordability
- Credit Rating



Evidence of Success

Utilities that set financial targets by 2013:

- Had **higher operating ratios** in FY2017
- Were **twice as likely** to have higher operating revenues than operating expenses in FY2017



When comparing utilities against others of similar size, similar number of FTEs, and similar presence/absence of a full-time utility manager

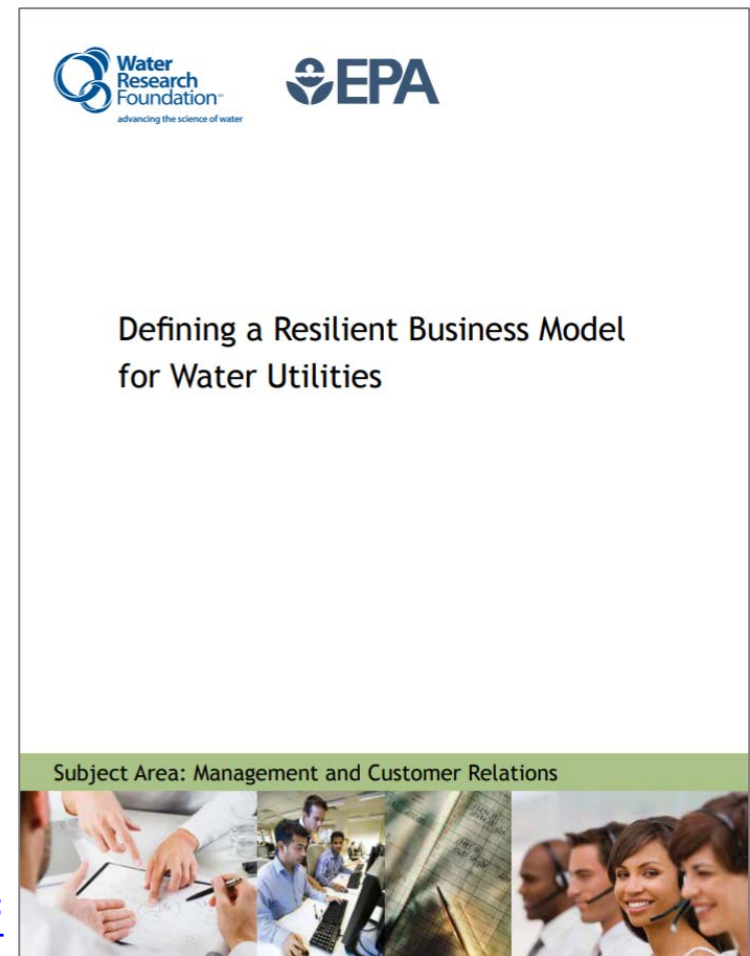
Chapter on Financial Strategies

Water Research
Foundation report (2014).

Chapter 4: Strategies and
Practices for Revenue
Resiliency.

<https://efc.sog.unc.edu/project/defining-resilient-business-model-water-utilities> or

<http://www.waterrf.org/PublicReportLibrary/4366.pdf>



Recorded Webinar on Setting Financial Targets

Financial Targets

<https://efc.sog.unc.edu/event/setting-financial-targets-water-utilities-beyond-budget>

Broad River
WATER AUTHORITY

6,600 accounts

Setting Financial Targets For Water Utilities
Beyond The Budget

Webinar
September 25, 2018

Shadi Eskaf
Environmental Finance Center at the UNC School of Government
Maria Hunnicutt
Broad River Water Authority, NC
Stephen Winters
Orange Water and Sewer Authority, NC

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21,000 accounts

Minimum Cash on Hand Target

Town of Shallotte, NC

Water and wastewater utility

2,300 accounts



North Carolina



Minimum Cash on Hand Target

“Our Board of Aldermen have always used a 90% rule: keeping at least 90% of current budget on hand in case of emergencies.

Being a coastal community, we realize that a hurricane could do significant damage.”

Orange Water and Sewer Authority Financial Targets

Measurement	Objective	FY 2018 Goal	Results
Working Capital Reserve	Greater of four months Operating expenses or 20% of succeeding three years CIP	\$11.6M	\$10.1M
Capital Improvements Reserve	2% of Net Capital Assets (Funding \$400,000 per year until reach goal of approximately \$6M)	\$3.6M	\$3.6M
Rate/Revenue Stabilization Reserve	5% of annual Water and Sewer Revenue	\$1.7M	\$1.7M



Orange Water and Sewer Authority

A public, non-profit agency providing water, sewer and reclaimed water services to the Carrboro-Chapel Hill community

Speaker: Stephen Winters, Director of Finance and Customer Service, OWASA

Orange Water and Sewer Authority Financial Targets

Measurement	Objective	FY 2018 Goal	Results
Debt Burden to Asset Value	Total Debt not more than 50% of Total Assets	< 50%	24%
Sufficiency of Revenues above Debt Requirements	Annual Debt Service no more than 35% of Gross Revenue	< 35%	17%
Cash Financing of Capital	Annual revenues and reserves provide at least 30% of CIP funding	> 30%	49%
Debt Service Coverage Ratio	Annual Net Income not less than two times Annual Debt Service	2.0	2.6



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Orange Water and Sewer Authority Financial Targets

Measurement	Objective	FY 2018 Goal	Results
Credit Ratings	Moody's Standard & Poor's Fitch	Aa2 AA+ AA+	Aa1 AAA AA+
Service Affordability Ratio	Average annual OWASA bill not more than 1.5% of area median household income	1.5%	1.35%



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Examples of Financial Targets



Financial Metric	Policy Target
Debt Service Coverage Ratio	<ul style="list-style-type: none"> • Parity coverage of 1.5x • Total coverage of 1.2x
Debt Load	<ul style="list-style-type: none"> • Debt service less than 40% of total revenue requirements
Capital Funding	<ul style="list-style-type: none"> • Minimum of 25% of annual capital expenses funded through rate-funded capital (PAYGO)
Days Cash on Hand	<ul style="list-style-type: none"> • 180 days
O&M Budget Escalation	<ul style="list-style-type: none"> • Maximum annual O&M budget escalation of 5%
Operating Reserve Fund	<ul style="list-style-type: none"> • Minimum fund balance of 90 days of annual O&M expenses
Capital Reserve Fund	<ul style="list-style-type: none"> • Minimum fund balance of 25% of annual Capital expenses
Rate/Revenue Stabilization Fund	<ul style="list-style-type: none"> • Minimum fund balance target of 5% of projected annual revenues
Rate Revenue Composition	<ul style="list-style-type: none"> • Minimum of 25% of annual revenue from fixed charges
Rate Increases	<ul style="list-style-type: none"> • Minimum of automatic rate increases indexed to inflation
Service Affordability	<ul style="list-style-type: none"> • Maximum annual bill of an average customer of 2% of median household for each water and wastewater

Source: Water Research Foundation report, 2014, *Defining a Resilient Business Model for Water Utilities*.

Targets should be customized for each utility based on objectives, conditions, and purpose.

Measurement

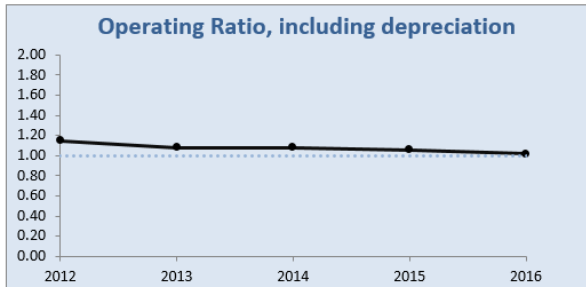
Dashboard of revenues, expenditures, cash and investments, and capital projects. Updated monthly.

 TOWN OF SHALLOTTE Monthly Financial Dashboard FISCAL YEAR ENDING June 30, 2019 Reporting Period: August 2018																											
SPECIFIC REVENUE COLLECTIONS AT A GLANCE...		EXPENDITURES AT A GLANCE...																									
Enterprise Fund																											
OTHER REVENUES		\$ 929,216	\$ 3,989,476																								
Revs YTD% Coll% of Budget	39,596	4.26%	23.29%																								
SYSTEM DEV FEES		\$ 195,471	\$ 3,989,476																								
Revs YTD% Coll% of Budget	\$ 42,003	21.49%	4.90%																								
WATER CHARGES		\$ 1,078,736	\$ 3,989,476																								
Revs YTD% Coll% of Budget	\$ 208,609	19.34%	27.04%																								
SEWER CHARGES		\$ 1,786,053	\$ 3,989,476																								
Revs YTD% Coll% of Budget	\$ 319,533	17.89%	44.77%																								
FUND TOTALS		90% of Budget																									
General Fund		\$ 6,188,180	\$ 5,569,362																								
Revenues FYTD	\$ 339,439	5%																									
Enterprise Fund		\$ 3,989,476	\$ 3,590,528																								
Revenues FYTD	\$ 609,740	15%																									
OUR CASH AND INVESTMENTS																											
Balances on Aug 30, 2018 in whole dollars																											
CASH & INVESTMENTS BY FUND																											
ENTERPRISE FUNDS																											
	June 2018	August 2018																									
Water/sewer Fund	\$ 1,340,576	\$ 1,043,217																									
First Bank	\$ 327,183	\$ 327,238																									
NCCMT	\$ 103,868	\$ 104,406																									
Water/sewer Fund Savings	\$ 2,510,517	\$ 2,513,625																									
TOTAL OTHER FUNDS	\$ 4,282,144	\$ 3,988,486																									
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Enterprise Fund</p>  <p>- Water Department - Sewer Department</p> </div> <div style="border: 1px solid black; padding: 5px;"> <table border="1"> <thead> <tr> <th colspan="3">Capital Project - Riverfront Project</th> </tr> <tr> <th>CP Expenditures</th> <th>FY Budget</th> <th>Current Exp</th> </tr> </thead> <tbody> <tr> <td>Riverwalk</td> <td>\$ 1,500,000.00</td> <td></td> </tr> <tr> <td>Legal Svcs</td> <td>\$ 60,000.00</td> <td></td> </tr> <tr> <td>Professional Svc</td> <td>\$ 250,000.00</td> <td>\$ 18,080.00</td> </tr> <tr> <td>Capital Outlay</td> <td>\$ 1,900,000.00</td> <td></td> </tr> <tr> <td>Total</td> <td>\$ 3,710,000.00</td> <td>\$ 18,080.00</td> </tr> <tr> <th>CP Revenues</th> <th>FY Budget</th> <th>Current Rev</th> </tr> </tbody> </table> </div> </div>				Capital Project - Riverfront Project			CP Expenditures	FY Budget	Current Exp	Riverwalk	\$ 1,500,000.00		Legal Svcs	\$ 60,000.00		Professional Svc	\$ 250,000.00	\$ 18,080.00	Capital Outlay	\$ 1,900,000.00		Total	\$ 3,710,000.00	\$ 18,080.00	CP Revenues	FY Budget	Current Rev
Capital Project - Riverfront Project																											
CP Expenditures	FY Budget	Current Exp																									
Riverwalk	\$ 1,500,000.00																										
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Total	\$ 3,710,000.00	\$ 18,080.00																									
CP Revenues	FY Budget	Current Rev																									
Fiscal Year Budget		\$ 6,188,180	\$ 1,497,178																								
Unspent Budget Remaining		\$ 4,691,002	75.81%																								
ENTERPRISE FUND		Fiscal Year	YTD Expenses																								
DEPARTMENTS		17/18 Budget	Current FY																								
Water Department		\$ 1,581,625	\$ 146,979																								
Sewer Department		2,407,851	285,056																								
			11.84%																								
		\$ 3,989,476	\$ 432,035																								
			10.83%																								
Fiscal Year Budget		\$ 3,989,476	\$ 432,035																								
Unspent Budget Remaining		\$ 3,557,441	89.17%																								

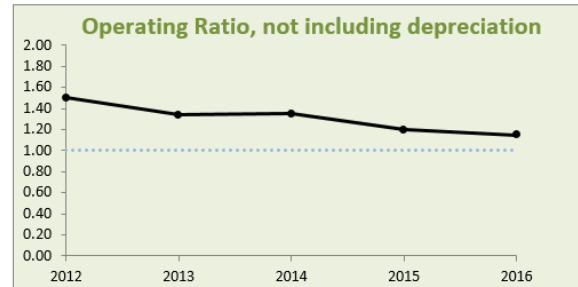
Consider Trends Over Time

Assessment for Example utility

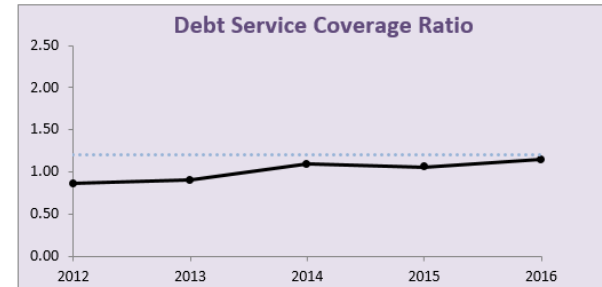
Did you generate the revenues needed to pay for O&M and a little for capital?



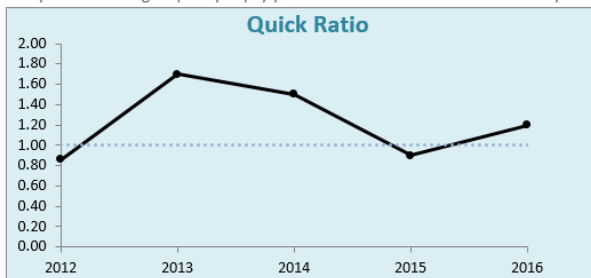
Did you generate the revenues needed to pay for O&M by itself?



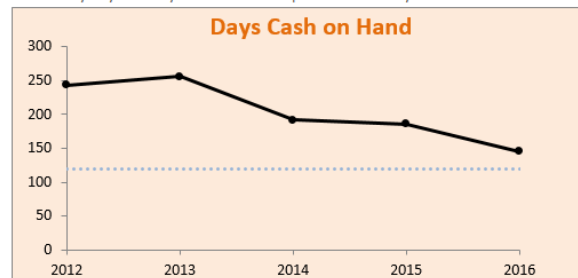
Did you generate the revenues needed to pay for O&M and existing debt service?



Did you have enough liquidity to pay your current liabilities at the end of the year?



How many days could you continue to operate the utility with the cash levels available?



Measurement

Key Performance Indicators

July 2018



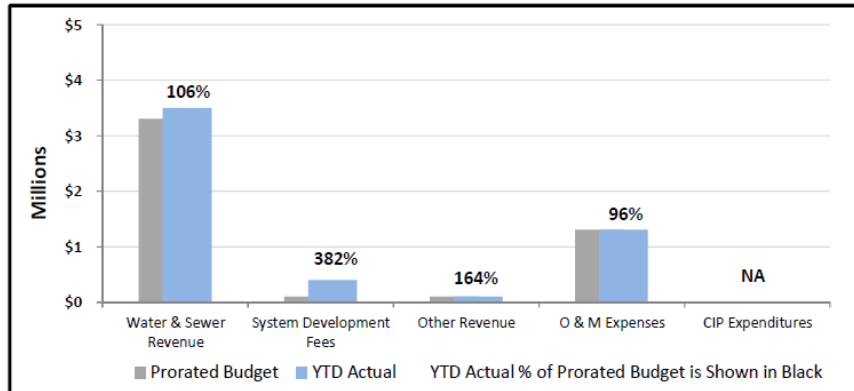
WATER SUPPLY AND DEMAND

Water Supply		Water Demand (Sales in Million Gallons per Day)				
Reservoir Storage % of Capacity	87.3% <small>(as of July 31, 2018)</small>	July 2018		FY 2018 (Avg Year to Date)		
Risk of Shortage Restrictions in Coming Year (Minimal, Low, Moderate)	Minimal	Est.	% of Projected	Estimated	% of Projected Year-to-Date	
		Drinking Water (DW)	6.54	100%	6.54	100%

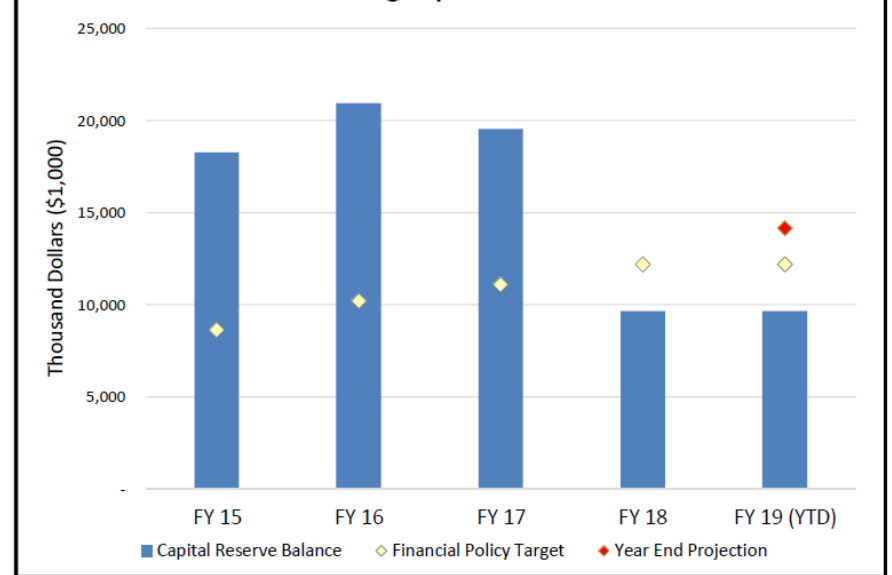
FINANCE MANAGEMENT

FY 2019 Budget Performance (millions of dollars)

Category	July 2018		FY 2019 Year-to-Date		
	Actual	Budget	Actual	Budget	Variance
Revenue (Preliminary)	4.0	3.5	4.0	3.5	0.5
Operating Expenses (Prelim)	1.3	1.3	1.3	1.3	0.0
Capital Expenditures (Prelim)	NA	NA	NA	NA	NA



Working Capital Reserves



FINANCIAL ANALYSIS AND MANAGEMENT SYSTEM (FAMS) SUMMARY

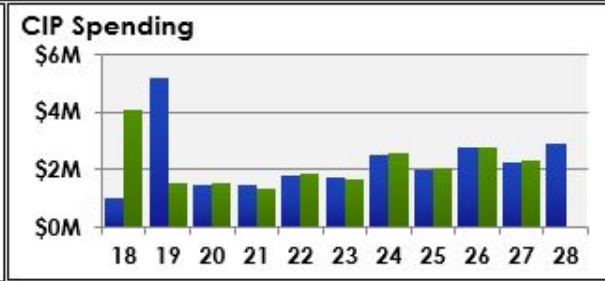
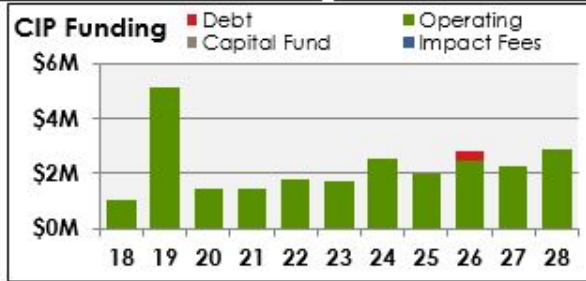
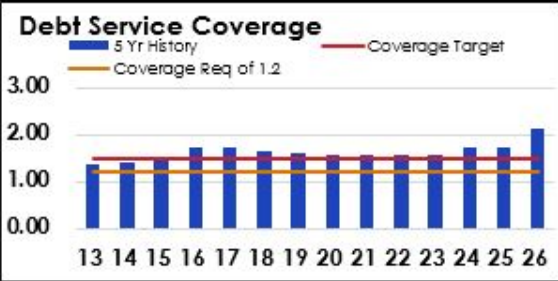
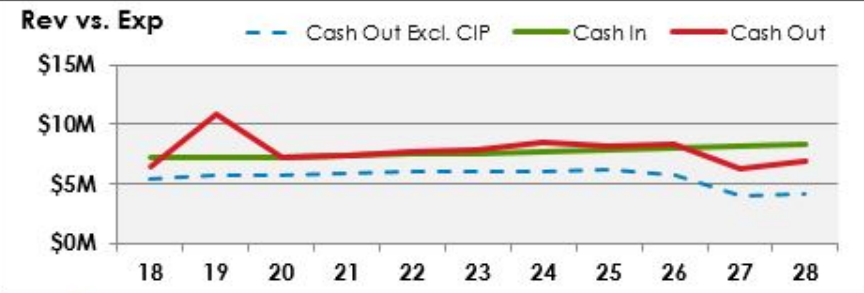
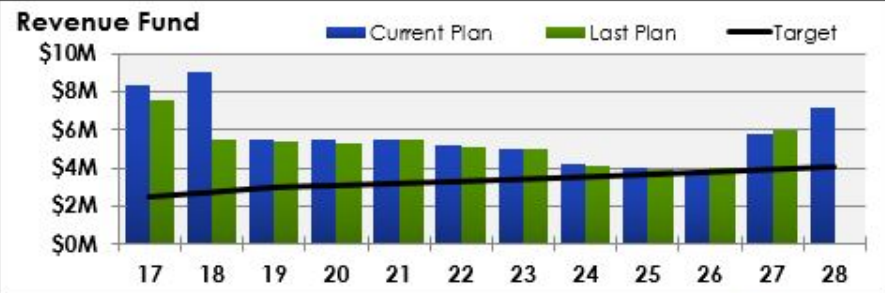


Broad River Water Authority

ROLL CALC SAVE

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Cumulative Change	
Water Fee Rate Plan	0.00%	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	FY 2023	FY 2028
Override ▶	0.00%	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	12.52%	30.43%
Last Plan	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	0.00%	15.88%	34.29%
Bulk Fee Rate Plan	2.60%	2.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Override ▶	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Last Plan	2.60%	2.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Senior-Lien DSC	1.66	1.61	1.55	1.56	1.57	1.58	1.71	1.71	2.14	167.24	168.49		
Last Plan	1.62	1.53	1.54	1.55	1.56	1.57	1.69	1.71	2.18	88.36	0.00		
Monthly Bill (3,500 Gals)	\$41.38	\$41.38	\$42.61	\$43.89	\$45.20	\$46.56	\$47.95	\$49.38	\$50.87	\$52.39	\$53.97		
Last Plan	\$41.38	\$42.61	\$43.89	\$45.20	\$46.56	\$47.95	\$49.38	\$50.87	\$52.39	\$53.97	\$0.00		
												Check	-

ICWD & Polk?
EDC Project?



Speaker: Maria Hunnicutt, General Manager, Broad River Water Authority

TOOLS TO HELP WITH FINANCIAL PLANNING



Tools Can Be Accessed Here

<http://www.efc.sog.unc.edu/project/utility-financial-tools>

or <http://efcnetwork.org/resources/tools/>



The EFC has created several free tools to assist water utilities in addressing the challenges and questions we commonly see in our teaching and advising. These tools cover a broad range of finance and management topics, including rates and revenue, financial benchmarking, affordability, capital finance, communicating with the board, and evaluating loans and grants.

Rates and Revenue



Water and Wastewater Rates Analysis Model

Use this tool to review your rates to ensure projected revenues cover projected expenses. This tool will help you determine whether proposed rates will keep the utility financially self-sufficient for the next few years.



Water Utility Revenue Risk Assessment Tool

Use this tool to assess how much revenues might be affected by changing demand patterns. The tool will help you compare effects on existing rates and on alternative rate structures.

Benchmarking



Financial Sustainability and Rates Dashboards

Our flagship tools for water utilities, these interactive dashboards allow you to benchmark your utility's rates against other utilities with similar characteristics. The dashboards also help you evaluate rates, cost recovery, affordability, pricing signal, and other financial benchmarks. Use the dashboards to communicate important information about your rates with your board, the media, and the public.

See Handout


Financial Health Checkup for Water Utilities

<http://efc.sog.unc.edu> or <http://efcnetwork.org>


Find the most up-to-date version in Resources / Tools

Fill in your audited financial data to automatically compute trends in six financial assessment indicators over the past five years.

Financial Health Checkup for Water Utilities



Developed by the Environmental Finance Center at the University of North Carolina, Chapel Hill
<http://efc.sog.unc.edu>




A resource for water systems through the Environmental Finance Center Network's Smart Management for Small Water Systems project, funded under a cooperative agreement with the U.S. Environmental Protection. <http://efcnetwork.org>

What does this tool do?
This tool assists in the assessment of the financial performance of a water (and/or wastewater) utility fund. Financial data readily available in annual financial statements are copied into this tool, which computes key financial indicators that measure a variety of important metrics, such as the ability to pay debt service, availability of cash to pay for operations and maintenance, the sufficiency of revenues generated, etc. Each metric is compared against targets that are specified by the user. The tool demonstrates the financial strengths and weaknesses of the utility fund in the past 5 years.

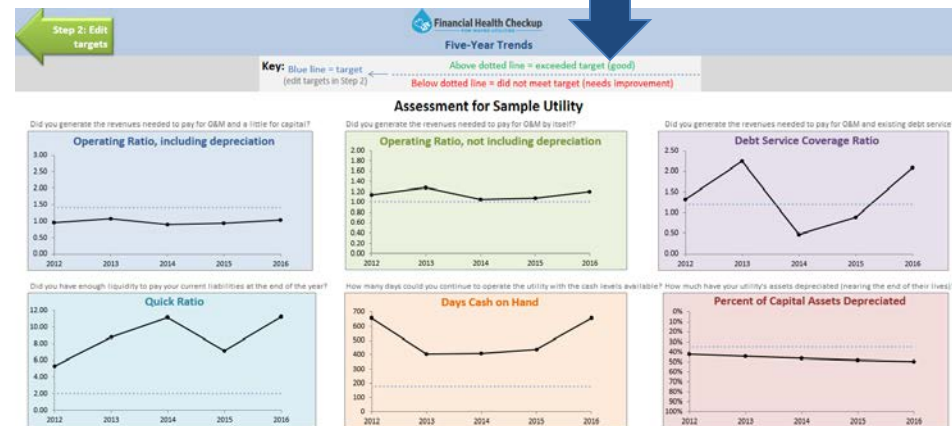
Features:
Simple data entry (uses data already reported in your audited financial statements)
6 financial performance indicators with explanations
Set your own targets
Assessment of last year's financial ratios, improvements since previous year, and five-year trends
Guided navigation through hyperlinked images

What are financial indicators?
Watch a whiteboard video explaining financial performance indicators in lay terms.



- key** Field in the financial statement/LARK
- [1] Total Operating Revenues
 - [2] Total Operating Expenses
 - [3] Depreciation & Amortization Expenses
 - [4] Debt Principal Payments
 - [4b] Debt Interest Payments
 - [5] Current Assets, excluding inventories, restricted cash, prepaids
 - [6] Current Liabilities, excluding deposits & bond anticipation notes
 - [7] Unrestricted Cash & Investments
 - [8] Total Accumulated Depreciation
 - [9] Total Depreciable Capital Assets

	2012	2013	2014	
[1]	\$ 3,984,193	\$ 3,965,968	\$ 3,901,253	\$
[2]	\$ 4,165,641	\$ 3,736,470	\$ 4,378,937	\$
[3]	\$ 681,808	\$ 635,807	\$ 656,255	\$
[4]	\$ 323,177	\$ 331,520	\$ 339,490	\$
[4b]	\$ 55,289	\$ 53,350	\$ 47,011	\$
[5]	\$ 6,614,237	\$ 4,004,526	\$ 4,756,504	\$
[6]	\$ 1,247,456	\$ 456,465	\$ 425,164	\$
[7]	\$ 6,297,233	\$ 3,406,963	\$ 4,149,266	\$
[8]	\$ 12,976,114	\$ 13,611,921	\$ 14,268,176	\$
[9]	\$ 30,575,353	\$ 30,686,885	\$ 30,867,768	\$



Excel®-based

Free to download

Free to use

Water & Wastewater Rates Analysis Model


<http://efc.sog.unc.edu> or <http://efcnetwork.org>

Find the most up-to-date version in Resources / Tools


Cash-flow model to compare different rates on your projected fund balance to determine sufficiency of covering costs.

Water & Wastewater Rates Analysis Model

Version 2.8.7 (last updated May 2018)



Developed by the Environmental Finance Center at the University of North Carolina, Chapel Hill
<http://efc.sog.unc.edu>



Funded by the U.S. Environmental Protection Agency and the Public Water Supply Section of the North Carolina Department of Environmental Quality

[Get](#)
[Download a populated example](#)

DESCRIPTION


A do-it-yourself, simplified financial model to assist utility managers and private system owners in setting water and wastewater rates.

FEATURES

Comparisons of annual fund balance projections (for up to 20 years) under proposed new rates vs. staying with existing rates	Up to 12 rate structures	Uniform or block rates (up to 10 blocks)
Adjust rates for the next 1-5 years	Model changes to accounts and water use	Customizable list of operating and capital expenses
Compare monthly bills under new rates vs. existing rates	Building up reserves through rates	Assess revenue sufficiency and fund balance
Error notifications		


INSTRUCTIONS

1) Navigate using worksheet tabs at bottom of screen or following arrows and clicking on buttons



→

2) In the green "Data Input" worksheets, input data in the dark green cells



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Residential Rates Affordability Assessment

<http://efc.sog.unc.edu> or <http://efcnetwork.org>

Find the most up-to-date version in Resources / Tools

Guides you to access socioeconomic data for your community and calculates multiple metrics to assess affordability of your rates.



Tool developed by the Environmental Finance Center at the University of North Carolina, Chapel Hill

Water & Wastewater Residential Rates Affordability Assessment Tool

Interactive Spreadsheet Tool
Version 1.8 (January 2nd, 2020)

This tool allows users to enter relevant Census data on their service community to help assess the affordability of their water or wastewater rates on their residential customers. The tool also allows for a new rate structure to be entered to see how affordability compares from one rate structure to the next.

In the "Inputs" worksheet, fill in all yellow-colored cells.

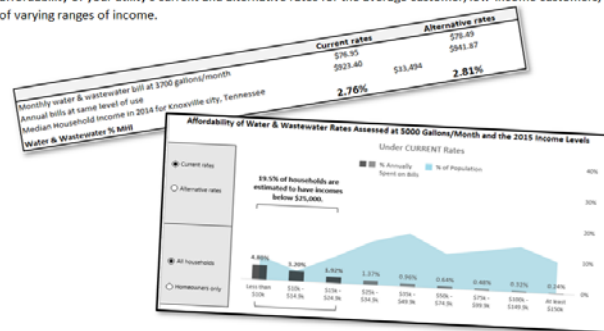
Begin data inputs

Data Inputs

1) Utility Information
Name of the utility:
Select the state, District of Columbia, or Puerto Rico from the dropdown menu:
Assess affordability of water, wastewater or combined water & wastewater rates?
River Run Utility
District of Columbia
Water & Wastewater

2) Monthly Charges at (Near) the Average Residential Water Use
What is the approximate average residential monthly consumption?
4,360 gallons/month or

In the "Assessment" worksheet, the tool automatically populates tables and charts to assist you in assessing the affordability of your utility's current and alternative rates for the average customer, low-income customers, and customers of varying ranges of income.



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Plan to Pay: Scenarios to Fund your C.I.P.

<http://efc.sog.unc.edu> or <http://efcnetwork.org>

Find the most up-to-date version in Resources / Tools

List your capital projects and compare different scenarios for funding them by automatically estimating the impact on your rates.

Plan to Pay: Scenarios to Fund your C.I.P. (Capital Improvement Plan)
Version 2.8 (Updated January 2018)

20-year capital planning Debt and/or capital reserve financing options Guided data inputs Simple data needs

Financial dashboard outputs Estimates necessary rate increases over time to pay for capital projects

INSTRUCTIONS

- Use tabs at bottom of screen and buttons to navigate to different pages.
- In **"Data Input 1"**, enter utility characteristics, rates and usage information in blue cells.
- In **"Data Input 2"**, enter details on capital improvement projects in the light blue cells. Each row is a different project.
- In **"20-Year Projections"**, view your fund balance projections for 20 years and observe the estimated rate increases needed each year to pay for your Capital Improvement. No data entry required on this page.
- After all your utility information and capital improvement project details are entered, go to the **"Dashboard"** to view long term trends in your financial reserves, rate increases and average bills, and capital investments.

	FY15	FY16	FY17	FY18
Estimated Rate Changes Needed to Maintain the Fund Balance				
Total Revenue (Excludes) in Rates (plus with Voluntary)	NA	0.0%	0.1%	2.4%
Increase (Decrease) in the Monthly Bill for 5,000 Gallons	NA	\$0.00	\$1.51	\$0.75
Increase (Decrease) in the Monthly Base Charge	NA	\$0.00	\$0.44	\$0.34
Monthly Base Charge ("Minimum Charge")	\$12.24	\$12.24	\$12.88	\$13.21
Voluntary Rate at 1,000 gallons (1000 gallons)	\$1.67	\$1.67	\$1.66	\$1.11
Volume Included with the Base Charge (1,000 gal of gallons)	\$29.20	0	0	0
Approximate Monthly Charge for 5,000 gallons (0)	\$29.20	\$29.20	\$30.88	\$31.61
Projected Fund Balance				
Total Reserves	\$ 1,310,000	\$ 953,459	\$ 1,238,312	\$ 1,354,405
Base Charges	\$ 1,775,980	\$ 1,785,322	\$ 1,907,205	\$ 1,976,733
Usage Charges	\$ 3,029,840	\$ 3,094,959	\$ 3,216,658	\$ 3,281,362
Interest Earned from Previous Year's Positive Balance	\$ -	\$ 9,465	\$ 9,107	\$ 9,697
Revenues from Other Sources Besides Charges	\$ 103,268	\$ 103,268	\$ 103,268	\$ 103,433
Total Revenues	\$ 5,109,088	\$ 5,056,463	\$ 5,267,345	\$ 5,367,628

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Subsidized Loan Calculator

<https://public.tableau.com/profile/efc.at.unc#!/vizhome/SubsidizedLoanCalculator/LandingPage>

Or <http://efc.sog.unc.edu>

Find out the cumulative savings value of being offered a subsidized loan by a funding agency.

The screenshot shows a web-based calculator titled "What is the Value of an SRF Loan? Subsidized Loan Calculator". It includes input fields for "Estimated Project Cost" (\$500,000), "Subsidiz..." (2.0%), "Loan Ter..." (25), "Principa..." (0), and "Market Ra..." (4.5%). Below the inputs, a question asks "Based on These Inputs, How Much Could You Save Compared to a Commerical Loan?". Two results are displayed in blue boxes: "Grant Equivalent (Principal Forgiven)" is \$0, and "Interest Savings Over the Life of the Loan (in Nominal Dollars)" is \$202,732. The footer includes the UNC logo, "SCHOOL OF GOVERNMENT Environmental Finance Center", and a "To Pg. 2 -->" button.

New!
Not listed yet

Online tool

Free to use

Funding Programs in the State

North Carolina Water and Wastewater Funding Sources

Compiled by the Environmental Finance Center Network, July 2019

Organization	Program (key words)	Gov. Entity	Non- Profit	For- Profit	Purpose or Use of Funds	How to Apply	Website	Contact
North Carolina Department of Environmental Quality	Drinking Water State Revolving Fund (SRF) (water)	✓	✓	✓	The DWSRF provides low interest loans to local government units and certain non-profit water corporations for projects to provide safe drinking water.	There are two funding cycle per year, typically in March and September. Applications and guidance concerning the funding process can be accessed on the website.	https://deq.nc.gov/about/divisions/water-infrastructure/i-need-funding/drinking-water-state-revolving-fund	Vincent Tomaino vincent.tomaino@ncdenr.gov 919-707-9058 512 North Salisbury Street Raleigh, North Carolina 27604
	Clean Water State Revolving Fund (SRF) (sewer)	✓			The CWSRF provides low interest loans to local government units to fund wastewater collection and treatment facilities as well as programs associated with estuary and non-point sources.		https://deq.nc.gov/about/divisions/water-infrastructure/i-need-funding/clean-water-state-revolving-fund	Anita Robertson anita.robertson@ncdenr.gov 919-707-9174 512 North Salisbury Street Raleigh, North Carolina 27604
	Community Development Block Grant- Infrastructure (CDBG) (water, sewer)	✓			Provides grants to local government units to address water and wastewater infrastructure needs in HUD qualified low to moderate income communities.	There is one funding cycle per year, typically in September. Applications and guidelines concerning the funding process can be accessed on the website.	https://deq.nc.gov/about/divisions/water-infrastructure/i-need-funding/community-development-block-grant-0	Julie Haigler Cubeta julie.cubeta@ncdenr.gov 919-707-9189 512 North Salisbury Street Raleigh, North Carolina 27604
	State Wastewater and Drinking Water Reserve Programs (wastewater, water)	✓			The State Wastewater Reserve and Drinking Water Reserve Programs provide grants and loans for planning, design and construction of critical water infrastructure. Grant dollars are awarded according to affordability criteria developed based on the definition found in NCGS 159G-20.(1).	Application forms and guidelines concerning the funding process can be accessed online on the NCDWI website.	https://deq.nc.gov/about/divisions/water-infrastructure/i-need-funding/state-wastewater-and-drinking-water-reserve	Vincent Tomaino vincent.tomaino@ncdenr.gov 919-707-9058 or Anita Robertson anita.robertson@ncdenr.gov 919-707-9174 512 North Salisbury Street Raleigh, North Carolina 27604
	Merger/Regionalization Feasibility Grants (water, wastewater)	✓	✓		The Merger/Regionalization Feasibility grants were created in Session Law 2015-241, with the changes made to NCGS 159G, to broaden the use of grant funds to encourage water and wastewater utilities to become viable and more proactive in the management and financing of their systems.	Application forms and guidelines concerning the funding process can be accessed online on the NCDWI website.	https://deq.nc.gov/about/divisions/water-infrastructure-draft/i-need-funding/mergerregionalization-feasibility-grants	Amy Simes amy.simes@ncdenr.gov 919-707-9192 512 North Salisbury Street Raleigh, North Carolina 27604
	Asset Inventory and Assessment Grants (water, wastewater)	✓	✓		The Asset Inventory and Assessment grants were created in Session Law 2015-241 in the changes made to NCGS 159G, to broaden the use of grant funds to encourage water and wastewater utilities to become more viable and more proactive in the management and financing of their systems.	Application forms and guidelines concerning the funding process can be accessed online on the NCDWI website.	https://deq.nc.gov/about/divisions/water-infrastructure-draft/i-need-funding/asset-and-inventory-assessment-grants	



Compiled by the Environmental Finance Center Network. For the most up-to-date information, contact program managers or see <http://efcnetwork.org/funding-sources-by-state/>. To make corrections, contact waterfundingprograms@unc.edu.

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Find the latest at <https://efcnetwork.org/funding-sources-by-state/>

Funding for Disaster Recovery

Natural Disaster Recovery Water and Wastewater Funding Sources

North Carolina

Compiled by the Environmental Finance Center Network, July 2019

Program (key words)	Gov. Entity	Non- Profit	For- Profit	Purpose or Use of Funds	How to Apply	Website	Contact
North Carolina Department of Environmental Quality Drinking Water State Revolving Fund (DWSRF) <i>(water)</i>	✓	✓	✓	The DWSRF can be used for response, recovery, and mitigation efforts. These include: Emergency Repairs, Construction/Capitalization, and Technical Assistance.	The application and the application for the DW/CW SRF program can be found on the forms page. There are two funding cycles per year, typically in March and September.	https://deq.nc.gov/about/divisions/water-infrastructure/i-need-funding/drinking-water-state-revolving-fund	Vincent Tomaino vincent.tomaino@ncdenr.gov 919-707-9058 512 North Salisbury Street Raleigh, North Carolina 27604
Clean Water State Revolving Fund (CWSRF) <i>(wastewater)</i>	✓			The CWSRF can also be used for response, recovery, and mitigation efforts. These uses match those of the DWSRF, with the exception of technical assistance.		https://deq.nc.gov/about/divisions/water-infrastructure/i-need-funding/clean-water-state-revolving-fund	Anita Reed anita.reed@ncdenr.gov 919-797-9174 512 North Salisbury Street Raleigh, North Carolina 27604
Federal Emergency Management Agency (FEMA) Public Assistance <i>(water, wastewater)</i>	✓	✓		FEMA's Public Assistance (PA) grant program provides federal assistance to government organizations and certain private nonprofit (PNP) organizations following a Presidential disaster declaration.	Applications are available online.	https://www.fema.gov/public-assistance-local-state-tribal-and-non-profit	Federal Emergency Management Agency 800-621-33662 500 C Street Southwest Washington, District of Columbia 20472
Pre-Disaster Mitigation Grant (PDM) <i>(water, wastewater)</i>	✓	✓		The PDM Program is designed to assist States, U.S. Territories, Federally-recognized tribes, and local communities in implementing a sustained pre-disaster natural hazard mitigation program. The goal is to reduce overall risk to the population and structures from future hazard events, while also reducing reliance on Federal funding in future disasters. This program awards planning and project grants and provides opportunities for raising public awareness about reducing future losses before disaster strikes.	Applications and sub-applications for the PDM Grant Program must be submitted via the Mitigation eGrants system on the FEMA Grants Portal: https://portal.fema.gov .	https://www.fema.gov/media-library/assets/documents/168111	
Hazard Mitigation Grant (HMG) <i>(water, wastewater)</i>	✓	✓	✓	Hazard mitigation measures are any sustainable action taken to reduce or eliminate long-term risk to people and property from future disasters. The HMG supports cost-effective post-disaster projects and is the longest running mitigation program among FEMA's three grant programs. Studies have shown that every \$1 spent equals \$4 of future damages mitigated.	Contact your state hazard mitigation officer to apply: https://www.fema.gov/state-hazard-mitigation-officers	https://www.fema.gov/hazard-mitigation-grant-program	
USDA Rural Development (RD) Emergency Community Water Assistance Grants <i>(water, sewer)</i>	✓	✓		This program helps eligible communities prepare or recover from, an emergency, such as a drought or flood, earthquake, tornado or hurricane, disease outbreak, chemical spill leak or seepage, that threatens the availability of safe, reliable drinking water. A federal disaster declaration in that area is not required.	Applications are accepted year round through your local RD office. Program resources are available on the website.	https://www.rd.usda.gov/programs-services/emergency-community-water-assistance-grants/nc	For specific regional contact, please see: https://www.rd.usda.gov/programs-services/emergency-community-water-assistance-grants/nc
Small Business Administration (SBA) Business Disaster Loans <i>(small business)</i>			✓	SBA provides low-interest disaster loans to help businesses and homeowners recover from declared disaster. Help is available in the form of low-interest, long-term loans for losses not fully covered by insurance or other means.	Application is available on the website.	https://www.sba.gov/funding-programs/disaster-assistance	SBA Disaster Loan Customer Service disastercustomerservice@sba.gov 800-659-2955



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