



January 4, 2017

## Financing the Future of Water Systems

*Department of Environmental Quality  
Jennifer Haynie*



# Overview

- Background
- Infrastructure needs
- Tools to address needs
  - NC Statewide Master Plan
  - Funding
- Funding availability
- Summary of funding provided by Division of Water Infrastructure programs
- Next funding round

# *Division of Water Infrastructure*

- Created in 2013 to consolidate critical need water infrastructure funding sources in NC
  - Community Development Block Grant – Infrastructure (CDBG-I)
  - Clean Water State Revolving Fund (CWSRF)
  - Drinking Water State Revolving Fund (DWSRF)
  - State Drinking Water and Wastewater Reserves
- State Water Infrastructure Authority (SWIA)

# *State Water Infrastructure Authority – 12 Charges*

1. Review recommendations for grants and loans submitted to it by the Division of Water Infrastructure
2. Establish priorities for making loans and grants, consistent with federal law
3. Review the criteria for making loans and grants and make recommendations, if any, for additional criteria or changes to the criteria
4. Develop guidelines for making loans and grants
5. Develop a master plan to meet the State's water infrastructure needs
6. Assess and make recommendations on the role of the State in the development and funding of wastewater, drinking water, and stormwater infrastructure
7. Analyze the adequacy of projected funding to meet projected needs over the next five years
8. Make recommendations on ways to maximize the use of current funding resources (federal, State, local) and ensure that funds are used in a coordinated manner
9. Review the application of management practices in wastewater, drinking water, and stormwater utilities and to determine the best practices
10. Assess the role of public-private partnerships in the future provision of utility service
11. Assess the application of the river basin approach to utility planning and management
12. Assess the need for a "troubled system" protocol



# *State Water Infrastructure Authority – 12 Charges*

1. Review recommendations for grants and loans submitted to it by the Division of Water Infrastructure
2. Establish priorities
3. Review the criteria for making loans and grants, and, if necessary, develop additional criteria or changes to the criteria
4. Develop guidelines for making loans and grants
5. Develop a master plan for the development and funding of wastewater, drinking water, and stormwater utilities
6. Assess and make recommendations for the development and funding of wastewater, drinking water, and stormwater utilities
7. Analyze the adequacy of projected funding to meet projected needs over the next five years
8. Make recommendations for the use of existing resources (federal, State, local) and for the development of new resources
9. Review the application of best practices in the management of drinking water, and stormwater utilities and to determine the best practices
10. Assess the role of public private partnerships in the future provision of utility service
11. Assess the application of best practices in the management of drinking water, and stormwater utilities
12. Assess the need for the development of new resources

**Distribute loan and grant funds**

**Define needs and funding**

**Emerging practices in utility management**

**Troubled systems protocol**



# *Drinking Water and Wastewater Utilities in NC*

- 380 active combined drinking water (DW) and wastewater (WW) local government utilities
- 75 active DW only local government utilities
- 2,025 active community DW systems
- Approximately 7.5 million served by community DW
- 35 WW only local government utilities
- Approximately 4.5 million served by centralized WW

# *Current Needs*

- 20-year NC Water Infrastructure needs based on surveys conducted by State Revolving Fund (SRF) programs and additional analysis by Environmental Finance Center
  - 2011 NC EPA DW Needs Survey - \$11 - \$15 Billion
  - 2012 NC EPA WW Needs Survey - \$7 - 11 Billion
- Limitations
  - Only cover SRF eligible activities
  - Use of statistical analysis for small to medium systems
  - Limited information for years 10 - 20
  - Replacement schedules are less than expected life



# State Water and Wastewater Infrastructure Master Plan

The state will best be able to meet its water infrastructure needs by ensuring individual utilities are, or are on a path to be, viable systems

A viable system is one that functions as a long-term, self-sufficient business enterprise, establishes organizational excellence, and provides appropriate levels of infrastructure maintenance, operation, and reinvestment that allow the utility to provide reliable water services now and in the future

## 2016

North Carolina's Statewide Water and Wastewater  
**INFRASTRUCTURE MASTER PLAN**  
*The Road to Viability*



Water Infrastructure  
ENVIRONMENTAL QUALITY



# State Water and Wastewater Infrastructure Master Plan

The state will best be able to meet its water infrastructure needs by ensuring individual utilities are, or are on a path to be, viable systems

A viable system is one that functions as a long-term, self-sufficient business enterprise, establishes organizational excellence, and provides appropriate levels of infrastructure maintenance, operation, and reinvestment that allow the utility to provide reliable water services now and in the future

## 2016

North Carolina's Statewide Water and Wastewater  
**INFRASTRUCTURE MASTER PLAN**  
*The Road to Viability*



Water Infrastructure  
ENVIRONMENTAL QUALITY

# State Water and Wastewater Infrastructure Master Plan

The state will best be able to meet its water infrastructure needs by ensuring individual utilities are, or are on a path to be, viable systems

A viable system is one that functions as a long-term, self-sufficient business enterprise, establishes organizational excellence, and provides appropriate levels of infrastructure maintenance, operation, and reinvestment that allow the utility to provide reliable water services now and in the future

**2016**

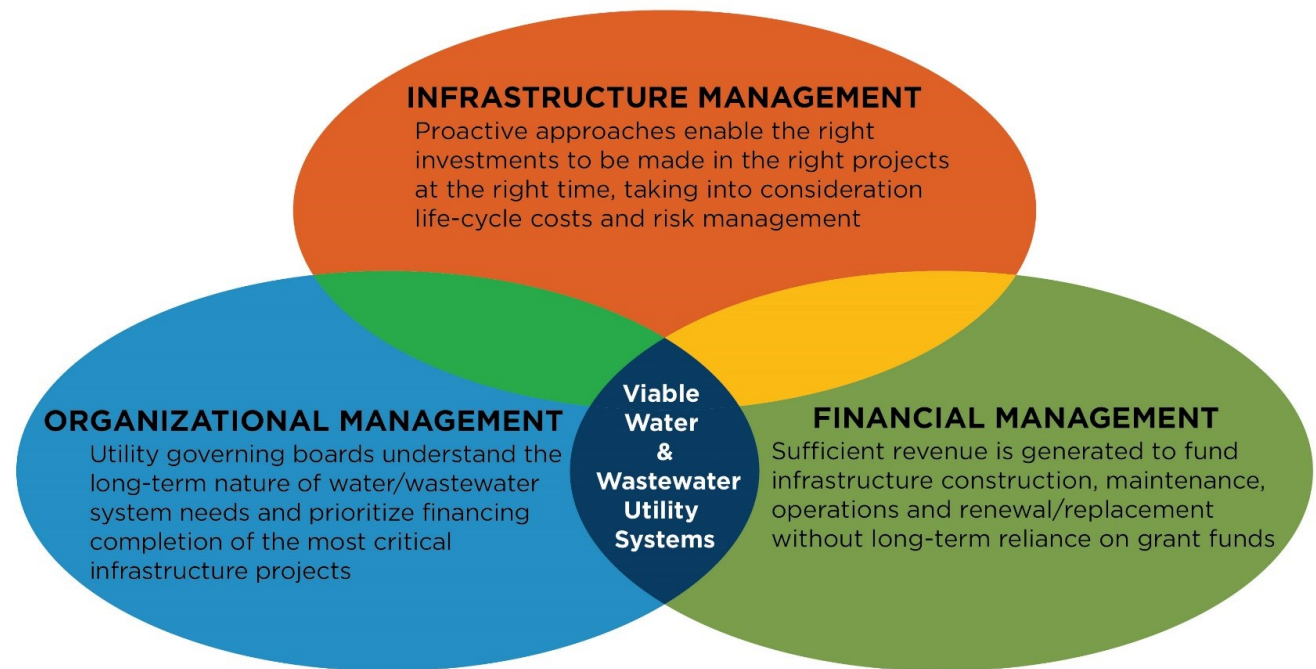
North Carolina's Statewide Water and Wastewater  
**INFRASTRUCTURE MASTER PLAN**  
*The Road to Viability*



Water Infrastructure  
ENVIRONMENTAL QUALITY

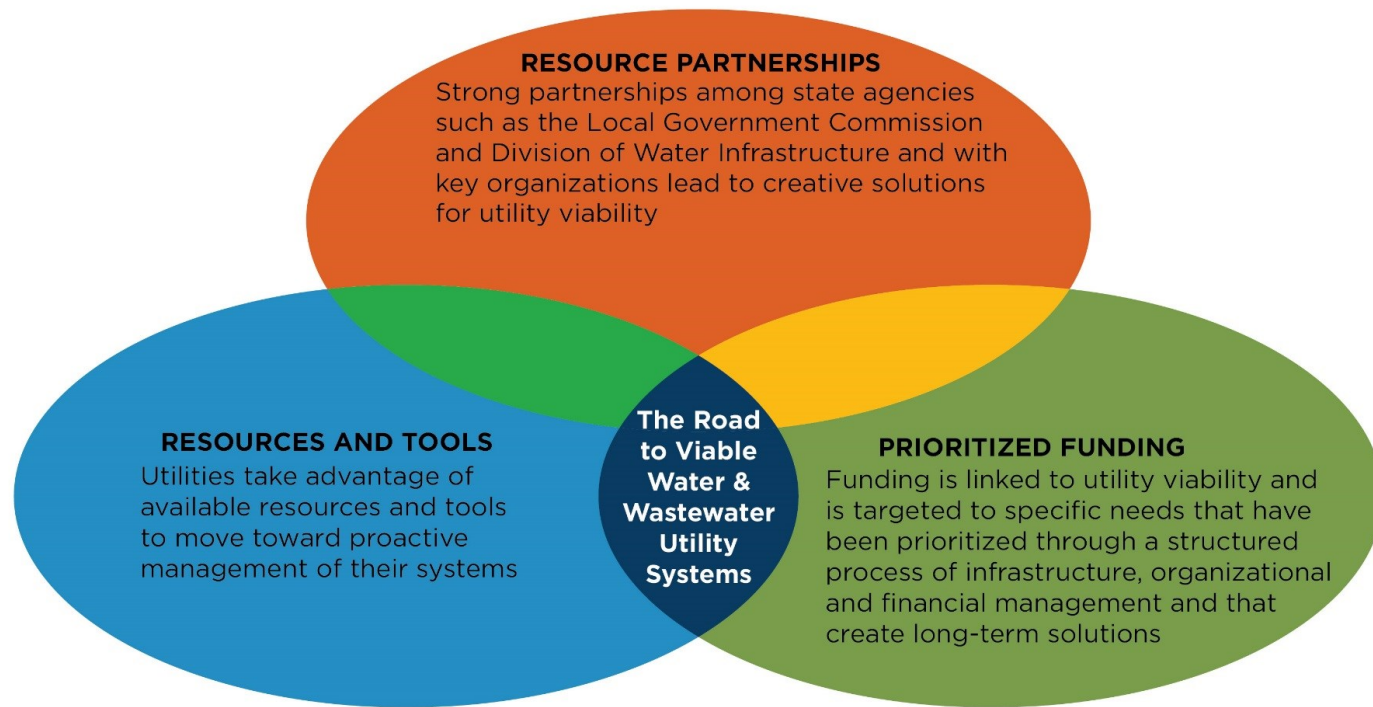
# *Vision for the Future: Viable Utility Systems – Focus Areas*

Infrastructure management  
Organizational management  
Financial management



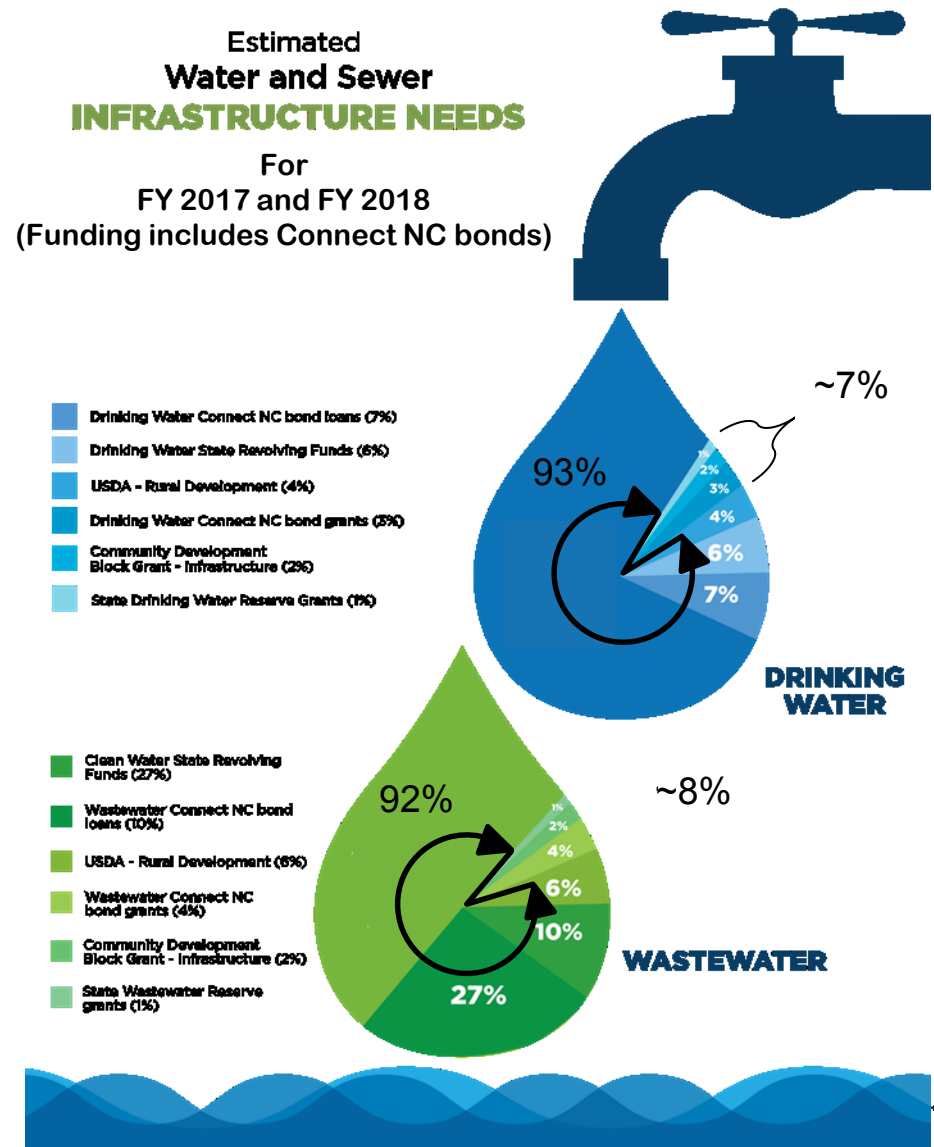
# *Achieving the Vision*

Requires actions by the state, local governments and water utility providers



# Infrastructure Funding Sources

- Grant funding for only ~ 7-8% of needs
  - Includes Connect NC bond funds
- Remaining ~ 92-93% of needs
  - Rely on revenue generated by the utility
    - Reserves
    - Federal SRF loans
    - State loans
    - Municipal bonds
  - Deferred





# *Funding Availability*

- Revenue bonds (80% of counties and 15% of municipalities have a bond rating)
- Private banks
- Subsidized loan programs
  - USDA-RD - \$50 million per year (loans and grants)
  - CWSRF - \$140 million per year
  - DWSRF - \$50 million per year
- Targeted grant programs
  - CDBG-I - \$25 million per year
  - State Reserve grants - \$10 to \$15 million per year
- Connect NC Bonds
  - \$209.5 million loan
  - \$100 million grant

# Challenges

- Declining condition of existing infrastructure
  - Deferring rehabilitation and replacement
  - Pressure to keep rates low
- Long term impacts
  - Reduced availability and reliability of service
  - Increased overall cost to customers
  - Economic strain on local government units
- Ability of local government units to afford financing and successfully operate as an enterprise with limited grant funds available (30% of utilities have no debt)

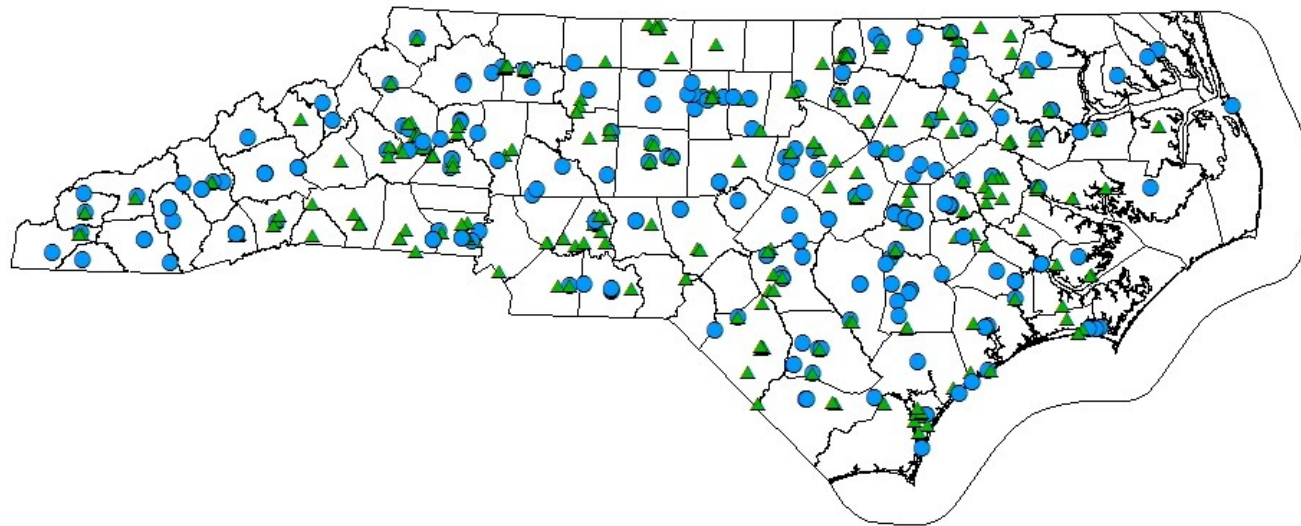


# *Division of Water Infrastructure Programs*

- Can fund wide availability of applicants and project types
- Substantial funding availability across programs
- Both loan and grant programs available
- Focus on rehabilitation and system viability
- Simplified application process
  - Common application documents and priorities
  - Can be considered for multiple funding programs with a single application
  - No engineering report required
  - Division can package loans and grants together for projects

# *Water Infrastructure Fund Since 2010*

## **Drinking Water and Wastewater Projects Funded by the Division of Water Infrastructure Since 2010**



### **Legend**

- Drinking Water
- ▲ Wastewater
- Counties

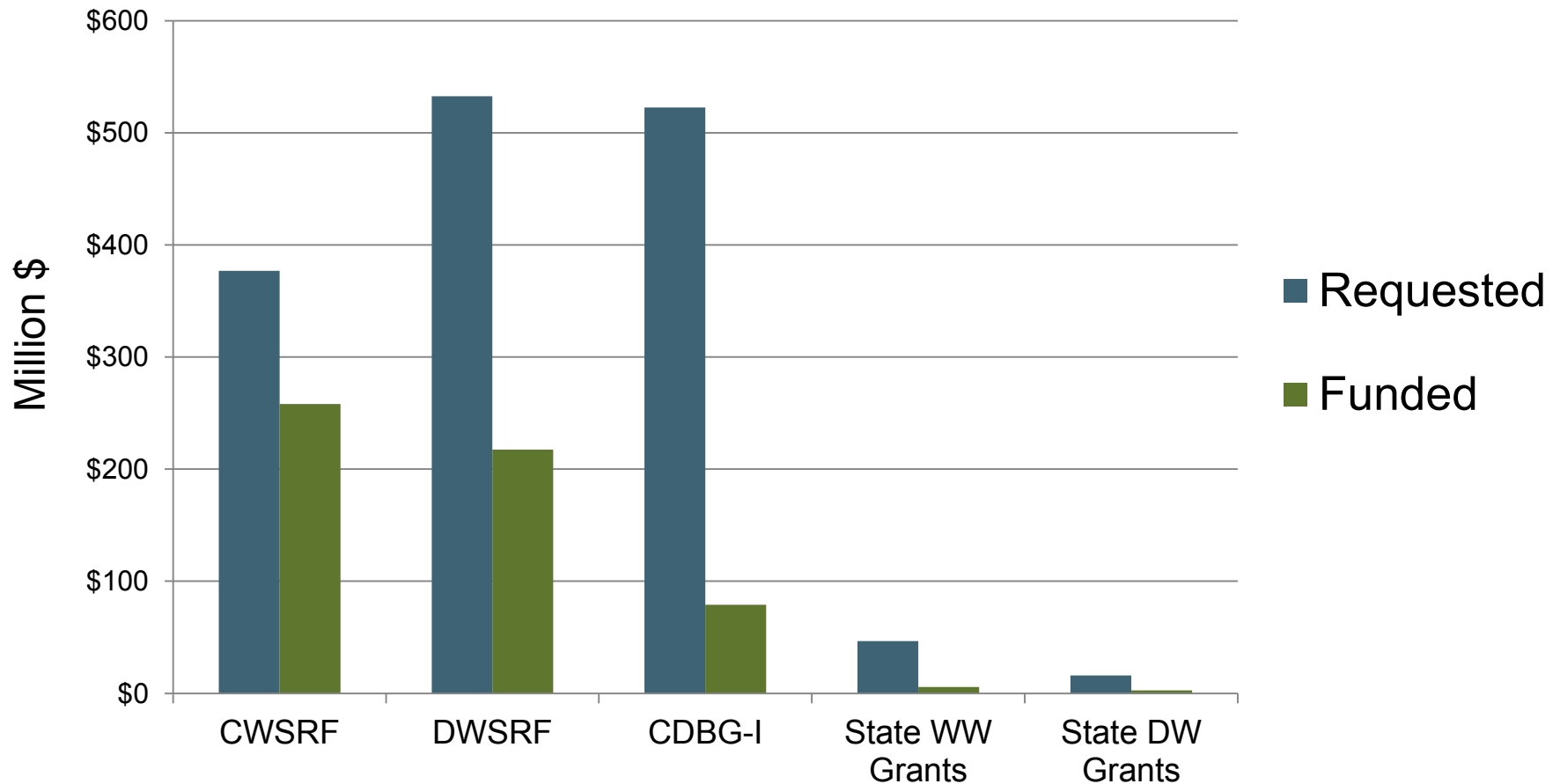


0 20 40 80 120 160 Miles



# *DWI Funding Across Programs*

## *Jan 2014 – Jan 2016 Application Approvals by SWIA*



# *State Revolving Fund Programs*

- Clean Water State Revolving Fund (Wastewater, Green)
- Drinking Water State Revolving Fund
- Low-interest loan programs
  - Current rates 1.66% to 0%
  - Capitalized by federal grants through EPA with state match
- Benefits
  - Stable source of funding
  - Largest funding program available (\$50+ million per round)
  - Can fund large projects (\$20 - \$30 million per project)
  - Any local government unit qualifies
  - Principal forgiveness available

# *Cost Savings of Subsidized Interest Rates*

- A project will save \$150,000 for every million at SRF base interest rate (equivalent to 15% grant)
- A project will save \$300,000 for every million at 0% interest rate (equivalent to 30% grant)

# *Types of Projects Funded*

- Drinking water
  - Failed infrastructure
  - Consolidation of failed systems
  - WTP rehabilitation/replacement
  - Waterline rehabilitation/replacement
  - Water storage rehabilitation/replacement
- Wastewater
  - Failed infrastructure
  - WWTP rehabilitation/replacement
  - Collection system rehabilitation/replacement
  - Expansion of existing infrastructure



# *CDBG Infrastructure Program*

- Federal Program implemented by US Housing and Urban Development (HUD)
- Purpose of program is to develop viable communities by providing benefits to persons of Low and Moderate Income (LMI)
- Projects must serve areas >51% LMI
- Only for Units of General Local Government
- Benefits
  - 100% grants available
  - \$25 million per year
  - \$2 million per project
  - Water and wastewater projects are eligible



# *Entitlement Area Funding*

- Nationally, \$2.3 billion goes directly to metropolitan cities and urban counties
- In NC, the cities of Asheville, Burlington, Cary, Chapel Hill, Charlotte, Concord, Durham, Fayetteville, Gastonia, Goldsboro, Greensboro, Greenville, Hickory, High Point, Jacksonville, Kannapolis, Lenoir, Morganton, New Bern, Raleigh, Rocky Mount, Salisbury, Wilmington, and Winston-Salem receive these funds directly, as do Wake, Mecklenburg and Cumberland Counties
- Entitlement areas are not eligible for Division of Water Infrastructure CDBG funds

# State Reserve Programs

- Loan and grant programs
- Water and wastewater funding available
- Funded by recurring state appropriation
  - Fiscal Year 2015 - \$7.4 million for grants
  - Fiscal Year 2016 - \$15 million for grants
- Low-interest loan programs
  - Current rates 1.66% to 0%
  - Max \$3 million per system type per applicant
- State Project Grants (\$3 million per system type per applicant over 3 years)
  - Qualification based upon affordability (most loan/grant mix)
- Asset Inventory and Assessment Grants
- Merger Regionalization Feasibility Study Grants

*Department of Environmental Quality*



# *Affordability Criteria – Purpose*

- S.L. 2013-360: “to better facilitate the dissemination of funds and meet the project needs of rural, economically stressed local governments”
- NCGS 159G-71.(8) - maximizing the use of state funding resources

# *Affordability Criteria -- Definition*

- The relative affordability of a project for a community compared to other communities in North Carolina based on factors that shall include, at a minimum, water and sewer service rates, median household income, poverty rates, employment rates, the population of the served community, and past expenditures by the community on water infrastructure compared to that community's capacity for financing of water infrastructure improvements.

NCGS 159G-20.(1)



# *Affordability Criteria Project Grant Qualification*

- Residential Connections < 20,000
- 3 of 5 Local Government Economic Indicators worse than state benchmark
  - Population Change
  - Median Household Income
  - Poverty Rate
  - Property tax value per capita
  - Employment rate
- Operating Ratio with proposed project debt service less than 1.3
- Grant percentage is determined based upon current utility rates and debt service per connection including proposed project
- Rates must be higher than state median to qualify for grant unless debt service is higher than state median

# *Asset Inventory and Assessment Grants*

- Limited to \$150,000 over three years per system type with matching funds
- To inventory existing water and/or sewer system and to document the condition of inventoried infrastructure
- Eligible activities
  - Identifying system components and where they are located
  - Performing a risk analysis to establish which components are critical
  - Determining the condition of critical components
  - Establishing costs for replacement/repairs/upgrades and continuous operations and maintenance
  - Creating a prioritized list of projects to be completed
  - Preparing a realistic Capital Improvement Plan

# *Merger / Regionalization Feasibility Grants*

- Limited to \$50,000 per system type over three years
- To determine the feasibility of consolidating the management of multiple utilities into a single utility operation or to provide regional treatment (and evaluate the best way of carrying out the merger or regionalization)



# *Connect NC Bonds*

- \$309.5 million available
  - \$209.5 million loan
  - \$100 million grant
- Funds are split evenly between drinking water and wastewater
- Funds are administered through State Reserve Programs with focus on project grants
- Wastewater grant funds have priority to resolving EPA administrative orders including higher per project cap (up to \$16 million grant and \$15 million loan per applicant)
- Application rounds: Spring 2017 and Fall 2017

# *Next funding round*

- Applications accepted for Connect NC and CWSRF
- Statewide training to be conducted starting mid-February
- Division staff are always available to discuss funding options and to provide assistance in the application process
- Review results with Authority in July 2017

# Contact Information

## **Seth Robertson, PE**

State Revolving Fund Section Chief  
Division of Water Infrastructure  
919.707.9175

[seth.robertson@ncdenr.gov](mailto:seth.robertson@ncdenr.gov)

## **Jennifer Haynie**

Supervisor, Environment and Special Projects Unit  
Division of Water Infrastructure  
919.707.9173

[jennifer.haynie@ncdenr.gov](mailto:jennifer.haynie@ncdenr.gov)

## **Francine Durso, PE**

Special Issues Technical Lead  
Division of Water Infrastructure  
919.707.9186

[francine.durso@ncdenr.gov](mailto:francine.durso@ncdenr.gov)

<http://portal.ncdenr.org/web/wi>

*Department of Environmental Quality*

