

# Regionalization of Water/Wastewater Systems in North Carolina

Presentation to the Environmental Management  
Commission's Water Allocation Committee

March 10, 2021

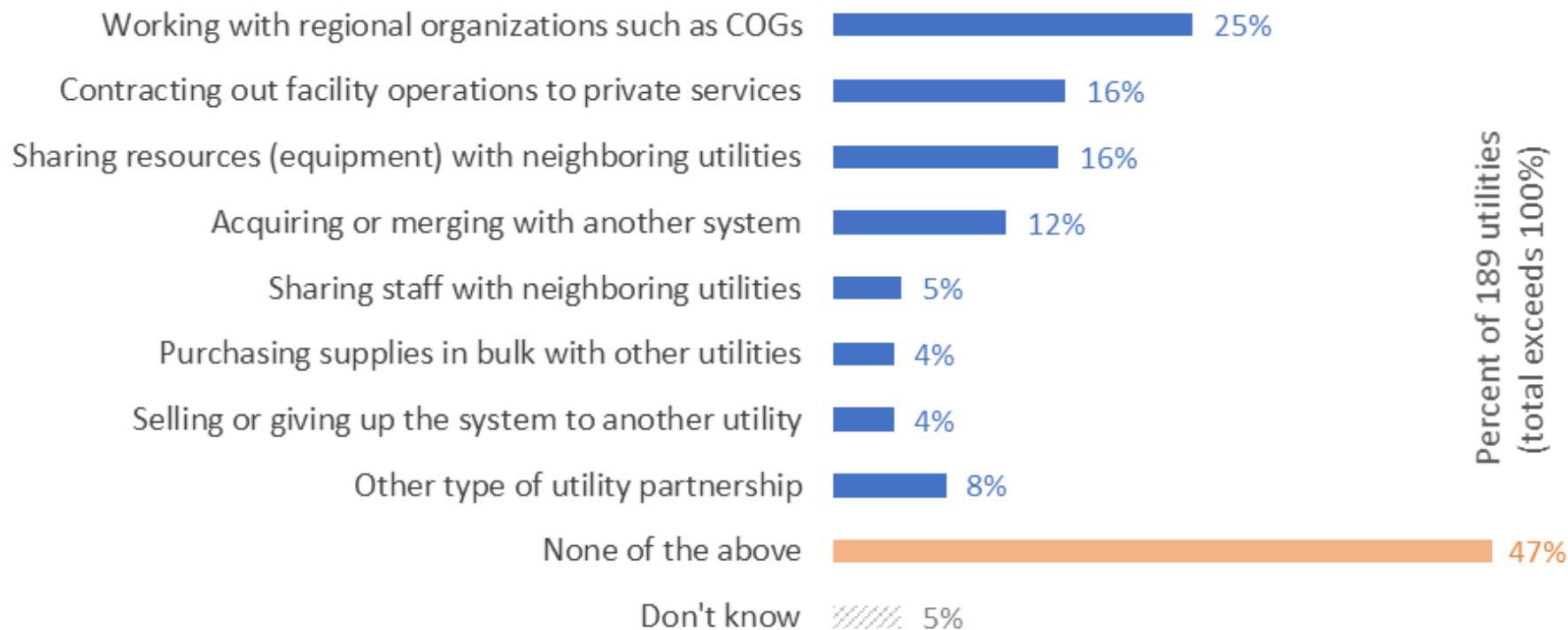
Shadi Eskaf



# Tools in the collaboration toolbox

**Partnership activities that North Carolina utilities are currently engaged in or are considering.** Excludes interconnections and wholesale purchase/sale agreements for water or wastewater treatment and delivery between utilities.

n = 189



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.

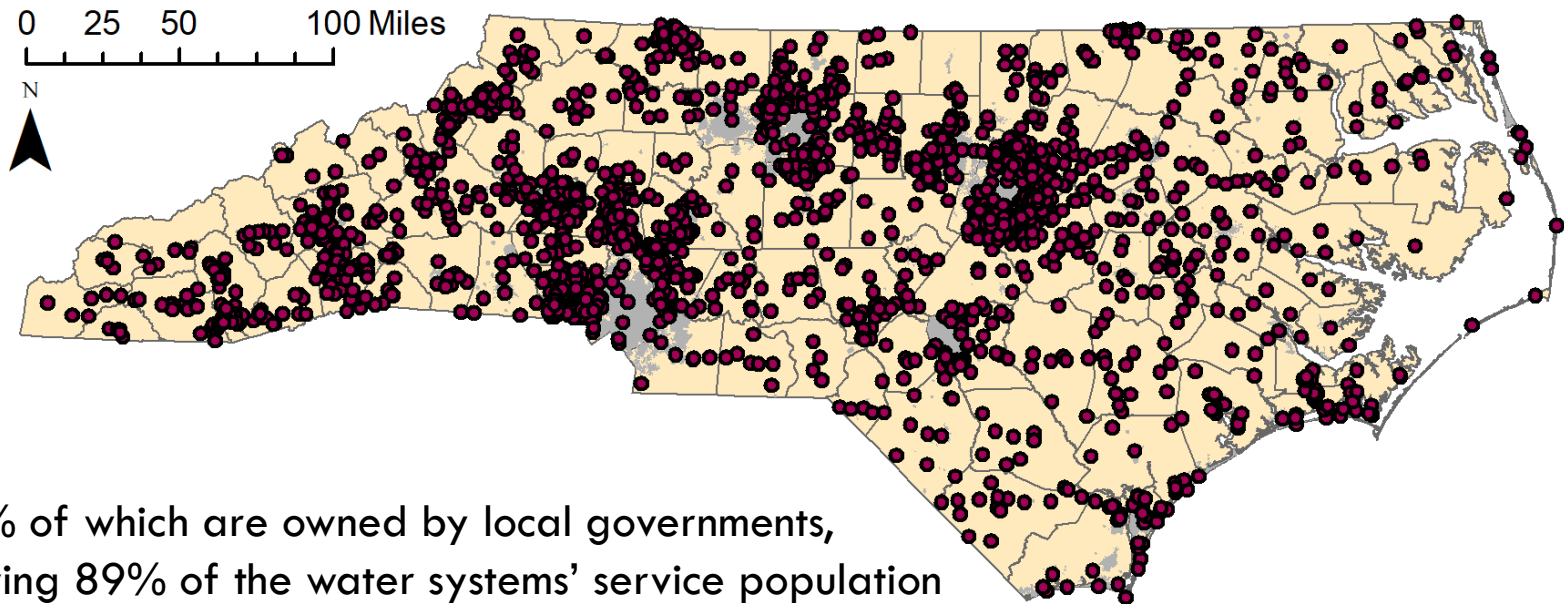
# The context for water systems



More than 49,000 community water systems in the U.S.  
But only ~3,300 electric utilities

# North Carolina at a glance

1,998 active community water systems serving more than 8.7 million people in North Carolina (March 2020)

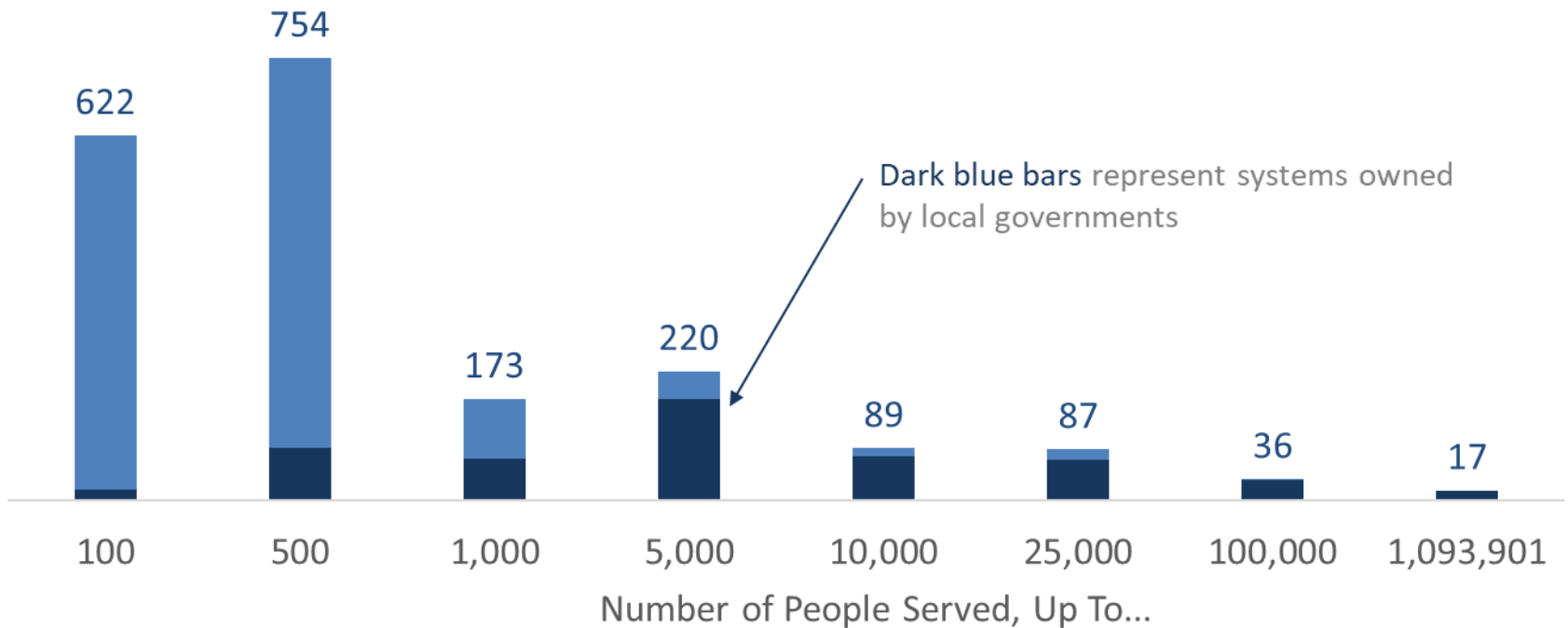


Analysis by the Environmental Finance Center at the UNC School of Government.

Data source: SDWIS database maintained by the Division of Water Resources in the NC Department of Environmental Quality. Geospatial locations are approximated by the EFC using secondary sources from NCOneMap (NC Geographic Information Coordinating Council), NC Department of Environmental Quality, NC Rural Economic Development Center, and primary sources.

# Most are very small systems

Number of Active Community Water Systems in North Carolina by Size



Analysis by the Environmental Finance Center at the University of North Carolina, Chapel Hill.  
Source: U.S. EPA's Safe Drinking Water Information System, March 2020 data.

Charlotte Water collected

**\$424 million**

in water and wastewater  
operating revenues in FY2019

Highest in North Carolina. Up 11% from FY2018.

Picture Source: Charlotte Water <http://charlottenc.gov/Water/Pages/Home.aspx>







Picture Source: Google Maps Streetview

Town of Proctorville collected

**\$22,373**

in wastewater operating revenues in FY2019  
(no water system)

Lowest in North Carolina. Up 6.2% from FY2018.

Raised monthly flat fee from \$30 to \$40 per customer = 25% increase.



The largest 10 utilities collected

45%

of all the local government water and wastewater  
operating revenues in FY2019



In FY2019, NC local government utilities had:

 In \$3.08 billion in operating revenues

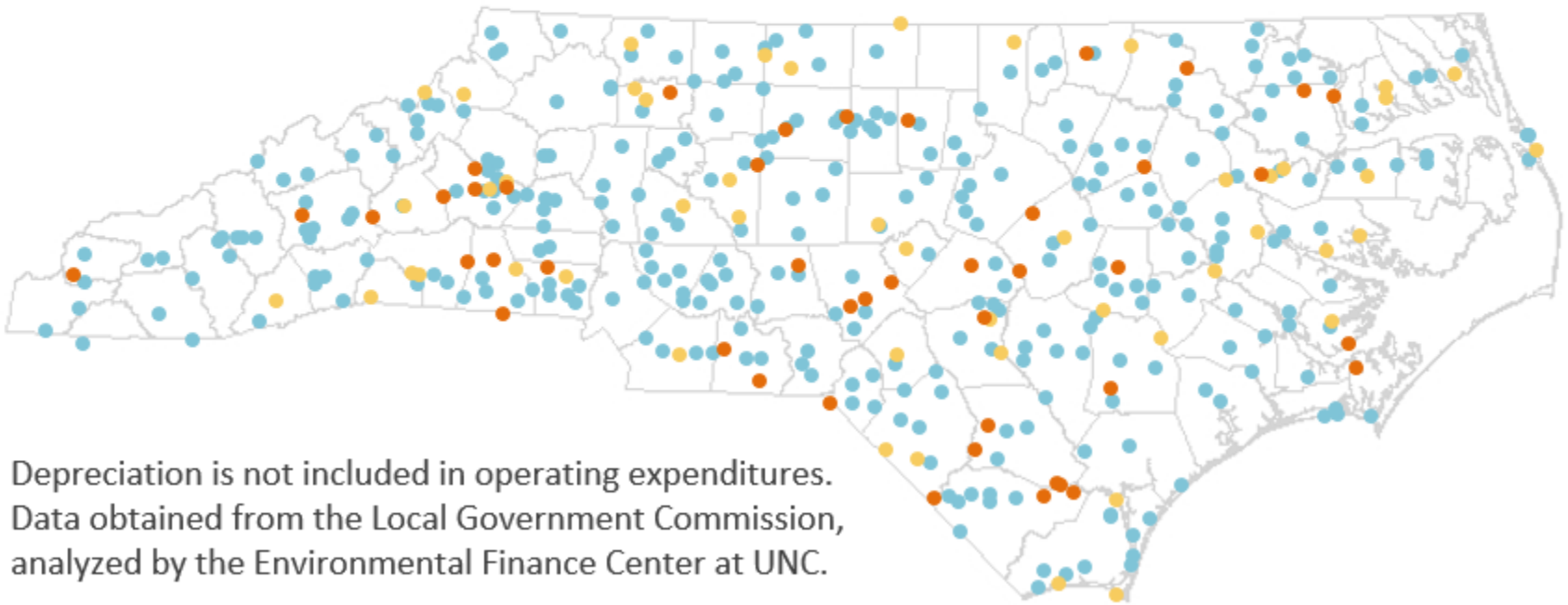
 Out \$2.47 billion in operating expenses

~**23%** of local government utilities had lower operating revenues than O&M expenditures plus debt service in FY2019

# Cost Recovery in 398 Local Government-owned Water and Wastewater Utilities during FY2019

## Local Government-Owned Water and Wastewater Utilities' Cost Recovery in FY 2019

- Operating revenues < operating expenditures (11%)
- Operating revenues < operating expenditures + principal + interest on long-term debt (12%)
- Operating revenues > operating expenditures + principal + interest on long-term debt (77%)





So, how can regionalization help?



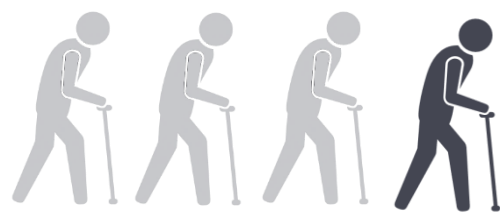
# Key Financial Benefits\*

*\*Can vary by situation and model*

- Economies of scale/operating efficiencies
- Increased access to capital
- Revenue stability
- Improved planning and risk management
- Increased opportunities for economic development
- Enhanced employment and retention incentives
- Reduction in rate discrepancies among nearby communities
- Increased opportunities for water resource management



# Tool for Growing *or* Shrinking Population Areas



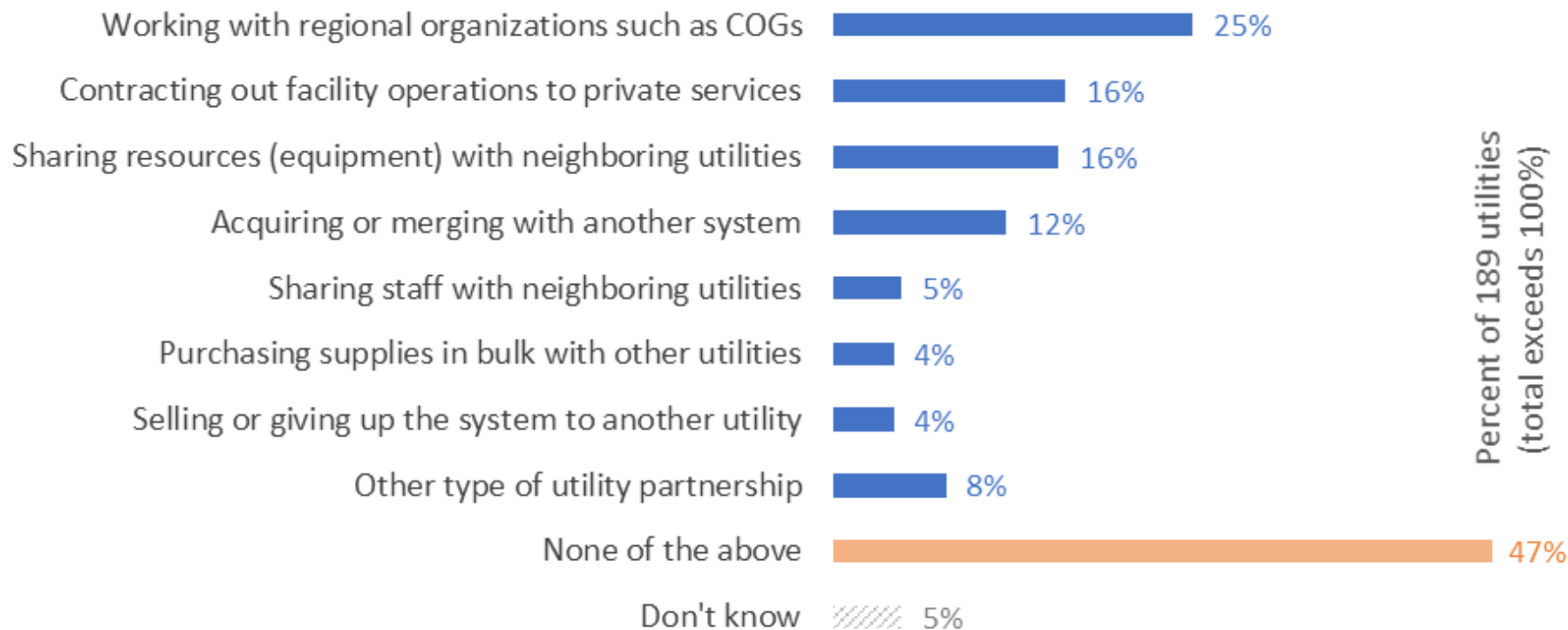




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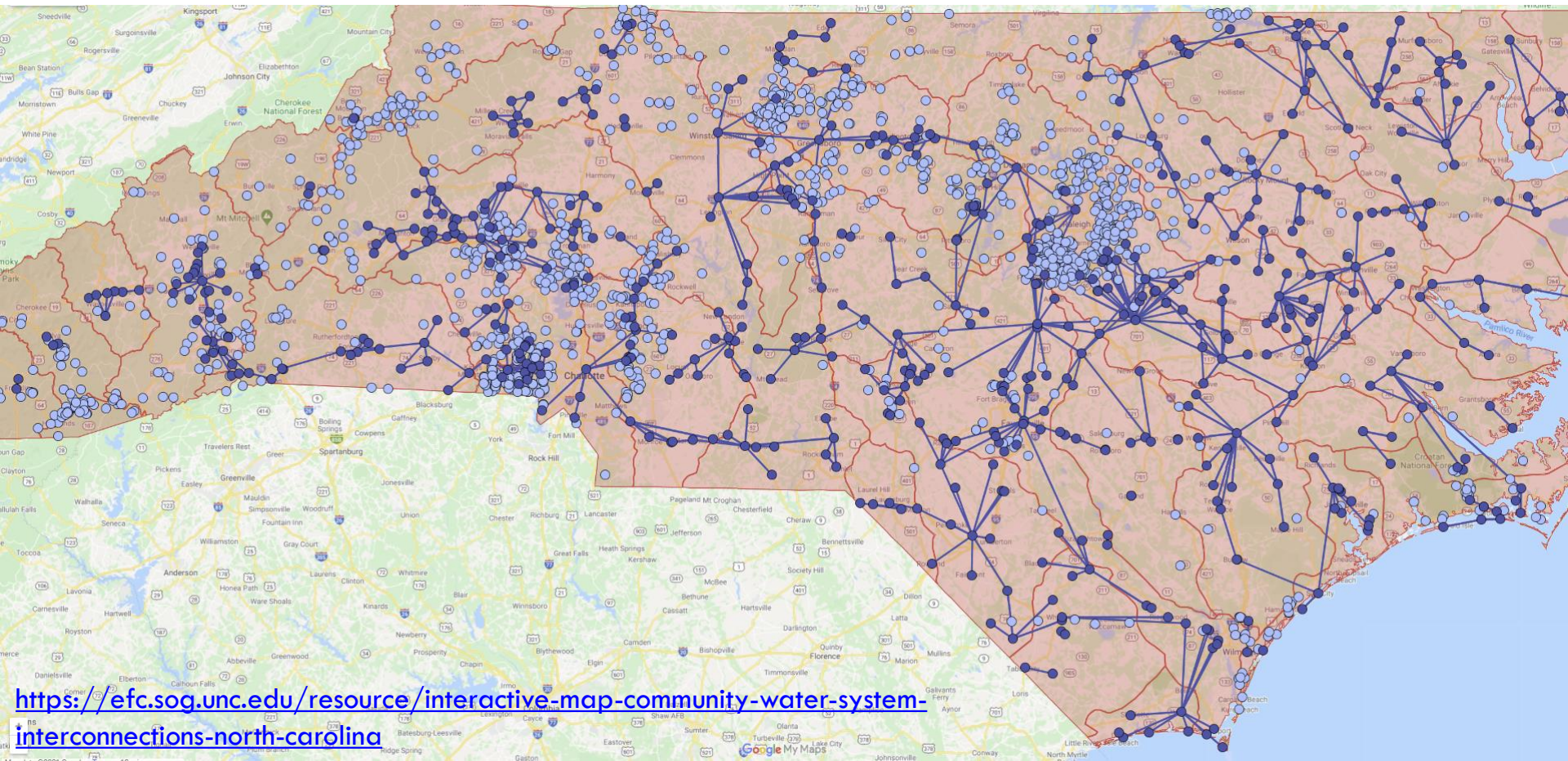
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Source: 2017 North Carolina Water and Wastewater Utility Management Survey conducted by the Environmental Finance Center at the UNC School of Government and the North Carolina League of Municipalities.

# Principle Tools for Establishing More Regionalized (Local Government ) Systems in NC

- Wholesale water/wastewater sales/purchase contracts (can be done through interlocal agreement)
  - Widespread across the state; many water systems interconnected



<https://efc.sog.unc.edu/resource/interactive-map-community-water-system->

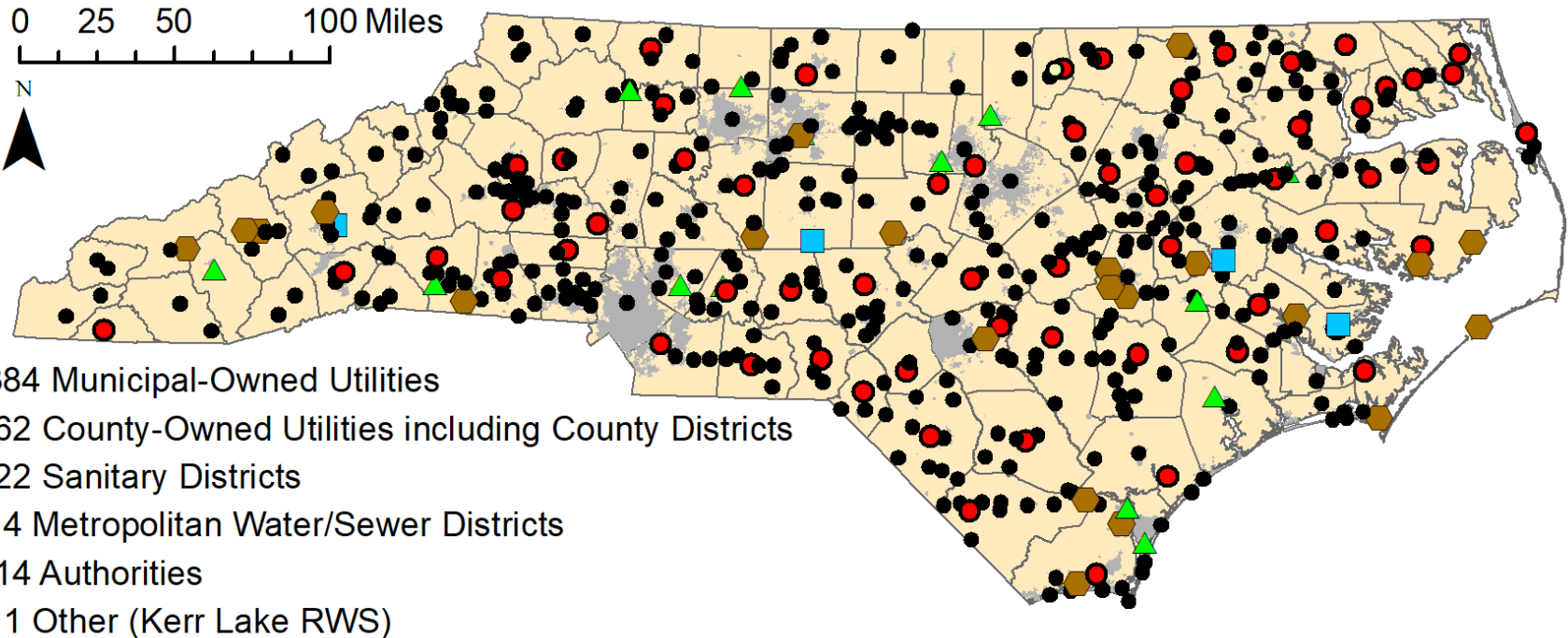
[interconnections-north-carolina](https://efc.sog.unc.edu/resource/interactive-map-community-water-system-)

# Principle Tools for Establishing More Regionalized (Local Government ) Systems in NC

- Wholesale water/wastewater sales/purchase contracts (can be done through interlocal agreement)
  - Widespread across the state; many water systems interconnected
- Interlocal agreements
  - Regional utilities (Charlotte Water, Two Rivers Utilities, Salisbury-Rowan Utilities, etc.)
- New local government entities
  - Water and Sewer Authority
  - Metropolitan Districts
  - Sanitary Districts



# There are 487 Local Government-Owned Water and/or Wastewater Utilities Active as of January 2018



Analysis by the Environmental Finance Center at the UNC School of Government.

Excludes utilities not owned by local governments.

Source: Database maintained by the EFC (Jan. 2018) updated with new information from the NC Department of Environmental Quality Division of Water Resources (SDWIS), and the Local Government Commission. Geospatial locations are approximated by the EFC using secondary sources from NCOneMap (NC Geographic Information Coordinating Council), NC Department of Environmental Quality, and primary sources.

# Interlocal Agreements

## Article 20.

### Interlocal Cooperation.

#### Part 1. Joint Exercise of Powers.

##### **§ 160A-460. Definitions.**

The words defined in this section shall have the meanings indicated when used in this Part:

- (1) "Undertaking" means the joint exercise by two or more units of local government, or the contractual exercise by one unit for one or more other units, of any power, function, public enterprise, right, privilege, or immunity of local government.
- (2) "Unit," or "unit of local government" means a county, city, consolidated city-county, local board of education, sanitary district, facility authority created under Part 4 of this Article, special district created under Article 43 of Chapter 105 of the General Statutes, or other local political subdivision, authority, or agency of local government. (1971, c. 698, s. 1; 1975, c. 821, s. 4; 1979, c. 774, s. 1; 1981, c. 641; 1995, c. 458, s. 3; 2009-527, s. 2(f).)

##### **§ 160A-461. Interlocal cooperation authorized.**

Any unit of local government in this State and any one or more other units of local government in this State or any other state (to the extent permitted by the laws of the other state) may enter into contracts or agreements with each other in order to execute any undertaking. The contracts and agreements shall be of reasonable duration, as determined by the participating units, and shall be ratified by resolution of the governing board of each unit spread upon its minutes. (1971, c. 698, s. 1.)

##### **§ 160A-462. Joint agencies.**

(a) Units agreeing to an undertaking may establish a joint agency charged with any or all of the responsibility for the undertaking. The units may confer on the joint agency any power, duty, right, or function needed for the execution of the undertaking, except that legal title to all real property necessary to the undertaking shall be held by the participating units individually, or jointly as tenants in common, in such manner and proportion as they may determine.

(b) The participating units may appropriate funds to the joint agency on the basis of an annual budget recommended by the agency and submitted

# What is an Interlocal Agreement?

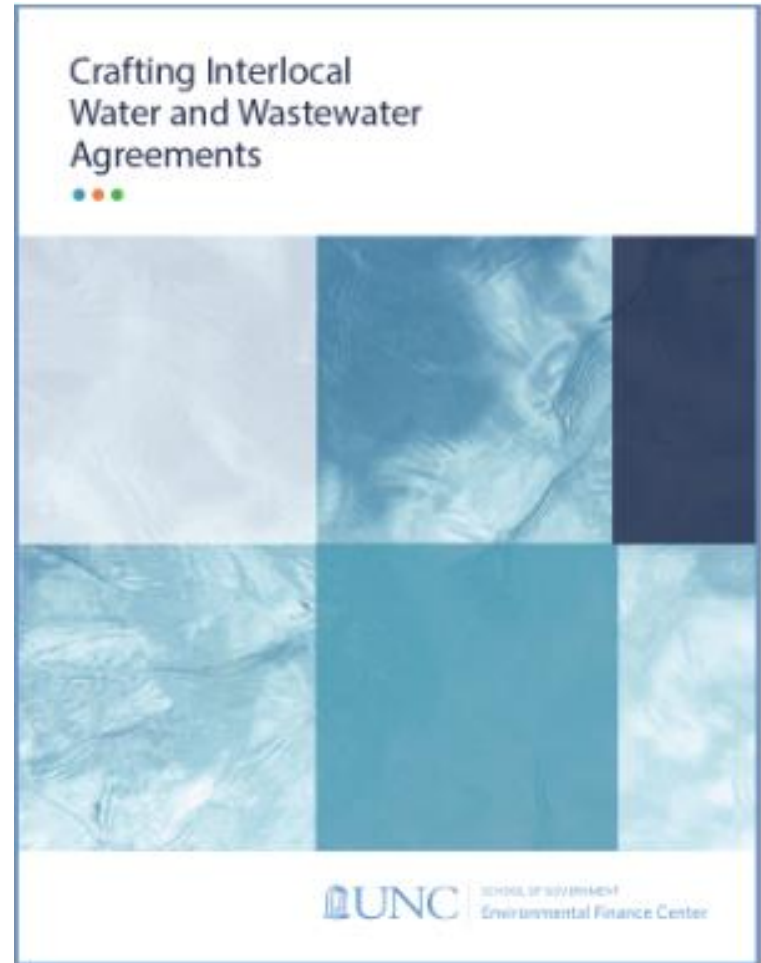
- Agreement between 2 or more political subdivisions
- In this state and other states
- To perform jointly or on behalf of each other
- Any “undertaking” the unit has the legal authority to perform
- Must be of “reasonable duration” (expenses and revenues agreements limited to 99 years)
- Board approval is required (by all boards that are parties to the agreement)

*G.S. Chapter 160A, Article 20*

# A lot to be considered in crafting an interlocal agreement



<https://vimeo.com/digitalpmedia/review/372993470/18aeaf9a2>



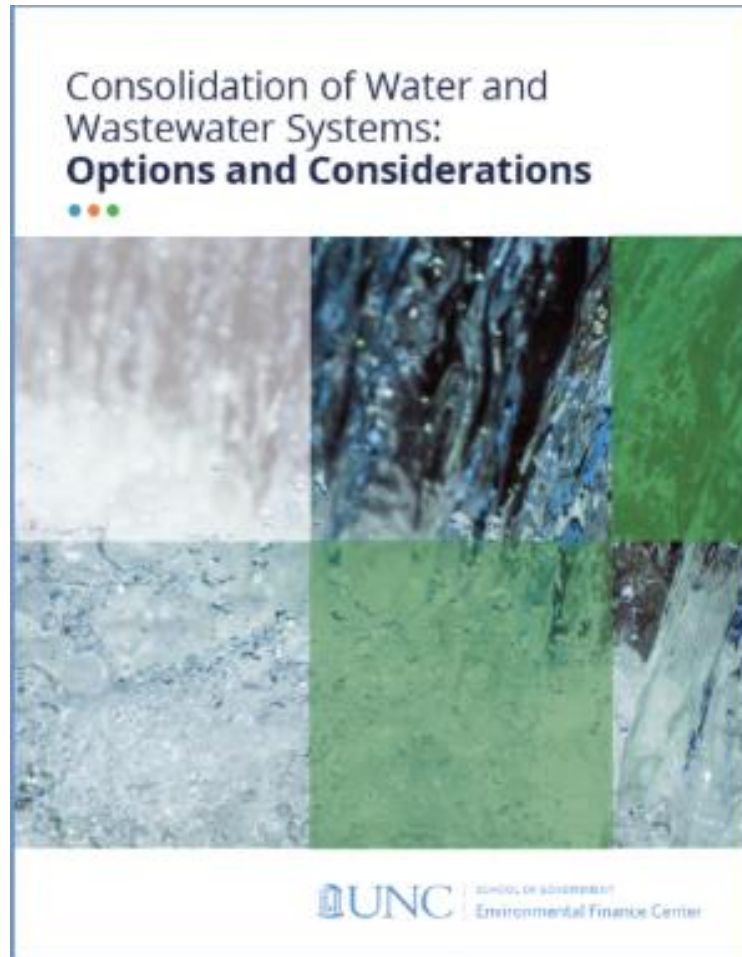
<https://efc.sog.unc.edu/project/utility-regionalization-and-consolidation>



# Interlocal agreement considerations described in the guide

1. Defining Current and Future Service Areas
2. Annexation and Growth
3. Key Usage Thresholds
4. Meter Maintenance
5. Water Quality Concerns
6. Water Pressure
7. Adequate Payment for Use of Capital
8. Calculation and Modification of Commodity Charges
9. Reselling Water or Capacity
10. Handling Supply Interruptions and Shortages and Emergencies
11. Transferability of Conservation Status/Measures/Emergency Reduction
12. Non-Revenue Water

# Consolidation Considerations



<https://efc.sog.unc.edu/project/utility-regionalization-and-consolidation>

# Forms of Consolidation

- **Direct Acquisition** - one higher-capacity utility absorbing another in its entirety.
- **Joint Merger** - two or more utilities often, but not necessarily, of similar capacity consolidating to become a new entity that is jointly owned by the participating utilities.
- **Balanced Merger** - hybrid of the other two types and involves two or more utilities consolidating and creating a governance structure that is designed to allow for participation by the previously existing utilities in future decision-making.
- **Consolidation of Governance/Operations/Management**

# Existing NC Models

- Municipality operating as a regional utility – Raleigh
- Water and sewer authority – Cape Fear PUA
- Single county government – Harnett County (125k)
- Joint Management Agency – W-S/Forsyth County
- Metropolitan Water District and Metropolitan Sewerage District – special purpose unit of gov/fewer than 5 in NC
- Sanitary District – public health focused
- Private Nonprofit Associations/Water Cooperatives – Davidson Water (50k connections)
- Investor-Owned Utilities – Aqua NC (regulated by NCUC)

Questions?



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