

Utilities 101: Water and Wastewater



February 24

Water & Wastewater Infrastructure Basics

NCEDA Utilities 101 Webinar

February 24, 2021



Wooten

Will Larsen, PE

Project Manager

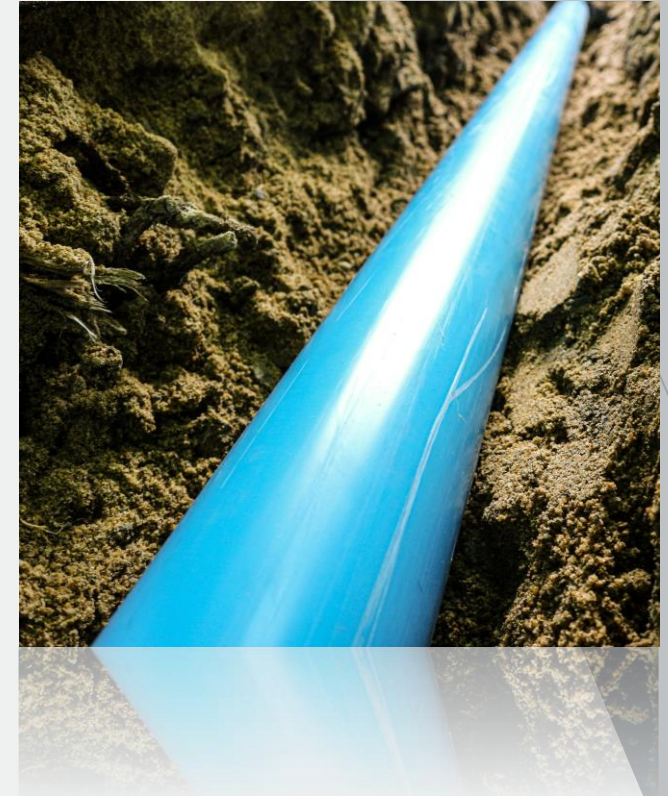
Key Considerations for Site Readiness

- Identification of Development Team
- Tailoring for Target Industries
- Considering Environmental Factors
- **Planning for Water In, Sewer Out**
- Optimizing Site for Flexibility
- Securing Financial Commitment

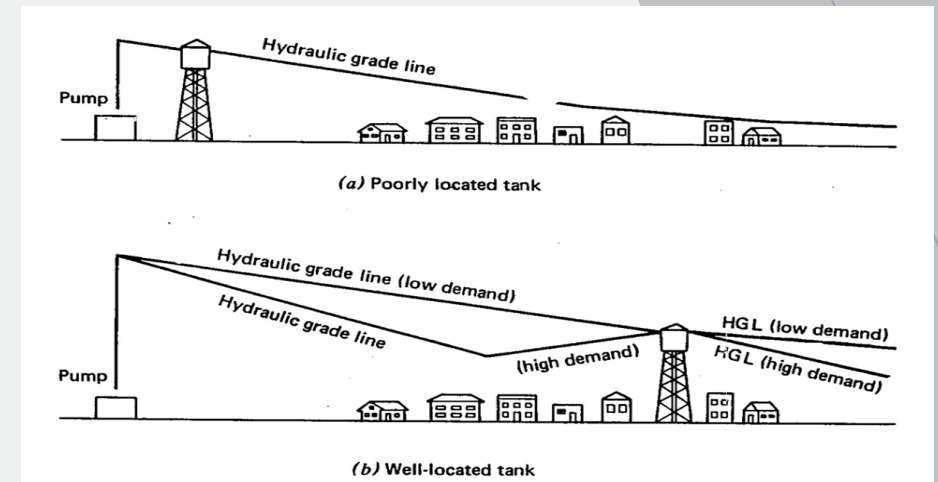
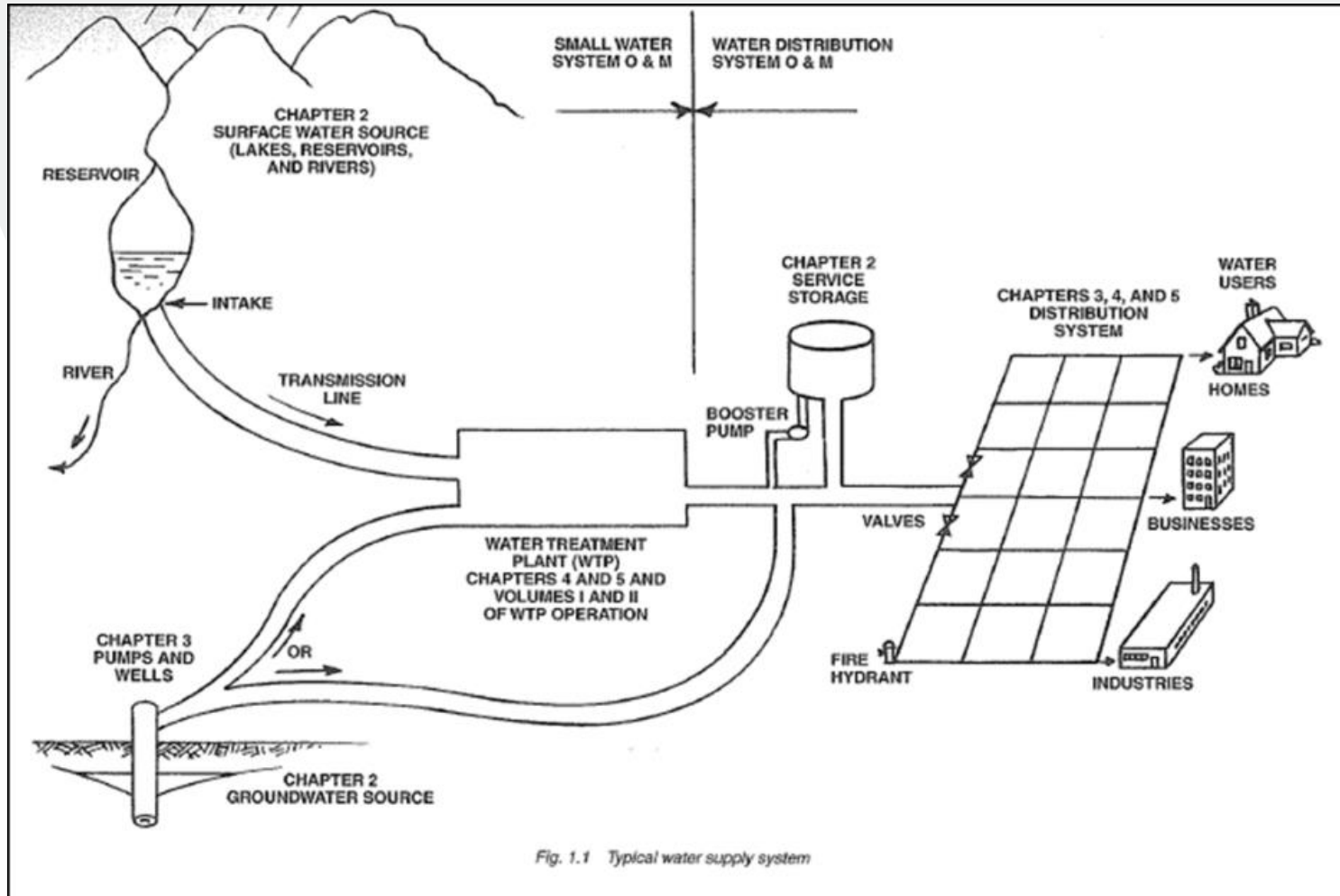


Requirements for Water Utility Extension

- Availability of Supply
- Existing vs. Required Storage
- Distribution System Assets
- Water Chemistry
- Projecting Cost, Timeline & Methodology



Water System Schematic

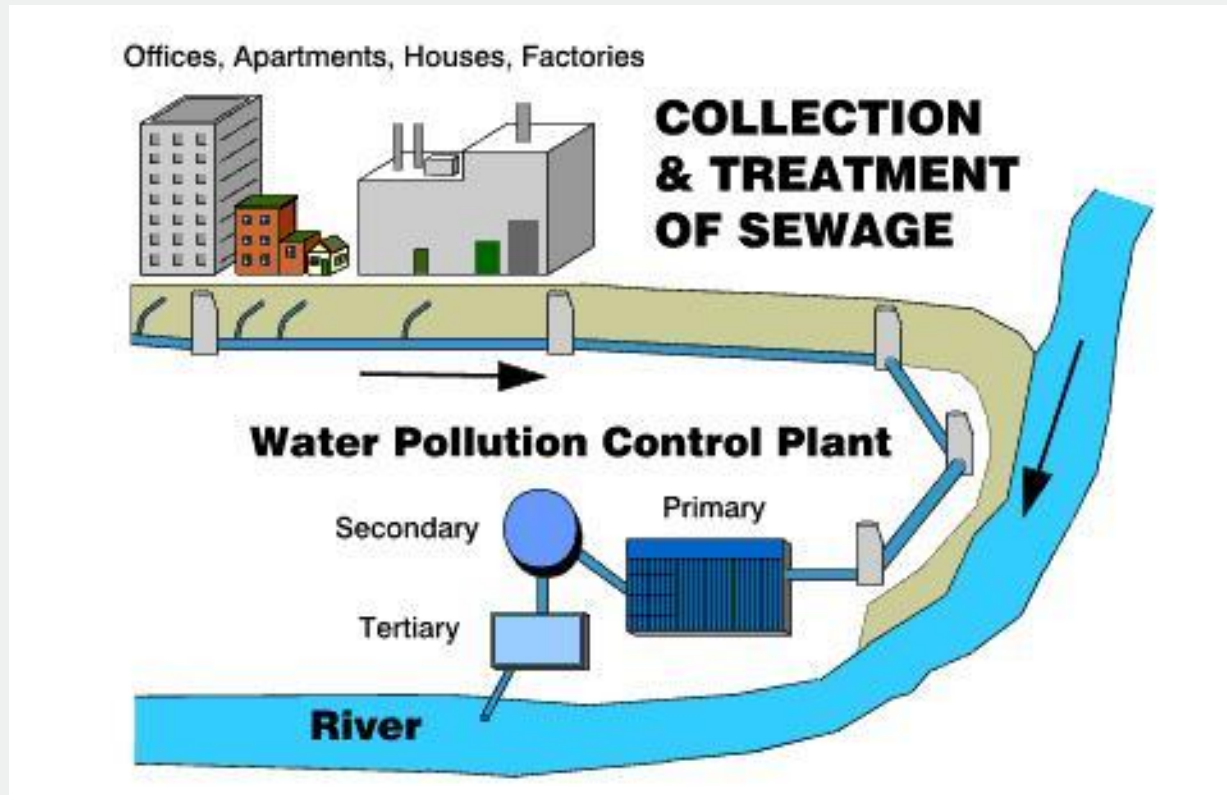


Requirements for Wastewater Utility Extension

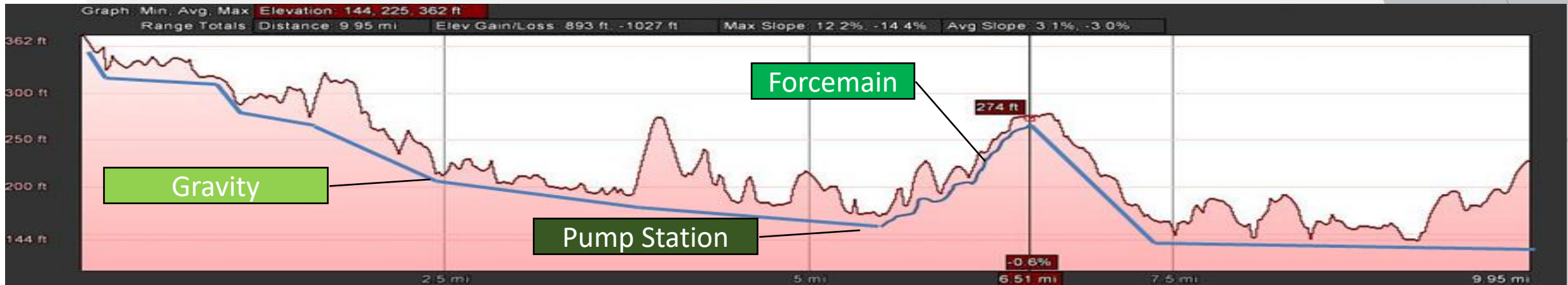
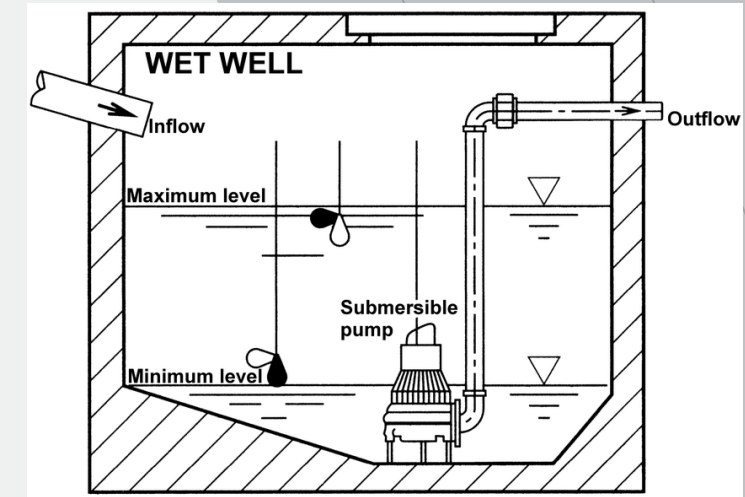
- Collection & Transmission System Assets
- Treatment System Assets
- System Capacity
- Pretreatment
- Projecting Cost, Timeline & Methodology



Sewer System Schematic



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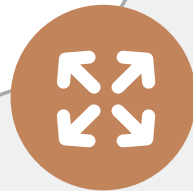
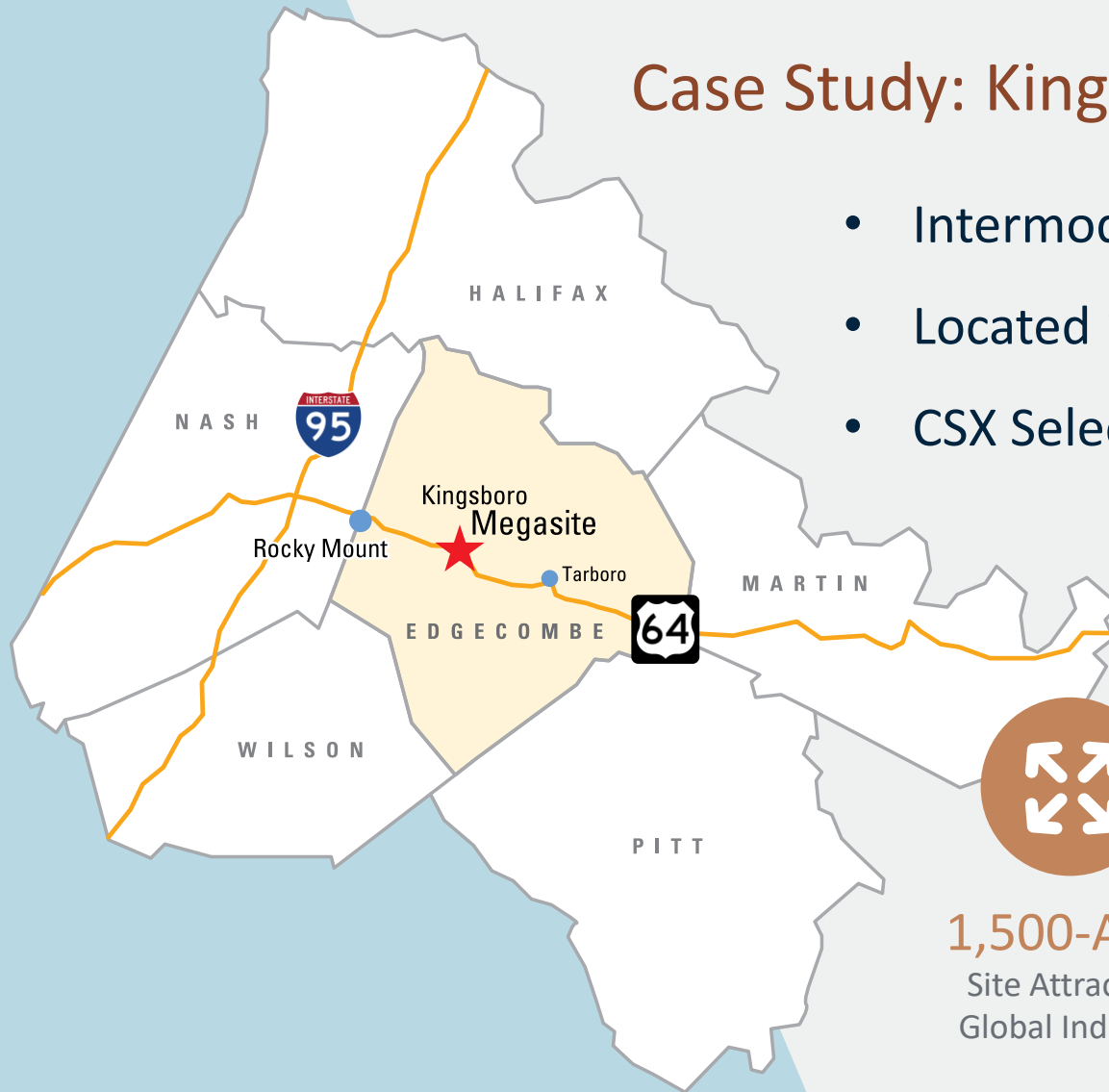
Project Cost

- Water System
 - Elevated Tanks ~\$1/Gallon
 - Distribution Lines ~\$5/in-ft
- Sewer System
 - Gravity Lines ~\$30/in-ft
 - Force Mains ~\$5/in-ft
 - Pump Station Minimum ~\$250,000



Case Study: Kingsboro Megasite

- Intermodal Transportation Hub
- Located 15 miles from I-95
- CSX Select Site linked to ports



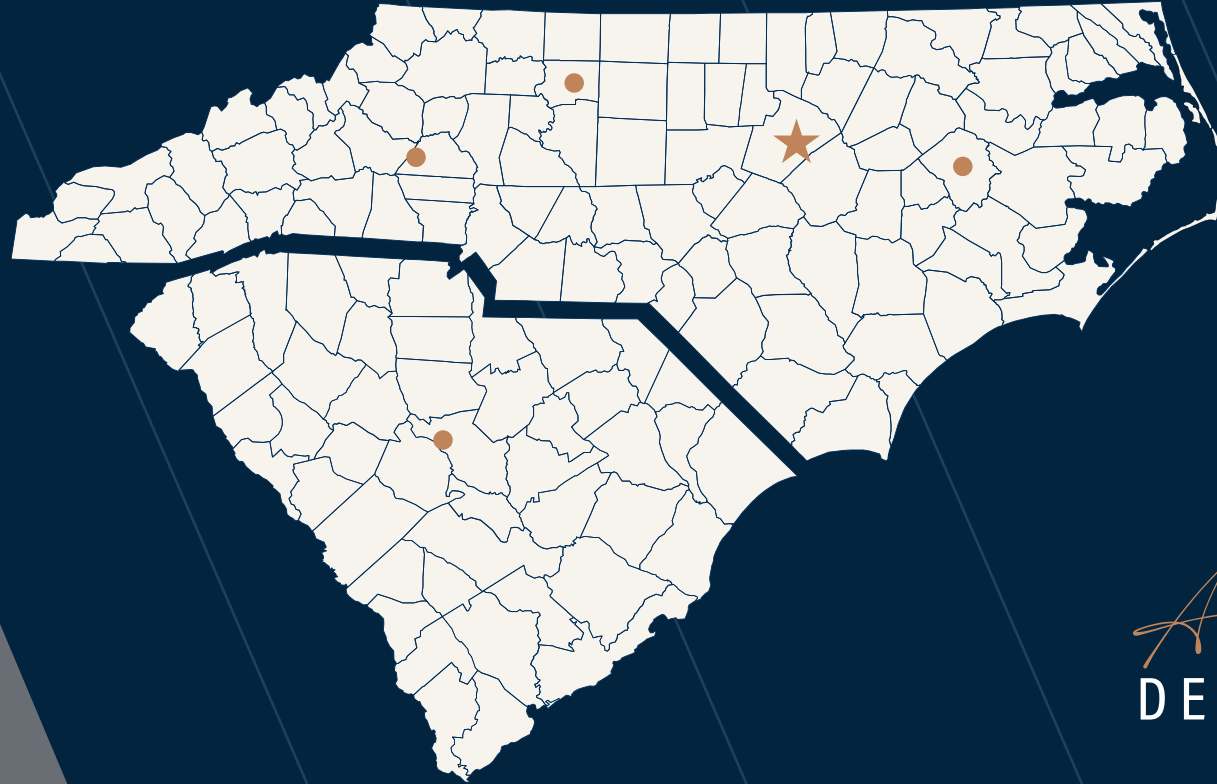
1,500-Acre
Site Attracting
Global Industry



1,200 Jobs
In Economically
Distressed Region



\$2.4 Billion
Projected for the
State Economy



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Holly Springs, NC

Irena Krstanovic, Economic Development Director





Utilities



Water

- Capacity (GPD): **12M**
- Avg Daily Usage (GPD): **2.5M**
- Source: Cape Fear River & Jordan Lake
 - ✓ provides 3 access points for redundancy

Wastewater

- Capacity (GPD): **8M**
- Avg Daily Usage (GPD): **2.8M**

Reclaimed Water

- Saves **12%** of daily potable water
- Used for irrigation / industrial processes
- 1/2 price of potable water



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Commerce Economic Development Infrastructure Programs

- Rural Infrastructure Program—State funds
- IDF/Utility Account—JDIG payments
- CDBG ED—Federal Funds



Commerce Economic Development Infrastructure Programs

Grants to local governments to assist with the construction of public infrastructure including:

- Water
- Sewer,
- Public, non-State maintained roads,
- Natural gas lines,
- Rail, or
- Municipal electrical

Typically projects in Tier 1 and Tier 2 counties are eligible

Infrastructure must support a private business recruitment or expansion that will lead to job creation

Repayment is required if the company fails to create the number of jobs required.



Commerce Economic Development Infrastructure Programs

Funding Process:

- Start project with your EDPNC Representative
- EDPNC submits project details to Commerce,
- Commerce will select the best funding source,
- Commerce will provide a proposal with the funding source, amount, and requirements

Local government submits an application to the funding program identified in the proposal

Final awards are made by the Rural Infrastructure Authority every two months.



Rural Economic Development Division

RURAL GRANTS	<ul style="list-style-type: none"> ■ BUILDING REUSE ■ DEMOLITION 	<ul style="list-style-type: none"> ■ ECONOMIC INFRASTRUCTURE 	<p>Melody Adams melody.adams@nccommerce.com</p>
COMMUNITY DEVELOPMENT BLOCK GRANTS	<ul style="list-style-type: none"> ■ CDBG BUILDING REUSE LOANS ■ CDBG INFRASTRUCTURE ■ CDBG DEMOLITION 	<ul style="list-style-type: none"> ■ CDBG SHELL BUILDING LOANS ■ CDBG SITE DEVELOPMENT LOANS ■ CDBG NEIGHBORHOOD REVITALIZATION 	<p>Iris Payne ipayne@nccommerce.com</p>
UTILITY ACCOUNT	<ul style="list-style-type: none"> ■ ELECTRICAL SYSTEMS ■ WATER LINES ■ SEWER LINES 	<ul style="list-style-type: none"> ■ WATER & WASTE PLANT UPGRADES ■ NATURAL GAS LINES 	<p>Mark Poole mpoole@nccommerce.com</p>
MAIN STREET & PLANNING	<ul style="list-style-type: none"> ■ MAIN STREET ■ SMALL TOWN PROGRAM 	<ul style="list-style-type: none"> ■ MAIN ST. SOLUTIONS FUND ■ PROSPERITY ZONE PLANNERS/CONSULTING 	<p>Liz Parham lparham@nccommerce.com</p>
APPALACHIAN REG. COMM	<ul style="list-style-type: none"> ■ INFRASTRUCTURE ■ WORKFORCE TRAINING 	<ul style="list-style-type: none"> ■ LEADERSHIP DEVELOPMENT 	<p>Olivia Collier Ocollier@nccommerce.com</p>



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Division of Water Infrastructure Funding Programs

- Funding source for water & wastewater projects
- Eligible to Local Government Units (counties, cities, towns, sanitary districts, etc.)
- Loan / principal forgiveness / grant programs
- Pure grant programs
 - Community Development Block Grant – Infrastructure (construction only)
 - Viable Utility Reserve



State Reserve

State Reserve Program - ~\$10M per year

- Water and wastewater projects grants (\$3M cap)
- Asset Inventory and Assessment grants (\$150,000 cap)
- Merger / Regionalization Feasibility grants (\$50,000 cap)
- No Federal Requirements
- Grant eligibility based on affordability criteria



State Revolving Funds (SRF)

Clean Water SRF (\$120-\$130M/year)
Drinking Water SRF (\$90-\$100M/year)

Federal conditions apply including Davis-Bacon, American Iron and Steel, NEPA-like environmental review

- **Percentage rate**
 - ½ market rate
 - Interest rate reduction based on affordability criteria 1
- **Principal Forgiveness (PF)**
 - Up to \$500k per applicant per round based on affordability criteria
- **Loan limit**
 - \$20 million limit (DWSRF)
 - \$30 million limit (CWSRF)



Federal Community Development Block Grants – Infrastructure (CDBG-I)

- Comprehensive community development program overseen by HUD
- Typically \$21-\$25M in grants per year
- Water and wastewater projects may include
 - New service into low-mod income areas,
 - Work must be in residential areas; we cannot fund infrastructure in business districts
- Cannot fund infrastructure for job creation



Federal Community Development Block Grants – Infrastructure (CDBG-I)

- **Eligibility:**

- Must be a minimum of 51% low-to-moderate income population in the service area
- Excludes 24 “entitlement cities”

- **Many layers of Federal Requirements**

- DBW, AIS, environmental review, and
- Focus on comprehensive community development

Equal Employment Opportunity	Residential Anti-Displacement and Relocation
Procurement Plan	Citizens Participation Plan
Section 3 Plan	Fair Housing Plan/Analysis
Language Access Plan	



Summary

- One project application for all programs
 - Same application for consideration across all programs
 - Considered at same time (usually)
 - Applicant indicates their grant requirements for project to move forward, and willingness to accept federal condition
- Two funding rounds per year
 - Spring (~April 30) SRF and State loans
 - Fall (~Sept. 30) all funding sources available



NC DEQ Division of Water Infrastructure Contacts

CDBG program –

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