November 13, 2017

Implementing North Carolina’s Statewide Water and Wastewater Infrastructure Master Plan

Department of Environmental Quality Division of Water Infrastructure
Outline

• 2013 Legislation
• 2017 Statewide Water and Wastewater Infrastructure Master Plan – The Road to Viability
• Implementing the Master Plan
• Next Steps

Department of Environmental Quality
General Assembly Legislation in 2013

• Created Division of Water Infrastructure
  • To consolidate water infrastructure funding programs

• Created 9-member State Water Infrastructure Authority
  • Qualifications and knowledge
    • Wastewater professional engineer
    • Federal water/wastewater funding
    • Urban water/wastewater systems
    • Rural water/wastewater systems
    • Rural county commissioner/resident; public health services experience
    • Water, wastewater, stormwater issues and state funding sources
  • Assigned 12 tasks

Division Funding Programs

- State Revolving Funds (SRF)
  • Clean Water SRF loans
  • Drinking Water SRF loans

- Community Development Block Grants (CDBG) – Infrastructure

- State Programs
  • Wastewater loans & grants
  • Drinking water loans & grants
  • Asset Inventory and Assessment Grants
  • Merger/Regionalization Feasibility Grants

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Tuesday at 10:45
Policy & Management Session
Amy Simes, PE
Some of the State Water Infrastructure Authority’s Tasks

• Criteria and priorities for project funding; make funding decisions

• Recommendations on role of the State to develop and fund water infrastructure

• Maximize and coordinate use of funding resources (federal, state, local)

• Review application of emerging utility management best practices

• Develop a master plan to meet the State's water infrastructure needs

• Assess the need for a “troubled system” protocol

Department of Environmental Quality
Water Infrastructure Needs over the Next 20 Years

- Drinking water systems needs: $10-$15 billion
- Wastewater systems needs: $7-$11 billion
- For most funding sources, users pay to meet capital needs (e.g., loans, bonds, reserves, etc.)
- Federal grants and loans made up only 4% of water infrastructure spending in 2014

Source: Environmental Finance Center (EFC) at the University of North Carolina’s School of Government evaluation of needs surveys
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.
Master Plan Vision

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Implementation: Promoting Viable Utilities

- Target grant funds
  - Some of the most rural and economically distressed areas that have some of the highest rates in the state
  - Support transition to permanent local funding solutions

- Address affordability
  - Recognize that many entities can afford to incur some amount of debt or obligate some amount of funding for a project

- Prioritize projects that represent best utility management practices
Implementation: Promoting Viable Utilities

• Ensure that utilities operate as enterprise systems
  • Generate enough revenue to cover all O&M and capital expenditures
  • Set aside reserves for future renewal/replacement and unexpected events

• Acknowledge that not all utilities are viable or are on a path to become viable
  • Permanent solutions are needed that go beyond simply constructing or repairing infrastructure
  • Organizational and financial management solutions
Operating as an Enterprise System?

Local Government-Owned Water and Wastewater Utilities' Cost Recovery in FY 2016

- Operating revenues < operating expenditures (10%)
- Operating revenues < operating expenditures + principal + interest on long-term debt (10%)
- Operating revenues > operating expenditures + principal + interest on long-term debt (81%)

<table>
<thead>
<tr>
<th>Number of service connections</th>
<th># of utilities</th>
<th>Operating revenues &lt; operating expenditures</th>
<th>Operating revenues &lt; operating expenditures + principal + interest on long-term debt</th>
<th>Operating revenues &gt; operating expenditures + principal + interest on long-term debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1,000</td>
<td>143</td>
<td>17%</td>
<td>11%</td>
<td>72%</td>
</tr>
<tr>
<td>1,000 - 10,000</td>
<td>163</td>
<td>2%</td>
<td>10%</td>
<td>87%</td>
</tr>
<tr>
<td>&gt; 10,000</td>
<td>48</td>
<td>0%</td>
<td>4%</td>
<td>96%</td>
</tr>
</tbody>
</table>

Source: UNC Environmental Finance Center
Best Practices in Utility Management

Infrastructure management
• Proactive approaches
• Risk and life-cycle costs

Organizational management
• Long-term nature of system needs
• Prioritize the most critical projects

Financial management
• Cover O&M, renewal/replacement and reserves
A Joint Effort to Achieve the Vision of Viability

Partnerships
- To help leverage existing resources and programs

Resources and Tools
- Support proactive management

Prioritized Funding
- Linked to utility viability

RESOURCE PARTNERSHIPS
Strong partnerships among state agencies such as the Local Government Commission and Division of Water Infrastructure and with key organizations lead to creative solutions for utility viability

RESOURCES AND TOOLS
Utilities take advantage of available resources and tools to move toward proactive management of their systems

The Road to Viable Water & Wastewater Utility Systems

PRIORITIZED FUNDING
Funding is linked to utility viability and is targeted to specific needs that have been prioritized through a structured process of infrastructure, organizational and financial management and that create long-term solutions
Implementation: Merger/Regionalization Feasibility Grants

• Options for voluntary partnerships
• Wide range of solutions
• Sharing staff, expertise, equipment

• Develop realistic costs for comparison
  • Operate
  • Maintain
  • Renew/replace
  • Set aside reserves

“This grant gave us the resources needed to analyze our water system’s finances and needs to determine the best path for the whole community. Our system has served a vital community need for almost 100 years, but we knew it was time to review the long-term benefit of operating a small system.”

Allison Alexander
Town Manager
Town of Laurel Park
“I’ve already used this information on several occasions and it has helped make the point of the current state of the industry and what we can expect going forward as far as the priorities of your Division.

If this Master Plan and the strategic approach it promotes gains traction long term, it will give utilities like us the stability we need to map our own path forward with some certainty.”

Dan Harbaugh
Executive Director
Tuckaseigee Water & Sewer Authority
Implementation: Troubled Systems

• “Many utilities throughout the state are probably somewhere within a range between viable and troubled”

• Some common issues
  • Billing and revenue collection
  • Internal controls
  • Low cash balances
  • Utility rates
  • Decreasing population

• Current initiative
Next Steps

• Facilitate discussions at the local level
• Evaluate effects of recent program changes
  • Restructured funding priorities
  • Stretching funds by offering combination of loans and grants
  • Grants for proactive utility management
    • Asset Inventory and Assessment
    • Merger/Regionalization Feasibility
• Update and refresh Master Plan
Master Plans are available at our Booth

Division of Water Infrastructure
http://portal.ncdenr.org/web/wi/home

State Water Infrastructure Authority
http://portal.ncdenr.org/web/wi/authority