

## **FINANCIAL OVERSIGHT OF WATER AND WASTEWATER SYSTEMS**

**A Report to the Legislative Study Commission on Water and Wastewater Infrastructure  
Prepared by the N.C. Department of Environment and Natural Resources in Consultation with  
Staff to the Local Government Commission (Department of the State Treasurer)**

**November 1, 2010**

## Background

Session Law 2010-144 directed the Department of Environment and Natural Resources and the Local Government Commission of the Department of State Treasurer to jointly evaluate the costs and benefits of providing additional financial oversight for public water systems and public wastewater systems.<sup>1</sup> (A copy of Session Law 2010-144 is attached as Appendix A.) This Report responds to the specific issues identified in the Session Law:

**1. Evaluate the costs and benefits of requiring each public water system or wastewater system in the State to demonstrate that the system raises sufficient revenue to cover the costs associated with proper operation of the system, including the costs of maintenance and repair. The evaluation should specifically consider: increasing oversight by reviewing grant applications to determine the portion of the grant match that is funded from local revenues as opposed to another grant and development of benchmarks to ensure that the system is operating in a financially sound manner.**

Local Government Commission (LGC) staff in the State and Local Government Finance Division (SLGFD) of the Department of State Treasurer already reviews the finances of local government water and wastewater systems to determine whether the system raises sufficient revenue to cover operating costs. The review also includes an analysis of the local government's ability to cover debt service payments, principal and interest included. To the extent operating expenditures and debt service include expenditures for system maintenance and repair, the financial review would determine the local government's ability to finance those costs. An annual report summarizing the results of water/wastewater system financial reviews can be found at <http://www.nctreasurer.com/lgc/LgcMemos/Memo2010-30final.pdf>.

Water and wastewater systems are not required to present an asset management plan or capital improvement plan as part of the financial review. LGC can only evaluate a system's ability to finance maintenance and repair activities that are already reflected in current operating costs and debt financing. Evaluation of a system's financial ability to fund future operations, maintenance and capital costs would require cost calculations based on a specific maintenance/capital improvement plan (including a schedule for those improvements) and comparison of estimated costs to projected future revenues.

The LGC staff does not review water/wastewater infrastructure grant applications to determine how much of the local match comes from local revenues as opposed to another grant, but the state grant-making agencies ask for that information. Both Clean Water Management Trust

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<sup>1</sup> In developing this report, DENR worked with the State and Local Government Finance Division (SLGFD) of the Department of State Treasurer which provides staff to the Local Government Commission. SLGFD staff provided background information on LGC activities and worked with DENR to develop recommendations. The report has not been the subject of formal action on the part of the Local Government Commission.

Fund (CWMTF) and the N.C. Rural Center require that grant applicants identify all sources of local matching funds. CWMTF takes that information into consideration in prioritizing projects for funding. For some small local governments, using another grant source for part of the local match is the only way to afford system rehabilitation.

There has been a significant amount of work done over the last few years to develop new benchmarks and tools for assessing the financial health of water and wastewater systems. The LGC evaluates each public water and sewer system through an audit review process and produces annual statistical reports on the operations of each system. The most recent report can be found at <http://www.nctreasurer.com/lgc/LgcMemos/Memo2010-30final.pdf>.

Effective July 1 2009, drinking water systems applying for state infrastructure loans or grants for extension of waterlines or expansion of water treatment capacity must demonstrate that the water system has a rate structure that is:

“adequate to pay the cost of maintaining, repairing, and operating the system, including reserves for payment of principal and interest on indebtedness incurred for maintenance or improvement of the water system during periods of normal use and periods of reduced water use due to implementation of water conservation measures.”  
G.S. 143-355.4(b)(1).<sup>2</sup>

Note that this requirement only applies to water systems and then only if the local government is applying for state funding to expand the water system by extending lines or expanding water treatment capacity. The requirement does not apply if the water system applies for state funds to rehabilitate the system or improve water treatment and there is no parallel requirement for wastewater systems that seek state infrastructure funding.

The State Water Infrastructure Council (SWIC) worked with the Environmental Finance Center at the UNC School of Government (EFC) to develop guidelines for state funding agencies to use in applying the requirement. (A copy of the guidance document adopted by SWIC is attached as Appendix C. ) The guidelines focus on two indicators:

1. Operating revenues compared to operating expenditures. Operating expenditures includes operations and maintenance costs minus depreciation; it does not include capital or debt service payments. If operating revenues were less than operating

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<sup>2</sup> Note that this requirement only applies to water systems and then only if the local government is applying for state funding to expand the water system by extending lines or expanding water treatment capacity. The requirement does not apply if the water system applies for state funds to rehabilitate the system or improve water treatment and there is no parallel requirement for wastewater systems that seek state infrastructure funding.

expenditures, the utility's rates were too low to cover day to day expenditures for operation and maintenance.

2. Operating revenues compared to operating expenditures + principal and interest payments on existing long-term debt. If operating revenues exceeded all costs (operating expense and debt payments), the rates were sufficient to cover the costs of operation, maintenance and debt service.

Since government-owned utilities provide water and sewer financial statements to the Local Government Commission, the LGC already has data that can be used to calculate these two indicators. In fiscal year 2008-2009, about 13% of utilities "failed" the first indicator. Over the last two years, 25-35% of utilities "failed" one of the two indicators. That fact that revenues fall below one or both benchmarks in a given year does not necessarily mean that the system is in financial crisis. The indicator provides a snapshot comparison of operating revenues to expenditures in that fiscal year. It does not take into consideration the availability of other funding sources used to support the utility's operation or special conditions – such as water conservation in response to drought – that may temporarily reduce revenues.<sup>3</sup> On the other hand, the indicators only provide a comparison of revenues to past costs and do not predict the adequacy of revenue to cover future costs.<sup>4</sup>

The LGC recently created a new benchmarking dashboard for water and/or sewer funds as well as other local government activities including the general fund and electric fund (if applicable). The dashboard provides eight indicators of financial condition for water and sewer systems and can be found at <http://www.nctreasurer.com/dsthome/StateAndLocalGov/lgcreport>.

The Environmental Finance Center developed a rates dashboard instrument to provide eight similar indicators of financial health for local government utilities. The dashboard can be found at <http://www.efc.unc.edu/RatesDashboards/>. The dashboard does not directly connect to any oversight agency or regulatory requirements; it was conceived as an evaluation tool for managers and local government officials.

As noted above, water systems now must demonstrate the adequacy of local water rates in order to qualify for state infrastructure funding to expand the capacity of a water treatment system or to extend water lines to address growth. Local governments do not have to demonstrate the adequacy of sewer rates to qualify for state funds to expand the wastewater system. The State should explore the feasibility of requiring similar rate information from local governments applying for state infrastructure funding to extend sewer lines or expand wastewater treatment capacity. One complicating factor may be that local governments

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<sup>3</sup> Routine reliance on general fund or other fund revenues to support a water or sewer utility, however, can be a strong indicator that rates are too low.

<sup>4</sup> Email from Shadi Eskaf, Environmental Finance Center, UNC School of Government.

operating both water and sewer systems generally send a single financial report to the LGC for the combined system.<sup>5</sup> Some local governments have told the LGC that it is not possible to separate all financial aspects of the two operations. The N.C. Rural Center, however, has taken the adequacy of local water and sewer rates in consideration in making funding decisions through the Clean Water Partners Infrastructure Program.

**(2) Evaluate the desirability of requiring each public water system and wastewater system to submit an annual audit statement with any application for state water and wastewater infrastructure funding and to implement remedial measures if the audit statement indicates a shortfall, including the submission of a written explanation for the revenue shortfall from the governing body of the system and the development of a plan to ensure that system revenues cover system costs.**

Units of government and public authorities already submit an annual audit to LGC staff in the Department of State Treasurer for review. These audits must be prepared by an independent CPA. State infrastructure funding agencies do not receive the audits directly, but in recent years have more frequently asked the LGC for audit results. Rather than duplicate the submission of audit information, DENR and the Dept. of State Treasurer would recommend continuing the practice of sharing audit information between the Department of State Treasurer and the funding agencies. If a more formal mechanism for sharing audit results is needed, that could be developed.

If audit review indicates that a system is not meeting established financial benchmarks, LGC contacts the unit of local government in writing. The letter goes to the highest level elected official in the unit of government and is copied to the manager, finance office and independent auditor. LGC requests a written response from the government or authority. If the local government or authority applies for debt that must be approved by the LGC, consideration of the debt application is delayed until the LGC receives a sufficient response from the local government. The LGC may decide not to approve the debt if the local government has not adequately addressed the issues identified in the letter. If the system is severely troubled, LGC staff will work one-on-one with the unit of local government to address the issues. LGC has not sent copies of letters concerning systems with water and/or sewer financial deficiencies to DENR in the past; both DENR and the LGC staff recommend establishing a practice of doing so.

LGC does not require that each water or wastewater system maintain a capital reserve fund unless the debt underwriter requires it. Use of a capital reserve fund is not a common practice

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<sup>5</sup> LGC does not require water and sewer financial data to be reported separately unless the local government has revenue debt secured by only one of the two operations. The LGC's published data and the benchmarking dashboard tools combine the two operations under the assumption that most local government offer both services.

among local government utilities, possibly because it gives the local government less flexibility in managing financial resources.

State regulatory agencies do not routinely provide notification to infrastructure funding agencies when a water or sewer system is failing to operate in compliance with applicable State and federal standards. Some local governments seek state funding, however, specifically to address problems in the water or sewer system –including upgrades needed to meet new standards and improvements necessary to eliminate water quality problems.

LGC staff would benefit from notification that a water or wastewater system has received a substantial civil penalty or entered into a compliance order requiring specific system improvements to address ongoing violations. Either could materially impact the financial health of the unit.

**3. Identify other actions or measures that would improve financial oversight of public water systems and wastewater systems.**

LCG staff also recommends better coordination between DENR and the LGC when local governments receive state loan or grant funds to consolidate water or wastewater systems. That consultation could help ensure that the terms of the consolidation are fair to all parties.

**RECOMMENDATIONS:<sup>6</sup>**

- The State should explore the feasibility of requiring local governments to document the adequacy of sewer rates to cover system operation as a condition of receiving state infrastructure funding to extend sewer lines or expand wastewater treatment capacity.
- Rather than duplicate the submission of audit information, LGC staff should continue the practice of sharing audit information with state infrastructure funding agencies.
- LGC should send copies of letters concerning water and sewer systems with financial deficiencies to DENR staff in the drinking water and wastewater State Revolving Fund programs.
- DENR should notify LGC staff when a local government water or sewer system receives a substantial civil penalty or enters into a compliance order requiring specific system improvements to address ongoing violations

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<sup>6</sup> Recommendations have been developed in consultation with the State and Local Government Finance Division (SLGFD) of the Department of State Treasurer which provides staff to the Local Government Commission. The Local Government Commission has not been asked to take a position on the recommendations.

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- State infrastructure funding agencies should consult LGC staff when local governments request state loan or grant funds to consolidate water or wastewater systems to ensure that the terms of the consolidation are fair to all parties.

**APPENDIX A**

**GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2009**

**SESSION LAW 2010-144  
HOUSE BILL 1746**

AN ACT TO: (1) DIRECT THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, IN CONJUNCTION WITH OTHER INTERESTED PARTIES, TO ESTABLISH A TASK FORCE TO DEVELOP A STATEWIDE SURVEY TO SUPPLEMENT THE CURRENT INFORMATION USED TO ASSESS THE STATE'S WATER AND WASTEWATER INFRASTRUCTURE NEEDS, DEVELOP A PLAN FOR INCORPORATING THE INFORMATION COMPILED FROM THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY SURVEY INTO THE STATE WATER SUPPLY PLAN, AND DEVELOP RECOMMENDATIONS REGARDING A STATEWIDE WATER AND WASTEWATER INFRASTRUCTURE RESOURCE AND FUNDING DATABASE; AND (2) DIRECT THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES AND THE LOCAL GOVERNMENT COMMISSION OF THE DEPARTMENT OF STATE TREASURER TO JOINTLY EVALUATE THE POTENTIAL BENEFITS OF MONITORING THE FINANCIAL CONDITION OF PUBLIC WATER SYSTEMS AND WASTEWATER SYSTEMS, AS RECOMMENDED BY THE LEGISLATIVE STUDY COMMISSION ON WATER AND WASTEWATER INFRASTRUCTURE.

Whereas, the two primary sources of data currently available to determine the State's water and wastewater needs include the United States Environmental Protection Agency surveys of publicly owned water and wastewater systems conducted every four years by the Department of Environment and Natural Resources and the North Carolina Rural Economic Development Center Water 2030 Initiative; and

Whereas, the Water 2030 Initiative, completed in 2005, provides a snapshot of projected water and wastewater infrastructure needs through 2030, but was funded as a onetime overview, and has not been fully updated since 2005; and

Whereas, while both the United States Environmental Protection Agency surveys and Water 2030 Initiative are useful tools, there continue to be gaps in the information used to determine the State's water and wastewater infrastructure needs, particularly with regard to economic development and growth-related infrastructure needs, water system efficiency measures, and costs related to the development of new water sources; Now, therefore,



The General Assembly of North Carolina enacts:

**SECTION 1.(a)** Task Force. – The Department of Environment and Natural Resources, the Department of Commerce, the Department of State Treasurer, the Clean Water Management Trust Fund, the State Water Infrastructure Commission, the Office of Information Technology Services, the North Carolina League of Municipalities, the North Carolina Association of County Commissioners, the Rural Economic Development Center, and the Environmental Finance Center at the School of Government at the University of North Carolina at Chapel Hill shall establish a task force to improve the collection and utilization of information related to State water and wastewater infrastructure needs. The Department of Environment and Natural Resources shall be the lead agency for the task force. The task force may also work with other interested stakeholders in its discretion. The responsibilities and duties of the task force shall include all of the following:

- (1) To develop a statewide survey to build on the base of the existing United States Environmental Protection Agency water and wastewater infrastructure survey process that will provide a more accurate assessment of statewide water and wastewater infrastructure needs.
  - a. The survey shall be designed to address the following information gaps that have been identified in the current information sources:
    1. Information on water and wastewater infrastructure needs related to economic development and population growth.
    2. Information on water and wastewater system service areas.
    3. Information on drinking water needs relevant to determining the need and the cost of proposed reservoir construction.
    4. Information on infrastructure needs to address failing water and wastewater systems.
    5. Information on the infrastructure needs related to water system efficiency to address the issue of water loss.
  - b. The task force shall consider how often the information provided by the survey should be updated.
  - c. The task force shall consider requesting information to update the Water 2030 Initiative as part of the survey design.
  - d. The task force shall consider how often to update the survey, and how best to formulate and summarize the survey results on the State's combined water and wastewater infrastructure needs in a concise and easily understood format for use by the General Assembly. The task force shall prepare a model report based on this format.
- (2) To develop a plan to incorporate relevant information obtained from the existing United States Environmental Protection Agency survey and any statewide survey developed pursuant to subdivision (1) of this section into the State water supply plan developed pursuant to G.S. 143-355(m). In devising the plan to incorporate the needs survey information into the State water supply plan, the task force shall consider possible modifications to the information collected as part of the local water supply plans or the

methodology used to prepare the local water supply plans that would make it easier to incorporate the needs survey information into the State water supply plan.

- (3) To recommend a plan for the establishment and maintenance of a statewide water and wastewater infrastructure resource and funding database, or alternative information systems or processes that are capable of consolidating and integrating statewide information on water and wastewater infrastructure needs, resources, and funding and making this information more accessible to applicants, government agencies, and policymakers. The task force shall consider the relative merits of a database and any proposed alternatives, taking into account estimated costs and the ability of each to meet the goals outlined in this section. In analyzing a database, the task force shall identify options for database system design and structure and delineate the categories of information to be compiled and indexed.

**SECTION 1.(b)** Task Force Report. – The Department of Environment and Natural Resources shall report the findings and recommendations of the task force to the Legislative Study Commission on Water and Wastewater Infrastructure by November 1, 2010. The report shall include the estimated cost to implement the recommendations and any legislative changes required to implement the recommendations.

**SECTION 2.(a)** The Department of Environment and Natural Resources and the Local Government Commission of the Department of State Treasurer shall jointly evaluate the costs and benefits of requiring each public water system or wastewater system in the State to demonstrate that the system raises sufficient revenue to cover the costs associated with proper operation of the system, including the costs of maintenance, repair, and replacement of collection, treatment, and distribution infrastructure.

- (1) The Department of Environment and Natural Resources and the Local Government Commission shall specifically consider increasing their oversight role to include the following actions:
  - a. Review grant applications submitted by a system to determine the portion of the proposed grant match that is funded from local revenues as opposed to another grant.
  - b. Develop benchmarks that a system must meet to ensure that the system is operating in a financially sound manner.
- (2) The Department of Environment and Natural Resources and the Local Government Commission shall specifically evaluate the desirability of requiring each public water system and wastewater system in the State to conduct the following actions:
  - a. Submit an annual audit statement to State water and wastewater infrastructure funding agencies to which the system is applying for loan or grant funds for the purpose of reporting on the operation of the system and to demonstrate whether the water or wastewater rates of each system are sufficient to maintain system operations and meet debt service obligations.

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- b. Implement remedial measures in the event that the audit statement indicates a shortfall, including the submission of a written explanation for the revenue shortfall from the governing body of the system and the development of a plan to ensure that system revenues cover system costs.
  - c. Maintain a capital reserve fund.
  - d. Provide notification to funding agencies when a system is failing to operate in compliance with applicable State and federal water quality standards.
- (3) The Department of Environment and Natural Resources and the Local Government Commission shall identify and consider other actions or measures that would improve the oversight of the financial condition of public water systems and wastewater systems.

**SECTION 2.(b)** For the purposes of this act, "public water system" has the same meaning as in G.S. 130A-313(10), and "wastewater system" has the same meaning as in G.S. 159G-20(25).

**SECTION 2.(c)** The Department of Environment and Natural Resources and the Local Government Commission shall jointly report their findings and recommendations to the Legislative Study Commission on Water and Wastewater Infrastructure no later than November 1, 2010.

**SECTION 3.** This act is effective when it becomes law.

In the General Assembly read three times and ratified this the 8<sup>th</sup> day of July, 2010.

s/ Walter H. Dalton  
President of the Senate

s/ Joe Hackney  
Speaker of the House of Representatives

s/ Beverly E. Perdue  
Governor

Approved 1:54 p.m. this 22<sup>nd</sup> day of July, 2010