

**2009-2010**

**WATER &  
WASTEWATER  
INFRASTRUCTURE  
STUDY COMMISSION**

**MINUTES**

**WATER & WASTEWATER INFRASTRUCTURE  
STUDY COMMISSION  
2009-2010**

**Pro Temp's Appointments**

Sen. Charlie W. Albertson, Co-chair  
136 Henry Dunn Pickett Rd.  
Beulaville, NC 28518  
910-298-4923  
Cell – 910-296-4413

Sen. Thomas Apodaca  
214 N. King St.  
Hendersonville, NC 28792  
828-696-0574  
Cell –

Sen. David Hoyle  
604 Queens Dr.  
Dallas, NC 28034  
704-922-4969  
Cell -

Sen. A. B. Swindell  
700 E. Birchwood Dr.  
Nashville, NC 27856  
252-459-7805  
Cell -

**Other Appointees**

Secretary J. Keith Crisco  
Dept. of Commerce  
4301 Mail Service Center  
Raleigh, NC 27699-4301  
919-733-3449  
Cell -

**Speaker's Appointments**

Rep. Jim Crawford, Co-Chair  
509 College St.  
Oxford, NC 27565  
252-492-0185 (district office)  
Cell – Not available

Rep. Mitch Gillespie  
185 Cross Creek North Ridge Dr.  
Marion, NC 28752  
828-652-5548  
Cell -

Rep. William "Bill" Owens  
113 Hunters Trail East  
Elizabeth City, NC 27909  
252-335-0167  
Cell -

Rep. Cullie Tarleton  
P. O. Box 1269  
Blowing Rock, NC 28605  
828-295-3353  
Cell -

Secretary Dee Freeman  
Dept. of Environment & Nat. Res.  
1601 Mail Service Center  
Raleigh, NC 27699-1601  
919-715-4102  
Cell –

Mr. Billy Ray Hall, President  
NC Rural Center  
4021 Carya Drive.  
Raleigh, NC 27610-2914  
919-250-4314  
Cell - 919-218-3393

Mr. Arthur (Buck) Kennedy  
NC League of Municipalities  
215 N. Dawson St.  
Raleigh, NC 27603-1172  
919-715-4000  
Cell -

Mr. Richard E. Rogers, Jr., Exec. Dir.  
Clean Water Management Trust Fund  
1651 Mail Service Center  
Raleigh, NC 27699-1651  
919-571-6767  
Cell -

Mr. David F. Thompson, Exec. Dir.  
NC Assoc. of County Commissioners  
215 N. Dawson St.  
Raleigh, NC 27603-1172  
919-715-2893  
Cell -

Mr. Bill Holman, Director  
Nicholas Institute  
Duke University, Box 90335  
Durham, NC 27708  
919-613-8737  
Cell-

#### **Governor's Appointees**

Mr. Larry Wooten  
NC Farm Bureau Federation, Inc.  
P. O. Box 27766  
Raleigh, NC 27611  
919-782-1705  
Cell - 919-306-6305

Ms. Victoria (Tori) Small, PE  
Westcott, Small & Assoc., PLLC  
4015 Meeting Way, Suite 105  
High Point, NC 27265  
336-812-3546  
Cell - 336-558-5978

#### **Staff**

Tim Dodge  
Research Division - 919-733-2578

Kristin Walker & Mark Bondo  
Fiscal Research Division - 919-733-4910

Emily Johnson  
Bill Drafting Division - 919-733-6660

Cindy Brooks Davis/Office of Sen. Albertson  
Room 523-Legislative Office Bldg.  
Commission Clerk - 919-733-5705

# ATTENDANCE

COPY

Committee: Water & Wastewater Infrastructure Study Commission

| NAMES                                      | DATES    |          |         |         |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------------|----------|----------|---------|---------|---------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                                            | 11-10-09 | 12-14-09 | 1-20-10 | 4-22-10 | 5-11-10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sen. Charlie Albertson, Co-Chair           | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sen. Thomas Apodaca                        |          |          | ✓       |         |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sen. David Hoyle                           |          |          | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sen. A. B. Swindell                        | ✓        | ✓        |         |         |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rep. Jim Crawford, Co-Chair                | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rep. Mitch Gillespie                       | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rep. William "Bill" Owens                  |          | ✓        | ✓       |         | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rep. Cullie Tarleton                       | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <del>Jim Blackburn</del> - Co-Commissioner |          |          |         | ✓       |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sec. J. Keith Crisco <i>Designated</i>     |          | ✓        |         |         | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sec. Dee Freeman - Robin Smith             | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mr. Billy Ray Hall <i>Present</i>          |          | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mr. S. Ellis Hankins <i>Buck Kennedy</i>   | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mr. Richard E. Rogers, Jr.                 | ✓        | ✓        | ✓       |         | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mr. David F. Thompson <i>(Leonard)</i>     | ✓        | ✓        | ✓       |         | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Larry Wooten (m. Pate)</i>              | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Tori Small</i>                          | ✓        | ✓        | ✓       |         | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Jeffrey Hudson, Chief Staff Counsel        | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Tim Dodge</i>                           | ✓        | ✓        | ✓       |         | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Bill Holman</i>                         | ✓        | ✓        | ✓       |         | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cindy J. Davis, Comm. Clerk                | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Kristen Welch</i>                       | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Mark Bonds</i>                          | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Emily Johnson</i>                       |          |          | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Jim Blackburn





**NORTH CAROLINA GENERAL ASSEMBLY**  
**LEGISLATIVE BUILDING**  
**RALEIGH NC 27601**

November 2, 2009

**MEMORANDUM**

**TO: Members of the Legislative Study Commission on Water and Wastewater Infrastructure**

**FROM: Senator Charles W. Albertson, Co-Chair**  
**Representative James W. Crawford, Co-Chair**

**SUBJECT: Meeting Notice**

The Legislative Study Commission on Water and Wastewater Infrastructure will as follows:

**DAY: Tuesday, November 10, 2009**  
**TIME: 10:00 a.m.**  
**LOCATION: Room 414 Legislative Office Building**

The authorizing legislation for the Commission is attached to this meeting notice for your reference.

If you have any questions concerning this meeting or are unable to attend, please contact Cindy Davis, Commission Clerk, at 919-733-5705 or by e-mail at [albertsonla@ncleg.net](mailto:albertsonla@ncleg.net).

## SL 2009-574 – THE STUDIES ACT OF 2009

### **PART XLIII. LEGISLATIVE STUDY COMMISSION ON WATER AND WASTEWATER INFRASTRUCTURE (Crawford, Owens)**

**SECTION 43.1.** There is created the Legislative Study Commission on Water and Wastewater Infrastructure. The Commission shall consist of 17 members appointed as follows:

- (1) Four members of the House of Representatives, appointed by the Speaker of the House of Representatives.
- (2) Four members of the Senate, appointed by the President Pro Tempore of the Senate.
- (3) Two members appointed by the Governor.
- (4) The Secretary of the North Carolina Department of Environment and Natural Resources or the Secretary's designee.
- (5) The Secretary of the North Carolina Department of Commerce or the Secretary's designee.
- (6) The President of the North Carolina Rural Economic Development Center or the President's designee.
- (7) The Executive Director of the North Carolina Clean Water Management Trust Fund or the Executive Director's designee.
- (8) The Executive Director of the North Carolina League of Municipalities or the Executive Director's designee.
- (9) The Executive Director of the North Carolina Association of County Commissioners or the Executive Director's designee.
- (10) The Chair of the State Water Infrastructure Commission.

**SECTION 43.2.** The Speaker of the House of Representatives and the President Pro Tempore of the Senate shall each designate a cochair. The Commission may meet at any time upon the joint call of the cochairs. A quorum of the Commission shall be a majority of its members.

Vacancies on the Commission shall be filled by the same appointing authority that made the initial appointment.

Subject to the approval of the Legislative Services Commission, the Commission may meet in the Legislative Building or the Legislative Office Building.

The Legislative Services Commission, through the Legislative Services Officer, shall assign professional staff to assist the Commission in its work. The House of Representatives' and the Senate's Director of Legislative Assistants shall assign clerical support staff to the Commission, and the expenses relating to the clerical employees shall be borne by the Commission.

In addition, the State agencies and nonprofits serving on the Commission shall cooperate in providing information and additional staff resources as needed to accomplish the work of the Commission.

The Commission, while in the discharge of its official duties, may exercise all powers provided for under G.S. 120-19 and G.S. 120-19.1 through G.S. 120-19.4. The Commission may contract for professional, clerical, or consultant services as provided by G.S. 120-32.02.

Members of the Commission shall receive subsistence and travel expenses at the rates set forth in G.S. 120-3.1, 138-5, or 138-6, as appropriate.

**SECTION 43.3.** The Legislative Study Commission on Water and Wastewater Infrastructure shall focus on the development of an ongoing process to identify and regularly report to the North Carolina General Assembly on statewide water and wastewater infrastructure needs and to improve the delivery of State appropriated water and wastewater programs. The Commission shall specifically do all of the following:

- (1) Evaluate the information provided through the drinking water and wastewater needs assessment prepared by the Environmental Protection Agency (EPA) every four years; the drinking water and wastewater needs surveys currently done by the North Carolina Department of Environment and Natural Resources in support of the EPA needs assessment; the data compiled as part of Water 2030 by the North Carolina Rural Economic Development Center, Inc.; and any other existing data sets in order to determine what information currently exists and where there may be gaps in the data.
- (2) Study an ongoing method for regularly determining and reporting on the State's water and wastewater infrastructure needs, including the subject of small towns whose water or sewer rates exceed the high-unit-cost threshold as defined in G.S. 159G-20.
- (3) Select a method for identifying and reporting on infrastructure needs in the future.
- (4) Review infrastructure funding priorities currently set out in State law to determine whether the priorities appropriately reflect the State's most pressing needs in light of future growth projections.
- (5) Recommend changes to infrastructure funding priorities and appropriations processes to ensure that funds are used to meet the State's most pressing needs.
- (6) Ascertain the capacity and role of the State in bridging identified gaps between funding priorities and available funds.
- (7) Determine what steps funding agencies can take to improve the delivery of existing funding programs, including the following options:
  - a. Developing common application requirements;
  - b. Scheduling regular joint meetings between funders and applicants;
  - c. Where projects are jointly funded, exploring options to share and improve oversight responsibilities; and
  - d. Coordinating reporting requirements to produce a single integrated funders report on an annual basis.

**SECTION 43.4.** As used in subdivision (7) of Section 43.3, "funding agencies" means the Department of Commerce, the Department of Environment and Natural Resources, the Clean Water Management Trust Fund, and the Rural Economic Development Center.

**SECTION 43.5.** On or before May 1, 2010, the Legislative Study Commission on Water and Wastewater Infrastructure shall submit an interim report to the 2009 General Assembly, Regular Session 2010. This interim report shall include any findings or

recommendations of the Commission at that time. In addition, no later than the convening of the 2011 General Assembly, the Commission shall submit a final report to the General Assembly. This final report shall include the Commission's findings and recommendations under this study, including any legislative or administrative proposals. The Commission shall terminate upon the earlier of the filing of its final report or the convening of the 2011 General Assembly.

# ATTENDANCE

Committee: Water & Wastewater Infrastructure Study Commission

| NAMES                                            | DATES    |          |         |         |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------------------|----------|----------|---------|---------|---------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                                                  | 11-10-09 | 12-14-09 | 1-20-10 | 4-22-10 | 5-11-10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sen. Charlie Albertson, Co-Chair                 | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sen. Thomas Apodaca                              |          |          | ✓       |         |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sen. David Hoyle                                 |          |          | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sen. A. B. Swindell                              | ✓        | ✓        |         |         |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rep. Jim Crawford, Co-Chair                      | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rep. Mitch Gillespie                             | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rep. William "Bill" Owens                        |          | ✓        | ✓       |         | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rep. Cullie Tarleton                             | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <del>Jim Blackburn - Co-Commissioner</del>       |          |          |         | ✓       |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sec. J. Keith Crisco <del>of</del> <i>Deputy</i> |          | ✓        |         |         | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sec. Dee Freeman - Robin Smith                   | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mr. Billy Ray Hall <i>(P. Bode)</i>              |          | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mr. S. Ellis Hankins <i>Buch Kennedy</i>         | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mr. Richard E. Rogers, Jr.                       | ✓        | ✓        | ✓       |         | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mr. David F. Thompson <i>(Leonard)</i>           | ✓        | ✓        | ✓       |         | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Larry Wooten (m. Peck)</i>                    | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Tori Small</i>                                | ✓        | ✓        | ✓       |         | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Jeffrey Hudson, Chief Staff Counsel              | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Tim Dodge</i>                                 | ✓        | ✓        | ✓       |         | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Bill Holman</i>                               | ✓        | ✓        | ✓       |         | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cindy J. Davis, Comm. Clerk                      | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Kristin Welch</i>                             | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Mark Bonds</i>                                | ✓        | ✓        | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Emily Johnson</i>                             |          |          | ✓       | ✓       | ✓       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Jim Blackburn

JOINT COMMISSION ON WATER & WASTEWATER  
INFRASTRUCTURE

**MINUTES**

November 10, 2009

The Joint Commission on Water & Wastewater met on Tuesday, November 10, 2009, in Room 414 of the Legislative Office Building in Raleigh at 10:00 a.m. Members present were: Senators Charlie Albertson, Co-chair, Sen. A. B. Swindell. House members were: Rep. Jim Crawford, Co-chair, Rep. Mitch Gillespie &, Rep. Cullie Tarleton. Public members were: Mr. Richard Rogers, Mr. Buck Kennedy, Mr. Dale Carroll (for Sec. Crisco), Mr. Billy Ray Hall, Mr. David Thompson, Mr. Mitch Peele (for Mr. Larry Wooten), Ms. Robin Smith (for Sec. Freeman), and Ms. Tori Small.

**I. CALL TO ORDER & INTRODUCTORY REMARKS**

Sen. Albertson called the meeting to order and thanked everyone for their attendance. He allowed each member to introduce themselves and tell what agency they represent.

**II. COMMISSION CHARGE**

Ms. Emily Johnson, Bill Drafting Division, introduced all staff members. Ms. Johnson read the Charge and explained.

**III. NEEDS ASSESSMENT**

A. Mr. Patrick Woodie, Vice President, NC Rural Economic Development Center covered four topics. (Attachment A). His presentation explained the history of the Rural Center's involvement in water & wastewater infrastructure; an overview of Water 2030-6 major elements; Funding over the last two years (fiscal year 2008-2009); and Going forward.

**DISCUSSION:**

Rep. Tarleton asked how close we are to spending \$6.8 billion capital dollars. Mr. Woodie responded that is the over-all total need. Mr. David Thompson asked about the funds for consent water. Mr. Woodie explained there was identified \$500 million dollars in 2007. This was for systems that been identified for repair. We have made great progress made and we still have some on that list to be done. Sen. Albertson asked if we are staying where we need to be. Mr. Woodie advised that the population increases are causing us to have greater needs. It's a struggle for infrastructures to keep up.

**B.** Ms. Robin Smith, Assistant Secretary-Dept. of Environment & Natural Resources gave her presentation. (Attachment B). She explained the funding needs for drinking water systems in NC based on the most recent EPA 4-year Drinking Water Needs Survey (released in February 2009 = \$10 billion over the next 20 years). She explained how the needs are surveyed for the federal revolving fund and those figures are not included in this chart. Another category that is not reflected in the survey is small private failing systems. They sometimes have to work with private landowners in these cases. There are some things the state can do to help manage infrastructure costs. For non-drinking water needs the state can do more. NC has an unusually large number of water systems. These may be providing water for mobile home parks or subdivisions. Wake County is a good example that has many water systems. Ms. Smith also mentioned that population growth is extremely important for water infrastructure needs. An example is that by 2029 Wake County will double in growth according to one study, according to data she recently saw. This is evidence of the importance of needs. The current state/federal revolving program cannot be used for all funding needs.

DISCUSSION: Sen. Albertson has also read that Wake County has grown by 50% in the past ten years so this is an indication of what we are facing state-wide relative to growth. Sen. Albertson asked Ms. Smith to provide for our members a list of needs. Ms. Smith said NC is making progress in terms of storm-water and discharges. Our biggest challenge is the non-point sources of stormwater. We have a strong program and we have made a lot of progress. We received about \$160 million in recovery funds and that was a huge help.

**C.** Mr. Dale Carroll, Deputy Secretary-Dept. of Commerce, gave a power point presentation. (Attachment C). This presentation provided a breakdown of the Community Development Block Grants (CDBG) monies by years. All line-item figures are provided in the presentation. They appreciate the recurring funds from the NC General Assembly for the Industrial Development Fund.

DISCUSSION: Sen. Albertson asked what it means to a prospective business to have "clean" water. Mr. Carroll said they have a chart of current business/industry parks that don't have the planned infrastructure they need. One example is along the Columbus County line that has needs that have not been met yet. There is another industrial park in Concord that also has needs. These are two examples of inadequate infrastructure. Sometimes one side of the road will have the infrastructure but the other side of the road may not be ready to accommodate those needs. We have several such needs state-wide that don't have all of the water & sewer infrastructure in place. Even when we receive federal funds we sometimes don't have the state funds that we need to put with it.

**D.** Mr. Richard Rogers, Executive Director-Clean Water Management Trust Fund, also had a power point presentation. (Attachment D). The purpose of their program is to enhance and protect our surface waters. Restoration on streams is also a part of their program. They respond to all applications submitted. All needs/requests address the need for improved water infrastructure. Failing septic tanks, discharge eliminations, water reuse, and repairs or upgrades are part of their functions.

DISCUSSION: Sen. Swindell asked about one of his projects that are running behind by a year. Sen. Swindell asked if it is unusual to be behind and how long from the time a town is approved until they receive their funds. Mr. Rogers said they are funding 2008 again because the Governor withdrew some of their funds to help balance the budget that year. Now they have received these funds and they are working on those past contracts. It is their practice to fund applications the year they are approved and appropriated.

#### **IV. UPDATE ON FUNDERS COOPERATION LETTER**

Mr. Richard Rogers explained the letter included in today's packet. (Attachment E). This explains the needs of the gap to provide information to the legislature. There are 5 areas they are interested in (these are listed on the back of the letter). Coordinating and communicating is their common goal to help with all the funders to help meet needs on local levels. A spread sheet may be put together in order to help coordinate the needs of all areas.

DISCUSSION: Rep. Crawford asked what shape our urban areas are in with their needs and meeting their needs. Ms. Smith said she could get the information on the 25 top urban areas. They know they are facing challenges in those areas.

#### **V. COMMITTEE DISCUSSION**

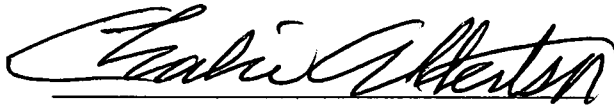
Rep. Gillespie followed up on comments by Ms. Smith said about follow up for the next 30 years. Can DENR provide this chart for this committee so we can know how to identify needs within the state? Ms. Smith said there are different ways to gather this information. Demographics are one way to establish needs. DENR does have projects for demands on water supply but this is not the exact same thing for infrastructure needs. Rep. Tarleton asked if there is a system in place in NC so that when a municipality reaches 80% of their capacity is there a tickler system. Ms. Smith said there is a system in place. Mr. Dan Blaisdell, Water Quality- DENR said there is a system they use. Mr. Mitch Peele asked if we know what percent of water is being lost due to leaking or failing systems and are these in small or urban areas. Ms. Smith said there are some systems that have large amounts (as much as 30-40%) systems that have loss and they have some information they can provide committee members. Rep. Gillespie spoke on bridging gaps and something to consider for our committee is to get information on potential reservoir sites that may need statute changes to save potential sites; and also look at programs for cost shares for farming communities. He feels this is something to consider. Mr. Billy Ray Hall commented that he finds it interesting to interact with local governments as he travels the state for the Rural Center. Being able to communicate is important to small communities. This is a huge issue to them. The Charge to this committee is to help make more information available to the state on how to provide water/wastewater to communities. As we talk about putting our report together it is important on how handle these communications with our local communities. Sen. Albertson agreed this is important and education and keeping information available for



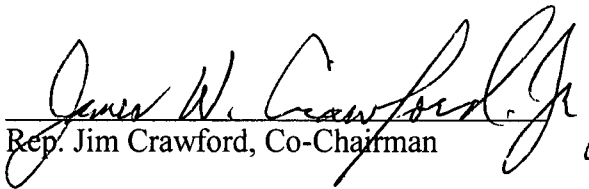
our citizens is vital. David Thompson recommended the State Water Infrastructure Report report that was submitted on 11-1-09 would make a good presentation. Mr. Buck Kennedy asked about the 303-D list and the fact that is ever increasing. He believes it would be nice to hear about that at a future meeting. This could have an impact on how funding on the protection of streams is important. Ms. Smith said that is a good point because impaired streams is an important factor. Mr. Kennedy spoke again in relation to the 2<sup>nd</sup> largest county has a large number of failing septic tanks. Local government is trying to help repair those septic tanks and this is impacting the 303-D list. Sen. Albertson asked that staff look at this issue and get back with us. There was no further discussion.

## VI. ADJOURNMENT

The meeting adjourned at 11:25 p.m.



Sen. Charlie Albertson, Co-Chairman



Rep. Jim Crawford, Co-Chairman



Cindy J. Davis, Commission Clerk

**Legislative Study Commission on  
Water and Wastewater Infrastructure  
Agenda**

**Tuesday, November 10, 2009, 10:00 A.M.  
Room 414, Legislative Office Building**

**Sen. Albertson, Presiding**

**I. Welcome & Chair Remarks**

Senator Albertson  
Representative Crawford

**II. Commission Charge**

Staff

**III. Needs Assessment**

Rural Economic Development Center  
Patrick Woodie, Vice President

Department of Environment and Natural Resources  
Robin Smith, Assistant Secretary

Department of Commerce  
Dale Carroll, Deputy Secretary

Clean Water Management Trust Fund  
Richard Rogers, Executive Director

**IV. Update on Funders Cooperation Letter**

Richard Rogers

**V. Committee Discussion**

**VI. Adjourn**

---

**WATER & WASTEWATER INFRASTRUCTURE  
STUDY COMMISSION  
2009-2010**

**Pro Temp's Appointments**

Sen. Charlie W. Albertson, Co-chair  
136 Henry Dunn Pickett Rd.  
Beulaville, NC 28518  
910-298-4923  
Cell – 910-296-4413

Sen. Thomas Apodaca  
214 N. King St.  
Hendersonville, NC 28792  
828-696-0574  
Cell –

Sen. David Hoyle  
604 Queens Dr.  
Dallas, NC 28034  
704-922-4969  
Cell -

Sen. A. B. Swindell  
700 E. Birchwood Dr.  
Nashville, NC 27856  
252-459-7805  
Cell -

**Other Appointees**

Secretary J. Keith Crisco  
Dept. of Commerce  
4301 Mail Service Center  
Raleigh, NC 27699-4301  
919-733-3449  
Cell -

**Speaker's Appointments**

Rep. Jim Crawford, Co-Chair  
509 College St.  
Oxford, NC 27565  
252-492-0185  
Cell – 252-431-4689

Rep. Mitch Gillespie  
185 Cross Creek North Ridge Dr.  
Marion, NC 28752  
828-652-5548  
Cell -

Rep. William "Bill" Owens  
113 Hunters Trail East  
Elizabeth City, NC 27909  
252-335-0167  
Cell -

Rep. Cullie Tarleton  
P. O. Box 1269  
Blowing Rock, NC 28605  
828-295-3353  
Cell -

Secretary Dee Freeman  
Dept. of Environment & Nat. Res.  
1601 Mail Service Center  
Raleigh, NC 27699-1601  
919-715-4102  
Cell –

Mr. Billy Ray Hall, President  
NC Rural Center  
4021 Carya Drive.  
Raleigh, NC 27610-2914  
919-250-4314  
Cell - 919-218-3393

Mr. S. Ellis Hankins  
NC League of Municipalities  
215 N. Dawson St.  
Raleigh, NC 27603-1172  
919-715-4000  
Cell -

Mr. Richard E. Rogers, Jr., Exec. Dir.  
Clean Water Management Trust Fund  
1651 Mail Service Center  
Raleigh, NC 27699-1651  
919-571-6767  
Cell -

Mr. David F. Thompson, Exec. Dir.  
NC Assoc. of County Commissioners  
215 N. Dawson St.  
Raleigh, NC 27603-1172  
919-715-2893  
Cell -

### **Governor's Appointees**

Mr. Larry Wooten  
NC Farm Bureau Federation, Inc.  
P. O. Box 27766  
Raleigh, NC 27611  
919-782-1705  
Cell - 919-306-6305

Ms. Victoria (Tori) Small, PE  
Westcott, Small & Assoc., PLLC  
4015 Meeting Way, Suite 105  
High Point, NC 27265  
336-812-3546  
Cell - 336-558-5978

### **Staff**

Tim Dodge  
Research Division - 919-733-2578

Kristin Walker & Mark Bondo  
Fiscal Research Division - 919-733-4910

Emily Johnson  
Bill Drafting Division - 919-733-6660

Cindy Brooks Davis/Office of Sen. Albertson  
Room 523-Legislative Office Bldg.  
Commission Clerk - 919-733-5705

November 9, 2009

**PART XLIII. LEGISLATIVE STUDY COMMISSION ON WATER AND WASTEWATER INFRASTRUCTURE (Crawford, Owens)**

**SECTION 43.1.** There is created the Legislative Study Commission on Water and Wastewater Infrastructure. The Commission shall consist of 17 members appointed as follows:

- (1) Four members of the House of Representatives, appointed by the Speaker of the House of Representatives.
- (2) Four members of the Senate, appointed by the President Pro Tempore of the Senate.
- (3) Two members appointed by the Governor.
- (4) The Secretary of the North Carolina Department of Environment and Natural Resources or the Secretary's designee.
- (5) The Secretary of the North Carolina Department of Commerce or the Secretary's designee.
- (6) The President of the North Carolina Rural Economic Development Center or the President's designee.
- (7) The Executive Director of the North Carolina Clean Water Management Trust Fund or the Executive Director's designee.
- (8) The Executive Director of the North Carolina League of Municipalities or the Executive Director's designee.
- (9) The Executive Director of the North Carolina Association of County Commissioners or the Executive Director's designee.
- (10) The Chair of the State Water Infrastructure Commission.

**SECTION 43.2.** The Speaker of the House of Representatives and the President Pro Tempore of the Senate shall each designate a cochair. The Commission may meet at any time upon the joint call of the cochairs. A quorum of the Commission shall be a majority of its members.

Vacancies on the Commission shall be filled by the same appointing authority that made the initial appointment.

Subject to the approval of the Legislative Services Commission, the Commission may meet in the Legislative Building or the Legislative Office Building.

The Legislative Services Commission, through the Legislative Services Officer, shall assign professional staff to assist the Commission in its work. The House of Representatives' and the Senate's Director of Legislative Assistants shall assign clerical support staff to the Commission, and the expenses relating to the clerical employees shall be borne by the Commission.

In addition, the State agencies and nonprofits serving on the Commission shall cooperate in providing information and additional staff resources as needed to accomplish the work of the Commission.

The Commission, while in the discharge of its official duties, may exercise all powers provided for under G.S. 120-19 and G.S. 120-19.1 through G.S. 120-19.4. The Commission may contract for professional, clerical, or consultant services as provided by G.S. 120-32.02.

Members of the Commission shall receive subsistence and travel expenses at the rates set forth in G.S. 120-3.1, 138-5, or 138-6, as appropriate.

**SECTION 43.3.** The Legislative Study Commission on Water and Wastewater Infrastructure shall focus on the development of an ongoing process to identify and regularly report to the North Carolina General Assembly on statewide water and wastewater infrastructure needs and to improve the delivery of State appropriated water and wastewater programs. The Commission shall specifically do all of the following:

- (1) Evaluate the information provided through the drinking water and wastewater needs assessment prepared by the Environmental Protection Agency (EPA) every four years; the drinking water and wastewater needs surveys currently done by the North Carolina Department of Environment and Natural Resources in support of the EPA needs assessment; the data compiled as part of Water 2030 by the North Carolina Rural Economic Development Center, Inc.; and any other existing data sets in order to determine what information currently exists and where there may be gaps in the data.
- (2) Study an ongoing method for regularly determining and reporting on the State's water and wastewater infrastructure needs, including the subject of small towns whose water or sewer rates exceed the high-unit-cost threshold as defined in G.S. 159G-20.
- (3) Select a method for identifying and reporting on infrastructure needs in the future.
- (4) Review infrastructure funding priorities currently set out in State law to determine whether the priorities appropriately reflect the State's most pressing needs in light of future growth projections.
- (5) Recommend changes to infrastructure funding priorities and appropriations processes to ensure that funds are used to meet the State's most pressing needs.
- (6) Ascertain the capacity and role of the State in bridging identified gaps between funding priorities and available funds.
- (7) Determine what steps funding agencies can take to improve the delivery of existing funding programs, including the following options:
  - a. Developing common application requirements;
  - b. Scheduling regular joint meetings between funders and applicants;
  - c. Where projects are jointly funded, exploring options to share and improve oversight responsibilities; and
  - d. Coordinating reporting requirements to produce a single integrated funders report on an annual basis.

**SECTION 43.4.** As used in subdivision (7) of Section 43.3, "funding agencies" means the Department of Commerce, the Department of Environment and Natural Resources, the Clean Water Management Trust Fund, and the Rural Economic Development Center.

**SECTION 43.5.** On or before May 1, 2010, the Legislative Study Commission on Water and Wastewater Infrastructure shall submit an interim report to the 2009 General Assembly, Regular Session 2010. This interim report shall include any findings or recommendations of the Commission at that time. In addition, no later than the convening of the 2011 General Assembly, the Commission shall submit a final report to the General Assembly. This final report shall include the Commission's findings and recommendations under this study, including any legislative or administrative proposals. The Commission shall terminate upon the earlier of the filing of its final report or the convening of the 2011 General Assembly.

Department of Environment and Natural Resources  
Division of Environmental Health  
Public Water Supply Section

**The projected infrastructure funding need for drinking water systems in North Carolina based on the most recent EPA 4-year Drinking Water Needs Survey (released in February 2009) = \$10 billion over the next 20 years.**

**20-Year Need (millions of January 2007 dollars) as reported in the 2009 EPA Needs Survey:**

| <i>Reported By Project Type</i> |            | <i>Reported By System Size</i> |            |
|---------------------------------|------------|--------------------------------|------------|
| Transmission/distribution       | \$6,037.1  | Large                          | \$3,043.9  |
| Source                          | \$ 670.7   | Medium                         | \$4,907.5  |
| Treatment                       | \$2,237.7  | Small                          | \$1,734.1  |
| Storage                         | \$1,032.7  | Non community                  | \$ 369.7   |
| Other                           | \$ 77.1    |                                |            |
| Total                           | \$10,055.2 | Total                          | \$10,055.2 |

**Survey Method.** The U.S. Environmental Protection Agency conducts a Needs Survey every 4 years to assess drinking water infrastructure needs nationally and to determine the relative distribution of federal funds among the states for the Drinking Water State Revolving Fund. Of the 268 medium and large community water systems operating in N.C. in 2007, all systems serving a population greater than 100,000 were surveyed (20) and a sample of systems serving populations between 3,301 and 100,000 were surveyed (34). For systems serving fewer than 3,301 people, EPA models projected needs based on results from interviews conducted with a statistical sample set of water systems. (Note: The federal survey includes privately owned systems that are not currently eligible for funding in the state.)

**Scope.** The EPA survey does not cover all infrastructure needs. The survey results only reflect needs that: 1. have been adequately documented as capital improvements required during the 20-year time frame of that particular needs survey; and 2. further the public health goals of the Safe Drinking Water Act (SDWA). The results would include new, expanded or upgraded infrastructure to meet the needs of *existing* customers and replacement or rehabilitation of existing undersized or deteriorated infrastructure. Within those constraints, the needs survey could include infrastructure costs associated with water treatment; transmission and distribution lines; the water source; water storage; consolidation of systems; and creation of new systems. The costs of complying with proposed or recently adopted federal regulations are not included in the survey. Those costs are derived from EPA's economic analyses of the federal rule and then added to the national total.

**Certain types of water infrastructure projects are not eligible for drinking water state revolving fund monies and are excluded from the survey.** For example, the EPA needs survey excludes non-capital projects (including studies, operation and maintenance); projects primarily intended to serve future population growth; infrastructure for fire suppression; reservoir or dam-related needs; source water protection (such as acquisition of buffers around a water source); and acquisition of existing infrastructure.



**Federal Funds/State Match Money.** Federal funds for drinking water infrastructure generally come through the Drinking Water State Revolving Fund and can only be used for purposes allowed under the federal statute. The federal funds can only be used for the types of projects covered in the EPA survey – for example, funds can be used for capital projects to serve existing populations but not for primarily growth-related projects. The federal Capitalization Grant requires a 20 percent state match. Historically, N.C. has always provided the match required to maximize the state's drawdown of federal funds. In 2009, the General Assembly appropriated \$5,482,800 to match \$27,414,000 in federal fiscal year 2008 funds. In 2010, another \$5,482,800 will be needed to drawdown North Carolina's allocation of \$27,414,000 in the 2009 federal budget. Congress significantly increased federal fiscal year 2010 funding for the Drinking Water State Revolving Fund. A larger allocation to the state in 2010 may require a larger match in state FY2011; that match could be close to \$7,600,000.



**Division of Water Quality  
Construction Grants and Loans Section  
EPA Clean Watersheds 2008 Needs Survey  
And  
Clean Water State Revolving Fund**



November 10, 2009

**Needs Survey Summary**

**2008 North Carolina 20-year needs (in millions)**

|                                          |                                 |
|------------------------------------------|---------------------------------|
| Wastewater Treatment                     | \$ 2,543                        |
| Wastewater Conveyance (including repair) | \$ 3,672                        |
| Recycled Distribution                    | \$ 245                          |
| CSO Correction                           | \$ 4                            |
| Stormwater                               | \$ 87                           |
| Decentralized Treatment                  | \$ 6                            |
| <u>Non-Point Source</u>                  | <u>\$ 234</u>                   |
| Total                                    | \$ 6,791 (pending OMB approval) |

**Survey Method**

- Cooperative effort between EPA and the States, required by the Clean Water Act every four years.
- Comprehensive assessment of unfunded projects that will address water quality or water-quality related public health problems.
- Projects must fall into an EPA category of need.
- 25 need categories addressing wastewater, stormwater and non-point sources.
- Survey sent to 500 municipalities; 100 counties; COGS; engineers; and other public wastewater utilities requesting Engineering Reports and CIPs to support wastewater, stormwater, non-point source projects.

**Needs must be adequately documented.**

- Applicants must be a Local Unit of Government.
- Operation and Maintenance costs and land are not eligible for inclusion in the survey.

**2008 Needs Survey Status**

- State survey and data collection is complete.
- National survey has been approved by EPA and is under review at Office of Management and Budget.
- OMB review anticipated to be complete by end of 2009.
- Submitted to Congress and the public in first part of 2010.

**Clean Water State Revolving Fund Summary**

| Year* | Federal Funding | 20% State Match | Total        |
|-------|-----------------|-----------------|--------------|
| 2008  | \$12,281,247    | \$2,456,249     | \$14,737,496 |
| 2009  | \$12,281,148    | \$2,456,229     | \$14,737,378 |
| 2010  | \$38,898,300    | \$7,779,660     | \$46,677,960 |

*\*2010 estimate based on Anticipated 2010 SRF Reauthorization.*

# NC Department of Commerce

NORTH CAROLINA  
THE STATE OF MINDS

# Program Overview

- **Community Development Block Grant (CDBG)** - Division of Community Assistance – Housing and Urban Development Federal Program
- **Community Development Block Grant (CDBG-R)** - Division of Community Assistance – Housing and Urban Development Federal Program
- **Community Development Block Grant Economic Development** – Commerce Finance Center – Federal Funding
- **Appalachian Regional Commission-** Division of Community Assistance-Federal Funding
- **Industrial Development Fund** – Commerce Finance Center – General Assembly Recurring Funds
- **Utility Fund** – Commerce Finance Center – JDIG Award Funded

# **Community Development Block Grant (CDBG) - Division of Community Assistance – Housing and Urban Development Federal Program**

2005 - \$5.5 million  
2006 - \$6.125 million  
2007 - \$10.99 million  
2008 - \$13.6 million  
2009 - \$9.7 million

# **Community Development Block Grant Division of Community Assistance Housing and Urban Development Federal Program**

| 2004/2005 | Program  | HUDGrantNumber  | AwardDate  | Grantee        | County      | GrantNumber | Project | Activity           | FundsBudgeted |
|-----------|----------|-----------------|------------|----------------|-------------|-------------|---------|--------------------|---------------|
|           | CDBG-DCA | B-04-DC-37-0001 | 8/19/2004  | Henderson      | Vance       | 04-C-1292   | C1      | Water Improvements | 353,199.00    |
|           | CDBG-DCA | B-03-DC-37-0001 | 8/19/2004  | Mebane         | Alamance    | 04-C-1293   | C1      | Sewer Improvements | 400,000.00    |
|           | CDBG-DCA | B-04-DC-37-0001 | 8/19/2004  | Trinity        | Randolph    | 04-C-1294   | C1      | Sewer Improvements | 675,000.00    |
|           | CDBG-DCA | B-04-DC-37-0001 | 8/19/2004  | Warrenton      | Warren      | 04-C-1295   | C1      | Sewer Improvements | 586,995.00    |
|           | CDBG-DCA | B-04-DC-37-0001 | 8/19/2004  | Warrenton      | Warren      | 04-C-1295   | C1      | Sewer Improvements | 111,005.00    |
|           | CDBG-DCA | B-04-DC-37-0001 | 11/24/2004 | Yanceyville    | Caswell     | 04-C-1314   | C1      | Sewer Improvements | 145,000.00    |
|           | CDBG-DCA | B-04-DC-37-0001 | 12/6/2004  | Roanoke Rapids | Halifax     | 04-C-1315   | C1      | Water Improvements | 12,208.75     |
|           | CDBG-DCA | B-04-DC-37-0001 | 12/6/2004  | Roanoke Rapids | Halifax     | 04-C-1315   | C1      | Sewer Improvements | 8,896.00      |
|           | CDBG-DCA | B-04-DC-37-0001 | 12/7/2004  | Cofield        | Hertford    | 04-C-1318   | C1      | Water Improvements | 37,000.00     |
|           | CDBG-DCA | B-04-DC-37-0001 | 12/7/2004  | Cofield        | Hertford    | 04-C-1318   | C1      | Sewer Improvements | 35,000.00     |
|           | CDBG-DCA | B-04-DC-37-0001 | 1/18/2005  | Murfreesboro   | Hertford    | 04-C-1322   | C1      | Water Improvements | 9,597.95      |
|           | CDBG-DCA | B-04-DC-37-0001 | 1/18/2005  | Murfreesboro   | Hertford    | 04-C-1322   | C1      | Sewer Improvements | 176,864.15    |
|           | CDBG-DCA | B-04-DC-37-0001 | 3/14/2005  | Littleton      | Halifax     | 04-C-1332   | C1      | Sewer Improvements | 677,725.53    |
|           | CDBG-DCA | B-04-DC-37-0001 | 3/14/2005  | Northampton    | Northampton | 04-C-1331   | C1      | Sewer Improvements | 608,399.09    |
|           | CDBG-DCA | B-04-DC-37-0001 | 3/14/2005  | Statesville    | Iredell     | 04-C-1333   | C1      | Water Improvements | 79,415.00     |
|           | CDBG-DCA | B-04-DC-37-0001 | 3/14/2005  | Statesville    | Iredell     | 04-C-1333   | C1      | Sewer Improvements | 18,000.00     |
|           | CDBG-DCA | B-04-DC-37-0001 | 4/15/2005  | Caswell        | Caswell     | 04-C-1339   | C1      | Sewer Improvements | 108,000.00    |
|           | CDBG-DCA | B-04-DC-37-0001 | 4/15/2005  | Henderson      | Vance       | 04-C-1340   | C1      | Water Improvements | 21,700.00     |
|           | CDBG-DCA | B-04-DC-37-0001 | 4/15/2005  | Henderson      | Vance       | 04-C-1340   | C1      | Sewer Improvements | 33,300.00     |
|           | CDBG-DCA | B-05-DC-37-0001 | 6/24/2005  | Albemarle      | Stanly      | 05-C-1397   | C1      | Sewer Improvements | 3,100.00      |
|           | CDBG-DCA | B-05-DC-37-0001 | 6/24/2005  | Montgomery     | Montgomery  | 05-C-1424   | C1      | Water Improvements | 100,000.00    |
|           | CDBG-DCA | B-04-DC-37-0001 | 6/24/2005  | Wallace        | Duplin      | 05-C-1421   | C1      | Water Improvements | 24,565.78     |
|           | CDBG-DCA | B-05-DC-37-0001 | 6/24/2005  | Taylorsville   | Alexander   | 05-C-1422   | C1      | Water Improvements | 72,045.00     |
|           | CDBG-DCA | B-05-DC-37-0001 | 6/24/2005  | Taylorville    | Alexander   | 05-C-1422   | C1      | Sewer Improvements | 498,220.75    |
|           | CDBG-DCA | B-04-DC-37-0001 | 6/24/2005  | New Bern       | Craven      | 05-C-1427   | C1      | Sewer Improvements | 35,179.00     |
|           | CDBG-DCA | B-05-DC-37-0001 | 6/24/2005  | Albemarle      | Stanly      | 05-C-1397   | C1      | Water Improvements | 3,100.00      |
|           | CDBG-DCA | B-05-DC-37-0001 | 6/24/2005  | Shelby         | Cleveland   | 05-C-1399   | C1      | Sewer Improvements | 111,783.00    |
|           | CDBG-DCA | B-04-DC-37-0001 | 6/24/2005  | Pamlico        | Pamlico     | 05-C-1402   | C1      | Water Improvements | 39,000.00     |
|           | CDBG-DCA | B-05-DC-37-0001 | 6/24/2005  | Alexander      | Alexander   | 05-C-1404   | C1      | Water Improvements | 340,560.84    |
|           | CDBG-DCA | B-04-DC-37-0001 | 6/24/2005  | Wallace        | Pender      | 05-C-1421   | C1      | Sewer Improvements | 94,036.89     |
|           | CDBG-DCA | B-04-DC-37-0001 | 6/24/2005  | New Bern       | Craven      | 05-C-1427   | C1      | Water Improvements | 9,525.00      |
|           | CDBG-DRI | B-05-DJ-37-0001 | 6/10/2005  | Mitchell       | Mitchell    | 05-I-1385   | C1      | Water Improvements | 105,835.00    |
|           |          |                 |            |                |             |             |         |                    | 5,534,256.73  |
| 2005/2006 | CDBG-DCA | B-04-DC-37-0001 | 8/17/2005  | Rhodhiss       | Burke       | 04-C-1347   | C1      | Sewer Improvements | 517,500.00    |
|           | CDBG-DCA | B-02-DC-37-0001 | 9/14/2005  | Stantonsburg   | Wilson      | 05-C-1428   | C1      | Sewer Improvements | 26,010.00     |
|           | CDBG-DCA | B-02-DC-37-0001 | 9/14/2005  | Stantonsburg   | Wilson      | 05-C-1428   | C1      | Water Improvements | 25,320.00     |
|           | CDBG-DCA | B-01-DC-37-0001 | 9/15/2005  | Camden         | Camden      | 05-C-1420   | C1      | Sewer Improvements | 600,000.00    |
|           | CDBG-DCA | B-04-DC-37-0001 | 9/15/2005  | Haywood        | Haywood     | 04-C-1349   | C1      | Water Improvements | 92,522.17     |
|           | CDBG-DCA | B-04-DC-37-0001 | 9/15/2005  | Haywood        | Haywood     | 04-C-1349   | C1      | Sewer Improvements | 220,348.00    |
|           | CDBG-DCA | B-02-DC-37-0001 | 1/24/2006  | Red Springs    | Robeson     | 05-C-1453   | C1      | Sewer Improvements | 638,000.00    |
|           | CDBG-DCA | B-05-DC-37-0001 | 1/31/2006  | Hoke           | Hoke        | 05-C-1461   | C1      | Sewer Improvements | 675,000.00    |

# Community Development Block Grant - Division of Community Assistance Housing and Urban Development Federal Program

|          |                 |           |             |          |           |    |                    |              |
|----------|-----------------|-----------|-------------|----------|-----------|----|--------------------|--------------|
| CDBG-DCA | B-05-DC-37-0001 | 1/31/2006 | Pembroke    | Robeson  | 05-C-1466 | C1 | Sewer Improvements | 55,000.00    |
| CDBG-DCA | B-05-DC-37-0001 | 1/31/2006 | Pembroke    |          | 05-C-1466 | C1 | Water Improvements | 34,000.00    |
| CDBG-DCA | B-05-DC-37-0001 | 4/25/2006 | Bladenboro  | Bladen   | 05-C-1476 | C1 | Sewer Improvements | 12,770.00    |
| CDBG-DCA | B-05-DC-37-0001 | 4/25/2006 | Bladenboro  |          | 05-C-1476 | C1 | Water Improvements | 35,830.00    |
| CDBG-DCA | B-05-DC-37-0001 | 4/25/2006 | China Grove | Rowan    | 05-C-1473 | C1 | Sewer Improvements | 518,402.00   |
| CDBG-DCA | B-05-DC-37-0001 | 4/25/2006 | Burke       | Burke    | 05-C-1474 | C1 | Water Improvements | 397,529.73   |
| CDBG-DCA | B-05-DC-37-0001 | 4/25/2006 | China Grove |          | 05-C-1473 | C1 | Water Improvements | 231,598.00   |
| CDBG-DCA | B-05-DC-37-0001 | 5/18/2006 | Aberdeen    |          | 05-C-1477 | C1 | Water Improvements | 29,011.00    |
| CDBG-DCA | B-05-DC-37-0001 | 6/1/2006  | Washington  |          | 05-C-1479 | C1 | Water Improvements | 274,922.09   |
| CDBG-DCA | B-05-DC-37-0001 | 6/1/2006  | Washington  | Hertford | 05-C-1479 | C1 | Sewer Improvements | 425,077.91   |
| CDBG-DCA | B-05-DC-37-0001 | 6/1/2006  | Ahoskie     |          | 05-C-1480 | C1 | Sewer Improvements | 700,000.00   |
| CDBG-DCA | B-05-DC-37-0001 | 6/1/2006  | Grantsboro  | Pamlico  | 05-C-1478 | C1 | Sewer Improvements | 617,100.00   |
|          |                 |           |             |          |           |    |                    | 6,125,940.90 |

|           |          |                 |            |                  |           |           |    |                    |            |
|-----------|----------|-----------------|------------|------------------|-----------|-----------|----|--------------------|------------|
| 2006/2007 | CDBG-DCA | B-06-DC-37-0001 | 7/5/2006   | Elm City         | Wilson    | 06-C-1501 | C1 | Sewer Improvements | 47,916.63  |
|           | CDBG-DCA | B-06-DC-37-0001 | 7/5/2006   | Elm City         |           | 06-C-1501 | C1 | Water Improvements | 17,200.00  |
|           | CDBG-DCA | B-06-DC-37-0001 | 7/5/2006   | Bertie           | Bertie    | 06-C-1503 | C1 | Water Improvements | 41,500.00  |
|           | CDBG-DCA | B-06-DC-37-0001 | 7/5/2006   | Wayne            | Wayne     | 06-C-1505 | C1 | Water Improvements | 25,500.00  |
|           | CDBG-DCA | B-06-DC-37-0001 | 7/5/2006   | Bertie           | Bertie    | 06-C-1503 | C1 | Sewer Improvements | 73,000.00  |
|           | CDBG-DCA | B-06-DC-37-0001 | 7/31/2006  | Yadkinville      | Yadkin    | 06-C-1512 | C1 | Sewer Improvements | 139,968.00 |
|           | CDBG-DCA | B-05-DC-37-0001 | 7/31/2006  | Mebane           | Alamance  | 05-C-1488 | C1 | Sewer Improvements | 750,000.00 |
|           | CDBG-DCA | B-05-DC-37-0001 | 7/31/2006  | Halifax          | Halifax   | 05-C-1487 | C1 | Sewer Improvements | 554,431.10 |
|           | CDBG-DCA | B-05-DC-37-0001 | 7/31/2006  | Dobbins Heights  | Richmond  | 05-C-1486 | C1 | Sewer Improvements | 700,000.00 |
|           | CDBG-DCA | B-05-DC-37-0001 | 7/31/2006  | Halifax          | Halifax   | 05-C-1485 | C1 | Sewer Improvements | 181,519.50 |
|           | CDBG-DCA | B-05-DC-37-0001 | 7/31/2006  | Aberdeen         |           | 05-C-1484 | C1 | Water Improvements | 50,000.00  |
|           | CDBG-DCA | B-05-DC-37-0001 | 7/31/2006  | Aberdeen         |           | 05-C-1484 | C1 | Sewer Improvements | 700,000.00 |
|           | CDBG-DCA | B-05-DC-37-0001 | 7/31/2006  | Connelly Springs | Burke     | 05-C-1483 | C1 | Sewer Improvements | 700,000.00 |
|           | CDBG-DCA | B-06-DC-37-0001 | 7/31/2006  | McDowell         | McDowell  | 06-C-1514 | C1 | Water Improvements | 353,500.00 |
|           | CDBG-DCA | B-06-DC-37-0001 | 7/31/2006  | Gaston           | Gaston    | 06-C-1513 | C1 | Sewer Improvements | 272,204.00 |
|           | CDBG-DCA | B-06-DC-37-0001 | 7/31/2006  | Yadkinville      |           | 06-C-1512 | C1 | Water Improvements | 106,000.00 |
|           | CDBG-DCA | B-06-DC-37-0001 | 7/31/2006  | Catawba          | Catawba   | 06-C-1509 | C1 | Water Improvements | 58,750.00  |
|           | CDBG-DCA | B-06-DC-37-0001 | 7/31/2006  | Catawba          |           | 06-C-1509 | C1 | Sewer Improvements | 340,930.00 |
|           | CDBG-DCA | B-06-DC-37-0001 | 7/31/2006  | Tabor City       | Columbus  | 06-C-1508 | C1 | Water Improvements | 19,000.00  |
|           | CDBG-DCA | B-06-DC-37-0001 | 7/31/2006  | Kings Mountain   | Cleveland | 06-C-1506 | C1 | Sewer Improvements | 225,000.00 |
|           | CDBG-DCA | B-06-DC-37-0001 | 7/31/2006  | Moore            | Moore     | 06-C-1502 | C1 | Sewer Improvements | 198,250.00 |
|           | CDBG-DCA | B-06-DC-37-0001 | 7/31/2006  | Moore            |           | 06-C-1502 | C1 | Water Improvements | 185,000.00 |
|           | CDBG-DCA | B-05-DC-37-0001 | 8/10/2006  | Washington       |           | 05-C-1490 | C1 | Sewer Improvements | 42,688.72  |
|           | CDBG-DCA | B-05-DC-37-0001 | 8/10/2006  | Washington       |           | 05-C-1490 | C1 | Water Improvements | 24,664.00  |
|           | CDBG-DCA | B-06-DC-37-0001 | 11/20/2006 | Brunswick        | Brunswick | 06-C-1566 | C1 | Sewer Improvements | 176,700.00 |
|           | CDBG-DCA | B-04-DC-37-0001 | 3/19/2007  | Windsor          | Bertie    | 06-E-1591 | E1 | Water Improvements | 58,510.00  |
|           | CDBG-DCA | B-04-DC-37-0001 | 3/19/2007  | Waldese          |           | 06-E-1591 | E1 | Sewer Improvements | 120,350.00 |
|           | CDBG-DCA | B-06-DC-37-0001 | 3/22/2007  | Valdese          | Burke     | 06-C-1598 | C1 | Water Improvements | 451,563.00 |
|           | CDBG-DCA | B-06-DC-37-0001 | 3/22/2007  | Valdese          |           | 06-C-1598 | L1 | Water Improvements | 123,487.00 |
|           | CDBG-DCA | B-06-DC-37-0001 | 3/22/2007  | Pinehurst        | Moore     | 06-C-1597 | C1 | Sewer Improvements | 675,000.00 |
|           | CDBG-DCA | B-06-DC-37-0001 | 3/22/2007  | Kings Mountain   |           | 06-C-1596 | C1 | Sewer Improvements | 396,000.00 |
|           | CDBG-DCA | B-06-DC-37-0001 | 3/22/2007  | Stanley          | Stanley   | 06-C-1595 | C1 | Water Improvements | 564,114.00 |

# Community Development Block Grant Division of Community Assistance Housing and Urban Development Federal Program

|          |                 |           |            |           |    |                    |               |
|----------|-----------------|-----------|------------|-----------|----|--------------------|---------------|
| CDBG-DCA | B-06-DC-37-0001 | 3/22/2007 | Alamance   | 06-C-1593 | C1 | Sewer Improvements | 185,000.00    |
| CDBG-DCA | B-06-DC-37-0001 | 3/22/2007 | Stokes     | 06-C-1592 | C1 | Sewer Improvements | 690,000.00    |
| CDBG-DCA | B-06-DC-37-0001 | 3/22/2007 | Montgomery | 06-C-1594 | C1 | Sewer Improvements | 694,100.00    |
| CDBG-DCA | B-06-DC-37-0001 | 3/29/2007 | Vance      | 06-C-1600 | C1 | Water Improvements | 47,000.00     |
| CDBG-DCA | B-02-DC-37-0001 | 4/4/2007  | Rockingham | 06-E-1599 | E1 | Sewer Improvements | 475,000.00    |
| CDBG-DCA | B-06-DC-37-0001 | 5/11/2007 | Iredell    | 06-C-1602 | C1 | Sewer Improvements | 123,263.00    |
| CDBG-DCA | B-06-DC-37-0001 | 5/11/2007 | Vance      | 06-C-1609 | C1 | Water Improvements | 84,402.00     |
| CDBG-DCA | B-06-DC-37-0001 | 5/11/2007 | Henderson  | 06-C-1609 | C1 | Sewer Improvements | 9,590.00      |
| CDBG-DCA | B-06-DC-37-0001 | 5/11/2007 | Moore      | 06-C-1603 | C1 | Water Improvements | 60,500.00     |
| CDBG-DCA | B-06-DC-37-0001 | 5/11/2007 | Carthage   | 06-C-1602 | C1 | Water Improvements | 92,153.00     |
| CDBG-DCA | B-06-DC-37-0001 | 5/11/2007 | Mooreville | 06-C-1603 | C1 | Sewer Improvements | 164,500.00    |
| CDBG-DCA | B-06-DC-37-0001 | 5/11/2007 | Carthage   | 06-C-1603 | C1 | Sewer Improvements | 10,998,253.95 |

|          |                 |           |                     |           |    |                    |            |
|----------|-----------------|-----------|---------------------|-----------|----|--------------------|------------|
| CDBG-DCA | B-07-DC-37-0001 | 8/22/2007 | Bladen              | 07-C-1644 | C1 | Sewer Improvements | 47,381.00  |
| CDBG-DCA | B-07-DC-37-0001 | 8/22/2007 | Whiteville          | 07-C-1644 | C1 | Water Improvements | 24,931.00  |
| CDBG-DCA | B-06-DC-37-0001 | 9/5/2007  | Franklin            | 06-C-1617 | C1 | Water Improvements | 276,000.00 |
| CDBG-DCA | B-06-DC-37-0001 | 9/5/2007  | Madison             | 06-C-1614 | C1 | Water Improvements | 104,500.00 |
| CDBG-DCA | B-04-DC-37-0001 | 9/5/2007  | Jackson             | 06-C-1613 | C1 | Sewer Improvements | 119,050.00 |
| CDBG-DCA | B-04-DC-37-0001 | 9/5/2007  | Dillsboro           | 06-C-1613 | C1 | Water Improvements | 105,865.60 |
| CDBG-DCA | B-06-DC-37-0001 | 9/5/2007  | Franklin County     | 06-C-1616 | C1 | Water Improvements | 82,000.00  |
| CDBG-DCA | B-07-DC-37-0001 | 10/2/2007 | Granville           | 07-C-1681 | C1 | Water Improvements | 20,400.00  |
| CDBG-DCA | B-07-DC-37-0001 | 10/2/2007 | Oxford              | 07-C-1681 | C1 | Sewer Improvements | 26,000.00  |
| CDBG-DCA | B-07-DC-37-0001 | 10/2/2007 | Ranlo               | 07-C-1699 | C1 | Sewer Improvements | 225,000.00 |
| CDBG-DCA | B-07-DC-37-0001 | 10/2/2007 | Tabor City          | 07-C-1683 | C1 | Sewer Improvements | 119,720.00 |
| CDBG-DCA | B-07-DC-37-0001 | 10/2/2007 | Lumberton           | 07-C-1682 | C1 | Water Improvements | 54,798.00  |
| CDBG-DCA | B-07-DC-37-0001 | 10/2/2007 | Lumberton           | 07-C-1682 | C1 | Sewer Improvements | 166,702.00 |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Conover             | 07-C-1688 | C1 | Water Improvements | 18,500.00  |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Brunswick           | 07-C-1686 | C1 | Sewer Improvements | 292,600.00 |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Maxton              | 07-C-1685 | C1 | Sewer Improvements | 148,338.00 |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Conover             | 07-C-1688 | C1 | Sewer Improvements | 22,300.00  |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Entfield            | 07-C-1689 | C1 | Sewer Improvements | 251,415.00 |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Entfield            | 07-C-1689 | C1 | Water Improvements | 17,075.00  |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Lewisston Woodville | 07-C-1691 | C1 | Sewer Improvements | 304,000.00 |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Lewisston Woodville | 07-C-1691 | C1 | Water Improvements | 9,000.00   |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Columbia            | 07-C-1687 | C1 | Sewer Improvements | 20,700.00  |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Onslow County       | 07-C-1693 | C1 | Water Improvements | 26,000.00  |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Washington          | 07-C-1698 | C1 | Water Improvements | 75,795.00  |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Washington          | 07-C-1697 | C1 | Sewer Improvements | 281,205.00 |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Stany County        | 07-C-1697 | C1 | Sewer Improvements | 89,585.00  |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Stany County        | 07-C-1690 | C1 | Sewer Improvements | 187,321.00 |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Lawndale            | 07-C-1690 | C1 | Sewer Improvements | 344,400.00 |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Rockingham          | 07-C-1695 | C1 | Water Improvements | 60,875.00  |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Rockingham          | 07-C-1695 | C1 | Sewer Improvements | 72,131.00  |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Raeford             | 07-C-1694 | C1 | Sewer Improvements | 27,500.00  |
| CDBG-DCA | B-07-DC-37-0001 | 10/3/2007 | Navassa             | 07-C-1684 | C1 | Water Improvements | 19,000.00  |
| CDBG-DCA | B-07-DC-37-0001 | 1/2/2008  | Kings Mountain      | 07-C-1715 | C1 | Water Improvements | 125,340.00 |



## Community Development Block Grant - Division of Community Assistance Housing and Urban Development Federal Program

|          |                 |           |                   |            |           |    |                    |            |
|----------|-----------------|-----------|-------------------|------------|-----------|----|--------------------|------------|
| CDBG-DCA | B-05-DC-37-0001 | 1/30/2008 | Elizabeth City    | Pasquotank | 05-D-1727 | C1 | Water Improvements | 454,000.00 |
| CDBG-DCA | B-05-DC-37-0001 | 1/30/2008 | Southern Pines    | Moore      | 05-D-1732 | C1 | Water Improvements | 218,000.00 |
| CDBG-DCA | B-05-DC-37-0001 | 1/30/2008 | Southern Pines    |            | 05-D-1732 | C1 | Sewer Improvements | 532,000.00 |
| CDBG-DCA | B-05-DC-37-0001 | 1/30/2008 | Sandyfield        | Columbus   | 05-D-1731 | C1 | Water Improvements | 710,000.00 |
| CDBG-DCA | B-07-DC-37-0001 | 1/30/2008 | Littleton         | Harnett    | 07-C-1720 | C1 | Water Improvements | 251,496.00 |
| CDBG-DCA | B-05-DC-37-0001 | 1/30/2008 | Ronda             | Wilkes     | 05-D-1730 | C1 | Sewer Improvements | 706,500.00 |
| CDBG-DCA | B-03-DC-37-0001 | 1/30/2008 | Wilkes County     | Wilkes     | 03-D-1735 | C1 | Water Improvements | 110,250.00 |
| CDBG-DCA | B-05-DC-37-0001 | 1/30/2008 | Pembroke          | Robeson    | 05-D-1729 | C1 | Sewer Improvements | 431,731.24 |
| CDBG-DCA | B-05-DC-37-0001 | 1/30/2008 | Elkin             | Surry      | 05-D-1728 | C1 | Sewer Improvements | 632,750.00 |
| CDBG-DCA | B-05-DC-37-0001 | 1/30/2008 | Tyrrell County    | Tyrell     | 05-D-1733 | C1 | Sewer Improvements | 700,000.00 |
| CDBG-DCA | B-07-DC-37-0001 | 1/30/2008 | Saratoga          | Wilson     | 07-C-1726 | C1 | Water Improvements | 181,114.00 |
| CDBG-DCA | B-07-DC-37-0001 | 1/30/2008 | Trinity           | Randolph   | 07-C-1725 | C1 | Sewer Improvements | 306,000.00 |
| CDBG-DCA | B-07-DC-37-0001 | 1/30/2008 | Rockingham County | Rockingham | 07-C-1724 | C1 | Sewer Improvements | 637,000.00 |
| CDBG-DCA | B-07-DC-37-0001 | 1/30/2008 | Ranlo             | Gaston     | 07-C-1723 | C1 | Water Improvements | 96,075.00  |
| CDBG-DCA | B-07-DC-37-0001 | 1/30/2008 | McDowell County   | McDowell   | 07-C-1721 | C1 | Water Improvements | 221,060.00 |
| CDBG-DCA | B-07-DC-37-0001 | 1/30/2008 | Farmville         | Pitt       | 07-C-1718 | C1 | Water Improvements | 102,390.00 |
| CDBG-DCA | B-07-DC-37-0001 | 1/30/2008 | Farmville         |            | 07-C-1718 | C1 | Sewer Improvements | 586,860.00 |
| CDBG-DCA | B-07-DC-37-0001 | 1/30/2008 | Edgecombe County  | Edgecombe  | 07-C-1717 | C1 | Water Improvements | 700,000.00 |
| CDBG-DCA | B-07-DC-37-0001 | 1/30/2008 | Eden              | Rockingham | 07-C-1716 | C1 | Sewer Improvements | 750,000.00 |
| CDBG-DCA | B-07-DC-37-0001 | 1/30/2008 | Gaston County     | Gaston     | 07-C-1719 | C1 | Sewer Improvements | 675,000.00 |
| CDBG-DCA | B-07-DC-37-0001 | 1/30/2008 | Navassa           | Brunswick  | 07-C-1722 | C1 | Water Improvements | 320,000.00 |
| CDBG-DCA | B-03-DC-37-0001 | 1/31/2008 | Washington        | Beaufort   | 03-D-1734 | C1 | Sewer Improvements | 458,000.00 |
| CDBG-DCA | B-07-DC-37-0001 | 5/6/2008  | Alamance County   | Alamance   | 07-C-1744 | C1 | Water Improvements | 41,768.00  |
| CDBG-DCA | B-07-DC-37-0001 | 5/6/2008  | Hoke County       | Hoke       | 07-C-1745 | C1 | Water Improvements | 32,000.00  |
| CDBG-DCA | B-07-DC-37-0001 | 5/6/2008  | Alamance County   | Alamance   | 07-C-1744 | C1 | Sewer Improvements | 53,166.00  |

13,672,607.84

| 2008/2009 |                 |           |                   |            |           |    |                    |            |
|-----------|-----------------|-----------|-------------------|------------|-----------|----|--------------------|------------|
| CDBG-DCA  | B-07-DC-37-0001 | 9/8/2008  | Mars Hill         | Madison    | 07-C-1750 | C1 | Water Improvements | 540,000.00 |
| CDBG-DCA  | B-08-DC-37-0001 | 9/19/2008 | Clinton           | Sampson    | 08-C-1801 | C1 | Sewer Improvements | 173,000.00 |
| CDBG-DCA  | B-08-DC-37-0001 | 9/19/2008 | Roanoke Rapids    | Halifax    | 08-C-1807 | C1 | Water Improvements | 74,800.00  |
| CDBG-DCA  | B-08-DC-37-0001 | 9/19/2008 | Roanoke Rapids    |            | 08-C-1807 | C1 | Sewer Improvements | 70,800.00  |
| CDBG-DCA  | B-08-DC-37-0001 | 9/19/2008 | Pollocksville     | Jones      | 08-C-1806 | C1 | Water Improvements | 40,000.00  |
| CDBG-DCA  | B-08-DC-37-0001 | 9/19/2008 | Pollocksville     |            | 08-C-1806 | C1 | Sewer Improvements | 75,000.00  |
| CDBG-DCA  | B-08-DC-37-0001 | 9/19/2008 | Pasquotank County | Pasquotank | 08-C-1805 | C1 | Water Improvements | 44,000.00  |
| CDBG-DCA  | B-08-DC-37-0001 | 9/19/2008 | Pasquotank County |            | 08-C-1805 | C1 | Sewer Improvements | 30,000.00  |
| CDBG-DCA  | B-08-DC-37-0001 | 9/19/2008 | Clinton           | Sampson    | 08-C-1801 | C1 | Water Improvements | 39,800.00  |
| CDBG-DCA  | B-08-DC-37-0001 | 9/19/2008 | Burke County      | Burke      | 08-C-1800 | C1 | Sewer Improvements | 225,000.00 |
| CDBG-DCA  | B-05-DC-37-0001 | 9/19/2008 | Marshall          | Madison    | 05-D-1751 | C1 | Water Improvements | 528,000.00 |
| CDBG-DCA  | B-08-DC-37-0001 | 9/19/2008 | Lillington        | Harnett    | 08-C-1804 | C1 | Sewer Improvements | 50,000.00  |
| CDBG-DCA  | B-07-DC-37-0001 | 10/2/2008 | Montgomery County | Montgomery | 07-C-1752 | C1 | Water Improvements | 400,000.00 |
| CDBG-DCA  | B-08-DC-37-0001 | 2/26/2009 | Warren County     | Warren     | 08-C-1865 | C1 | Water Improvements | 67,500.00  |
| CDBG-DCA  | B-08-DC-37-0001 | 2/26/2009 | Nash County       | Nash       | 08-C-1861 | C1 | Water Improvements | 685,000.00 |
| CDBG-DCA  | B-08-DC-37-0001 | 2/26/2009 | Laurinburg        | Scotland   | 08-C-1860 | C1 | Sewer Improvements | 640,744.00 |
| CDBG-DCA  | B-08-DC-37-0001 | 2/26/2009 | Anson County      | Anson      | 08-C-1859 | C1 | Sewer Improvements | 750,000.00 |
| CDBG-DCA  | B-08-DC-37-0001 | 2/26/2009 | Yadkin County     | Yadkin     | 08-C-1858 | C1 | Water Improvements | 517,687.00 |
| CDBG-DCA  | B-08-DC-37-0001 | 2/26/2009 | Boone             | Watauga    | 08-C-1854 | C1 | Water Improvements | 540,000.00 |

**Community Development Block Grant Division of Community Assistance  
Housing and Urban Development Federal Program**

|          |                 |           |                  |            |           |    |                    |              |
|----------|-----------------|-----------|------------------|------------|-----------|----|--------------------|--------------|
| CDBG-DCA | B-08-DC-37-0001 | 2/26/2009 | Alexander County | Alexander  | 08-C-1856 | C1 | Water Improvements | 690,000.00   |
| CDBG-DCA | B-08-DC-37-0001 | 2/26/2009 | Burke County     | Burke      | 08-C-1857 | C1 | Water Improvements | 682,150.00   |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Tyon             | Polk       | 08-C-1880 | C1 | Water Improvements | 126,320.00   |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Duplin County    | Duplin     | 08-C-1875 | C1 | Sewer Improvements | 7,000.00     |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Chadbourne       | Columbus   | 08-C-1873 | C1 | Water Improvements | 93,000.00    |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Aberdeen         | Moore      | 08-C-1868 | C1 | Sewer Improvements | 213,000.00   |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Windsor          | Bertie     | 08-C-1883 | C1 | Sewer Improvements | 132,375.00   |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Benson           | Johnston   | 08-C-1871 | L1 | Sewer Improvements | 68,920.00    |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Ayden            | Pitt       | 08-C-1869 | C1 | Sewer Improvements | 98,000.00    |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Clinton          | Sampson    | 08-C-1874 | C1 | Sewer Improvements | 112,280.00   |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Duplin County    | Duplin     | 08-C-1875 | C1 | Water Improvements | 20,000.00    |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Roxboro          | Person     | 08-C-1877 | C1 | Sewer Improvements | 320,300.00   |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Haw River        | Alamance   | 08-C-1879 | C1 | Water Improvements | 147,414.00   |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Ayden            | Pitt       | 08-C-1869 | C1 | Water Improvements | 60,500.00    |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Beaufort County  | Beaufort   | 08-C-1870 | C1 | Water Improvements | 11,325.00    |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Forest City      | Johnston   | 08-C-1876 | C1 | Water Improvements | 40,363.00    |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Benson           | Rutherford | 08-C-1871 | C1 | Sewer Improvements | 152,500.00   |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Forest City      | Sampson    | 08-C-1874 | C1 | Water Improvements | 59,574.00    |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Bertie County    | Bertie     | 08-C-1872 | C1 | Water Improvements | 15,000.00    |
| CDBG-DCA | B-08-DC-37-0001 | 3/18/2009 | Rantio           | Gaston     | 08-C-1872 | L1 | Water Improvements | 127,500.00   |
| CDBG-DCA | B-08-DC-37-0001 | 3/23/2009 | Saratoga         | Wilson     | 08-C-1882 | C1 | Water Improvements | 103,227.00   |
| CDBG-DCA | B-05-DC-37-0001 | 3/23/2009 | Morven           | Anson      | 05-D-1884 | C1 | Water Improvements | 92,326.00    |
| CDBG-DCA | B-08-DC-37-0001 | 5/8/2009  | Albemarle        | Stanly     | 08-C-1884 | C1 | Water Improvements | 458,858.00   |
| CDBG-DCA | B-08-DC-37-0001 | 5/8/2009  | Albemarle        | Stanly     | 08-D-1913 | C1 | Water Improvements | 215,173.00   |
| CDBG-DCA | B-08-DC-37-0001 | 6/17/2009 | Roper            | Washington | 01-D-1918 | C1 | Sewer Improvements | 19,094.00    |
| CDBG-DCA | B-01-DC-37-0001 |           |                  |            |           |    | Sewer Improvements | 31,154.00    |
|          |                 |           |                  |            |           |    |                    | 70,000.00    |
|          |                 |           |                  |            |           |    |                    | 9,719,904.00 |

---

**Community Development Block Grant Recovery  
(CDBG-R) - Division of Community Assistance –  
Housing and Urban Development Federal Program**

**2009 - \$11.5 million**

**A total of ten grants were made for water and sewer  
improvements totaling \$5.7 million**

# Community development Block Grant Recovery (CDBG-R) Division of Community Assistance Housing and Urban Development Federal Program 2009

## Town of Clarkton

The Town of Clarkton requested \$300,000 under the Infrastructure category for its Highway 211 West Project. The funds will be used to construct 900 linear feet of 8 inch sanitary sewer, 4 manholes, and 13 service taps and connect to an existing gravity line where it will flow to an existing pump station and then be pumped to the town's Wastewater Treatment Facility. The project will benefit 13 low-to-moderate households. The estimated job creation and retention from this project is 4 new and up to 30 retained.

|               |                |
|---------------|----------------|
| Amount        | Use            |
| \$285,000     | Sewer          |
| <u>15,000</u> | Improvements   |
| \$300,000     | Administration |
|               | Total          |

## Cherokee County

The County of Cherokee requested \$800,000 under the Infrastructure category for the Regal Road and Pleasant Valley Road Water and Sewer System Improvements. The County will construct 6,700 linear feet of 6-inch water line, 6,525 linear feet of 8-inch sewer line and 6,760 linear feet of 12-inch sewer line to serve the target area. This corrective action will address the failing septic systems in the area which are significantly increasing the potential for contamination of the drinking water wells and springs. The total project costs are \$1.6 million. The remaining \$800,000 will be provided by the N.C. Rural Center and Appalachian Regional Commission grants. The project will support 35 households of which 73 percent are low-to-moderate income. This project will not only spur economic investment through job creation and retention, but also through reducing health issues, increasing property values, and the quality of life of the beneficiaries.

|               |                |
|---------------|----------------|
| Amount        | Use            |
| \$569,625     | Sewer          |
| 190,375       | Improvements   |
| <u>40,000</u> | Water          |
| \$800,000     | Improvements   |
|               | Administration |
|               | Total          |

## Stanly County

Stanly County requested \$706,507 to provide public water distribution facilities to serve two (2) existing mobile home parks ( MHP). Tyson Village MHP and Rolling Hills MHP. Both parks are located off of Old Aquadale Road in central Stanly County. There are currently 97 residences in the project area consisting of single wide and double wide mobile homes. Existing water supply for both MHP's are provided by means of private community wells. It is the intent of Stanly County to provide public drinking water to these communities thereby eliminating the dependency on ground water supplies and privately operated community water system. The Stanly County Health Department and North Carolina Department of Environmental Natural Resources have documented incidences of total coliform bacteria and elevated arsenic levels in the planning area. Contaminants commonly encountered in groundwater samples include coliform and fecal coliform bacteria. The water system improvements consist of 14,600 linear feet of 6 inch water lines,

|               |                |
|---------------|----------------|
| Amount        | Use            |
| \$671,182     | Water          |
| <u>35,325</u> | Improvements   |
| \$706,507     | Administration |
|               | Total          |

250 linear feet of 2 inch water lines, fire hydrants and other associated system appurtenances. Water improvements also include the construction of 97 single family water service connections and the subsequent connection of house plumbing to the new public water system. The installation of this public water facility will provide environmental protection to low-very income families by providing them with safe drinking water.

#### Town of Sawmills

The Town of Sawmills requested \$256,700 to assist with infrastructure improvements in southeastern Caldwell County. It borders the Catawba River/Lake Rhodhiss south and US Highway 321 to the east. Sawmills owns and operates its own water distribution and wastewater collection system. Much of the town's water system was installed prior to 1958 and consists of asbestos-cement pipe (ACP) and galvanized steel pipe. Asbestos is a containment regulated by the EPA due to its known health hazards. Town of Sawmill will replace 6,8000 old, decaying waterlines with 6 inch and 8 inch with PVC pipe to serve 28 households located on Dry Ponds Road, Lakewood Drive, and Carl Drive. This project will serve 81% low to moderate income persons. Due to the recent numerous line breaks (three major breaks since January 2009) and the hazardous materials of existing pipe (including asbestos) this project is a critical need for the community. Pipes have deteriorated to the point of severe failure. Each break disrupts service, introduces containments from the surrounding soil, introduces containments from the pipe, and endangers workers that have to cut and handle the pipes. This investment will provide an environmental protection to individuals served by removing the current infrastructure that enables harmful containments.

| Amount        | Use            |
|---------------|----------------|
| \$244,200     | Water          |
| <u>12,500</u> | Improvements   |
| \$256,700     | Administration |
|               | Total          |

#### City of Rockingham

City of Rockingham requested \$800,000 to provide public sewer to a portion of the Jefferson Park neighborhood that has been plagued with serious site wastewater systems sewer problems. Richmond County Environmental Health reported in a study prepared by their department that the Jefferson Park neighborhood has some of the most problematic site wastewater systems due to the size of the lot are too small to allow for repairs to septic tanks, some of the soils are unsuitable and there are low lying wet natural areas that stay wet during the rainy weather. Some vacant properties in the area have to remain vacant because failing septic systems, and Environmental Health cannot write repair permits to many of the homeowners due to poor soils and the repairs that have been made do not last long enough make them economically viable. This project will serve 38 dwellings in which 92% of residents are low to moderate income. The project will provide 4,221 linear feet of 8 inch PVC sanitary sewer and 5,951 square yards of asphalt removal and 9,563 square yards of and 1 ½ of asphalt overlay. The installation of this public sewer will provide environmental protection as well as spur additional long term economic benefits for the area.

| Amount        | Use            |
|---------------|----------------|
| \$762,000     | Sewer          |
| <u>38,000</u> | Improvements   |
| \$800,000     | Administration |
|               | Total          |

### City of Cherryville

The City of Cherryville is located in Gaston County. The city requested \$233,125 to provide total replacement of a 125 gallon per minute self priming submersible sanitary sewer pumping station with a new pump station serving the Cedar Street development located in southwest Cherryville that provides service to twenty-two homes in the area. Cedar Street homes were built in the early 1970's. The pump station to be replaced is more than 30 years old and is extremely poor mechanical condition. The existing pumps are obsolete and are almost impossible to repair due to the inability to find suitable parts to effect repairs needed. The current pump station does not meet current State standards and is subject to failure all the time. The City has documented a series of pump station failures over the last few years that have at time necessitated the extraction of raw sewage from the pump station. This pump station serves twenty- two homes in which 93% of persons are low to moderate income. A new pump station will correct environmental hazards and ensure that residents in this area have utility services that are equivocal with others living in the area. In addition, with the various components of this project, this will continue to spur new jobs in construction, administration, and also retain jobs. Moreover, this will provide a needed investment to increase economic efficiency for the City of Cherryville by enabling the City to not have to continue to use funds to replace parts for the old pump station and create 5 jobs.

### Town of Saratoga

The Town of Saratoga requested \$775,867 and will install sanitary sewer to serve 20 residential units that are presently served with individual substandard non-code compliant septic systems. The project will install a completely new sanitary sewer service by extending the Town of Saratoga's existing sanitary sewer lines. 84% of residents that are in this area to be served are low to moderate income. The installation of the sanitary sewer service will provide environmental protection to low-very income families by providing them with proper sewer that will protect them from harmful containments. The project would install 6 and 8 inch lines as required, force main, sanitary sewer service cleanouts, manholes, service taps, driveway cuts, new pump station and upgrading the existing pump station. This project will create jobs in construction as well as retain current jobs with the extension of the existing sewer lines.

### Village of Pinehurst

The Village of Pinehurst requested \$796,530 and will serve 50 families in the Jackson Hamlet community. The project is a second phase of the Jackson Hamlet Community. Almost all of the homes in the area were built in the 1940's and 1950's and are experiencing failing or failed septic tanks. Seven of the homes have no sewer system due to the sharing of a common septic tank with adjoining properties. The majority of the homes are forced to straight-pipe gray water as a means to preserve the life of their septic tanks. Most of the lots are

|               |                |
|---------------|----------------|
| Amount        | Use            |
| \$212,500     | Sewer          |
| <u>10,625</u> | Improvements   |
| \$223,125     | Administration |
|               | Total          |

|               |                |
|---------------|----------------|
| Amount        | Use            |
| \$740,687     | Water          |
| <u>35,180</u> | Improvements   |
| \$775,867     | Administration |
|               | Total          |

|               |                |
|---------------|----------------|
| Amount        | Use            |
| \$758,600     | Sewer          |
| <u>37,930</u> | Improvements   |
| \$796,530     | Administration |
|               | Total          |

small and the soil conditions are inadequate to properly handle so many on-site septic systems. The Village of Pinehurst will install 4,600 linear feet of 8 inch gravity sewer line to serve the 50 families. All 50 families are 100% low and moderate income. This project will provide environmental protection for families through eliminating health risks as well as creating infrastructure that will enable this community to thrive and possibly promote a sustainable community.

#### Village of Alamance

The Village of Alamance requested \$400,000 and will use funds to assist 19 households located on Alamance Baptist Church Loop with sewer infrastructure improvements. Alamance Baptist Church Loop area has severe infrastructure needs that have contributed to the slum and blight of the area. 1967 with septic systems majority for existing residences were constructed prior to 1967 with septic systems. Due to the age of the septic tanks systems, several of the systems are experiencing the problems of aging and failing septic tank systems. To address this need, the Village of Alamance will install 3,000 linear feet of 8 inch sewer mains, 15 precast concrete manholes and 19 sanitary sewer service connections. Sanitary sewer services are proposed to be installed from the main to each house in order to eliminate the septic tank systems. The project will assist 19 households in which 100% are low and moderate income. With the investment into infrastructure, this project can spur long term economic benefits for the community with the removal of slum and blight and start overall community revitalization for the area.

| Amount        | Use            |
|---------------|----------------|
| \$380,000     | Sewer          |
| <u>20,000</u> | Improvements   |
| \$400,000     | Administration |
|               | Planning       |

# **Community Development Block Grant Economic Development – Commerce Finance Center – Federal Funding**

2006 - \$12.4 million  
2007 - \$5.3 million  
2008 - \$3.1 million  
2009 - \$3.5 million



**Community Development Block Grant - Commerce Finance Center - Economic Development  
Federal Funding**

| <u>AWARD DATE</u> | <u>GRANTEE</u>     | <u>COMPANY</u>                 | <u>COUNTY</u> | <u>AWARD</u>        | <u>PROJECT DESCRIPTION</u>                                                                                        |
|-------------------|--------------------|--------------------------------|---------------|---------------------|-------------------------------------------------------------------------------------------------------------------|
| 1/10/2006         | Town of Burnsville | Attec Industries               | Yancey        | \$1,000,000         | 3M gal water storage tank w/2700 ft-12" interconnect pipe, 180 gpm submersible pump station                       |
| 1/17/2006         | New London         | Hudson Plastics                | Stanly        | \$70,000            | 2,411 ft-8" sewer line                                                                                            |
| 1/23/2006         | Sparta             | TruLine Truss                  | Alleghany     | \$975,000           | 5,200 ft water line, 2 pump stations, 10,500 ft gravity and force main sewer line                                 |
| 1/23/2006         | Rockwell           | Sunshine Manu.                 | Rowan         | \$750,000           | 4,453 ft-12" water pipe, 3,578 ft-8" water pipe, 2,159 ft-8" sewer pipe, purchase 15 easements for water line     |
| 2/2/2006          | Mayodan            | Frontier Spinning Mills        | Rockingham    | \$180,000           | 3M gallon ground storage tank                                                                                     |
| 3/7/2006          | Chowan County      | Wharf Landing, LLC             | Chowan        | \$228,000           | 14,700 ft-6" force main sewer line, pump station                                                                  |
| 3/21/2006         | City of Washington | Flanders Filters               | Beaufort      | \$336,600           | 4,300 ft-8" waterline, 6,700 ft-16" water line, disconnect existing 16" water line                                |
| 3/21/2006         | Caldwell County    | New River Lumber               | Caldwell      | \$367,900           | 5,200 ft water main                                                                                               |
| 7/6/2006          | Roanoke Rapids     | R R Entertainment District     | Halifax       | \$1,000,000         | 15,050 ft-16", 12", 8", 6" water line                                                                             |
| 6/12/2006         | Conover            | Idealtalia Furniture           | Catawba       | \$71,000            | 910 ft gravity sewer line                                                                                         |
| 7/6/2006          | Halifax County     | Reser's Fine Foods             | Halifax       | \$900,000           | Expansion of waste water pre-treatment facility                                                                   |
| 7/25/2006         | McDowell County    | RDM Electronics                | McDowell      | \$60,000            | 4,900 ft-10" ductile iron pipe water main, 6 fire hydrants                                                        |
| 8/1/2006          | Archdale           | United Furniture               | Randolph      | \$750,000           | 2,250 ft-10", 3,600 ft-12", 8,000 ft-8" sewer lines                                                               |
| 8/22/2006         | Yanceyville        | Caswell Health                 | Caswell       | \$330,000           | 1,000 ft gravity sewer line, 800 ft force main water line, upgrade existing pump station                          |
| 8/28/2006         | Mocksville         | Amarr Garage Door              | Davie         | \$750,000           | 14,000 ft-12" sewer line, 2,300 ft-12" water line, pump station                                                   |
| 9/18/2006         | Rutherford County  | Thleman Metals                 | Rutherford    | \$476,200           | 8,400 ft-force main, pump station                                                                                 |
| 9/18/2006         | Pender County      | Pender Packing                 | Pender        | \$323,250           | 15,800 ft force main, pump station                                                                                |
| 10/30/2006        | Iredell County     | Pratt Industries               | Iredell       | \$680,000           | 1,700 ft water main                                                                                               |
| 10/2/2006         | Newton             | Target                         | Catawba       | \$1,000,000         | 2,400 ft-12" water line, 1,800 ft-6" water line                                                                   |
| 10/24/2006        | City of Locust     | United Protective Technologies | Stanly        | \$180,000           | 2,800 ft-8" gravity sewer line, 6,840 ft-4" force main                                                            |
| 10/30/2006        | Long View          | Tailored Chemical              | Burke         | \$815,763           | 3,930 ft-8" gravity sewer line                                                                                    |
| 10/31/2006        | Town of Norwood    | Bio-Energy Conversion          | Stanly        | \$375,742           | 1,000 ft-6" water line, 1,500 ft-4" force main, extension 637 ft industrial access road, 701 ft rail improvements |
| 12/14/2006        | Ashe County        | Trimurthi, Inc                 | Ashe          | \$73,385            | 1,748 ft-8" water main                                                                                            |
| 12/27/2006        | Alexander County   | Craftmaster Furn./Paladin Ind. | Alexander     | \$750,000           | 5,700 ft-3" force main, 11,100 ft-4" force main, 8,300 ft-8" gravity sewer line                                   |
|                   |                    |                                |               | <b>\$12,442,840</b> |                                                                                                                   |

**Community Development Block Grant - Commerce Finance Center - Economic Development  
Federal Funding**

| <u>AWARD DATE</u> | <u>GRANTEE</u>       | <u>COMPANY</u>          | <u>COUNTY</u> | <u>AWARD</u>       | <u>PROJECT DESCRIPTION</u>                                                                                 |
|-------------------|----------------------|-------------------------|---------------|--------------------|------------------------------------------------------------------------------------------------------------|
| 1/8/2007          | Anson County         | Hornwood                | Anson         | \$1,000,000        | 2,550 ft-36" water line, pump station upgrade                                                              |
| 2/5/2007          | Pembroke             | Native Angels           | Robeson       | \$390,000          | 4,000 ft-12" gravity sewer, 3,000 ft-4" force main, one pump station                                       |
| 2/6/2007          | Richmond County      | Viking Pools, Inc       | Richmond      | \$950,000          | 6,000 ft-16" water line, elevated storage tank, booster pump station                                       |
| 3/19/2007         | Windsor              | Bertie Health           | Bertie        | \$203,110          | 1,450 ft-10" gravity sewer main, 2,000 ft-6" water main                                                    |
| 3/23/2007         | Mayodan              | Bridgestone Tire        | Rockingham    | \$500,000          | 4,100 ft-12" gravity sewer line                                                                            |
| 6/8/2007          | Beaufort County      | Carver Machine Works    | Beaufort      | \$850,000          | 10,000 ft-8" sewer main, 6,200 ft-12" force main, 750 ft-24" to existing pump station                      |
| 6/28/2007         | Kings Mountain       | Ingles Markets, Inc     | Cleveland     | \$131,600          | 1,500 ft-8" PVC sewer line                                                                                 |
| 7/3/2007          | Caldwell County      | VX Aerospace            | Caldwell      | \$650,000          | 3,890 ft-12" water main                                                                                    |
| 9/12/2007         | Davidson County      | Morton Metalcraft       | Davidson      | \$244,161          | Construct 2,600 ft-8" gravity sewer line                                                                   |
| 9/20/2007         | Fairmont             | Harger Lightning        | Robeson       | \$400,000          | 3,000 ft-4" force main                                                                                     |
|                   |                      |                         |               | <b>\$5,318,871</b> |                                                                                                            |
| 3/17/2008         | Town of Chocowinity  | Southtech Plastics      | Beaufort      | \$740,000          | 12,500 ft-6" sewer force main, 1,900 ft-12" water line, fire pump system, 800 ft of industrial access road |
| 3/17/2008         | City of Rockingham   | von Drehle Cordova      | Richmond      | \$400,000          | Upgrades to waste water treatment plant                                                                    |
| 4/8/2008          | Town of Edenton      | Regulator Marine, Inc   | Chowan        | \$312,000          | Construct 1,450 ft-8" gravity sewer, 650 ft-4" sewer force main, 80 gpm pumping station                    |
| 5/22/2008         | Cleveland County     | Hallelujah Acres, Inc   | Cleveland     | \$200,000          | Construct 3,500 ft-8" gravity sewer line, 3,900 ft-8" sewer force main, 500 gpm pumping station            |
| 7/28/2008         | Rowan County         | RDH Tire                | Rowan         | \$384,000          | Construct 5,400 ft-12" water main                                                                          |
| 7/28/2008         | Town of Pine Level   | Custom Assemblies, Inc. | Johnston      | \$200,000          | Construct 3,750 ft-12" water main                                                                          |
| 10/20/2008        | Nash County          | SePRO                   | Nash          | \$187,000          | 5,800 ft-8" water main                                                                                     |
| 12/9/2008         | Town of Huntersville | Prairie Packaging       | Mecklenburg   | \$750,000          | 4,543 ft-18", 15", 12" and 8" water lines                                                                  |
|                   |                      |                         |               | <b>\$3,173,000</b> |                                                                                                            |
| 2/17/2009         | Surry County         | Bottomley Farms         | Surry         | \$147,000          | 43,000 ft-8" water main                                                                                    |
| 2/28/2009         | Robeson County       | Campbell Soup           | Robeson       | \$750,000          | 2,400 ft-16", 3,400 ft-8" raw water main, 7 new wells w/pumps                                              |
| 4/6/2009          | Hoke County          | Clean Burn Fuels LLC    | Hoke          | \$710,000          | Construct 750,000 gal ground water storage tank, 7,500 ft-12" water line                                   |
| 6/29/2009         | Caswell County       | NorAg Technology        | Caswell       | \$150,000          | Construct 300,000 gal elevated water storage tank                                                          |
| 8/11/2009         | Wilkesboro           | Tyson Foods             | Wilkes        | \$1,000,000        | Construct new pumping station, head works and septic receiving/treatment unit                              |
| 8/19/2009         | China Grove          | Altac Industries        | Rowan         | \$180,000          | 3,700 ft-8" gravity sewer line                                                                             |
| 10/21/2009        | Moore County         | ATEX Technologies       | Moore         | \$585,000          | 6,500 ft-8" gravity sewer line, 3,800 ft-4" sewer force main                                               |
|                   |                      |                         |               | <b>\$3,522,000</b> |                                                                                                            |

---

# **Appalachian Regional Commission- Division of Community Assistance-Federal Funding**

**2009 - \$1.94 million**

**Project Title:** Clay County/Towns County Water Interconnect - RECOMMEND

**Applicant:** Clay County

**County:** Clay (21<sup>st</sup> Century Community)

**Community Background:**

Commerce Tier: 1  
Drought Classification: Moderate Drought  
ARC Designation: Transitional  
Ability to Pay Score: 5.64  
Population: 10,527  
Median Family Income: \$38,777  
Current Unemployment Rate: 12.6%

**Project Budget:**

| <u>Source</u>              | <u>Amount</u>      |          |
|----------------------------|--------------------|----------|
| ARC                        | \$ 300,000         |          |
| NC Rural Center            | \$ 500,000         | Approved |
| Local Funds                | \$ 585,800         | Pending  |
| <b>Total Project Cost:</b> | <b>\$1,385,800</b> |          |

**ARC Goal:** Develop and Improve Infrastructure to Make the Region More Economically Competitive

**ARC Strategic Objective:** Build and enhance basic infrastructure

**State Strategy:** Assist communities in water and sewer improvements that will create and/or retain jobs

**Description:** Clay County will construct a water interconnection with Towns County, Georgia. This water interconnection will provide a supplemental source of water to Clay County and create an intrastate water system. The interconnection will also provide service to the Towns-Clay Regional Industrial Park. The state of Georgia's ARC program has contributed \$300,000 to this project in Georgia. This project while retaining jobs and increasing the economic development potential of the Industrial Park will also connect households to a supplemental water source that has become increasingly necessary due to the continuing drought.

**\*\*** Clay County has applied for funding from the North Carolina Drinking Water State Revolving Fund through the American Recovery and Reinvestment Act of 2009. A funding decision will be made by the end of April 2009. **\*\***

**Outputs:**

- Regional water system

**Outcomes:**

- Fifteen businesses and 10 households will be connected to a supplemental reliable water source

**Project Title: Fontana Village Wastewater Treatment Plant Replacement - RECOMMEND**

**Applicant:** Graham County

**County:** Graham (21<sup>st</sup> Century Community)

**Community Background:**

Commerce Tier: 1  
ARC Designation: At-Risk  
Ability to Pay Score: 5.57  
Population: 8,264  
Median Family Income: \$40,198  
Current Unemployment Rate: 17.9%

**Project Budget:**

| <u>Source</u>              | <u>Amount</u>      |          |
|----------------------------|--------------------|----------|
| <b>ARC</b>                 | <b>\$ 300,000</b>  |          |
| NC Rural Center            | \$ 500,000         | Approved |
| Local Funds                | <u>\$ 915,974</u>  | Approved |
| <b>Total Project Cost:</b> | <b>\$1,715,974</b> |          |

**ARC Goal:** Develop and Improve Infrastructure to Make the Region More Economically Competitive

**ARC Strategic Objective:** Build and enhance basic infrastructure

**State Strategies:** Assist communities in water and sewer improvements that will alleviate health or environmental hazards and assist communities in improvements that will retain and/or create jobs

**Description:** This project will construct a new water treatment facility to serve the Fontana Village community in Graham County. Fontana Village is the fifth largest employer in Graham County, employing 35 full time employees and 150 seasonal employees. Along, with the resort, a US Post Office, service station, several retail shops, the Fontana Dam's office and maintenance buildings are also connected to the water system in the village, employing 17 full time employees. The current water treatment facility is 65 years old and is failing. The community has been under a "Boil Water Advisory" since July of 2008. The construction of a new treatment facility will allow the advisory to be lifted and provide the businesses a reliable and safe water source.

**\*\*** Graham County has applied for funding from the North Carolina Drinking Water State Revolving Fund through the American Recovery and Reinvestment Act of 2009. A funding decision will be made by the end of April 2009.\*\*

**Outputs:**

- New water treatment facility

**Outcomes:**

- Retention of 52 full time and 150 part time jobs
- Better water quality
- Dependable water source

**Project Title: Mars Hill Water System Main Transmission Line- RECOMMEND**

**Applicant:** Town of Mars Hill

**County:** Madison

**Community Background:**

Commerce Tier: 1  
Drought Classification: Moderate Drought  
ARC Designation: Transitional  
Ability to Pay Score: 3.31  
Population: 1,769  
Median Family Income: \$45,000  
Current County Unemployment Rate: 10.4%

**Project Budget:**

| <u>Source</u>              | <u>Amount</u>      |         |
|----------------------------|--------------------|---------|
| <b>ARC</b>                 | <b>\$ 300,000</b>  |         |
| USDA-RD Loan               | \$ 200,000         | Pending |
| NC Rural Center            | \$ 500,000         | Pending |
| <b>Total Project Cost:</b> | <b>\$1,000,000</b> |         |

**ARC Goal:** Develop and Improve Infrastructure to Make the Region More Economically Competitive  
**ARC Strategic Objective:** Build and enhance basic infrastructure  
**State Strategy:** Assist communities in water and sewer improvements that will alleviate health or environmental hazards

**Description:** This project is the second phase of a larger water project that was started in 2008. This phase will allow the Town to continue to stabilize and enhance their water system by replacing a 5.5 mile transmission line. ARC funded the first phase of this project with a \$300,000 grant to construct a water interconnect with the City of Weaverville. The second phase of the project has become increasingly essential as a result of a water audit conducted by the North Carolina Department of Environment and Natural Resources, which indicated that the Town is losing 38% of its water. The second phase of this project would complete the creation of a regional system that efficiently utilizes and manages potable water usage from both the Laurel Fork and Ivy watersheds. This interconnection is critical for the Town to address current growth needs and to respond to issues related to the current drought.

**\*\*** The Town of Mars Hill has applied for funding from the North Carolina Drinking Water State Revolving Fund through the American Recovery and Reinvestment Act of 2009. A funding decision will be made by the end of April 2009. **\*\***

**Outputs:**

- Regional water system
- 1,769 residents with access to a reliable supply of water

**Outcomes:**

- Reduction in the number of system interruptions due to system maintenance
- Better water quality

**Project Title: Oakwood Drive Water Line Extension Project - RECOMMEND**

**Applicant:** Town of West Jefferson

**County:** Ashe County

**Community Background:**

Commerce Tier: 2  
Drought Classification: Abnormally Dry  
ARC Designation: Transitional  
Ability to Pay Score: 6.03  
Population: 1,123  
Median Family Income: \$35,000  
Current Unemployment Rate: 14.8%

**Project Budget:**

| Source              | Amount            |
|---------------------|-------------------|
| ARC                 | <u>\$146,667</u>  |
| NC Rural Center     | <u>\$293,333</u>  |
| Total Project Cost: | \$440,000 Pending |

**ARC Goal:** Develop and Improve Infrastructure to Make the Region More Economically Competitive

**ARC Strategic Objective:** Build and enhance basic infrastructure

**State Strategy:** Assist communities in improvements that will retain and/or create jobs

**Description:** Funding will be used to install a water line along Oakwood Drive connecting into the Town's existing water distribution system. In 2004, the Town was awarded a \$200,000 ARC grant to construct a new well, a sanitary sewer line and a water storage tank on Oakwood Drive, directly adjacent to The Villages of Ashe, an assisted living center, which was under construction at the time. These infrastructure facilities, which are not currently connected to the Town's water distribution system, were constructed to primarily serve The Villages of Ashe. However, as part of The Villages of Ashe project, the Town also planned to install a water line leading to the new well and water storage tank however, due to a lack of funding these project components were not completed in 2004. The Town's current funding request is critical to providing fire flow protection and a reliable potable water source to the businesses and residents in this community. This project will result in the retention of 200 jobs.

**Outputs:**

- Completion of an interconnected water distribution system

**Outcomes:**

- Retention of 200 jobs
- Provide adequate fire flow protection
- Dependable water source

**Project Title: Regal Road and Pleasant Valley Sewer System Improvement Project- RECOMMEND**

**Applicant:** Cherokee County

**County:** Cherokee (21<sup>st</sup> Century Community)

**Community Background:**

Commerce Tier: 2  
ARC Designation: At-Risk  
Ability to Pay Score: 4.34  
Population: 27,852  
Median Family Income: \$33,952  
Current Unemployment Rate: 17%

**Project Budget:**

| <u>Source</u>              | <u>Amount</u>      |          |
|----------------------------|--------------------|----------|
| ARC                        | \$ 300,000         |          |
| USDA –RD                   | \$ 75,000          | Pending  |
| NC Rural Center            | \$ 500,000         | Approved |
| Local Funds                | \$ 194,987         | Approved |
| <b>Total Project Cost:</b> | <b>\$1,069,987</b> |          |

**ARC Goal:** Develop and Improve Infrastructure to Make the Region More Economically Competitive

**ARC Strategic Objective:** Build and enhance basic infrastructure

**State Strategies:** Assist communities in water and sewer improvements that will alleviate health or environmental hazards (emphasizing those involving moratoria or special orders by consent), especially where these hazards constitute a barrier to continued economic development and assist communities in water and sewer improvements that will create and/or retain jobs

**Description:** The County will provide wastewater treatment disposal services to a community prone to septic system failures. It is suspected that failing septic systems in the area are significantly contributing to high fecal coliform counts in area streams. The systems are in close proximity to drinking water sources, thus posing a serious threat to public health and sanitation. This project will allow 40 residences and six businesses to be connected to a public wastewater system.

**Outputs:**

- Expanded wastewater treatment services

**Outcomes:**

- 40 residences and 6 businesses will have access to sanitary wastewater services



**Project Title: Rosman Wastewater System Improvements - RECOMMEND**

**Applicant:** Town of Rosman

**County:** Transylvania County

**Community Background:**

Commerce Tier: 2  
ARC Designation: Transitional  
Ability to Pay Score: 1.63  
Population: 563  
Median Family Income: \$ 24,219  
Current County Unemployment Rate: 10.3%

**Project Budget:**

| <u>Source</u>                     | <u>Amount</u>             |                             |
|-----------------------------------|---------------------------|-----------------------------|
| <b>ARC</b>                        | <b>\$ 300,000</b>         |                             |
| Community Development Block Grant | \$ 675,000                | Application to be developed |
| NC Rural Center                   | <u>\$ 500,000</u>         | Pending                     |
| <b>Total Project Cost:</b>        | <b><u>\$1,475,000</u></b> |                             |

**ARC Goal:** Develop and Improve Infrastructure to Make the Region More Economically Competitive

**ARC Strategic Objective:** Build and enhance basic infrastructure

**State Strategy:** Assist communities in water and sewer improvements that will alleviate health or environmental hazards

**Description:** This project will complete the final phase of a wastewater infrastructure rehabilitation project and replace the oldest pump station in the Town of Rosman and extend service to three unsewered areas. This project was started in 2005, however it could not be completed due to the lack of funding. The Town has been under Notices of Violation from the North Carolina Department of Environment and Natural Resources since 1996. The Notices have been in effect due to wastewater inflow and infiltration issues. This project will eliminate these issues and the use of approximately 25 failing septic systems and connect 54 homes and businesses to the new treatment facility. The project would also provide service to Rosman Elementary School, which serves 394 students.

**Outputs:**

- Reduced infiltration and inflow issues

**Outcomes:**

- 563 residents will be served by a stable wastewater treatment facility
- 25 failing septic systems will be eliminated

**Project Title:** Wilkes County Airpark Water and Sewer Infrastructure Project- RECOMMEND

**Applicant:** Wilkes County

**County:** Wilkes

**Community Background:**

Commerce Tier: 1  
Drought Classification: Abnormally Dry  
ARC Designation: Transitional  
Ability to Pay Score: 16.33  
Population: 68,020  
Median Family Income: \$49,591  
Current Unemployment Rate: 13.2%

**Project Budget:**

| <u>Source</u>                  | <u>Amount</u>      |         |
|--------------------------------|--------------------|---------|
| <b>ARC</b>                     | <b>\$ 300,000</b>  |         |
| NC Industrial Development Fund | \$ 220,000         | Pending |
| Golden LEAF                    | \$ 220,000         | Pending |
| U.S. EDA                       | \$ 600,000         | Pending |
| Local Funds                    | <u>\$ 5,500</u>    | Pending |
| <b>Total Project Cost:</b>     | <b>\$1,345,500</b> |         |

**ARC Goal:** Develop and Improve Infrastructure to Make the Region More Economically Competitive

**ARC Strategic Objective:** Build and enhance basic infrastructure

**State Strategy:** Assist communities in improvements that will retain and/or create jobs

**Description:** ARC funding will be used to install a water line from Liberty Church Road along Airport Road to the west side of the airport. The waterline will have to be bored under the runway to the east side of the airport. A 250,000 gallon water tank will be built on the airport property. Funding will also be used to install a new wastewater pump station. Two current tenants at the Wilkes County Airport, MXR Aircraft and Dove Air will be able to expand their operations due to these infrastructure improvements, creating 80 new jobs.

**Outputs:**

- Expanded water and sewer infrastructure system serving the airport industrial park

**Outcomes:**

- Creation of 80 new jobs and the retention of 25 jobs
- Provide adequate fire flow protection to Industrial Park and County Airport

---

## **Industrial Development Fund – Commerce Finance Center – General Assembly Recurring Funds**

2006 - \$802,000  
2007 - \$441,000  
2008 - \$940,000  
2009 - \$1.3 million

**Industrial Development Fund - Commerce Finance Center  
General Assembly Recurring Funds**

**Industrial Development Fund**

| AWARD DATE | REGION | PROJECT | UNIT OF GOV'T      | COUNTY     | COMPANY                                     | JOBS | GRANT AMT    |
|------------|--------|---------|--------------------|------------|---------------------------------------------|------|--------------|
| 02/23/06   | 2      | W/S/G/R | Gaston             | Gaston     | Project CASO/National Gypsum                | 75   | \$375,000.00 |
| 09/12/06   | 5      | S       | Clarkton, Town of  | Bladen     | Millworks Specialties                       | 6    | \$27,000.00  |
| 09/28/06   | 2      | W       | Newton             | Catawba    | Target Corporation                          | 572  | 400,000.00   |
| 02/19/07   | 4      | W/S     | Vance              | Vance      | Profilform                                  | 10   | 30,000.00    |
| 03/23/07   | 4      | W/S     | Vance              | Vance      | Frazier Snack Foods (Carolina Country Mfg.) | 8    | \$30,000.00  |
| 04/02/07   | 3      | W/S     | Davidson           | Davidson   | RCR Enterprises, Inc.                       | 7    | \$36,079.00  |
| 07/27/07   | 7      | S       | City of Washington | Beaufort   | Carver Machine Works                        | 50   | \$250,000.00 |
| 11/30/07   | 5      | W       | Raeford, City of   | Hoke       | Burlington Raeford ED Project               | 19   | \$95,000.00  |
| 03/04/08   | 2      | W/S/R   | Locust             | Stanly     | Chicago Tube & Iron                         | 42   | \$210,000.00 |
| 03/20/08   | 7      | W/S     | Chocowinity        | Beaufort   | Southtech Plastics                          | 26   | \$130,000.00 |
| 04/20/08   | 7      | W       | Cofield            | Hertford   | Perdue Agribusiness, LLC                    | 20   | \$100,000.00 |
| 08/29/08   | 7      | W/S     | Elizabeth City     | Pasquotank | DRS Technical Services, Inc.                | 100  | \$500,000.00 |
| 01/05/09   | 7      | S       | Halifax            | Halifax    | United Salvage & Auto, Inc.                 | 19   | \$91,000.00  |
| 01/05/09   | 2      | S       | China Grove        | Rowan      | Altec Industries                            | 15   | \$75,000.00  |
| 02/09/09   | 6      | W/S     | Kinston            | Lenoir     | Spirit Aerosystems                          | 203  | \$271,646.00 |
| 03/23/09   | 1      | W       | Cherokee           | Cherokee   | Snap-On Water Project                       | 40   | \$200,000.00 |
| 04/21/09   | 7      | S       | Littleton          | Halifax    | FASTA, Inc.                                 | 105  | \$447,137.00 |
| 06/11/09   | 3      | W       | Caswell            | Caswell    | NorAg Technology                            | 10   | \$50,000.00  |
| 09/14/09   | 1      | W/S     | Wilkes             | Wilkes     | MX Aircraft                                 | 36   | \$178,225.00 |

| ANNUAL SUMMARY | IDF GRANTS  | UTILITY ACCT GRANTS | TOTAL (BOTH) |
|----------------|-------------|---------------------|--------------|
| 2006           | \$802,000   | \$546,845           | \$1,348,845  |
| 2007           | \$441,079   | \$605,300           | \$1,046,379  |
| 2008           | \$940,000   | \$2,095,152         | \$3,035,152  |
| 2009           | \$1,313,008 | \$2,404,578         | \$3,717,586  |

---

## **Utility Fund – Commerce Finance Center – JDIG Award Funded**

2006 - \$547,000  
2007 - \$605,000  
2008 - \$2 million  
2009 - \$2.4 million

**Utility Fund - Commerce Finance Center  
JDIG Award Funded**

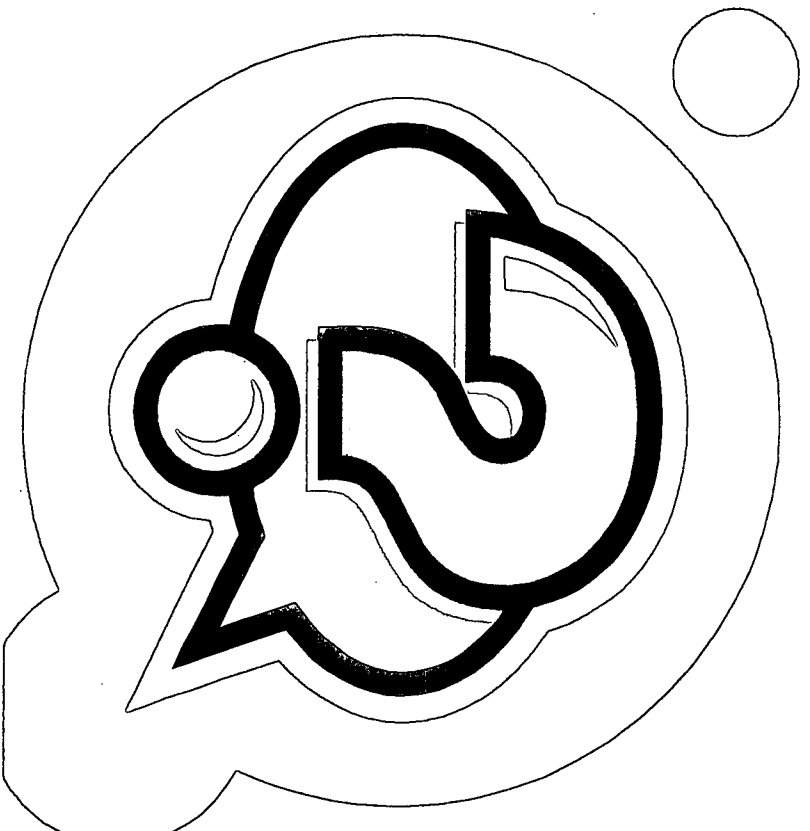
**Utility Account**

| AWARD DATE | REGION | PROJECT | UNIT OF GOV'T    | COUNTY     | COMPANY                                  | JOBS | GRANT AMT  |
|------------|--------|---------|------------------|------------|------------------------------------------|------|------------|
| 05/24/06   | 7      | W/S     | Halifax          | Halifax    | Halifax Co. Industrial Park              | N/A  | 169,220.00 |
| 06/28/06   | 7      | W/S     | Pasquotank       | Pasquotank | Pasquotank Commerce Park                 | N/A  | 377,625.00 |
| 08/31/07   | 6      | W       | Wayne            | Wayne      | ParkEast Elevated Water Tank             | N/A  | 500,000.00 |
| 08/31/07   | 5      | S       | Laurinburg       | Scotland   | LMA Industrial Park Water/Sewer          | N/A  | 105,300.00 |
| 01/11/08   | 7      | W       | Halifax          | Halifax    | Halifax-Northampton Regional Airport     | N/A  | 125,000.00 |
| 02/20/08   | 6      | W/S     | Edgecombe County | Edgecombe  | Fountain Industrial Park                 | N/A  | 493,152.00 |
| 02/27/08   | 6      | S       | Kenansville      | Duplin     | Hwy 11/Hwy 24 Bypass Sewer               | N/A  | 500,000.00 |
| 07/08/08   | 6      | W       | Bethel           | Pitt       | Bethel Waterline Extension               | N/A  | 500,000.00 |
| 08/04/08   | 7      | S       | Cofield          | Hertford   | Perdue Agribusiness, Inc.                | N/A  | 142,000.00 |
| 10/15/08   | 6      | W/S     | Wilson           | Wilson     | Becton Dickinson                         | N/A  | 460,000.00 |
| 01/06/09   | 5      | W       | Bladenboro       | Bladen     | Bladenboro Water System                  | N/A  | 500,000.00 |
| 05/28/09   | 5      | W       | Columbus         | Columbus   | Columbus Cnty. Water & Sewer District IV | N/A  | 500,000.00 |
| 06/11/09   | 3      | W       | Caswell          | Caswell    | NorAg Technology                         | N/A  | 404,578.00 |
| 10/02/09   | 6      | W/S     | Kinston          | Lenoir     | Sanderson Farms, Inc.                    | 550  | 500,000.00 |
| 09/25/09   | 1      | S       | Wilkesboro       | Wilkes     | United Parcel Services                   | N/A  | 500,000.00 |

**Dale B. Carroll**  
**Deputy Secretary**  
**Chief Operating Officer**  
**919-733-1374**

**dcarroll@nccommerce.com**

**www.nccommerce.com**



# CWMTF Wastewater Program



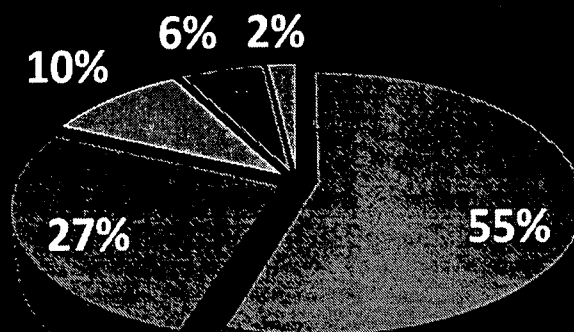
Richard Rogers

Legislative Study Commission on  
Water and Wastewater

November 10, 2009



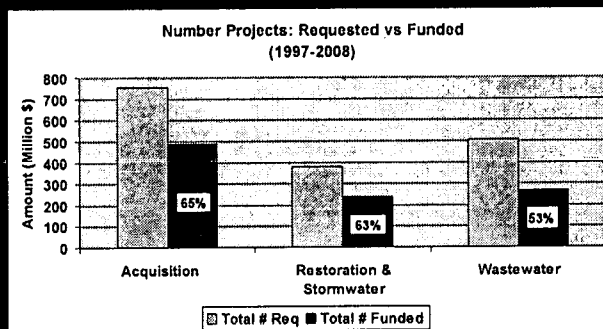
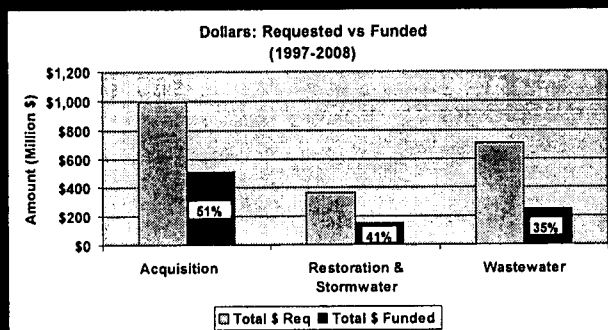
## Percentage of CWMTF Dollars Awarded by Project Type



- Acquisitions
- Wastewater
- Restoration
- Stormwater
- Planning



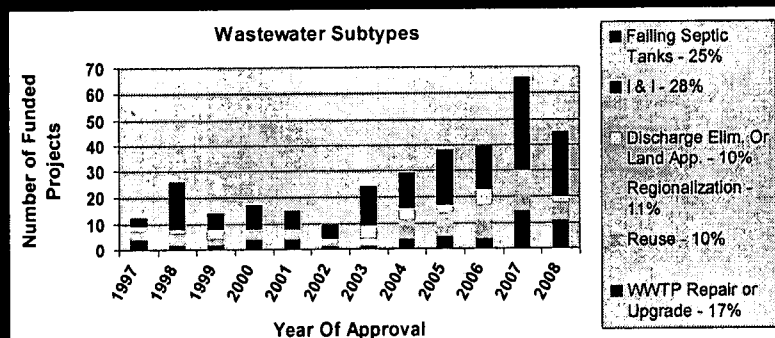




## Historical Perspective

### Funding Decisions through 2008

- Breakdown by wastewater sub-types through 2008.
- The number of each subtype have varied over the past twelve years; each type has been funded almost every year.





# North Carolina's Clean Water Management Trust Fund



## Fact Sheet

### For North Carolina's Natural and Economic Resources

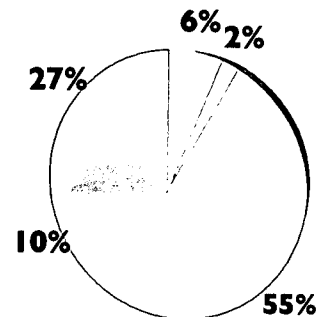
Since 1996, CWMTF has awarded \$950,689,910 in 1,319 grants to protect water quality all across North Carolina. By statute, CWMTF receives \$100 million annually to protect water quality. In the 2009-2010 fiscal year, it received \$50 million.

#### CWMTF has a Proven Track Record

- CWMTF has invested over \$506.3 million in 488 projects to help local governments, state agencies, and land trusts acquire both conservation easements and land to protect riparian buffers, floodplains and wetlands.
- CWMTF funds have leveraged over \$1.4 billion in private and other public funds.
- CWMTF grants have protected more than 454,944 acres and 4,859 miles of riparian buffers. That's the equivalent of 330,000 football fields and 10 trips from Murphy to Manteo.
- CWMTF has awarded \$94.6 million to fund 159 stream and wetlands restoration projects.
- \$52.8 million in CWMTF grants have helped fund 80 stormwater management projects.

#### Percentage of CWMTF Dollars Awarded by Project Type

- |                                             |                                   |
|---------------------------------------------|-----------------------------------|
| <input type="radio"/> Acquisitions          | <input type="radio"/> Restoration |
| <input checked="" type="radio"/> Wastewater | <input type="radio"/> Stormwater  |
| <input type="radio"/> Planning              |                                   |





# North Carolina's Clean Water Management Trust Fund

CWMTF projects play an important role in protecting North Carolina's economy. Its water quality grants help meet infrastructure needs; CWMTF has awarded a total of \$248 million for wastewater improvements across the state since 1997 and has leveraged \$457.7 million in additional funds for those projects.

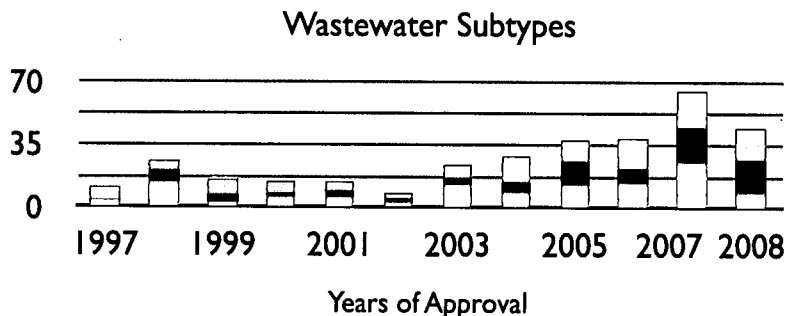
## CWMTF - Meeting the State's Infrastructure Needs

### CWMTF's Statute:

#### § 113A253. Clean Water Management Trust Fund.

- (c) Fund Purposes. – Moneys from the Fund are appropriated annually to finance projects to clean up or prevent surface water pollution in accordance with this Article. Revenue in the Fund may be used for any of the following purposes:
- (5) To repair failing wastewater collection systems and wastewater treatment works if the repair is a reasonable remedy for resolving an existing waste treatment problem and the repair is not for the purpose of expanding the system to accommodate future anticipated growth of a community.
- (6) To repair and eliminate failing septic tank systems, to eliminate illegal drainage connections, and to expand a wastewater collection system or wastewater treatment works if the expansion eliminates failing septic tank systems or illegal drainage connections.
- (8a) To finance innovative efforts, including pilot projects, to improve stormwater management, to reduce pollutants entering the State's waterways, to improve water quality, and to research alternative solutions to the State's water quality problems.

Number of Funded Projects



## CWMTF - A Vital Resource for Local Governments

Increasing numbers of wastewater grants and the resulting competitiveness for funds show that local governments depend on CWMTF. By statute, CWMTF gives priority to wastewater collection system or treatment works projects in economically distressed areas of the state.



North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue, Governor

Dee Freeman, Secretary

February 26, 2009

Representative James W. Crawford, Jr.  
Co-Chair, Joint Legislative Program Evaluation Oversight Committee  
North Carolina General Assembly  
Legislative Building  
16 West Jones Street  
Raleigh, NC 27601

Senator Daniel G. Clodfelter  
Co-Chair, Joint Legislative Program Evaluation Oversight Committee  
North Carolina General Assembly  
Legislative Building  
16 West Jones Street  
Raleigh, NC 27601

Senator Fletcher L. Hartsell, Jr.  
Co-Chair, Joint Legislative Program Evaluation Oversight Committee  
North Carolina General Assembly  
Legislative Building  
16 West Jones Street  
Raleigh, NC 27601

Gentlemen:

We are writing to you today in follow up to the Program Evaluation Division's report to the Joint Legislative Committee regarding water and wastewater infrastructure funding. One of the main points of discussion in the report and at the meeting concerned the need for greater coordination of activities among the different funding entities. While each of our programs was created to meet a specific statutory purpose, we also understand the value of coordinating our activities to be more efficient, to improve project management, and to provide more complete and understandable information on progress made toward meeting the state's water and wastewater infrastructure needs.

Our agencies have discussed ways to increase coordination of our water and wastewater infrastructure funding activities. Recognizing that our agencies are charged by the General Assembly to address different needs, our goal is to do so in a manner that adds value to each agency, minimizes the burden on applicants and provides clear and

1601 Mail Service Center, Raleigh, North Carolina 27699-1601

Phone: 919-733-4984 \ FAX: 919-715-3060 \ Internet: [www.enr.state.nc.us/ENR/](http://www.enr.state.nc.us/ENR/)

An Equal Opportunity / Affirmative Action Employer - 50 % Recycled \ 10 % Post Consumer Paper

One  
North Carolina  
*Naturally*

complete information on the performance of our funding programs. We identified five specific ways to accomplish this goal without increased bureaucracy or cost:

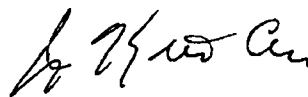
1. Develop a common first page for grant and loan applications. The intent is to create a single template for project descriptions that will make it easier to identify and coordinate on projects that request funding from multiple agencies, as well as to streamline the application process for applicants.
2. Schedule regular joint meetings of the funding agencies to share water and wastewater funding opportunities with potential applicants. This is an approach that the funding agencies have used periodically in the past, most recently to help water systems identify funding for drought response projects.
3. If a project receives funding from multiple state funding sources, we propose to exchange progress reports and site visit information among the funding agencies. Our agencies believe that there are opportunities for programs that jointly fund a particular project to also share and improve oversight responsibilities.
4. In addition to preparing our individual program funding reports for the General Assembly, each agency would share a copy in a common format with the State Water Infrastructure Commission. SWIC could then merge the information into a single annual funding report on all water/wastewater funding activities. A single report will make it much easier for both the General Assembly and the public to understand and evaluate water/wastewater funding activities.
5. Examine the needs assessment that is currently done by the Environmental Protection Agency (EPA), the needs survey done by DENR, and the Water 2030 data to determine what all the assessment tools tell us and where there may be gaps in the data in order to begin the process of developing a statewide needs assessment.

Our agencies are currently working to develop a document further defining our ideas for improved coordination and to ultimately sign a Memorandum of Understanding between our agencies adopting these coordination recommendations. We expect to have a more detailed document to share with you very soon.

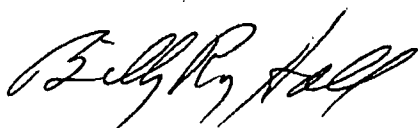
Sincerely,



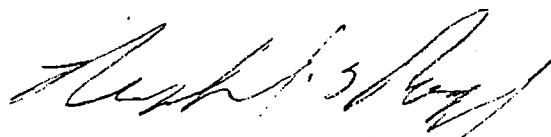
Dee Freeman  
Secretary of Environment and Natural Resources



J. Keith Crisco  
Secretary of Commerce



Billy Ray Hall, President  
N.C. Rural Economic Development  
Center



Richard Rogers, Executive Director  
Clean Water Management Trust  
Fund

## VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure  
Name of Committee

11-10-09  
Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE  
CLERK

| NAME             | FIRM OR AGENCY AND ADDRESS        |
|------------------|-----------------------------------|
| Dennis DeLong    | USDA - Rural Development          |
| George Sherrill  | NC Dept. of Commerce              |
| Larry Horton     | Clean Water Management Trust Fund |
| Erin Wynia       | NC League of Municipalities       |
| Brian Queen      | USDA - Rural Development          |
| STEVE CAVANAUGH  | CAVANAUGH ASSOC., WILSON-SALEM    |
| Don Helmer       | State Water Infrastructure Comm   |
| Sarah Clapp      | NCWRC                             |
| Kathy Hawkes     | Progress Energy                   |
| Michael Thompson | Dorinda                           |
| Debra J. ...     | N.C.H.C.<br>Agalliance of N.C.    |

## VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure  
Name of Committee

11-10-09  
Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE  
CLERK

| NAME          | FIRM OR AGENCY AND ADDRESS                                |
|---------------|-----------------------------------------------------------|
| DOUG HERON    | WILLIAMS MULLEN                                           |
| Sandy Sands   | WCS-R                                                     |
| Jessica Miles | DENR Public Water Supply                                  |
| SCOTT GARDNER | DUKE ENERGY                                               |
| Larry Bates   | Program Evaluation Division                               |
| BOOG CHAPMAN  | NC GREEN INDUSTRY COUNCIL                                 |
| Mark Peters   | NC Green Industry Council                                 |
| Buddy Murrow  | NC GREEN INDUSTRY COUNCIL                                 |
| BILLY FILLET  | NCRC                                                      |
| Dan Conrad    | NCCN                                                      |
| SHADI ESKAF   | ENVIRONMENTAL FINANCE CENTER,<br>UNC SCHOOL OF GOVERNMENT |

## VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure

11-10-09

Name of Committee

Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE  
CLERK

| NAME             | FIRM OR AGENCY AND ADDRESS   |
|------------------|------------------------------|
| Dan Crawford     | CCNC                         |
| Kim Hibbard      | NCLM                         |
| Hayley Rogers    | NCRWA                        |
| DON SAFRIT       | McKim & Creed<br>NC AWWA WEA |
| Elizabeth Taylor | Kochanek Linn                |
| Mark Hubbard     | DENR - CG & L Section        |
| Elizabeth Biser  | DENR                         |
| Tommy Stevens    | NCPU                         |
| Manly Wilder     | DENR                         |
| DANIEL BLAISDELL | DENR                         |
|                  |                              |



## VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure

11-10-09

Name of Committee

Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE  
CLERK

| NAME                | FIRM OR AGENCY AND ADDRESS |
|---------------------|----------------------------|
| Rita Harris         | NC Commerce Dept.          |
| John Goodman, V     | NC CHAMBER                 |
| Ben Matthew         | NCDPI                      |
| Larry Bewley        | GIC                        |
| Linda Andrews       | NCFB                       |
| Sam Crow            | BPAHL                      |
| Don Rymo            | DWR                        |
| Doug Lassiter       | NC STA 1                   |
| Sid Harre 77        | NC DENR/DEH/PWSS           |
| Pete B. [Signature] | WMRG                       |
|                     |                            |

## VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure

Name of Committee

11-10-09

Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE  
CLERK

| NAME              | FIRM OR AGENCY AND ADDRESS  |
|-------------------|-----------------------------|
| Jay Stem          | NCAA                        |
| Butch Gunnell     | NC Beverage A               |
| Bo Heath          | McGuire Woods               |
| Jim Lowry         | NC Utility Contractors Assn |
| Bryan Blinson     | NC Cattlemen's Assn.        |
| ZEB ALLEY         | NELSON MULLINS              |
| Trina Ozer        | AMEC                        |
| Kerlu Reading     | AMEC                        |
| Bobby Blowe       | NC REDE                     |
| Julip Skiffington | NC Rural Center             |
| Sara Stuckey      | NC Rural Center             |

## VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure

Name of Committee

11-10-09

Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE  
CLERK

NAME

FIRM OR AGENCY AND ADDRESS

DAVE Simpson

CALOC

# JOINT COMMISSION ON WATER & WASTEWATER INFRASTRUCTURE

## MINUTES

December 14, 2009

The Joint Commission on Water & Wastewater met on Monday, December 14, 2009, in Room 544 of the Legislative Office Building in Raleigh at 1:00 p.m. Members present were: Senators Charlie Albertson, Co-chair, and Sen. Swindell, House members were Rep. Jim Crawford, Co-chair, Rep. Mitch Gillespie, Rep. Cullie Tarleton & Rep. Owens. Public members were: Mr. Richard Rogers, Mr. Buck Kennedy, Mr. Dale Carroll (Commerce), Mr. Patrick Woodie (Rural Center), Mr. Kevin Leonard (Co. Comm. Assoc.), Mr. Dee Freeman, and Ms. Tori Small.

### I. WELCOME & CHAIR REMARKS

Rep. Crawford called the meeting to order and thanked everyone for their attendance. Each member introduced themselves.

### II. WATER/WASTEWATER FINANCE & GOVERNANCE

Mr. Jeff Hughes, Director, Environmental Finance Center, University of North Carolina gave a power point presentation. (Attachment A) There are regional utilities, Aqua NC, Davidson, Charlotte Mecklenburg, & Harnett. There are various agreements for water providers to supply the needs. Water system inner-connections and INTERBASIN boundaries work together. The cost ranges across the state are from \$15.00 to \$113 per month. Some areas charge more for water & sewer than others. Allocations are looked at for median family usages. Some may pay more than 2%. Working with the League of Municipalities is how the rate increases are determined. From 2008 – 2009 water increased 53% and wastewater by 58%. Assessing needs and gaps is done by a high profile study. This was a wake-up call on what we spend and what we have to spend. Needs numbers and Gap numbers are different things to look at. Outstanding long term water and sewer debt as of 6-30-09 is \$7.6 billion dollars. Some of this will be paid off next year and some in 20-30 years. The most common way to borrow is to pledge of trust. Examples of state funding assistance are: state grant programs funded by state debt; state grant program funded by appropriations; state low interest loan program capitalized by state debt/appropriations (Georgia & WV); pooled loan program (VA).

### DISCUSSION:

Rep. Tarleton questioned the outstanding debt and revenue bonds; what is the range/percentage of total revenue to pay off the bonds? Mr. Hughes said anything from 20-30% is used. Charlotte is over 50% but there are several small areas that have 0%.

Sen. Albertson noticed the disparity in rates, how does Aqua compare with non-profits? Mr. Hughes said Aqua rates are much higher, \$10-15 more.

Rep. Owens spoke on small units using revenue bonds. Mr. Hughes agreed and added that most small jurisdictions go with USDA debts.

Sen. Albertson asked how many communities are on hold because they can't be accommodated. Mr. Hughes said there are some that have reached capacity of 80% and they can no longer issue wastewater allocations.

Rep. Crawford asked Mr. Hughes or someone from staff to get the figures on this. This will be provided in the future.

### **III. WATER ALLOCATION STUDY**

Mr. Richard Whisnant, Professor of Public Law & Government, School of Government, University of North Carolina gave his power point presentation. (Attachment B). His presentation began by looking at what's going on in Georgia with Lake Lanier. NC should be able to use them as an example so that we avoid the same issues. Mr. Whisnant shared slides showing the water shortfalls by 2012. He has been working with Georgia also. Georgia needs 280 million gallons of water per day by 2012 and he doesn't want to see NC with a need this high. This is a very serious economic hit for any area. Every one needs water, especially to bring in infrastructure. Georgia has taken all alternatives to find ways to fill the gaps. By 2020 the overall supply gap could be addressed, at roughly capital cost of \$2.3 billion and at \$410/MG average cost efficiency. Letting even more large withdrawers tap in to a finite water supply with an inadequate/incorrect understanding of water budget until crisis hits is a way to avoid what Atlanta is facing. There is a way to partially control drought. Usage is the main crisis or cause of drought. Controlling usages is important. In NC there is a conflict of water quality. The way NC can avoid the problems Georgia has is to 1) have legislation with policy clarification; 2) Critical information is necessary—where are we most likely to run out of water in years to come?; 3) we need models to work with and study. It is important to planning of regional/basin needs; 4) we need to fill our big regulatory gap – withdrawal permitting for large withdrawals (>100,000 gallons per day); state role in storage – focus resources on areas in need. We need to start working on this before there is a crisis; therefore, we need to start now.

### **DISCUSSION:**

Rep. Owens asked about tying water systems together and do we actually look to see if there are ways to pipe water in from other towns to those who need it instead of piping it back in the sound. Mr. Whisnant said there are ways to shuttle water to where it's needed most, and some areas are doing so. In every case there many not be a way to run water due to restrictions from river basin to another. Some believe that connecting water from one area to another is not favored. On part two of the question, there are some

companies that are looking into ways to refine water for usage rather than pumping it as a waste. One problem is water is expensive to move. Rep. Owens continued with concerns about why water supplies can't be pumped to another area if the need exists. Mr. Whisnant agreed this is a good concern but there are strong negative reactions to move water from one basin to another. People are serious about taking "their" water.

Rep. Gillespie commended Mr. Whisnant and Mr. Holman on their good work and he encouraged everyone to go to the water web site. Water allocation is critical and we need to really study and have this done in order to move forward on regulatory issues and he asked where DENR is on this issue. Mr. Whisnant's understanding is there is a model of the Cape Fear and Mr. Reeder will be better able to address this in his presentation. This could take a matter of years. Rep. Gillespie feels this is critical and all the more reason for us to move forward on the water allocation bill that has been filed in the House during last session.

Sen. Albertson told about the well he put in on his farm many years ago. He has discovered the water levels dropped over the years and now he has had to add 3 new joints to his pipes in order to have water. Everyone has called the water shortage critical and it is important for us to loose the "this is my water" attitude.

Rep. Tarleton feels we need to get very serious about conserving water. We could save more water than we do and one day we will turn on the faucet and there will be no water coming out.

#### **IV. STATE WATER INFRASTRUCTURE COMMISSION OVERVIEW & UPDATE**

Mr. Bill Holman, Director of State Policy, Nicholas Institute for Environmental Policy Solutions, Duke University had prepared a letter for members and the Annual Report (Attachments C & D). The General Assembly had assigned the task of the State Water Infrastructure Commission (SWIC) to study our water supplies. A long-term management strategy is done by the State Treasurers Dept. This could be a good source of keeping up with our water needs/usages. He appreciates this Commission and the extended need to study our water resources. There are opportunities but we need to utilize our resources to get what we can out of what we have. The state is going to face water challenges and we need to be ready to support our local governments. In order to leverage our resources we need to use other states as examples of their bonds and grants programs. The state could possibility use the USDA examples of providing funding too. The State Water Infrastructure Commission meets regularly and he feels that it is important to have a group to study water needs whether it is the SWIC group or not.

**DISCUSSION:** None

## **V. STATE WATER SUPPLY PLAN & WATER SUPPLY PLANS**

Mr. Tom Reeder, Director, Division of Water Resources, Dept. of Environment & Natural Resources gave his power point presentation. The drought bill that was enacted has been a great source of helping them obtain their information. Now they can make projections up to 2050. There is also a guideline for daily demand that will exceed 80% of a system's available supply by 2030. There is much data that is necessary to make these models. There are agriculture surveys due to the 2008 Drought bill. This is excellent data and information that is vital to their reports. They were surprised to see some areas exceeded usage at certain times of the years. This is subject to change from year-to-year. Other water resources data is from State Ground Water Network; NC-USGS Cooperative Program; and State Climate Office. All data constantly changes with consumption usages. 2008 was an extremely dry year due to the tail-end of the 2007 drought year. After gathering data they put it in the River Basin Modeling and they have to look at this by basin-to-basin approach. This is a complex process but necessary to keep up with data. There is a schedule of completing models on various basins. The Cape Fear will be done by 12-2010; The Neuse will be done by the end of this year, 2009; The Roanoke will be updated 6-2010; Tar Pamlico by 6-2011; and The Broad by 6-2011. After all the modeling is done what if there is not enough water? There are options to use and challenges. Determining ecological flows is the biggest challenge and they hope by the fall of 2010 they will have a good idea of how much is needed. In summary, taking models and summaries is important for developing better water resources.

### **DISCUSSION:**

Rep. Tarleton questioned the slide of agriculture users and what falls under this. Mr. Reeder said this includes farmers, hog farms, livestock farms, poultry farms, etc. Rep. Tarleton asked if there really are farms that draw more than a million gallons a day. Mr. Reeder said there are 20 of those farms in NC.

Rep. Gillespie said this report re-emphasizes the critical needs for water. He asked how they chose the river basins they used in their models and when will the Catawba be done. Mr. Reeder said the Catawba will be done after the Broad is completed. Rep. Gillespie also asked if the water allocation bill could be phased in by basins we have studied rather than using basins that haven't been studied. Mr. Reeder said he would have to think about that and leave the policy making decisions to the law makers. Rep. Gillespie questioned the chart on Page 6 about the average daily withdrawals and how much is used by private wells vs. the western end of the state which doesn't have the same aquatically geography. Mr. Reeder explained the withdrawal based on the prediction that 26% use groundwater assumptions. He agreed that geographics make a difference. The data he used today is constantly updated. Rep. Gillespie asked if the ground water in the west wouldn't add to the surface water supply and suggests we make our reports reflective to that. Mr. Reeder agreed that could make a difference.

## **VI. COMMITTEE DISCUSSION**

Ms. Tori Small asked what percentage might be missed in the average daily withdrawal for public water systems. Mr. Reeder said this is all water systems that withdrawal or submit a local water supply plan. Ms. Small said this looks like we are missing about 60% of water systems. Mr. Tom Raynor, DENR responded to that for Ms. Small at the request of Mr. Reeder.

Mr. Mitch Peele, NC Farm Bureau spoke on the Kinston Regional Water System (WASA) and commended them on their success. He would like to know if they will share their models to other towns or municipalities that would be interested in out-reach programs. Mr. Reeder said they are happy to share their data. Other areas could gain information from them.

Sen. Albertyson was surprised to see the rise in the aquifers (by 23 feet) and asked why we can't do that in other areas. Mr. Reeder said WASA was very creative to make this work.

Mr. Bill Holman is proud that NC is a leader in developing our water resources and budgets.

Rep. Bill Owens said there have been many studies on water infrastructure but the problem is funding or a streaming of revenue. We need a steady stream of revenue and there is a need to sit down with some of the agencies to discuss funds and needs. It's going to take some time to get down to a final answer in order to get some action before it's too late.

Chairman Crawford said we need to look at what the state needs to do—do we need to be in the infrastructure business or the storage business. He encouraged anyone to contact the chairman or staff with ideas or concerns.

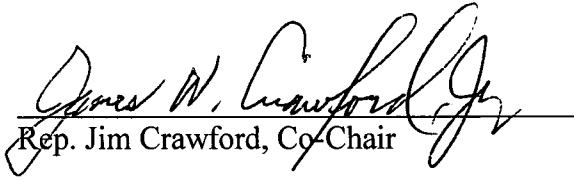
Mr. Buck Kennedy spoke on the agriculture usages that pull water from ground water and they may not be pulling from the same aquifer because some usage aquifers are not from drinking water sources. Also, there is an indirect re-use, and is this a part of the equation of Mr. Whisnant's report for off-set of demand. This is just food for thought.

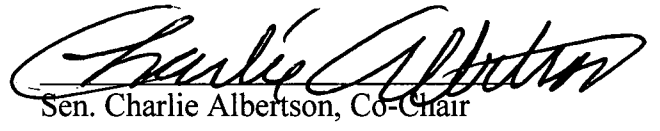
Sen. Albertyson spoke again and he feels that it is up to us a leaders to see where the needs will be, and we need a plan to prepare and cleanup our waster water systems. It is vital that we clean up our waters. He urged members to think about this also and bring back thoughts.

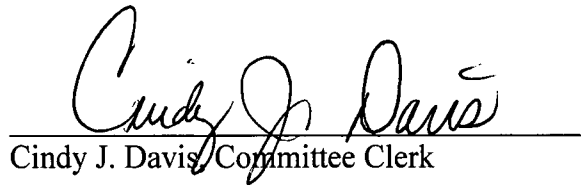
## **VII. ADJOURNMENT**

The meeting adjourned at 3:10 p.m.



  
Rep. Jim Crawford, Co-Chair

  
Sen. Charlie Albertson, Co-Chair

  
Cindy J. Davis, Committee Clerk

**Legislative Study Commission on  
Water and Wastewater Infrastructure  
Agenda**

**Monday, December 14, 2009, 1:00 P.M.**

**Room 544, Legislative Office Building**

**Rep. Crawford Presiding**

- I. Welcome & Chair Remarks**  
Representative Crawford  
Senator Albertson
  - II. Water/Wastewater Finance and Governance**  
Jeff Hughes, Director, Environmental Finance Center, University of North Carolina
  - III. Water Allocation Study**  
Richard Whisnant, Professor of Public Law and Government, School of Government, University of North Carolina
  - IV. State Water Infrastructure Commission Overview and Update**  
Bill Holman, Director of State Policy, Nicholas Institute for Environmental Policy Solutions, Duke University
  - V. State Water Supply Plan & Local Water Supply Plans**  
Tom Reeder, Director, Division of Water Resources, Department of Environment and Natural Resources
  - VI. Committee Discussion**
  - VII. Adjourn**
-

# North Carolina Water and Wastewater Systems: Finance and Governance Trends

## Presentation to the Water and Wastewater Infrastructure Joint Legislative Committee

December 14, 2009

Jeff Hughes

Shadi Eskaf

Environmental Finance Center

UNC School of Government

[www.efc.unc.edu](http://www.efc.unc.edu)

(919) 843-4956



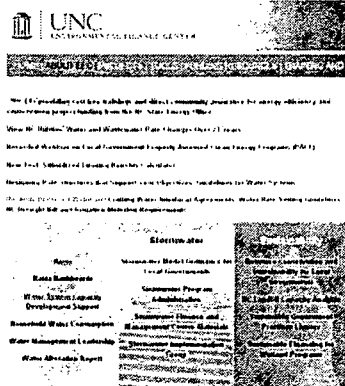
UNC

SCHOOL OF GOVERNMENT  
ENVIRONMENTAL FINANCE CENTER

## Finance and Governance

### Water and Wastewater Finance

- Policy Analysis
- Education
- Direct Advising

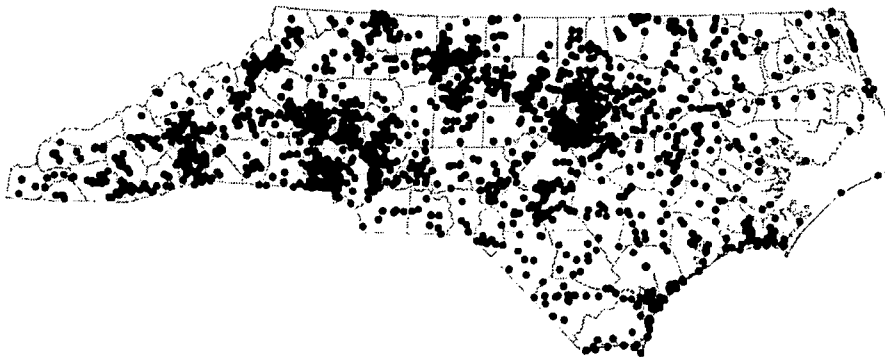


## Finance and Governance

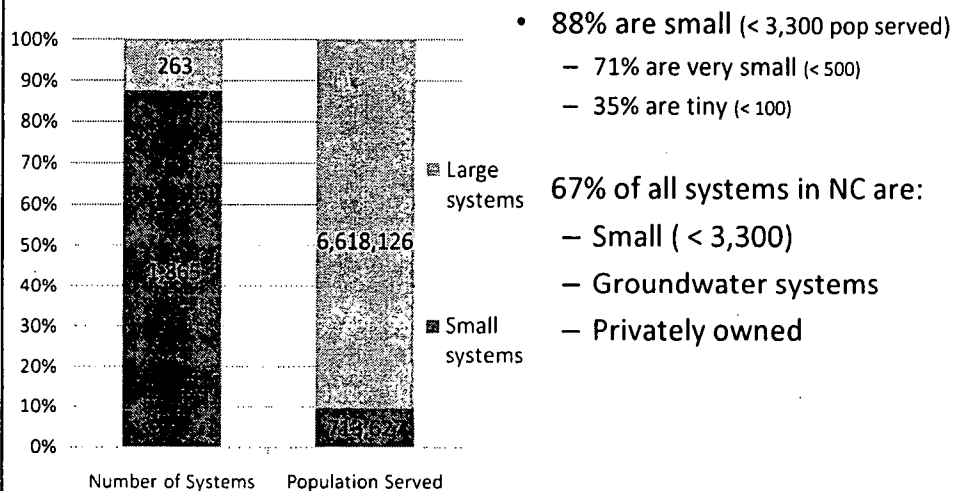
- Water and wastewater systems in NC
- Ownership and management models
- Finance trends
- Infrastructure needs and funding

## Community water systems in NC

- 2,128 in North Carolina in July 2009 (EPA SDWIS-Federal)
- Serve 7.3 million residents



## Many small water systems



## Wastewater system statistics (data source)

- Approximately 450 local government owned wastewater systems (EFC database)
- 300 NPDES discharge permits for municipalities (DWQ/EPA discharge permit database)
- Over 900 sewer "facilities" (CW Needs Database)

## Water systems and their owners

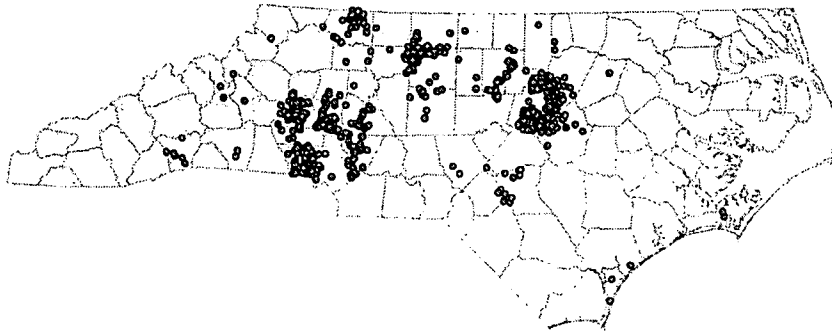
|                  | Financial Oversight     | Type                                    | Estimated Number of Owners | Estimated Number of Systems | Estimate Population Served |
|------------------|-------------------------|-----------------------------------------|----------------------------|-----------------------------|----------------------------|
| Government-Owned |                         | Municipality                            | 375                        | 395                         | 67%                        |
|                  | LGC (State Treasurer)   | County/District                         | 55                         | 110                         | 14%                        |
|                  |                         | Sanitary District                       | 17                         | 17                          | 1%                         |
|                  |                         | Authority/Metro. District               | 8                          | 12                          | 6%                         |
| Investor-Owned   | Exempt                  | Not-for-profit                          | 47                         | 49                          | 5%                         |
|                  | NC Utilities Commission | Large Multi-System For-Profit Companies | 4                          | ~780                        | 3%                         |
|                  |                         | Smaller For-Profit                      | >700                       | ~770                        | 4%                         |

Source: EFC analyses from different database sources (2007,2008,2009)

## Regional utilities come in all shapes and sizes

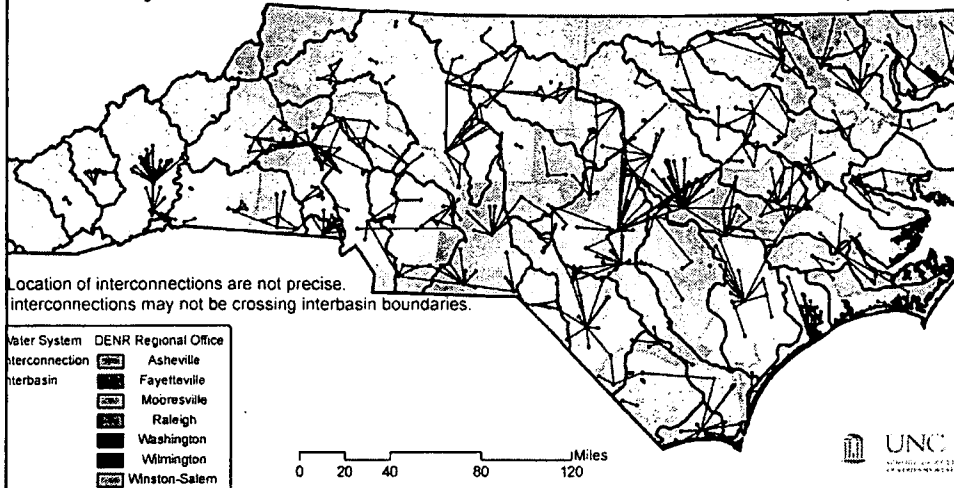
- Multi-system for profit: Aqua
- Non-profit: Davidson Water
- Municipal owned: Charlotte Mecklenburg Utilities
- County owned: Harnett County
- Authority: Yadkin Valley Sewer Authority

# Aqua North Carolina



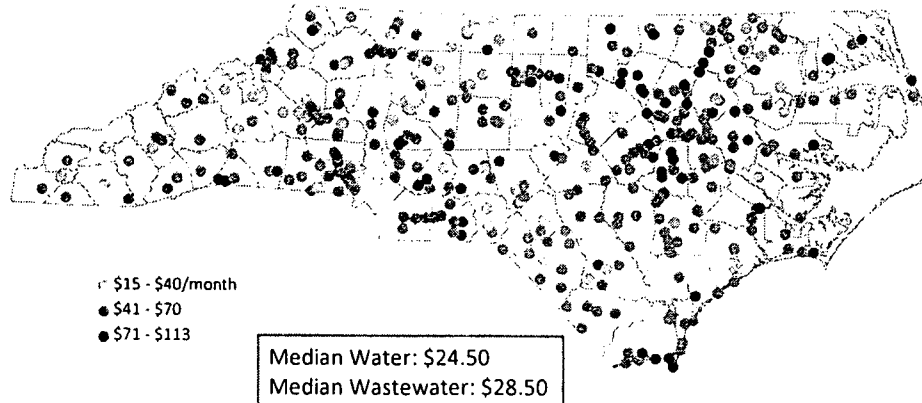
- Regulated, for-profit utility
- Own/operate >700 water systems, almost all are small

## Water System Interconnections and Interbasin Boundaries: June 29, 2009



## Water and sewer rates in January 2009

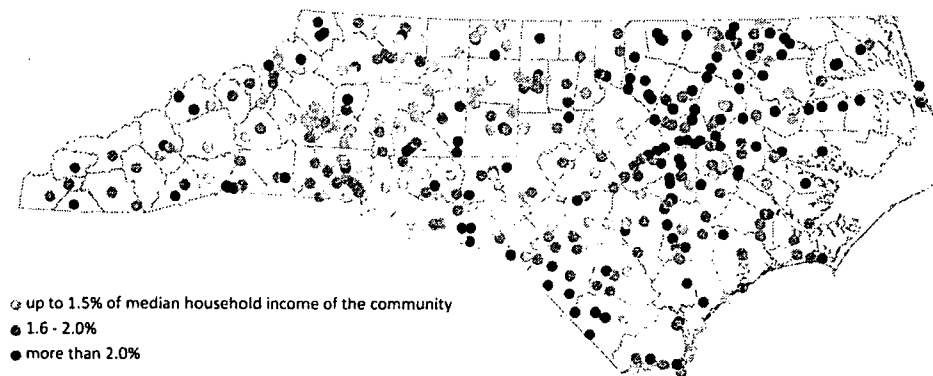
residential water and sewer bill for 5,000 gallons



Does not take into consideration "outside" rates paid by many customers

## Affordability of rates in January 2009

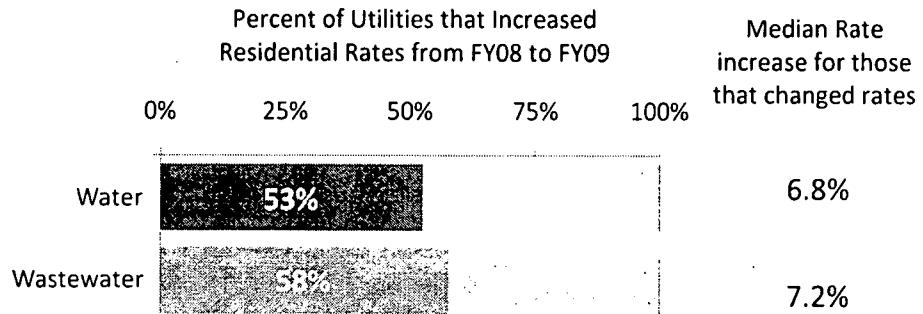
portion of income spent on annual water and sewer bills for 5,000 gallons



Does not take into consideration "outside" rates paid by many customers

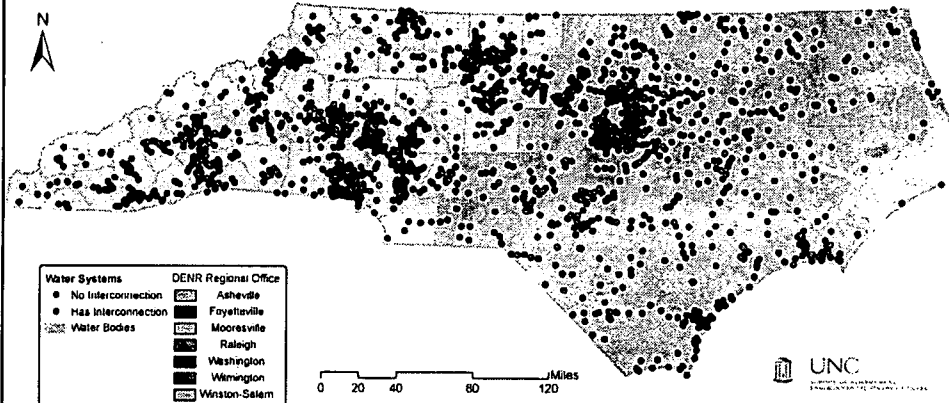


## Rate increases



## Interconnections

Presence of Interconnections in Active Community Water Systems: June 29, 2009

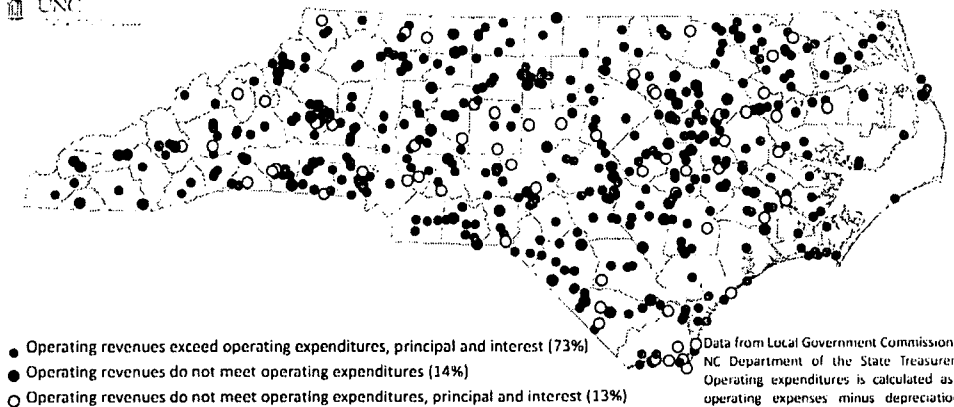
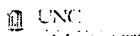


## Assessing Needs and Gaps

- EPA Gap Analysis
- Water 2030
- Drinking Water Needs Survey
- Clean Watershed Needs Survey
- Borrowing trends
- Expenditure trends

## Revenues and expenses

Operating Revenues, Expenditures and Principal and Interest Payments  
for Water and Wastewater Utilities in FY 2007-08

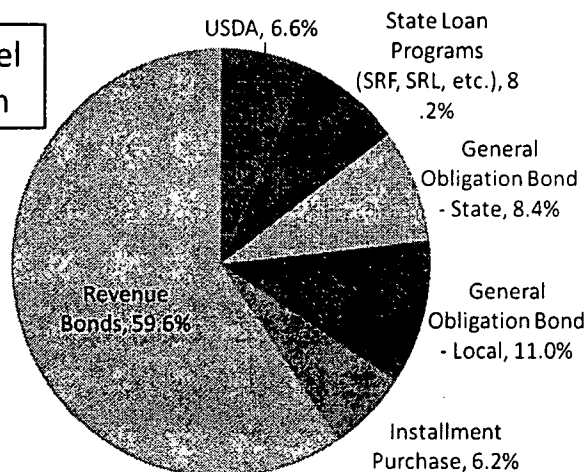


## USDA Funding In North Carolina

|         | Loan         | Grant        | Total         |
|---------|--------------|--------------|---------------|
| FY 2001 | \$38,781,000 | \$17,454,632 | \$56,235,632  |
| FY 2002 | \$36,637,325 | \$30,617,701 | \$67,255,026  |
| FY 2003 | \$43,904,000 | \$22,375,000 | \$66,279,000  |
| FY 2004 | \$57,355,000 | \$24,143,000 | \$81,498,000  |
| FY 2005 | \$47,931,000 | \$13,511,000 | \$61,442,000  |
| FY 2006 | \$69,777,000 | \$16,530,867 | \$86,307,867  |
| FY 2007 | \$70,950,000 | \$12,524,000 | \$83,474,000  |
| FY 2008 | \$93,975,000 | \$14,355,500 | \$108,330,500 |

## Outstanding Long Term Water and Sewer Debt (6/30/09)

Approximately \$7.6 Billion



Source: EFC Analysis using Data from Local Government Commission

## Examples of state funding assistance

- State grant program funded by state debt: 1999 Bond Grant Funds
- State grant program funded by annual appropriations: CWMTF, Rural Center CW Partners
- State low interest loan program capitalized by state debt/appropriations: Georgia, WV
- Pooled loan program: Virginia

## Questions

???????

Jeff Hughes  
[jhughes@sog.unc.edu](mailto:jhughes@sog.unc.edu)  
[www.efc.unc.edu](http://www.efc.unc.edu)  
(919) 843-4956



# Water allocation concerns

Or,  
what good are great pipes and treatment plants  
if there's no water to put in them?

Richard Whisnant, Prof. of Public Law and Government  
UNC School of Government



School of Government  
The University of North Carolina at Chapel Hill

WATER  
wiki

# Water allocation study

- Commissioned by Environmental Review Commission in light of conflicts over IBT and similar concerns about water quantity
- Carried out 2007-2008 by UNC and Duke with vast input from stakeholders and experts
- Reports, comments and background research all available at <http://water.unc.edu>



School of Government  
The University of North Carolina at Chapel Hill

WATER  
wiki



## What is cost of inaction? 2012 water shortfall could reduce Metro Region economic output by >10% (\$26B+/yr)

| Types of costs                                                                                                                                                      | Approach                                                                                                                                                                                                                             | Result                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Lower economic output of existing businesses</b></p> <p>Reduced investment for future growth</p> <p>Reduced quality of life</p> <p>Property value decline</p> | <ul style="list-style-type: none"> <li>Referred to studies documenting impact of water supply shortfalls<sup>1</sup> on business output</li> <li>Tailored assumptions to suit local situation- consulted local economists</li> </ul> | <ul style="list-style-type: none"> <li>Implies a potential 10-15% reduction in output</li> <li>↓</li> <li>Translates into roughly \$26-\$39B per year</li> </ul> |

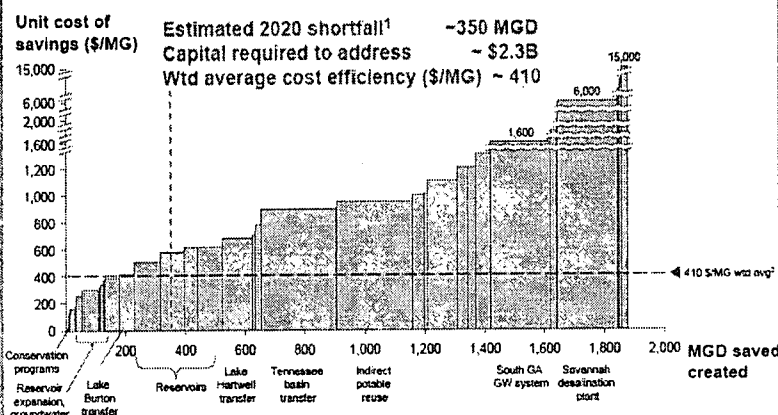
Costs are significant- but not explicitly quantified by Task Force

**Shortfall costs begin accruing now, as businesses evaluate metro ATL suitability... we need to ACT!**

1. Measures to Reduce the Economic Impacts of a Drought-Induced Water Shortage in the SF Bay Area, SFPUC (2007). Estimating business and residential water supply interruption losses from catastrophic events. Economic (2006). Economic Loss Estimation of Water Supply Shortage Based on Questionnaire Survey in Industrial Sectors, June (2006). Note: Assessed impact to Metro Atlanta GDP from potential water shortfall of ~30%. Assumed shortfall borne equally by all sectors (i.e. did not re-allocate supply). 1442/20-01 TR LWR 2-11 1441-022-002

Source: Georgia Water Contingency Planning Task Force, Nov. 23, 2009

## By 2020, overall supply gap could be addressed, at rough capital cost of ~\$2.3B and at ~\$410/MG avg cost efficiency



Note: 1. Shortfall = Projected 2020 demand with conservation in Metro plan - Estimated 2020 supply (LWR and Choc; withdrawals per ruling; all other sources at current levels). Assumptions: demand continues to grow until year of shortfall. Other approaches could assume demand decreases as result of ruling, thus reducing required gap. This analysis uses existing plan demand as baseline. Shortfall only accounts for shortfall with deficit under ruling. 2. Weighted average \$/MG calculated based on options that can address 2020 gap at lowest cost. Certain options yields may not be positive due to interaction effects. Size of transfer options do not account for return to originating basin. Source: Technical Advisory Panel preliminary estimates. 1442/20-01 TR LWR 2-11 1441-022-002

Source: Georgia Water Contingency Planning Task Force, Nov. 23, 2009

## What's the essential problem in Metro Atlanta that we can and should avoid?

- Letting ever more large withdrawers tap in to a finite water supply with an inadequate/incorrect understanding of the water budget, until crisis hits
- Once those large withdrawers come to rely on the water, solving the crisis will be VERY costly

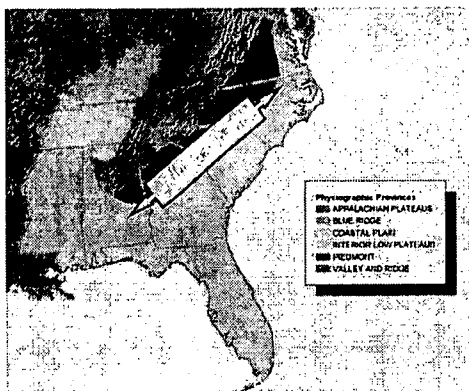


School of Government  
The University of North Carolina at Chapel Hill

WATER  
wiki

## Is our water challenge really like North Georgia's?

A huge percentage of the South's population, growth and economic prospects lies in the piedmont . . .



. . . a region with good average precipitation, but small streams and low yields from groundwater .

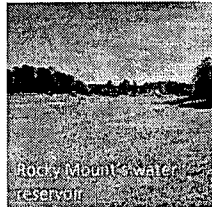
Result: low resilience; high susceptibility to drought; almost certain escalation in conflict over water unless growth stops.

School of Government  
The University of North Carolina at Chapel Hill

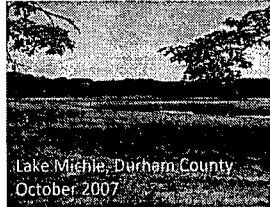
WATER  
wiki



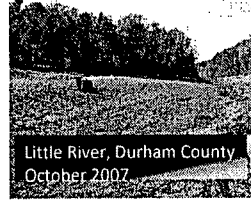
## We have partial control over drought



Rocky Mount water reservoir



Lake Michie, Durham County  
October 2007



Little River, Durham County  
October 2007

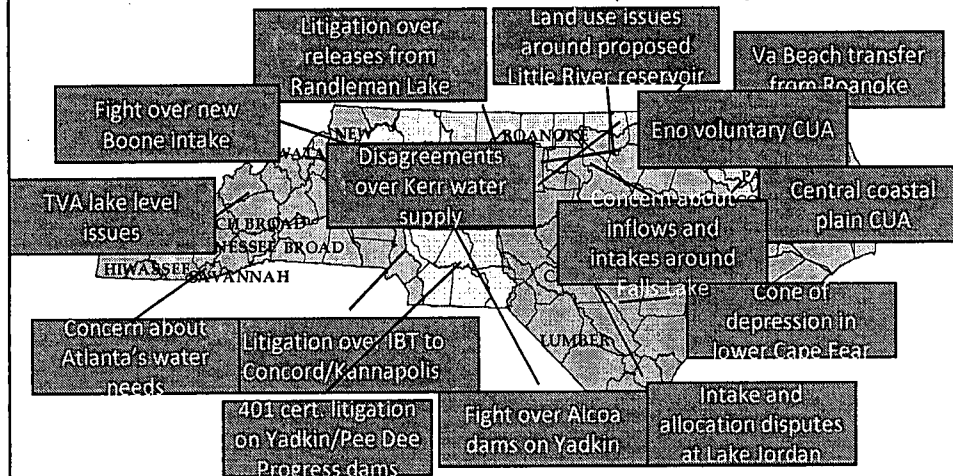


Falls Lake  
December 2007

Drought for us is less about unusually low precipitation than about increased demands with the same levels of precipitation. Our challenge is how to ensure all reasonable demands for water are met, and how to keep from pushing demand past our region-wide safe yields.

In the near-term, conflict will rise between water users as supplies are tapped harder for all the many uses of water....notably including energy production.

## Recent conflict over water quantity in NC



## How do we avoid these problems?

1. **Policy clarification:** legislative role
2. **Critical information:** where are we at risk of running out of water in the next 30-40 years?
  - DENR models will help, but need legislative direction on their use and importance
  - Shared approach to instream flow needs
3. How to get any areas at risk back within a water budget?
  - The important, unmet need for regional/basin **planning**
4. Fill our big regulatory gap: **withdrawal permitting** for large withdrawers (>100,000 gallons per day)
5. State role in **storage**: focus **resources** on areas in need

## Conclusion: upside and downside

- This could be among the world's best places for assured water supplies. We have the natural endowments; we need to build our management institutions and cultural understanding of water's value.
- The usual "wait until a crisis forces action" approach will be very costly to us and our children. Shame on us if we go this route.

III  
Whisnot

**State Water Infrastructure Commission  
Raleigh, North Carolina**

December 11, 2009

The Honorable Charlie Albertson &  
The Honorable Jim Crawford, Co-Chairs  
Legislative Study Committee on Water and Wastewater Infrastructure  
General Assembly of North Carolina  
Raleigh, North Carolina 27603

Re: SWIC Annual Report and State Role in Water Infrastructure

Dear Senator Albertson and Representative Crawford:

I am writing on behalf of the State Water Infrastructure Commission (SWIC) to provide a copy of our 2009 annual report and to offer SWIC as a resource to help you and your staff address the tasks assigned to you by the 2009 General Assembly.

I am also writing to respectfully request that the General Assembly appropriate funds to SWIC in its 2010 Session so that SWIC can continue its important work.

In 2005 the General Assembly assigned eight responsibilities to the SWIC. In subsequent sessions the General Assembly has assigned additional responsibilities to the SWIC. Consequently SWIC has discussed and debated many of the seven issues that the 2009 General Assembly asked you to consider in Section 43.3 of SL 2009-574, Studies Act of 2009.

Regarding Section 43.3(1) in 2009 SWIC reviewed the drinking water needs data collected by the Division of Environmental Health (DEH) in Department of Environment and Natural Resources (DENR) and compiled by the US Environmental Protection Agency (EPA). The SWIC agreed that this report provides the best estimate of drinking water needs in NC. SWIC is prepared to review the wastewater and stormwater needs data that will be collected by the Division of Water Quality (DWQ) in DENR in the future.

Regarding Section 43.3(2) in 2009 SWIC debated and adopted a resolution recommending that the General Assembly increase the high unit cost (HUC) threshold to 2.0% of median household income for combined water and wastewater service to be

eligible for state grants under GS 159G-20. SWIC determined that different funders used different methods to determine HUC and grant eligibility. This issue remains unresolved.

Regarding Section 43.3(3) SWIC agreed that the drinking water and wastewater and stormwater needs data collected by DENR and complied by EPA are currently the most effective method for identifying and reporting on infrastructure needs. SWIC also began to consider using asset management reporting required by GASB-34 as a method for determining water needs. Asset management data and reporting system is not currently robust enough to report water needs. However with effort it could provide annual estimates of water and other infrastructure needs.

Regarding Sections 43.3(4), 43.3(5), and 43.3(6) SWIC agrees that infrastructure funding priorities should be reviewed and changed as appropriate to meet the State's most pressing needs. SWIC also agrees that the role of the State in water infrastructure needs clarification. Most other states have defined clearer state roles and responsibilities. Most other states also primarily provide loans instead of grants and better leverage state investments with federal and local funds.

In North Carolina water is very decentralized. Planning for and providing drinking water, wastewater, and stormwater services is primarily a local responsibility in North Carolina. In the past the State has provided financial and technical assistance to local water systems. The General Assembly has created a number of state programs to deliver financial and technical assistance. The State through the Local Government Commission regulates the finances of local water systems and through DENR regulates the environmental performance of water systems. The State does not formally coordinate financial and environmental review.

The Environmental Review Commission's Water Allocation Policy study and SB 907/HB 1101, Water Resources Policy Act, call for a stronger State role in water supply planning and management and for integrating water quantity and quality by river basin. River-basin based plans and policies to balance water budgets and solve water quality problems could be used to set priorities for state and local investments.

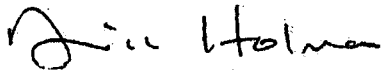
Regarding Section 43.3(7) SWIC has supported the work of the funders' forum to develop a common application and to improve coordination. SWIC could coordinate the production of a single integrated funders report.

The Honorable Charlie Albertson  
The Honorable Jim Crawford  
December 11, 2009  
Page 3

Attached is a copy of our letter of December 11, 2009 to the Co-Chairs of the Environmental Review Commission, pursuant to GS 159G-57 transmitting our annual report and summarizing our recommendations.

Thank you for your consideration. Please contact me if you have questions or need more information.

Sincerely,

A handwritten signature in black ink, appearing to read "Bill Holman". The signature is fluid and cursive, with the first name "Bill" and last name "Holman" clearly distinguishable.

Bill Holman, Chairman  
State Water Infrastructure Commission

**2009**  
**Annual Report**

**The North Carolina  
State Water Infrastructure Commission**

**To**

**The Governor  
And Members of the North Carolina General Assembly**

**December 7, 2009**

The State Water Infrastructure Commission was created by act of the North Carolina General Assembly in 2005. The purpose of the Commission is to identify the State's water infrastructure needs, develop a plan to meet those needs, and monitor implementation of the plan. The Commission is comprised of 13 members representing State agencies and non-profits, organizations representing North Carolina local governments and members of the water infrastructure and water resources professions.

**Report Author:** Jean Crews-Klein, Staff to Commission

## **Table of Contents**

### **Background on the State Water Infrastructure Commission . . . . . 4**

*List of Board Members 2008-2010*

*Duties Assigned by Legislature to the SWIC (Original and "Drought Bill" Duties)*

*Meetings 2008-2009*

### **Work of the SWIC Covered in This Report . . . . . 9**

#### **1. Infrastructure Financing . . . . . 9**

*a. Rate Setting Guide for Water Rates*

*b. High Unit Cost Threshold*

*c. Funder's Forum*

#### **2. Water Efficiency . . . . . 17**

*a. Conservation Rates for Water*

*b. Water Audits*

*c. Leak Detection and Repair*

*d. Reclaimed Water*

*e. Regionalization*

*f. Asset Management*

#### **3. Program Evaluation Division Report on Infrastructure Finance . . . . . 25**



## ***Background on the State Water Infrastructure Commission***

The State Water Infrastructure Commission (SWIC) was created through passage of House Bill 1095 during the 2005 Session of the North Carolina General Assembly. Passage of this bill was led by The Honorable John Kerr of the NC Senate and The Honorable Pryor Gibson of the NC House of Representatives and supported widely by members of the General Assembly. The bill is codified as Session Law 2005-454, "An Act to Establish Uniform Criteria for Drinking Water, Wastewater and Stormwater Loans and Grants, to Clarify and Revise the Procedures that Apply to These Loans and Grants to Reflect the Exhaustion of the 1998 Clean Water Bond Proceeds, and to Provide for Greater Coordination Among Agencies that Make Loans and Grants for Water Projects by Establishing the Water Infrastructure Commission."

The drive for creating the SWIC was to have available a forum where members could engage in proactive policy discussions relating to infrastructure. Of significance to the creators of SWIC were: 1) to make certain that the State's policies governing infrastructure financing were refined and updated to better align with current trends, and 2) to define the role of the State in providing financial resources and supporting best management practices for needed infrastructure investments.

The creation of the Commission and the modifications to the State's existing water and wastewater finance law were the product of a collaborative effort between major State funders of infrastructure including the Department of Environment and Natural Resources, the Clean Water Management Trust Fund and the Rural Economic Development Center. Together, these three entities have served as the administering agents of State funds and through this continue to make important water, wastewater and storm water investments that have protected public health and the environment and created opportunities for economic growth and development.

Appointments were completed in May 2006 and the Commission held its first meeting that month. A list of the current members of the Board of Directors and the assigned duties of the Commission follow below.

## ***Members of the State Water Infrastructure Commission: 2008 – 2010***

### ***Standing Members***

Bill Holman, Chairman, Appointee of Senate President Pro Tempore

Robin Smith, NC Department of Environment and Natural Resources

James Hardin, NC Department of Commerce

Billy Ray Hall, President, NC Rural Economic Development Center

Ellis Hankins, Executive Director, NC League of Municipalities

Vance Holloman, Deputy State Treasurer, Office of State Treasurer

David Thompson, Executive Director, NC Association of County Commissioners

Richard Rogers, Executive Director, Clean Water Management Trust Fund

### ***Appointed Members***

Dr. Downey Brill, Professor, NC State University (Chancellor's Appointee)

Steve Cavanaugh, P.E., Cavanaugh Associates (American Council of Engineering Companies Appointee)

Harold Herring, Executive Director, Neuse Regional Water and Sewer Authority (Appointee of the Governor)

The Honorable Bill Owens, NC House of Representatives (Appointee of Speaker of the House)

Richard Whisnant, Associate Professor, UNC School of Government (Appointee of Water Resources Research Institute)

## ***Duties of the State Water Infrastructure Commission:***

The purpose of the SWIC, as established by the North Carolina Legislature, is to identify the State's water infrastructure needs, develop a plan to meet those needs, and monitor implementation of the plan. The original, specific duties assigned are shown below:

- 1. To assess and make recommendations on the role of the State in the development and funding of wastewater, drinking water, and storm water infrastructure in the State.**
- 2. To analyze the adequacy of projected funding to meet projected needs over the next five years.**
- 3. To propose State priorities for funding.**
- 4. To make recommendations on ways to maximize the use of current funding resources, whether federal, State, or local, and to ensure that funds are used in a coordinated manner.**
- 5. To review the application of management practices in wastewater, drinking water, and stormwater utilities and determine the best practices.**
- 6. To assess the role of public-private partnerships in the future provision of utility service.**
- 7. To assess the application of the river basin approach to utility planning and management.**
- 8. To assess the need for a "troubled system" protocol.**

### ***Duties Included in the 2008 "Drought Bill"***

In a subsequent Legislative Session, the SWIC has been assigned additional duties. Specifically, in the 2008 Session, the SWIC was tasked with developing guidelines for local water systems to follow to set rates at a level to sustain the operation of the system and guidelines for developing water conservation rates. This was included as part of the "Drought Bill", Session Law 2008-143, Section 17. In accordance with the law, an interim report was delivered in January 2009. Recommendations on the water rates to sustain the system are included in this Report beginning on page 9. Commission work on the water conservation rates is ongoing.

#### **Session Law 2008-143, Section 17:**

The State Water Infrastructure Commission, in consultation with the Department of Environment and Natural Resources, the School of Government at the University of North Carolina at Chapel Hill, the North Carolina Utilities Commission, the Public Staff of the North Carolina Utilities Commission, and the Local Government Commission, shall develop guidelines for water rate structures that are adequate to pay the cost of maintaining, repairing, and operating the system, including payment of principal and interest on indebtedness incurred for maintenance or improvement of the water system. The guidelines shall also consider the effect of water rates on water conservation and recommend rate structures that support water conservation. Copies of the guidelines shall be made available to the Department of Environment and Natural Resources, the North Carolina Utilities Commission, and to all local government water systems and large community water systems, as defined in G.S. 143-350. The Commission shall report to the Environmental Review Commission on its progress in developing the guidelines no later than January 1, 2009.

## ***SWIC Meetings Fiscal Year 2008-2009***

The SWIC provides a monthly, public forum for local governments, state agencies, water professionals, water utilities, funders, and the public to share information, debate ideas, and develop recommendations to the Governor and General Assembly. The SWIC began meeting in Fiscal Year 2006. While required only to meet quarterly, SWIC members voted early on to meet monthly in order to address the numerous issues before the State related to water resources and infrastructure financing. In fiscal year 2008-2009 the SWIC met on the following dates:

July 8, 2008  
August 12, 2008  
September 9, 2008  
October 21, 2008  
November 12, 2008  
December – no meeting  
January 22, 2009  
February 17, 2009  
March 4, 2009 (HUC Sub-Committee)  
March 20, 2009  
April 17, 2009  
May 15, 2009  
June 19, 2009

The SWIC also met on the following dates in the current fiscal year. These are noted for the record as no additional funding for administrative support of the SWIC was included in the adopted State Budget for the current biennium. Utilizing funds saved from the 2006 appropriation extended for a three month period in to 2009-2010 fiscal year, the SWIC met on the following occasions and the efforts of the SWIC during that period are captured in this report:

July 17, 2009  
August 21, 2009  
September 18, 2009

## ***Commission Work 2008-2009***

Work of the State Water Infrastructure Commission during this 15-month reporting period focused on the topics listed below. A summary of activities and recommendations put forward by the SWIC on ***Infrastructure Financing***, ***Water Efficiency***, and the ***Report of the Program Evaluation Division of Infrastructure Finance*** follow.

### ***1. Infrastructure Financing***

The work of SWIC in support of infrastructure financing during this period focused on developing guidelines for local water systems to follow in setting rates adequate to support the system needs and on evaluating the adequacy of the current threshold established by the NC Legislature for eligibility to receive grant funds. A summary of these activities follows.

#### ***a. Rate Guidelines for Setting Water Rates***

Session Law 2008-143, commonly known as "The Drought Bill" included a specific charge to SWIC for developing guidance on rate setting for local systems that included provision for system revenues meeting the costs of operation and servicing of any debt on the system. The law states in Section 17:

**The State Water Infrastructure Commission, in consultation with the Department of Environment and Natural Resources, the School of Government at the University of North Carolina at Chapel Hill, the North Carolina Utilities Commission, the Public Staff of the North Carolina Utilities Commission, and the Local Government Commission, shall develop guidelines for water rate structures that are adequate to pay the cost of maintaining, repairing, and operating the system, including payment of principal and interest on indebtedness incurred for maintenance or improvement of the water system. The guidelines shall also consider the effect of water rates on water conservation and recommend rate structures that support water conservation. Copies of the guidelines shall be made available to the Department of Environment and Natural Resources, the North Carolina Utilities Commission, and to all local government water systems and large community water systems, as defined in G.S. 143-350. The Commission shall report to the Environmental Review Commission on its progress in developing the guidelines no later than January 1, 2009.**

Infrastructure assets, like all other “business” assets, depreciate in value over time. Efforts are underway in North Carolina by a host of professional organizations, non-profits and State regulatory agencies, to encourage local water systems owners to operate their systems as a business that provides a public service. This requires a move away from the older adopted practice of operating as a public service only which discounted the need to operate within a business model that is required in order to sustain the operation over time.

Operating within that business model, the accounting practices for North Carolina systems have been developed and adopted. These accounting practices are built on a business framework and title the water/sewer operations as an “Enterprise Fund” , implying that the operation of the enterprise will fall within the normal business practices of costs being recovered through the system revenues of rates and charges. Included in this model of accounting is the provision of depreciation of assets. Each year, assets that are used in conjunction with delivery of water and wastewater, such as the pipes, equipment, storage tanks, etc., are depreciating. By funding depreciation the system is able to set aside capital needed to replace these assets when they are fully depreciated or their useful life has expired. By setting rate and charges at a level to cover the operational needs, cover any debt service responsibilities and fund depreciation, a system can operate sustainably into the future.

Not only is this important to be prepared for periods of drought, but also for sustainable system operations under “normal” conditions. ***In its work this year, SWIC has focused on a response to the fact that a growing number of water/sewer systems are not financially sustainable.*** According to 2008 data submitted by system owners to the Local Government Commission, almost half (48 percent) of systems operate without funding depreciation. The actual fiscal challenge reaches deeper in certain systems. Many do not have rates and charges set to recover even the day-to-day operating expenditures of the system; others cannot cover debt service and operating expenditures without borrowing against their electrical fund, general fund or reserves.

To address the specific charge of the Drought Bill, SWIC contracted with the staff of the Environmental Finance Center (EFC) at the University of North Carolina at Chapel Hill – School of Government. Using information reported by local government systems to the NC Local Government Commission – NC Office of State Treasurer (LGC), the EFC staff proposed a series of means tests and applied them to the systems reporting information to the LGC in FY 2008. The “tests” included the following:

1. System operating revenues (money collected from customers for rates and fees) less than operating expenditures (costs to operate and maintain the system such as labor, chemicals, electricity, etc.).

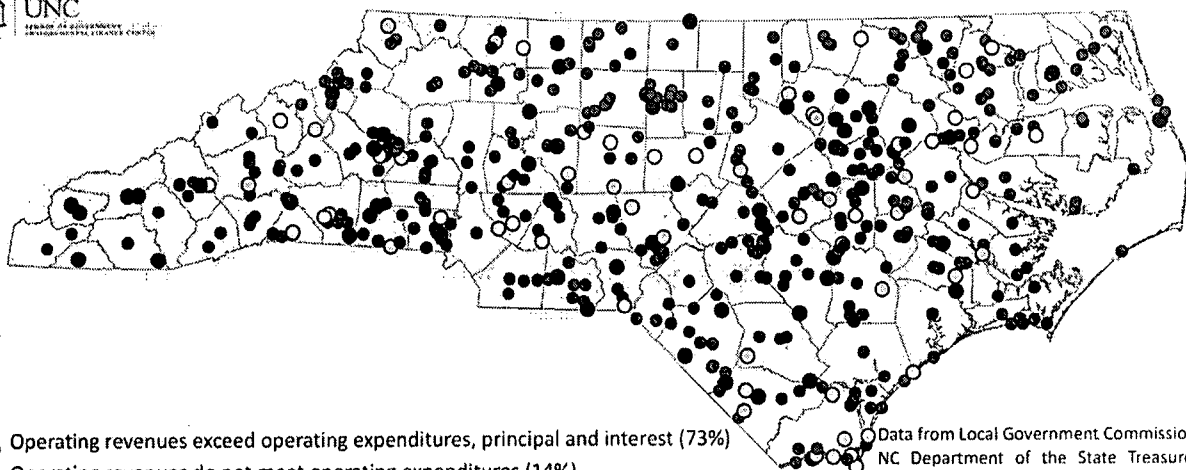
2. System operating revenues less than operating expenditures and debt service (principle and interest payment).
3. System operating revenues more than operating expenditures
  - Less than 50% of depreciation funded
  - 50-99% depreciation funded

Based on the application of these tests to the systems in the State, it was found that the operating revenues of 124 local government utilities or 27 percent of all local government water systems did not cover their operating expenditures and principal and interest payments during Fiscal Year 2007-08. Following debate and discussion which included the value of funding depreciation, the SWIC recommended that the State funders of water infrastructure – the Rural Economic Development Center, the NC Department of Commerce and the NC Department of Environment and Natural Resources – adopt the means test “2” above as a starting point. The map below shows the distribution of systems according to the tests above. A copy of the test rubric can be found as **Appendix 1**.

### **Recommendation**

Require all local government water systems applying for State financial assistance for water projects that include line extensions to expand the system to be fiscally sound and to have system revenues meet operating expenditures. This does not include funding of depreciation.

Operating Revenues, Expenditures and Principal and Interest Payments  
for Water and Wastewater Utilities in FY 2007-08



- Operating revenues exceed operating expenditures, principal and interest (73%)
- Operating revenues do not meet operating expenditures (14%)
- Operating revenues do not meet operating expenditures, principal and interest (13%)

Data from Local Government Commission, NC Department of the State Treasurer. Operating expenditures is calculated as operating expenses minus depreciation and amortization expense.



## ***b. High Unit Cost Threshold***

The General Assembly set the State's "High Unit Cost Threshold" (HUC) as part of the Clean Water and Natural Gas Critical Needs Bond Act of 1998. The purpose of the figure was to establish a threshold at which systems applying for State funding to make infrastructure improvements would be eligible to receive State grant funds. The metric was tied to the Median Household Income of the applicant unit (the municipality or county). At the time this was adopted as part of the 1998 Bond Act, the designation of "High Unit Cost Threshold" was a name and number utilized by the NC Department of Environment and Natural Resources – Construction Grants and Loans Section, for use in qualifying North Carolina applicants for federal State Revolving Loan Funds. The 1.5 percent of Median Household Income meant that at a minimum, the local system receiving funds would need to have a combined water and sewer bill for a residential customer set so that it equaled 1.5 percent of the Census Median Household Income for that jurisdiction. If the applicant unit did not have rates set at a level to meet this threshold then they were not eligible for any available grant funds.

Using a threshold in this manner is a common practice in states across the country. These thresholds provide a means for a State to allocate scarce grant funds to those communities where low median household incomes can make a needed project unaffordable to the residents if the full cost of the project were carried in loan funds only. By infusing grant funds into the project in the amount necessary only to bring the fair share cost of the project down to an amount equal to 1.5 percent of the Median Household Income of the residents, the project is deemed "affordable". A corresponding rate of .75% was also set for systems that only had a water utility.

In its 2008 Annual Report to the Governor and General Assembly the State Water Infrastructure Commission (SWIC) committed itself to determining whether after eleven years an increase in the HUC threshold would be appropriate and if so, how much of an increase would be appropriate. A High Unit Cost Sub-Committee was created including Robin Smith (NCDENR), Ellis Hankins (NCLM), Patrick Woodie (NCREDC) and Chairman Holman.

### ***SWIC Review and Evaluation of HUC Threshold***

Several factors guided SWIC's review of the High Unit Cost (HUC) Threshold. First, the costs associated with owning and operating water or wastewater systems have increased significantly since the State's HUC threshold was adopted. These include costs for operation and maintenance – pipes, equipment, labor and fringes, electricity, chemicals - as well as

costs of financing. Second, the volume of grant funds available from both the State and Federal governments has decreased dramatically. Third, according to information available from the NC Local Government Commission, almost half of the systems in the State operated with revenues less than expenses (including depreciation) in 2008. Finally, it had been eleven years since the threshold was established and a review of adequacy was needed.

To assist with the evaluation, the SWIC retained the assistance of the staff at the UNC Environmental Finance Center and the SWIC staff. A history of use of the threshold by the Federal Government was documented and a review of the threshold applied to all municipal and county water and sewer system owners/operators in the State was conducted. Data for this portion of the work was taken from the Annual Survey of Rates and Charges conducted by the NC League of Municipalities in concert with the Environmental Finance Center.

The results of the history of use of the threshold revealed that the Federal Government, in the ten years since the State of North Carolina adopted the 1.5 percent threshold, had raised its recommendation for threshold to 2.5 percent each for water and wastewater, or a combined 5 percent of MHI. The review also found that numerous states across the country are using a higher threshold, some as high as 7 percent, to reflect the increased costs of owning and operating a water/sewer system.

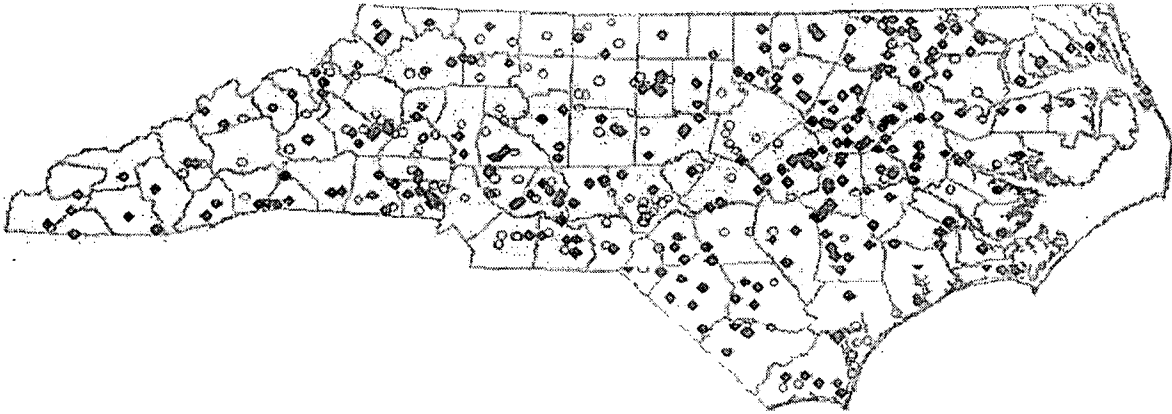
Efforts of the Environmental Finance Center at UNC-Chapel Hill determined (using rate data current as of January 2009) that 67 percent of NC water systems would qualify for high unit cost grants if the threshold remains at 1.5% for combined water and wastewater systems. If the threshold were increased to 2 percent, then 56 percent of NC water systems would qualify for high unit cost grants.

Concerned about the impact of the move in the threshold for communities with high rates of poverty, the Sub-Committee also looked at this threshold with a modifier where communities with poverty rates equal to or greater than the State's 2000 poverty rate (12.3 percent) would drop back to the 1.5 percent threshold.

The graphics on the following page illustrate the comparison.

If the affordability target remains at  $\geq 1.5\%$  MHI for combined water and wastewater bills for 5,000 GPM (ignoring water-only systems):

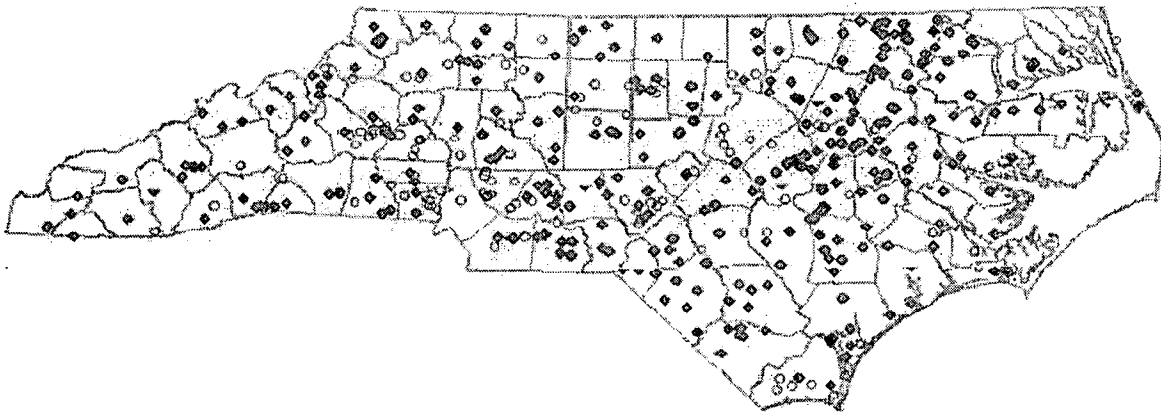
282 out of 421 (67 percent) of water systems qualify (shown as Blue Diamonds)



Source: EFC Research for SWIC – High Unit Cost Threshold, 2009

If the affordability target is adjusted up to  $\geq 2.0\%$  MHI for combined water and wastewater bills for 5,000 GPM (ignoring water-only systems)

237 of 421 (56 percent) of water systems qualify (shown as Blue Diamonds)



Source: EFC Research for SWIC – High Unit Cost Threshold, 2009

### ***Recommendation***

The SWIC recommends that the General Assembly increase the high unit cost threshold to 2.0% for combined water and wastewater systems and 1.0% for systems operating a single water or wastewater utility and having a poverty rate of less than 12.3% and should retain the high unit cost threshold at 1.5% for combined water and wastewater systems and 0.75% for water or wastewater systems with a poverty rate of 12.3% or greater, effective July 1, 2010.

- That a common understanding and practice of determining whether a system meets this threshold should include the use of the most recent decennial census figure for poverty for the community with by the update factor now available from the US Department of Housing and Urban Development. The updated Census number is not utilized uniformly by all State funders.
- That the SWIC will work to develop other criteria to determine affordability and to identify troubled or unsustainable water systems and will report to a future session of the General Assembly.
- That this resolution does not apply to the economic development programs administered by the NC Department of Commerce and the NC Rural Economic Development Center which are intended to create and retain jobs

A resolution outlining these recommendations was distributed to Legislative Members following its adoption. A copy of the resolution can be found as ***Appendix 2***.

### ***c. Funders Forum***

The North Carolina Funders Forum is a loosely organized consortium of State and Federal funders of drinking water, wastewater and stormwater infrastructure. The group has been in existence since the early 1980s when the Rural Economic Development Center sponsored the first meetings of the group.

The purpose of the Funder's Forum is to provide a place and time for funders to share information, ideas and current knowledge of approaching change in the funding priorities

and goals of each agency represented. In sharing information, it has been established that projects seeking funding have been able to secure the combination of funds available for their project with less time investment than through meeting with each funder individually. To this end, the Funder's Forum has sponsored a series of "Funding Fairs" regionally across the State.

As a result of the Program Evaluation Divisions Report on Infrastructure Funding, the Funders Forum submitted a letter to the Co-Chairs of the Joint Legislative Program Evaluation Oversight Committee outlining five strategies to increase coordination among the water and wastewater agencies. One strategy was the development of a "common application" that all appropriate state funding agencies will use as a part of their application process. The Funders Forum reviewed the different applications used by state funding agencies and pulled out the common information requested by all of the agencies to become a new **Section 1** for all funding applications. The use of the "common application" will improve project coordination among agencies and will enable agencies to provide more comprehensive reporting on all the water and wastewater projects in the state. The Funders letter that outlines five specific ways to increase coordination among agencies is attached to this report as **Appendix 3**.

The SWIC has supported the work of the Funder's Forum and sought the advice of the group on a number of matters under its consideration.

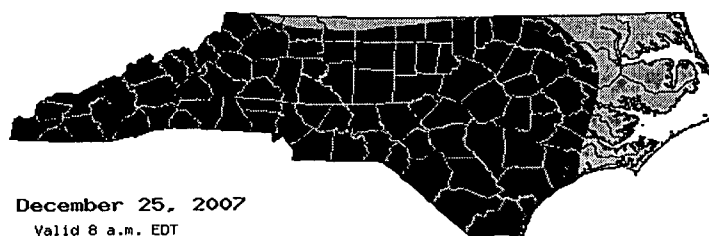
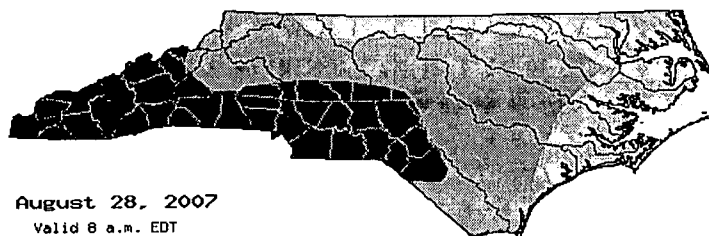
#### **d. Water Efficiency**

With the Droughts of 2002 and 2007 and newly released population estimates for the State as a backdrop, the SWIC committed to develop a set of recommendations for the State decision-makers on enhancement of Water Efficiency.

As the State Water Infrastructure Commission released its Annual Report in November of 2007, the consequences of the ongoing drought were brought into clear focus. By the end of December 2007, 67 counties were designated as under “exceptional drought”, the most severe of the drought designations. Another 20 were in extreme drought and 13 in severe drought.<sup>1</sup>

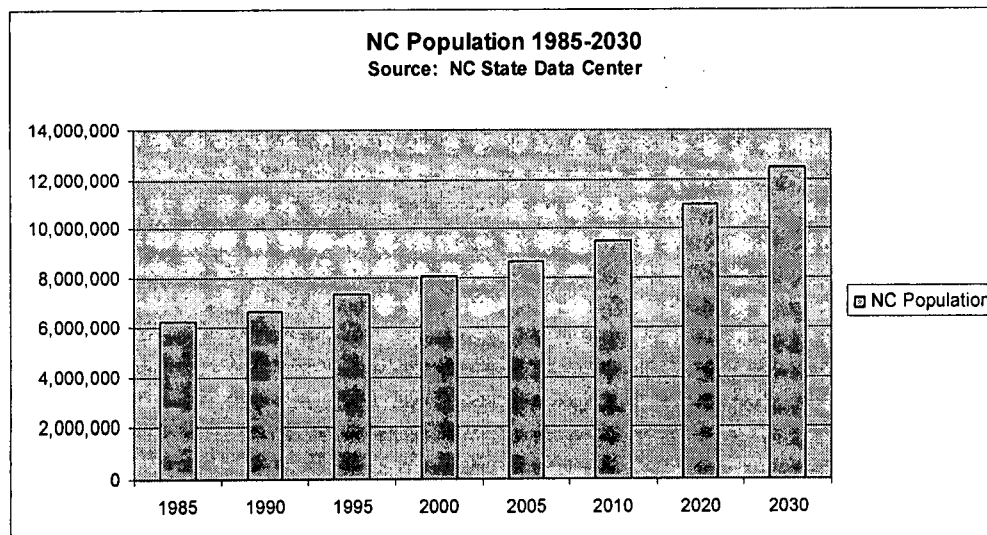
This drought of 2007 was more remarkable than the recent drought of 2002, not only because all 100 counties in the State of North Carolina were affected, but because of the speed with which the drought progressed. Within four months, as shown by the graphics below, the drought had spread across the State, engulfing 55 additional counties in exceptional drought conditions. The maps below, taken from the NC Drought Advisory Council website illustrate the speed at which this drought accelerated.

#### **Comparison of Extent of 2007 Drought August to December 2007**



Source: NC Drought Council Website

For most systems, this drought amplified the already apparent challenge of meeting the water demands for a growing population. Population growth in North Carolina has exceeded population growth in the nation as a whole since the year 2000. In the twenty year period between 1985 and 2005, North Carolina's population grew by 39 percent. Growth through 2030 calculated by the State Data Center shows an expected 30 percent increase in population between 2010 and 2030, bringing the State's population to more than 12 million people (see below).



In response to the severity of the 2007 drought, the Governor took unprecedented action on behalf of the State by calling for supply side conservation. Prior responses had focused on efforts to reduce consumption of water by the users. These new efforts focused attention on how the water systems could become more efficient in their own use of water. For many systems this was the first time attention was placed on the reduction of water use on the supply side. Water audits, leak detection and conservation pricing became regular parts of the conversation on how North Carolina would deal with its most severe drought.

### ***Work of SWIC on Water Efficiency***

- SWIC convened three separate panels of professionals representing agriculture, local government water managers, industry, trade groups and State regulators to discuss and debate the merits of enhanced water efficiency for the State.
- SWIC observed that being “water efficient” places a different lens on our water use. It challenges us to reduce the waste of water, to find better, more effective ways of doing things and to make behavioral changes in the way we use water.

- SWIC observed that we have distinct choices how we meet both current and future demand. Water systems across the State are making choices today regarding where their next increment of water will be found. Population growth and concentration, increasing regulation of drinking water, wastewater and stormwater and unpredictable variations in weather and climate all serve to drive up the cost of water and push us forward into developing new supplies. When local water systems respond to these conditions by finding ways within their own operation to reduce waste, it can help stabilize costs and defer the development of new supplies further into the future. By using water more efficiently, both drinking water systems and customers can help preserve water supplies for future generations, save money, and protect the environment.
- SWIC served as a forum for discussion and debate on the proposed 2008 drought legislation. In its final, adopted version (Session Law 2008-143), the Drought Rules contained eligibility requirements as recommended and supported by SWIC for local government water systems desiring to secure state financial assistance.

### ***Efficiency Tools Examined by SWIC***

SWIC examined three water efficiency tools: ***Water Audits and Leak Detection, Reclaimed Water, Asset Management and Water Rates/Rate Structures***. Each alone has the potential to increase water efficiency. Together, as part of an overarching policy shift by the State on water efficiency, they have potential to change the way we think about and value our water resources. A summary of work and recommendations of SWIC on each follows.

#### ***a. Water Conservation Rates***

The drought bill also directed SWIC to develop guidelines for water utilities to encourage water conservation. The research was designed to study the relationships between water usage for specific utilities and the following: pricing signals, rate structures, billing periods, the application of voluntary and/or mandatory watering restrictions, utility demographic data, climate data and other factors that are likely to influence usage. Work on these guidelines has begun and will be completed in the 2009-2010 fiscal year if funds are available.



## b. Water Audits

With newly defined emphasis by the State on water efficiency from the system or “supply side”, the SWIC held discussion on how to best support water systems in becoming more efficient. The SWIC convened a Water Audit Sub-Committee which included members from the State agencies, trade groups, consulting engineers, and local water systems. The group was charged with determining the best methods/tools available to estimate water efficiency in local systems and evaluating those to make certain they apply equitably to all systems.

**Recommendation of the Sub-Committee adopted by the SWIC:** The Sub-Committee reported and the SWIC subsequently adopted the recommendation that the while the audit standard developed by the American Water Works Association was the new “industry standard” that it may be too complex for small systems to utilize. Therefore, a modified version of the standard was recommended. The full AWWA standard is shown below:

AWWA Water Audit Format:

|                                                     |                        |                                 |                                                                 |                         |
|-----------------------------------------------------|------------------------|---------------------------------|-----------------------------------------------------------------|-------------------------|
| System Input Volume<br>(corrected for known errors) | Authorized Consumption | Billed Authorized Consumption   | Billed Metered Consumption (including water exported)           | Revenue Water           |
|                                                     |                        |                                 | Billed Unmetered Consumption                                    |                         |
|                                                     | Water Losses           | Unbilled Authorized Consumption | Unbilled Metered Consumption                                    | Non-Revenue Water (NRW) |
|                                                     |                        |                                 | Unbilled Unmetered Consumption                                  |                         |
|                                                     |                        | Apparent Losses                 | Unauthorized Consumption                                        |                         |
|                                                     |                        |                                 | Customer Metering Inaccuracies                                  |                         |
|                                                     |                        |                                 | Data Handling Errors                                            |                         |
|                                                     |                        | Real Losses                     | Leakage on Transmission and Distribution Mains                  |                         |
|                                                     |                        |                                 | Leakage and Overflows at Utility's Storage Tanks                |                         |
|                                                     |                        |                                 | Leakage on Service Connections up to point of Customer metering |                         |

**Rationale for Recommendation:** It is notable in that this new methodology moves thinking away from calculating how much water is “lost” to developing a greater understanding of the end points of water use. It is also notable that it provides a way to calculate the value of

water that fails to produce revenue and a greater understanding of costs and benefits – the economic value – of making various repairs to the system

Following discussion, the SWIC adopted a position of support for the use of a standardized water audit format in North Carolina. SWIC determined that having a format adopted for use North Carolina in conjunction with the Local Water Supply Plans would increase the utility of the information gathered by the Division of Water Resources. SWIC found that no policy barriers currently existed to deter this modification. The SWIC recognized the utility of the updated IWA/AWWA model but acknowledged that the model was developed for most useful application in large water systems, and required information that many of the State's smaller systems likely would not be able to produce. Thus, the SWIC recommends adoption of the IWA/AWWA model as a guideline for development of a North Carolina water audit format and requested that the State Department of Environment and Natural Resources develop the modified document in consultation with other interested parties.

### ***c. Leak Detection and Repair***

The growing emphasis on efficient management of our State's water resources spurred particularly by the droughts and growing water demand took root most effectively in leak detection in drinking water systems. Both detecting water leaks and the follow-up repairs are supply-side management strategies- those which can be employed by the water system owner to enhance the efficiency of operations.

Many municipal and county water systems have moved forward with water audits which provide a basis for understanding the volume of unaccounted for water and the impact that water "loss" has on the finances of the system. Leak detection and repair are the next logical step, providing the system owner with a precise location of leaks, and when coupled with information from the water audit, the priority order for repair that achieves the greatest cost and water savings.

The SWIC worked with NCDENR in developing a State approach to water audits and to introducing leak detection technology and process to local water systems. Attached in **Appendix 5** is a copy of the State guidance developed for local systems to follow when addressing the Leak Detection Requirement now attached to State funding for drinking water projects.

#### ***d. Reclaimed Water***

Water Reuse – also known as reclaimed water - involves the use of highly-treated wastewater as a substitute for treated drinking water for end uses that do not require potable water quality. In accordance with State and Federal regulation, drinking water systems must be sized to meet peak demand. Meeting the peak demand often drives the development of new supplies and infrastructure investments. If peak demand can be reduced through increasing the efficiency of use, the sustainability of the system and the resources is supported.

To gain an understanding of the current policy and practice of water reuse, the SWIC conducted its own research and also invited professionals in the water industry to provide their perspectives. SWIC sponsored a series of three panel discussions on water reuse and reclamation which were open to the public and drew significant attendance. The interests represented in the panels included Public Health, Agriculture, Industry, Local Governments already employing water reuse as part of their water management programs, the State of North Carolina represented by officials from the Department of Environment and Natural Resources (DENR) and members and Chair of the North Carolina American Water Works Association (AWWA) Water Reuse Committee.

These panel discussions provided key support to the Department of Environment in proposing expansion of the water reuse law in North Carolina. The SWIC 2008 Annual Report focused on the value of and impediments to expanded use of reclaimed water and other water efficiency measures in the State.

To date, the DENR staff have received approval of the fiscal note attached to the proposed rule changes for water reclamation. Staff is currently working on establishing the dates for the required public hearings and anticipates holding the hearings starting in late February 2010.

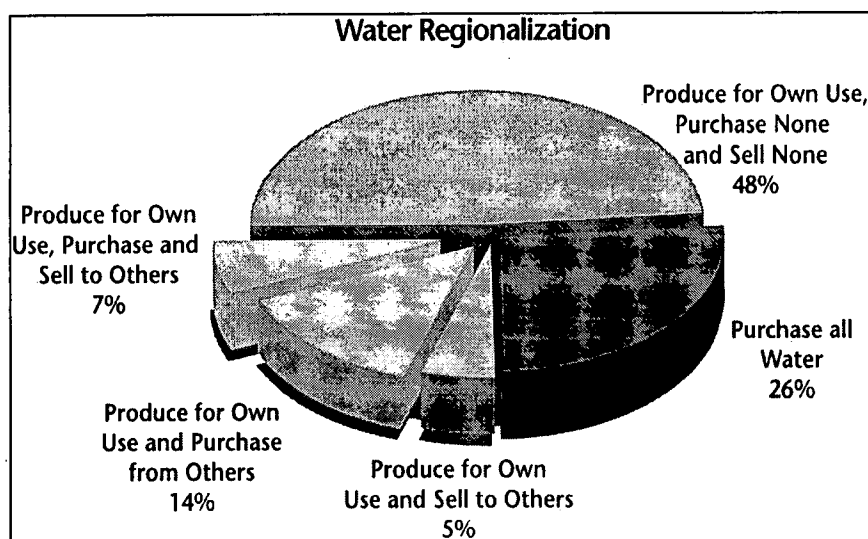
**Recommendation of the SWIC on Reclaimed Water:** The members of the State Water Infrastructure Commission support the expanded use of reclaimed water, gray water, harvested rain water and stormwater subject to adequate provisions to protect public health. The SWIC has adopted a resolution in support of the use of reclaimed water which it has distributed to the Governor, members of the North Carolina General Assembly and others. The SWIC supports the proposed rule enhancements for reclaimed water which are currently being considered by the EMC. SWIC notes with concern the inconsistencies in regulatory treatment of gray water, harvested rainwater, stormwater and reclaimed water and supports the timely reconciliation of these differences.

### ***e. Regionalization***

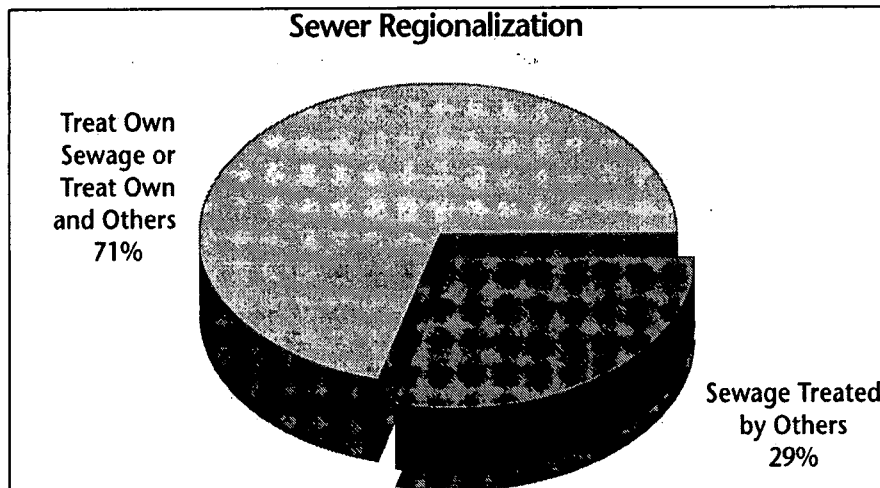
In the United States and abroad, regional cooperation among utility providers is used to increase efficiency of system operations, join systems together to enjoy economies of scale that otherwise might not be enjoyed by those members, and to provide service to areas that would not otherwise receive service. Regionalization, regional collaborations and partnerships take many forms and provide a variety of services to North Carolina drinking water and wastewater systems.

In keeping with its charge to provide recommendations on the role of the State government in the development and funding of wastewater, drinking water, and storm water infrastructure, the State Water Infrastructure Commission (SWIC) examined the concept and practice of regionalization in North Carolina. Through panel discussions and individual presentations, SWIC members heard from a variety of presenters including those that fund infrastructure in North Carolina and owners/operators of several of our largest regional systems.

Given the confluence of factors placing pressure on the safe operation of our state's infrastructure systems and highlighting our need for water resource planning and management statewide, the Commission sees regional collaboration as an important strategy/practice that may offer near-term benefit to the State. Without exception, funders and those that manage these regional systems see regional collaboration as an essential component of our State's strategy for enhanced resource management. A common thread running through all discussions and presentations was that State policy could do more to support regional collaborations. The graphics below show the extent of physical interconnection between drinking water and wastewater systems as of 2003.



**Source: NC Rural Center, Water 2030 Report**



**Source: NC Rural Center, Water 2030 Report**

#### **Outcomes of SWIC work on Regionalization:**

DENR through the Public Water Supply Section contracted with the UNC Environmental Finance Center to provide public water system capacity development support. One of the deliverables from this contract was to provide an inventory of water system partnerships, interconnections and the institutional agreements that control their usage. This information is available from the Environmental Finance Center's Web site at the following Uniform Resource Locator (URL). Information can be found at the following location:  
<http://www.efc.unc.edu/projects/partnerships.htm#inventory>.

**Recommendations of SWIC on Regionalization:** Support the development of regional infrastructure partnerships through direct State investment in policy development, funding, and technical assistance through the following:

- Develop and implement a set of criteria for evaluating system "readiness" for regionalization. This may prevent bringing systems that are not ready i.e., not yet managing their systems efficiently and effectively, into a regional configuration where they cannot participate as an equal.
- Fund a study to identify the most promising regions for water regionalization that could then inform local decision makers, funders and the public.
- Provide Start-Up funding for regional projects to match local investments for the engineering, planning and legal work associated with forming a regional entity.

### ***f. Asset Management***

The Environmental Protection Agency defines asset management as “managing infrastructure capital assets to minimize the total cost of owning and operating them, while delivering the service levels customer's desire. Each utility is responsible for making sure that its system stays in good working order-regardless of the age of components or the availability of additional funds. Asset management programs with long-range planning, life-cycle costing, proactive operations and maintenance, and capital replacement plans based on cost-benefit analyses can be the most efficient method of meeting this challenge.” (EPA website)

Asset Management entails maintaining an up-to-date inventory of water and wastewater assets and planning for the repair and replacement of those assets. It makes good sense and provides a means by which local systems can stay ahead of the “aging infrastructure” game. However, as discovered in the Water 2030 Initiative, few North Carolina systems – particularly smaller systems- have an active inventory or an Asset Management Plan.

Following logically along with the work on water audits and leak detection and repair, the SWIC supports Asset Management as a strategic water efficiency practice. SWIC appointed a sub-committee (Task Force) to begin an assessment of the current educational and technical assistance efforts at the State level and a look at gaps in education and technical assistance specific to asset management.

Attached in ***Appendix 4*** is a copy of the meeting summary of the Asset Management Task Force.

#### ***e. Program Evaluation Division Report on Infrastructure Funding***

In January 2009 the Program Evaluation Division of the NC General Assembly released its report assessing the focus and coordination of State funding for water, wastewater and stormwater infrastructure. The Program Evaluation Division is a central, non-partisan staff unit of the Legislative Services Commission of the North Carolina General Assembly which assists the General Assembly in fulfilling its responsibility to oversee government functions. The mission of the Program Evaluation Division is to evaluate whether public services are delivered in an effective and efficient manner and in accordance with the law. (Website) The report entitled, ***Report No. 2008-12-07: NC's Water and Wastewater Infrastructure Funding Lacks Strategic Focus and Coordination***, can be found on the NCGA website at <http://www.ncga.state.nc.us/PED/Reports/RecentReports.html>.

Directed by the North Carolina General Assembly's Legislative Program Evaluation Oversight Committee, the Program Evaluation Division (PED) conducted research on the six (6) State funding programs for infrastructure, "to determine the effectiveness of the current allocation system and to identify funding alternatives for infrastructure improvements." (Executive Summary, PED Report) In addition to the six State funders, the State Water Infrastructure Commission was also evaluated to determine how well it had met its intended mission.

The PED Report concluded that the system for funding was duplicative and uncoordinated and that without an oversight agency or a strategic plan to guide activities, water and wastewater funding was provided in a complex and fragmented manner. (PED Report)

The PED Report also concluded that the State Water Infrastructure Commission, had fallen short of achieving its mission of identifying the state's water infrastructure needs and developing a plan to meet those needs. The PED Report stated that this was attributable to the fact that the SWIC did not have the necessary funding or authority to deliver on the legislative charge.

The PED Report recommended that the General Assembly should consider the following actions:

- Direct the State Water Infrastructure Commission to develop a statewide strategic plan and needs assessment for water and wastewater infrastructure by May 1, 2010;
- Require better oversight of water and wastewater funding by either authorizing the State Water Infrastructure Commission to coordinate and oversee the system or by establishing a single water and wastewater authority;

- Using state loan program and relying less on grants when determining state appropriations for water and wastewater infrastructure. (Executive Summary – PED Report)

### ***SWIC Response to PED Report***

Since the spring of 2006 when it was appointed and organized the SWIC has provided a monthly forum for communication, collaboration, and cooperation for state and federal funders of water infrastructure, local governments and other interested parties. I believe the SWIC has successfully increased the communication, cooperation and collaboration among funders and other agencies.

With its limited resources and authority SWIC has chosen to focus on increasing cooperation rather than developing a strategic water infrastructure financing plan. In order to develop a strategic water infrastructure financing plan SWIC or any other agency would need clearer goals and objectives from the Governor and/or General Assembly. SWIC does not have the authority and has not sought the authority to require funders or other agencies to comply with what it considers best practices.

In a letter to the Joint Legislative Committee Chairs in January 2009, the Chairman responded on behalf of SWIC to state, "I believe that inconsistent funding has resulted in the lack of a statewide strategic plan more than the lack of a plan has caused inconsistent funding. State and local roles in planning, financing, constructing, operating and maintaining other significant infrastructure, including public schools, community colleges, universities, transportation and even parks, is relatively well defined. The State role in water infrastructure is not well defined. In good economic times the General Assembly has been generous in its funding for water infrastructure. The General Assembly's support has been important because national funding for EPA's drinking water and wastewater programs has decreased. The SWIC has advocated for a dedicated source of state funding for water infrastructure to be matched with local water, wastewater and stormwater revenues." (SWIC Response Letter to PED Report, January 2009)

In that correspondence, three **recommendations** were offered:

- 1) SWIC would appreciate the opportunity to develop a statewide strategic plan and needs assessment for water and wastewater infrastructure funding by May 2010. The General Assembly should set the goals that it desires the plan to achieve. The plan should include stormwater and other "new" sources of water such as that found with reclaimed water. SWIC would also appreciate the opportunity to assist in the development of regional strategic plans based on river basins. Further, SWIC would



oppose transferring funds from the Rural Center and CWMTF to pay for planning and would support an appropriation from the General Assembly instead.

- 2) Over time the General Assembly has created a decentralized system of meeting different water and wastewater needs. SWIC believes that it is appropriate and timely to discuss, debate, and consider alternatives to our current system. SWIC would welcome an opportunity to consider improving oversight and coordination.
- 3) EPA and USDA primarily provide low interest loans for water finance. SWIC could work with funders, the Local Government Commission, and the General Assembly to establish clearer state policies regarding the investment of state funds. Specifically, the state would benefit from clearly defined state policy on the funding of infrastructure improvements. Specifically, this should include guidance on the level of state assistance when the high unit cost threshold now established in NCGS 159G-20 is exceeded. Related to this topic, the SWIC would decide whether to recommend the existing high unit cost threshold of 1.5% of median household income be increased to the 2009 General Assembly.

### ***General Assembly Action Following Release of PED Report***

Although bills to implement the recommendations of the PED Report were introduced, the 2009 General Assembly did not act upon them.

The General Assembly appropriated no funds for SWIC to operate in 2009-2011.

The General Assembly authorized a legislative study committee on water and wastewater infrastructure in the Studies Act of 2009 (Part XLIII of SL 2009-574).

# Appendices

## **Appendix 1**

### **Rate Design Guidelines per Drought Bill Draft Presented to SWIC by UNC Environmental Finance Center 6/19/09**

#### **Cost Recovery**

1. Data sources
  - a. Last available audited financial report from the Local Government Commission database
  - b. Last approved annual budget
  - c. Approved multi-year capital investment plan and/or budget
  - d. Multi-year financial plan
2. Definitions
  - a. Annual operating expenditures
  - b. Annual operating revenue
  - c. Annual interest payment
  - d. Annual principal payment
  - e. Depreciation
  - f. Fund transfer
  - g. Reserves
  - h. Fixed cost
  - i. Variable costs
  - j. Asset management
3. Revenue tests
  - a. Operating revenues less than operating expenditures
  - b. Operating revenues less than operating expenditures and debt service (principle and interest payment)
  - c. Operating revenues more than operating expenditures
    - i. Less than 50% of depreciation funded
    - ii. 50-99% depreciation funded
4. Corrective measures/justification
  - a. Immediate rate increase
  - b. Documentation showing future revenue projections
  - c. Plan showing steps being taken to assure water system is sustainable
    - i. Approved rate increase program
    - ii. Approved multi-year financial plan
    - iii. Existence of reserve funds

## **Conservation Oriented Rates**

1. Data sources
  - a. Rate structures
  - b. Water shortage vulnerability
    - i. Drought status
    - ii. Safe yield
    - iii. Unused water treatment capacity
    - iv. Unused wastewater treatment capacity
2. Definitions
  - a. Fixed charge
  - b. Commodity charge
  - c. Block structure
    - i. Decreasing
    - ii. Uniform
    - iii. Simple Increasing
    - iv. Seasonal
    - v. Water budget
  - d. Marginal price
  - e. Average price
  - f. Average bill
  - g. Temporary water shortage rates (drought surcharge)
3. Anticipated conservation impact of rates tests
  - a. Block structure
  - b. Average price (5 K, 15 K for water only and combined water and wastewater)
  - c. Price of next 1,000 gallons (marginal price) (5 K, 10K, 15 K)
  - d. Percentage change in bill of next 1,000 gallons (5K, 10K, 15K)
  - e. Price of next 5,000 gallons (5K to 10 K)
  - f. Percentage change in bill of next 5,000 gallons (5K)
  - g. Billing period
  - h. Bill information
4. Measures
  - a. Increase rates
  - b. Reduce water productions
  - c. Rate structure change
  - d. Adoption of water shortage rate program
5. Conservation revenue vulnerability test
  - a. Historic usage analysis
  - b. Historic revenue analysis
  - c. Percentage of revenues generated from fixed charge component
  - d. Days cash on hand/fund reserve
  - e. Operating Revenue/Operating Expenditure

## Appendix 2

### **Resolution by State Water Infrastructure Commission Increasing the Median Household Income/High Unit Cost Threshold In Order to Apply for Water Infrastructure Grants**

**Whereas** the 1998 General Assembly enacted SL 1998-132, Clean Water and Natural Gas Critical Needs Bond Act of 1998, by Senator John Kerr and others, and established 1.5% of median household income as the high unit cost threshold in order for combined water and wastewater systems or 0.75% of median household income for water or wastewater systems to apply for water infrastructure grants; and

**Whereas** many water and wastewater systems raised their rates in order to compete for high unit cost grants and to raise revenues to operate and maintain their systems; and

**Whereas** the 2005 General Assembly codified the high unit cost threshold at 1.5% for combined water and wastewater systems and 0.75% for water or wastewater systems in SL 2005-454, Clarify Clean Water Funding; and

**Whereas** the State Water Infrastructure Commission in its 2008 Annual Report to the Governor and General Assembly committed itself to determining whether and if so, how much to increase the median household income threshold used for determining grant eligibility; and

**Whereas** with assistance from the Environmental Finance Center at UNC-Chapel Hill the SWIC determined that 67% of NC water systems would qualify for high unit cost grants if the threshold remains at 1.5% for combined water and wastewater systems and that 56% of NC water systems would qualify for high unit cost grants if the threshold was increased to 2.0% for combined water and wastewater systems with a poverty rate of less than 12.3% and the threshold was maintained at 1.5% for combined water and wastewater systems with a poverty rate of 12.3% or greater; and

**Whereas** the SWIC recognizes that it is difficult for local elected officials to increase water and wastewater rates and that high unit cost threshold is a strong incentive for local elected officials and water systems to raise their rates to cover their operating and maintenance costs; and

**Whereas** according to audit data submitted by water systems to the NC Local Government Commission almost half (48 percent) operated with expenses greater than revenues in 2008; and

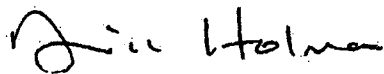
**Whereas** state policy should support local elected officials and water systems that are willing to raise their water rates to sustain their water systems.

**Now, therefore be it resolved** by the State Water Infrastructure Commission meeting in Raleigh, North Carolina on May 15, 2009:

The General Assembly of North Carolina should increase the high unit cost threshold to 2.0% for combined water and wastewater systems and 1.0% for water or wastewater systems with a poverty index of less than 12.3% and should retain the high unit cost threshold at 1.5% for combined water and wastewater systems and 0.75% for water or wastewater systems with statewide individual poverty index or greater as determined by the last decennial census index (currently 12.3% poverty ), effective July 1, 2010.

The SWIC will work to develop other criteria to determine affordability and to identify troubled or unsustainable water systems and will report to a future session of the General Assembly.

This resolution does not apply to the economic development programs administered by the NC Department of Commerce and the NC Rural Economic Development Center which are intended to create and retain jobs.



Bill Holman  
Chairman



### North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue, Governor

Dee Freeman, Secretary

February 26, 2009

Representative James W. Crawford, Jr.  
Co-Chair, Joint Legislative Program Evaluation Oversight Committee  
North Carolina General Assembly  
Legislative Building  
16 West Jones Street  
Raleigh, NC 27601

Senator Daniel G. Clodfelter  
Co-Chair, Joint Legislative Program Evaluation Oversight Committee  
North Carolina General Assembly  
Legislative Building  
16 West Jones Street  
Raleigh, NC 27601

Senator Fletcher L. Hartsell, Jr.  
Co-Chair, Joint Legislative Program Evaluation Oversight Committee  
North Carolina General Assembly  
Legislative Building  
16 West Jones Street  
Raleigh, NC 27601

Gentlemen:

We are writing to you today in follow up to the Program Evaluation Division's report to the Joint Legislative Committee regarding water and wastewater infrastructure funding. One of the main points of discussion in the report and at the meeting concerned the need for greater coordination of activities among the different funding entities. While each of our programs was created to meet a specific statutory purpose, we also understand the value of coordinating our activities to be more efficient, to improve project management, and to provide more complete and understandable information on progress made toward meeting the state's water and wastewater infrastructure needs.

Our agencies have discussed ways to increase coordination of our water and wastewater infrastructure funding activities. Recognizing that our agencies are charged by the General Assembly to address different needs, our goal is to do so in a manner that adds value to each agency, minimizes the burden on applicants and provides clear and

1601 Mail Service Center, Raleigh, North Carolina 27699-1601  
Phone: 919-733-4984 \ FAX: 919-715-3060 \ Internet: [www.enr.state.nc.us/ENR/](http://www.enr.state.nc.us/ENR/)

An Equal Opportunity / Affirmative Action Employer - 50 % Recycled \ 10 % Post Consumer Paper

One  
North Carolina  
*Naturally*

complete information on the performance of our funding programs. We identified five specific ways to accomplish this goal without increased bureaucracy or cost:

1. Develop a common first page for grant and loan applications. The intent is to create a single template for project descriptions that will make it easier to identify and coordinate on projects that request funding from multiple agencies, as well as to streamline the application process for applicants.
2. Schedule regular joint meetings of the funding agencies to share water and wastewater funding opportunities with potential applicants. This is an approach that the funding agencies have used periodically in the past, most recently to help water systems identify funding for drought response projects.
3. If a project receives funding from multiple state funding sources, we propose to exchange progress reports and site visit information among the funding agencies. Our agencies believe that there are opportunities for programs that jointly fund a particular project to also share and improve oversight responsibilities.
4. In addition to preparing our individual program funding reports for the General Assembly, each agency would share a copy in a common format with the State Water Infrastructure Commission. SWIC could then merge the information into a single annual funding report on all water/wastewater funding activities. A single report will make it much easier for both the General Assembly and the public to understand and evaluate water/wastewater funding activities.
5. Examine the needs assessment that is currently done by the Environmental Protection Agency (EPA), the needs survey done by DENR, and the Water 2030 data to determine what all the assessment tools tell us and where there may be gaps in the data in order to begin the process of developing a statewide needs assessment.

Our agencies are currently working to develop a document further defining our ideas for improved coordination and to ultimately sign a Memorandum of Understanding between our agencies adopting these coordination recommendations. We expect to have a more detailed document to share with you very soon.

Sincerely,



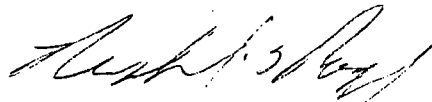
Dee Freeman  
Secretary of Environment and Natural Resources



J. Keith Crisco  
Secretary of Commerce



Billy Ray Hall, President  
N.C. Rural Economic Development  
Center



Richard Rogers, Executive Director  
Clean Water Management Trust  
Fund

Cc: Representative Joe Hackney, Speaker of the House  
Senator Marc Basnight, President Pro Tempore of the Senate





**CAVANAUGH**

*Solutions through integrity and partnership*

### SUMMARY OF MEETING

**DATE:** May 11, 2009

**TIME:** 3:00 p.m.

**PARTICIPANTS:** Steve Cavanaugh – SWIC  
Sharon Edmundson – State Treasurer's Office  
Dennis Ramsey – NCDENR – Division of Water Resources  
Linwood Peele – NCDENR – Division of Water Resources  
John McFadyen – NCDENR Public Water Supply

**RE:** SWIC Asset Management Task Force

---

Steve opened the conference call by explaining that although we were likely to have a limited group on the call at this first meeting, it was important to get started and outline some broad concepts relative to Asset Management and to keep those who were not able to participate informed by email.

Steve explained that the intent was to have a large cross-section of members who were interested in Asset Management, ranging from the members of SWIC, members of funding agencies and representation from small, medium and large systems. The members who have been contacted and expressed their interest include:

- Bill Holman – SWIC
- Downey Brill – SWIC
- Jean Klein – SWIC
- Jim Lowry – NCUCA
- Larry Cummings – Gastonia
- Rudy Shaw – Aqua America
- Sid Harrell – Public Water Supply
- Terry Rolan – Utility Consultant
- Vance Holloman – NC State Treasurers Office

In addition to these members, Linwood Peele suggested that we make contact with NC Rural Water Association – Daniel Wilson, Executive Director – and gain insight from Lowell Gunter, Training and Technical Assistance Specialist who has drafted a Small System Asset Management training seminar as administered by the NC Rural Water Association.

The group had general opening remarks relative to the importance of Asset Management and some of the limitations relative to funding of maintenance items in North Carolina. Steve delivered an Asset Management Best Practices guide as

SOM - SWIC Asset Management Task Force  
May 11, 2009  
Page 2 of 2

prepared by USEPA that identifies the five core questions of Asset Management including :

1. Current state of assets;
2. Level of service;
3. Critical assets;
4. Minimum life cycle costs;
5. Long-term planning.

It was suggested that this straight forward and simple EPA summary should be presented to the SWIC at the Friday, May 15<sup>th</sup> meeting.

The group also framed out the specific focus of the Task Force to the following areas:

1. Provide a general description of Asset Management;
2. Describe existing Asset Management practices in North Carolina for small, medium and large systems;
3. Discuss current funding practices, both opportunities and limitations;
4. Present any recommendations or policy considerations that the State Water Infrastructure Commission may consider relative to a stronger adoption of Asset Management in North Carolina and incentives for proactive Asset Management.

These notes will be sent to all the members who expressed their interest to be on the Asset Management Task Force and an additional conference call will be set.

Steve committed to communicate with NC Rural Water and to consider a few speakers who could present information to SWIC over the next few months.

The conference call was adjourned at 3:40 p.m.

## Appendix 5

Department of Environment and Natural Resources  
May 8, 2009

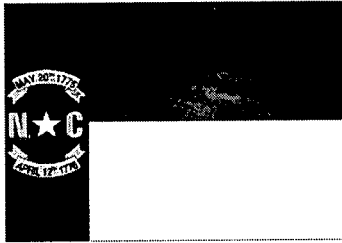
### GUIDANCE FOR WATER SYSTEMS ON MEETING THE LEAK DETECTION AND REPAIR REQUIREMENT FOR STATE LOANS AND GRANTS

Effective July 1, 2009, a water system seeking state funds for water line extension or expansion of water treatment capacity must have a leak detection and repair program. G.S. 143-355.3(b)(2). The funding agencies agree that the intent of the legislation was to require a basic program for identifying and reporting leaks and acting on that information. The level of effort necessary to meet the eligibility criteria will be below the level of effort required to receive priority points for a water loss reduction program under the existing common criteria used by the funding agencies.

The water system must include in its funding application a description of a program to identify, locate and respond to leaks in water lines and other water system infrastructure. The program is not required to use any particular technology or method of leak identification, but must be designed to actively gather and act on information about leaks in the water system. A description of the leak detection and repair program should include the answers to the following questions:

1. What tools, programs or activities are used to proactively identify and locate leaks?
2. Do written standard operating procedures exist to describe these activities?
3. How is the information on leaks tracked and managed?
4. How is information from the leak detection program acted on? Describe how the information is used in making decisions to replace, repair, or delay action on pipes and appurtenances with known leaks.
5. How is information gathered in the leak detection program reflected in the capital improvement program?
6. How effective has the leak detection program been in reducing water loss?
7. What future activities are planned?

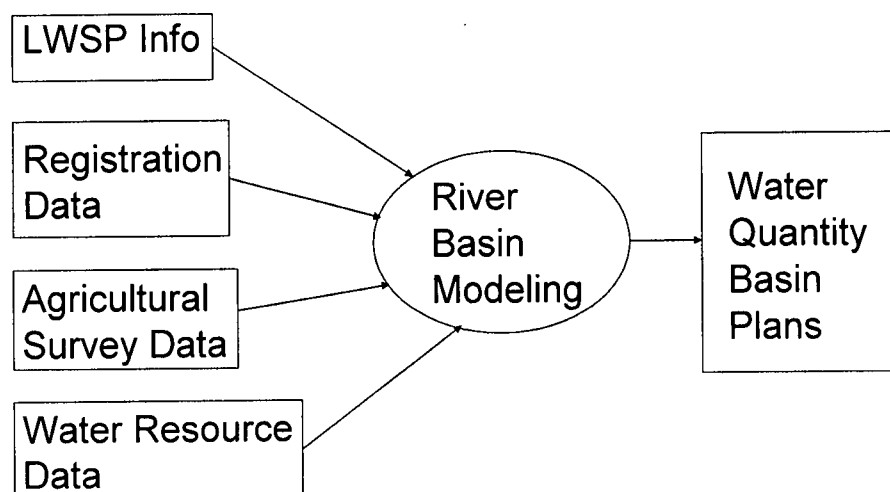
Answer with sufficient detail to provide a clear picture of the leak detection and repair program. For example, in describing activities undertaken to identify and locate leaks, include information on the frequency of those activities.



# Water Supply Planning in North Carolina

Water / Wastewater Infrastructure  
Study Commission  
December 14, 2009

Data + Modeling & Analysis = Plans



## Data Sources

- Local Water Supply Plans (LWSPs)
- Water Withdrawal Registration Data
- Agricultural Water Use Survey Data
- Water Resources Data
  - State Ground Water Network
  - USGS
  - State Climate Office

## Local Water Supply Plan Program

- 1<sup>st</sup> plans submitted in 1990.
- An assessment of a water system's current & future needs and its ability to meet those needs.
- Required for:
  - Units of local government
  - Community water systems with > 1,000 connections or serving > 3,000 people.
- Updated every 5 years.
- Annual water use reporting

## Local Water Supply Plan Program

- Plans are submitted electronically.
- Reviewed and approved by NC DWR.
  - New requirement in 2008 Drought Bill.
- Data essential for river basin models.

## Local Water Supply Plan Program

- Complete plan includes:
  - System Information
  - Water Use Information
  - Water Supply Sources
  - Wastewater Information
  - System Planning and Projections to 2050.
  - Water Shortage Response Plan
    - For managing water use during times of water shortages.

## LWSP 80% Guideline

- When average daily demand is projected to exceed 80% of a system's available supply by 2030.
- Systems are asked to evaluate options such as:
  - Enhanced demand management and efficiency
  - Additional source of water
    - Interconnection, additional wells, surface water intake, etc
- Describe plan in LWSP
- DWR Staff reviews proposed plans for new supply to determine if water will be available.

## Withdrawal Registration & Reporting Program

- Non-ag withdrawals >100,000 gpd required to register.
- Ag withdrawals >1,000,000 gpd required to register.
- Applies to surface and ground water withdrawals.
- Annual reporting of water use for registered users.
  - Requirement of 2008 Drought Bill.
- Local Water Supply Plan meets requirement.

## Agriculture Survey

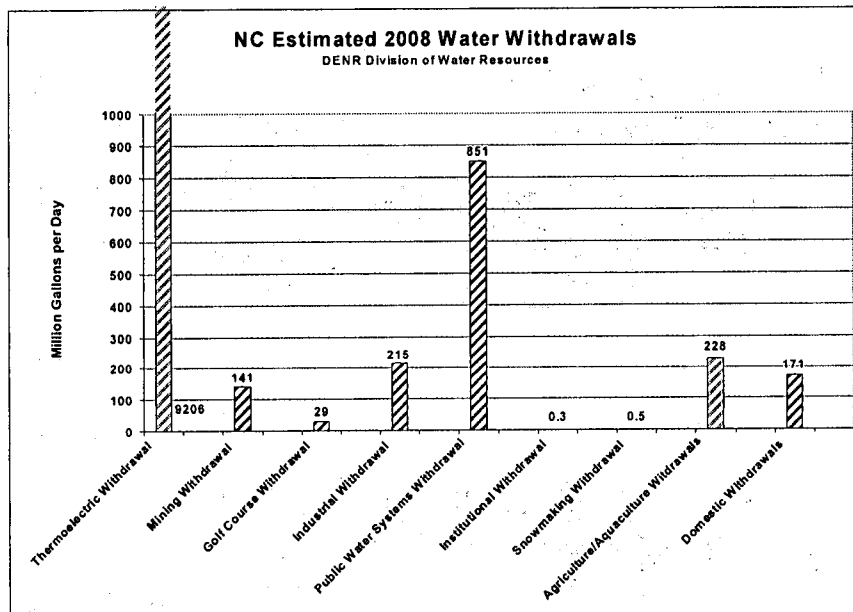
- New requirement in 2008 Drought Bill.
- Conducted by Dept of Ag & Consumer Services
- Survey of ag users > 10,000 gallons per day.
- 86% response rate.
- Results of 1st Survey submitted July 1, 2009.
- Contains information & data previously unavailable.
- In 2008 agricultural water use exceeded use by large community and local government water systems in July and August.

## Water Resources Data

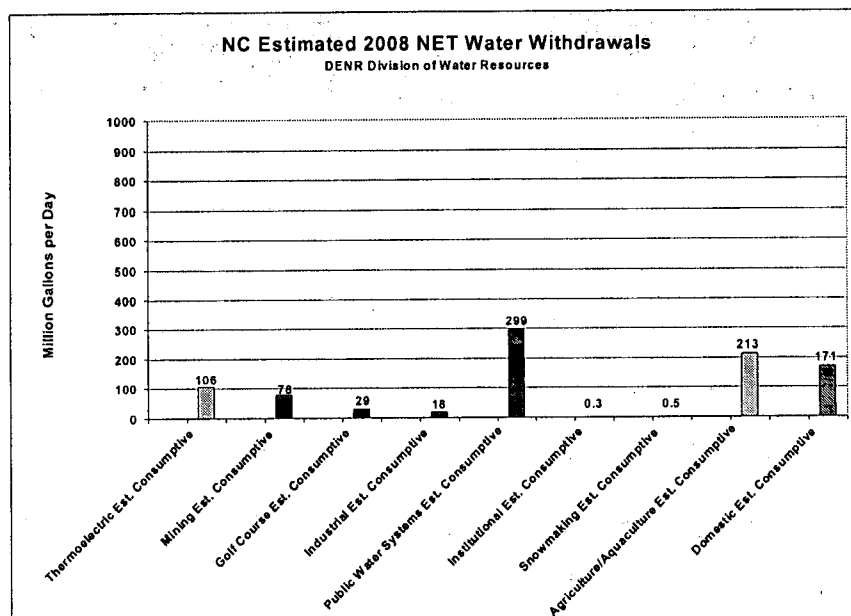
- State Ground Water Network
  - DWR monitors 561 wells across the State.
- NC – USGS Cooperative Program
  - Monitor 68 real-time stream flow gages.
  - Monitor 16 real-time wells.
- State Climate Office
  - Integrated database of streamflow, ground water levels, and climatic data.



## Average Daily Withdrawals



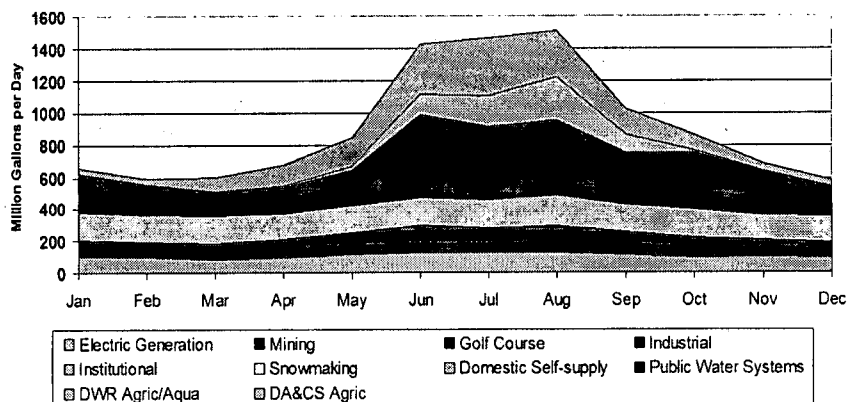
## Average Daily Net Withdrawals – Consumptive Use



## Monthly Average Daily Net Withdrawals

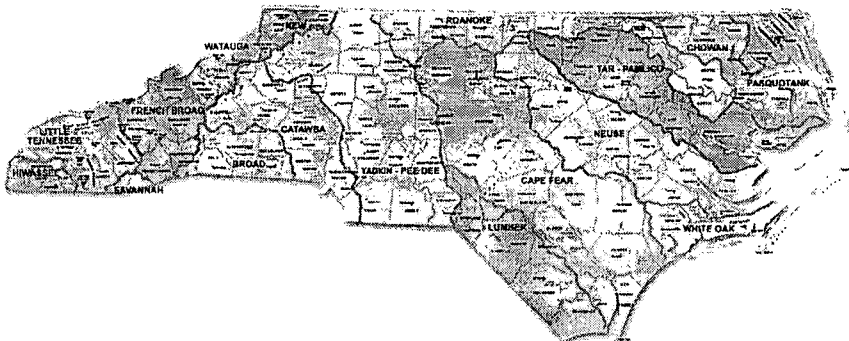
### NC Estimated 2008 Net Water Withdrawals

DENR Division of Water Resources



## River Basin Modeling

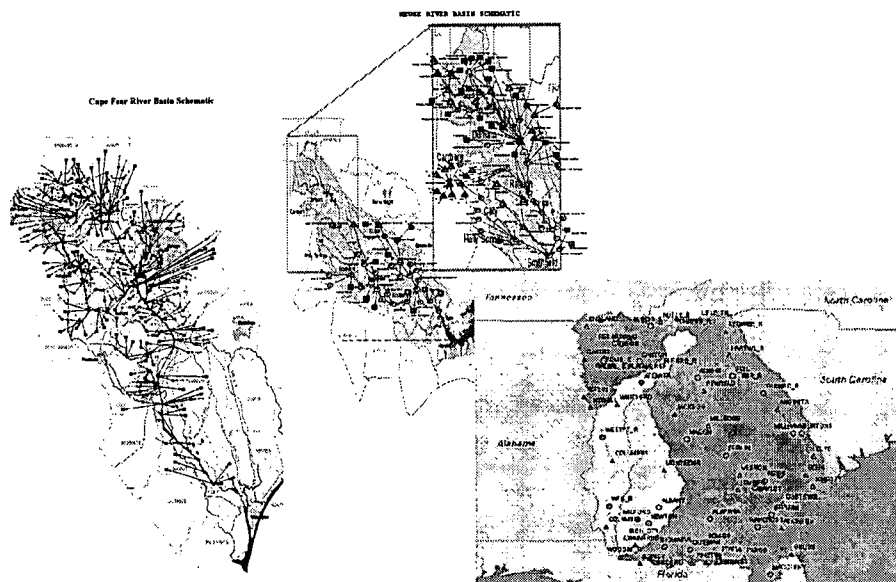
- Basin by basin approach.
- One of the most sophisticated programs in SE.
- Provide science based tools to study water management.



## River Basin Model Basics

- Water Balance Model  
 $\text{Inflow} - \text{Outflow} = \text{Change in Storage}$
- Model is like a checkbook  
Natural Inflow & WW Discharges = Salary  
Outflow & Withdrawals = Expenses  
Storage = Bank Account
- Calculated at many locations in basin.
- The complexity is developing the data and equations to describe the 3 variables.

## NC – GA Model Comparison



## Practical Applications of Modeling

- Determine the impacts of new & existing water withdrawals and wastewater discharges.
- Determine potential shortfalls based on projected uses detailed in Local Water Supply Plan.
- Scientifically defensible means of generating daily stream flows for ungaged stream segments.
- Safe yield estimates for run-of-the-river intakes and water supply impoundments.
- Develop and test drought management plans.

## Schedule for Models Underway

|             |                  |
|-------------|------------------|
| Cape Fear   | Update – 12/2010 |
| Neuse       | 12/2009          |
| Roanoke     | Update - 6/2010  |
| Tar-Pamlico | 6/2011           |
| Broad       | 6/2011           |

## River Basin Plans

- River Basin Plans are the final product of process.
  - Provide analysis of model output.
- Information needed for long range planning.
- Similar to DWQ Basinwide Plans.
- DENR goal to better coordinate and integrate DWR & DWQ Basin Plans.

## Schedule for Basin Plans Underway

|             |                  |
|-------------|------------------|
| Cape Fear   | Revised – 6/2011 |
| Neuse       | 6/2010           |
| Roanoke     | 6/2011           |
| Tar-Pamlico | 6/2012           |
| Broad       | 6/2012           |

## Benefits of Planning Program

- Highlights potential problems or shortfalls in future.
  - Identifies areas where demand may exceed supply.
- Resolution of potential conflicts over water sources.
  - Multiple systems over-using a single source.
  - Competition for water during droughts
- Provides local governments a valuable planning tool.
  - Raleigh, Jordan Lake Partners, IBTs, etc...
- SEPA Cumulative Impact Analysis

## What if there is not enough water?

- Projected demand greatly exceeds available supply.
- Opportunity for local solutions:
  - Comprehensive conservation & greater efficiency.
  - Joint ventures / regional solutions.
  - New sources, interconnections, IBTs, etc...
- One regulatory option currently available:
  - EMC designates area a "Capacity Use Area" (CUA)
- One area in State already designated as CUA:
  - 15 Counties in Central Coastal Plain CUA.

## Challenges of Current Program

- Incorporation of Ecological Flows.
  - How much water needs to be left in the river?
  - Not a single number – a seasonal flow regime or hydrograph.
  - Complex issue for all States to address.
- Incorporation of groundwater impacts.
- Ensure model outputs reflect reality.

## Value of Regional Water Supply Planning

|               | Total savings per mgd | Annual Net benefit per household | B/C Ratio  |
|---------------|-----------------------|----------------------------------|------------|
| Atlanta       | \$1.48                | \$3.83                           | 2.0        |
| Boston        | \$3.45                | \$28.92                          | 1.8        |
| Seattle       | \$1.06                | \$6.95                           | 2.1        |
| Phoenix       | \$1.76                | \$10.32                          | 4.3        |
| Houston       | \$10.33               | \$14.44                          | 1.7        |
| <b>Median</b> | <b>\$1.76</b>         | <b>\$10.32</b>                   | <b>2.0</b> |

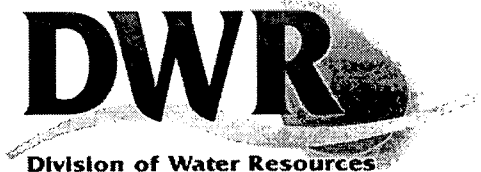
## Data + Modeling & Analysis = Plans

- One of the most sophisticated programs in SE.
- Accomplished with a minimal amount of resources.
- Need to incorporate ecological flow regimes.
- Process constrained by existing staff resources.

## Questions?

Contact Information:

Tom Reeder  
919-715-3045  
[tom.reeder@ncdenr.gov](mailto:tom.reeder@ncdenr.gov)





## VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure

12/14/09

Name of Committee

Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE  
CLERK

| NAME                 | FIRM OR AGENCY AND ADDRESS                           |
|----------------------|------------------------------------------------------|
| BILLY GUILLET        | NCRC                                                 |
| Bobby Blue           | NCRC                                                 |
| Sara Stuckey         | NCRC                                                 |
| Julie Haigler Cubeta | NCRC                                                 |
| W. Gaudin Culp       | Personal Interest                                    |
| Cody Thomas          | NCAR                                                 |
| Tommy Stevens        | NCPC                                                 |
| RICHARD WHISWANT     | UNC SDG                                              |
| Dawn Jennings        | P. W. C. of the City of Raleigh<br>Agalline of D. C. |
| Allison Fowler       | NC State Grange                                      |
| Nick Tosco           | NCLM                                                 |

## VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure

Name of Committee

12/14/09

Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

| NAME          | FIRM OR AGENCY AND ADDRESS |
|---------------|----------------------------|
| Rita Harris   | NC Commerce                |
| DANIEL WILSON | NC RWA                     |
| JOHN GOODMAN  | NC CHAMBER                 |
| Sandy Sauts   | WCSR                       |
| Doug Heron    | WILLIAMS MULLEN            |
| Kim Hibbert   | NCLM                       |
| Lisa Martin   | NC Home Builders           |
|               |                            |
|               |                            |
|               |                            |
|               |                            |
|               |                            |

## VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure

Name of Committee

12-14-09

Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE  
CLERK

| NAME            | FIRM OR AGENCY AND ADDRESS                   |
|-----------------|----------------------------------------------|
| Jim Lowry       | NC Utility Contractors Assn                  |
| Larry Horton    | NC DENR<br>Clean Water Management Trust Fund |
| Amy Simes       | DENR                                         |
| Mary U. da      | DENR                                         |
| Jerry Beardsley | GIC                                          |
| Robin Smith     | DENR                                         |
| Elizabeth Bism  | DENR                                         |
| Steve Wall      | DENR                                         |
| Amy Hobbs       | MWC                                          |
|                 |                                              |
|                 |                                              |

# VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure  
Name of Committee

Dec. 14, 2009  
Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE  
CLERK

| NAME             | FIRM OR AGENCY AND ADDRESS                 |
|------------------|--------------------------------------------|
| T REEDER         | DENR                                       |
| D RAYNO          | DENR                                       |
| DRK KILBR        | Law Office of K&B Kilbr                    |
| Buddy MURROW     | NC GREEN Industry Council                  |
| DOUG CHAPMAN     | NC GREEN IND. COUNCIL                      |
| MOE BOXLEY       | NC AGGREGATOR                              |
| Elizabeth Taylor | Kochanelek Law Group                       |
| Joy Hicks        | NCDAICS                                    |
| RAY STARLING     | "                                          |
| SHADI ESKAF      | ENVIRONMENTAL FINANCE CENTER<br>AT UNC SOG |
|                  |                                            |

# JOINT COMMISSION ON WATER & WASTEWATER INFRASTRUCTURE

## MINUTES

January 20, 2010

The Joint Commission on Water & Wastewater met on Wednesday, January 20, 2010, in Room 544 of the Legislative Office Building in Raleigh at 1:00 p.m. Members present were: Senators Charlie Albertson, Co-chair, Sen. Apodaca, Sen. Swindell, House members were Rep. Jim Crawford, Co-chair, Rep. Mitch Gillespie, Rep. Cullie Tarleton & Rep. Owens. Public members were: Mr. Richard Rogers, Mr. Buck Kennedy, Mr. Billy Ray Hall (Rural Center), Mr. Jim Blackburn (Co. Comm. Assoc.), Ms. Robin Smith, Mr. Larry Wooten (Farm Bureau) and Ms. Tori Small.

### **I. WELCOME & CHAIR REMARKS**

Sen. Albertson called the meeting to order and thanked everyone for their attendance.

### **II. STAFF COMMENTS**

Staff Counsel, Tim Dodge urged members to let us know if they are not receiving their email messages so that we can add them back to our distribution list.

### **III. POLLUTANT IMPACTS ON WATER QUALITY & WATER SUPPLY**

Ms. Colleen Sullins, Director, Division of Water Quality, Department of Environment and Natural Resources gave her power point presentation. (Attachment A). She explained water quality plans. She advised this information is for state-wide details. They collect fish and bugs to help gather their data for what's going on in bodies of water. This is to study sedimentation issues in monitored waters. Some stressors to our waters are broken down on Page 3 of her presentation. This explains the impacts in specific waters at the coastal areas, which includes freshwater acres of sounds.

Rep. Tarleton asked for the number one contributor of pollution. Ms. Sullins advised it is air. Particles land on the water and spread the pollutants.

Ms. Sullins continued with her presentation with various slides indicating the percentages of stressors and the affects of our waters. As basin plans are updated they can gather more data. Only about 32% of our NC streams are studied and this is a good basis for studies. Mercury is a state-wide problem in our streams and estuaries. Permit compliance is studied for what the waters are used for. Moratoriums provide important data. Treatment plants function under moratorium. They work with all communities

when moratoriums are put into place. Permit compliance includes many requirements that include animal feeding, industrial areas, schools, etc. Sanitary sewer overflows does continue to have its problems. In the future they will continue to look for ways to make their work internet friendly and work with agencies.

#### DISCUSSION:

Rep. Owens pointed out some of the spills that were provided (Attachment B) and who received penalties and who did not. Why is the fine for an animal waste spill more than for a human waste spill? Ms. Sullins said animal spills are more concentrated. She agrees that sanitary sewer spills has been stepped-up to come in line with animal spills. Rain fall amounts add to the severity of animal spills. In 2003 we had severe rain. Sen. Albertson shared his thoughts that there is a lack of consistency in enforcing animal and human waste spills. He's glad DENR is addressing this issue.

Mr. Bill Holman asked if there is another process to set state priorities on wastewater spills. Ms. Sullins said they have some plans in place now that will address and how to better use new data for future reports.

#### **IV. BEST PRACTICES TO IMPROVE THE COORDINATION OF WATER & WASTEWATER INFRASTRUCTURE FUNDING**

Mr. Jeff Hughes, Director, Environmental Finance Center, School of Government, University of North Carolina at Chapel Hill also had a power point presentation. (Attachment C). There are three objectives to help customers in studying state practices. Identifying needs was the starting point for gathering information and coordinating funding. They have also worked with at least 20 other states. Each state has different institutional structures on their operations with state and federal funds. There were some common structures that came up on all reports from other states; structured, committed participants, USDA participation, strong leadership, and focus of a few services. Some uncommon structures were if they required funders to fund projects contrary to their funding objectives, significant staff resources, and comprehensive resembled neighboring states. Kentucky has a Water Resource Information System that he found very interesting. They have things in their data base that we also have. Their information comes from the bottom up approach. They have policy planners that are equal to our Councils of Government. The data is updated every year in Kentucky. The system is paid for by user fess. There are 3 or 4 states that have a similar system, but Kentucky is the most extensive. He feels that NC is closer to Kentucky because we do have written data. Outreach services are important and NC and GA have these. Outreach includes things like funding roundtables, funding forums and funding fairs. This is a big achievement for us. Statewide Infrastructure Planning has many needs assessments; there are few funding plans and inventories with proposed funding sources which West Virginia has.

## DISCUSSION:

Mr. Billy Ray Hall asked if some of the other states had projects that were already included in data base. Mr. Hughes said he believe that was checked against data we have and compared it to other states.

Mr. Buck Kennedy asked if Mr. Hughes is familiar with the water/waste water data base that is used here in NC local watersheds. Mr. Hughes is very familiar with that program and he feels this is a good start to what we need for gathering data for coordination and assessments.

Rep. Owens feels some of the things other states are doing are important, but in NC each agency is funding different things and some of these steps will slow up the process. We need coordination but must be careful.

## V. AGRICULTURAL WATER USE ISSUES

Mr. Mitch Peele, Senior Director of Public Policy, NC Farm Bureau Federation gave his power point presentation. (Attachment D) He spoke on agriculture water usages. We have good data on agricultural use. There is a statewide registration system used by agricultural communities; there is a USDA Agricultural Census and also Ag water use surveys. Last year when the USDA program began it gave us excellent information. Agriculture uses about 1% less of water withdrawals in the state. There is not a lot of water use in animal agriculture comparably speaking. Agriculture is the state's number one industry. Many droughts are considered agriculture droughts that don't affect citizens of the state. Agriculture plays an important part of storage capacity for storing water for the future. There are approximately 17,000 farm ponds in NC. We have had past legislation that has addressed water usages and water resources that have helped us. There are things that will help us such as education and outreach; conservation and efficiency; increased storage capacity; use of alternative sources; and a new cost share program. A strategic plan has been developed that would include projections of growth; areas of concern; opportunity to partner with municipal wastewater plants; water audits; and need for cost share. Whatever we do to address water needs is going to require more money. We have existing tools in place such as the Water Use Act; CUA; State-wide reporting; inter-basin transfers and executive orders in place.

## DISCUSSION:

Rep. Tarleton commented that he appreciates the leadership shown by Farm Bureau. Ms. Smith asked what percentage of Ag usage comes from rivers, streams or water intakes. Mr. Peele did not have that data but feels this is a good source that we could study. Ms. Smith said this could help identify source impacts and water intakes. This would be useful information for other water users.

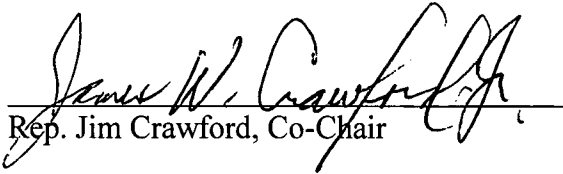
Mr. Bill Holman said the cost share program would be a good example of where we need to use our water quality to help with water quantity as well. He cautioned to be aware of competing users of water in addition to the Ag community.

## **VI. DISCUSSION FOR WORKING GROUPS PROPOSAL**

Sen. Albertson read the charges for a Working Group Proposal (Attachment E). He asked members to look over this list and see if there is a specific area you would like to work on. The Chairs and staff will put this together and begin work in each area. This will be put together in a few days. Rep. Crawford told them to sign up for 2 areas in case there is a need to move folks around. Mr. Peele asked if they would add the micro study to this list. Sen. Albertson advised this will be addressed if it is not on the current list.

## **VII. ADJOURNMENT**

The Chairmen announced the next meeting will be the end of March so that the working groups will have time to do their work and return their data to the full committee at the next meeting. The meeting adjourned at 2:45 p.m.

  
Rep. Jim Crawford, Co-Chair

  
Sen. Charlie Albertson, Co-Chair

  
Cindy J. Davis, Committee Clerk



# Legislative Study Commission on Water and Wastewater Infrastructure

## AGENDA

Wednesday, January 20, 2010 -- 1:00 P.M.

Room 544, Legislative Office Building

Sen. Albertson, Presiding

**I. Welcome & Chair Remarks**

Senator Charles A. Albertson  
Representative James Crawford

**II. Staff comments**

Staff

**III. Pollutant impacts on water quality and water supply**

Coleen H. Sullins, Director  
Division of Water Quality, Department of Environment and Natural Resources

**IV. Best practices to improve the coordination of water and wastewater infrastructure funding**

Jeff Hughes, Director  
Environmental Finance Center, School of Government, University of North Carolina at Chapel Hill

**V. Agricultural water use issues**

Mitch Peele, Senior Director of Public Policy  
North Carolina Farm Bureau Federation

**VI. Discussion of working groups proposal**

**VII. Adjourn**

---



**NORTH CAROLINA GENERAL ASSEMBLY**  
LEGISLATIVE BUILDING  
RALEIGH NC 27601

January 19, 2010

**MEMORANDUM**

**TO:** Members of the Legislative Study Commission on Water and Wastewater Infrastructure

**FROM:** Senator Charles W. Albertson, Co-Chair  
Representative James W. Crawford, Co-Chair

**SUBJECT:** Meeting Reminder

The Legislative Study Commission on Water and Wastewater Infrastructure will meet as follows:

**DAY:** Wednesday, January 20, 2010  
**TIME:** 1:00 pm  
**LOCATION:** Room 544 Legislative Office Building

If you have any questions concerning this meeting or are unable to attend, please contact Cindy Davis, Commission Clerk, at 919-733-5705 or by e-mail at [albertsonla@ncleg.net](mailto:albertsonla@ncleg.net).

# Legislative Study Commission on Water and Wastewater Infrastructure

## Agenda

Wednesday, January 20, 2010 -- 1:00 P.M.

Room 544, Legislative Office Building

Sen. Albertson, Presiding

### **I. Welcome & Chair Remarks**

Senator Albertson

Representative Crawford

### **II. Staff comments**

Staff

### **III. Pollutant impacts on water quality and water supply**

Colleen H. Sullins, Director

Division of Water Quality, Department of Environment and Natural Resources

### **IV. Best practices to improve the coordination of water and wastewater infrastructure**

#### **funding**

Jeff Hughes, Director

Environmental Finance Center, School of Government, University of North Carolina at Chapel Hill

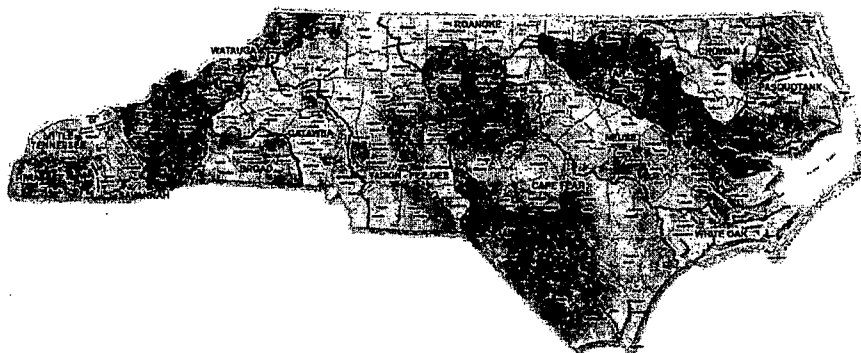
### **V. Agricultural water use issues**

Mitch Peele, Senior Director of Public Policy

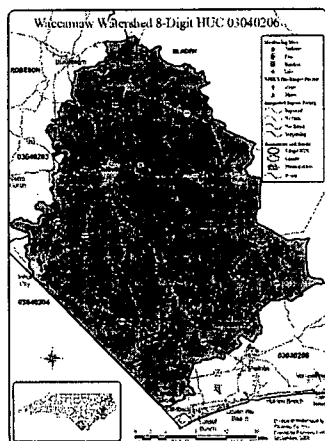
North Carolina Farm Bureau Federation

### **VI. Adjourn**

***North Carolina  
Division of Water Quality***



# Basinwide Water Quality Plans

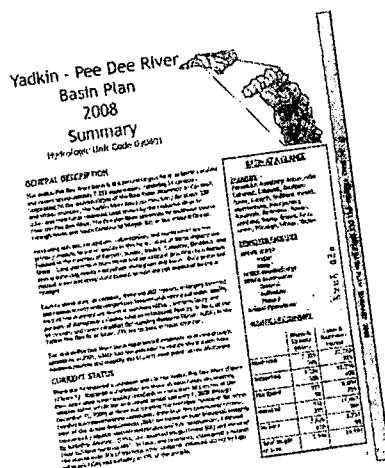


- **Target areas in need of additional water quality protection;**
- **Better evaluate cumulative effects of pollution;**
- **Meet EPA program reporting requirements; and**
- **Improve public awareness and involvement.**

## Content of a Basinwide Water Quality Plan



## What does NC get?



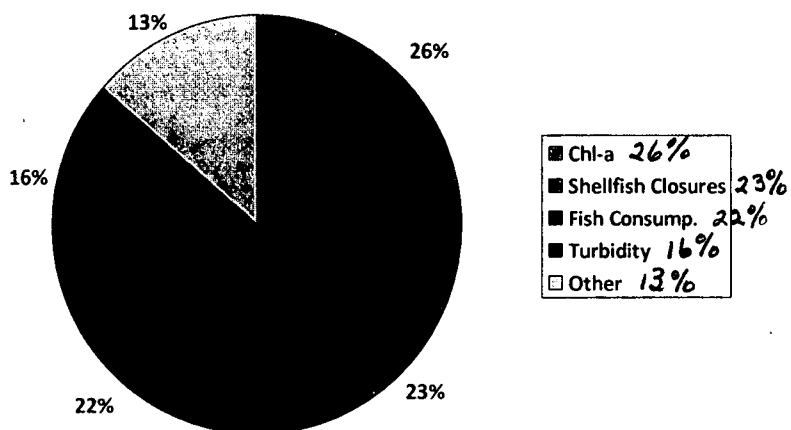
- Increased public understanding and participation;
- Focused resources;
- Sound ecological planning;
- Comprehensive NPDES permitting; and
- Integration and coordination of programs and agencies.

## Statewide Perspective Data Analysis

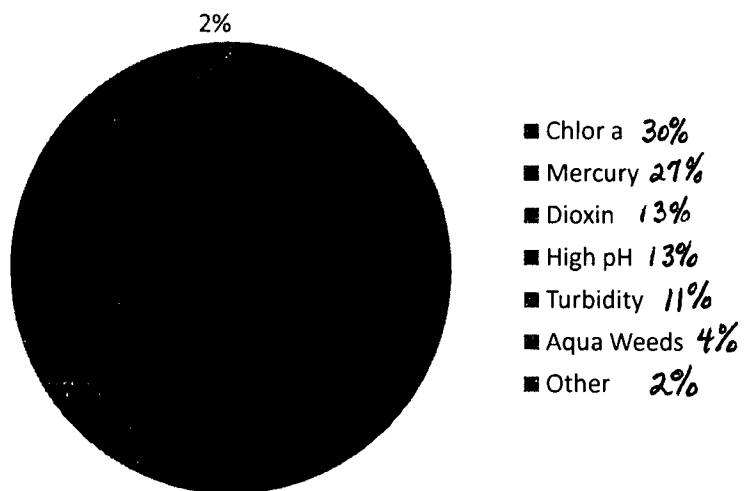
### Monitored Waters 2008 Integrated Report

| Use Rating | Reservoir Acres<br>% | Stream Miles<br>% | Estuarine Acres<br>% |
|------------|----------------------|-------------------|----------------------|
| Impaired   | 55.4                 | 29.4              | 28.8                 |
| Not Rated  | 10.3                 | 8.2               | 1.1                  |
| Supporting | 34.4                 | 62.4              | 70.0                 |

### Top Stressors: Estuaries

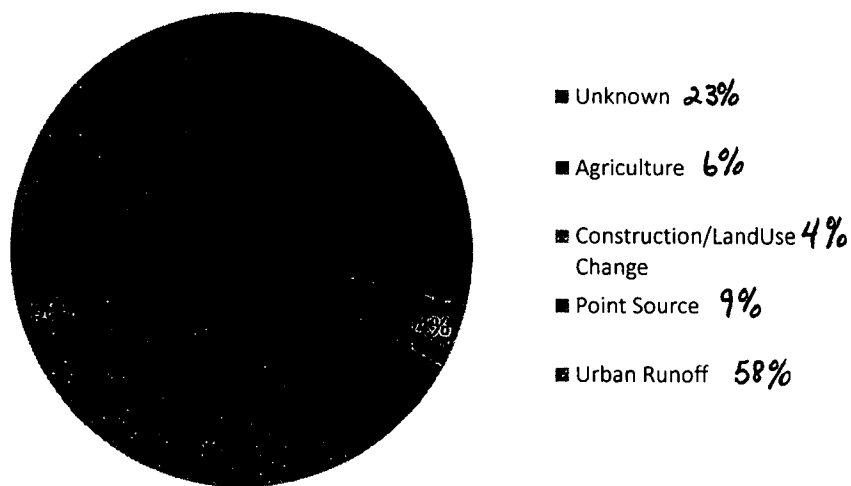


## Top Stressors: Reservoirs\*

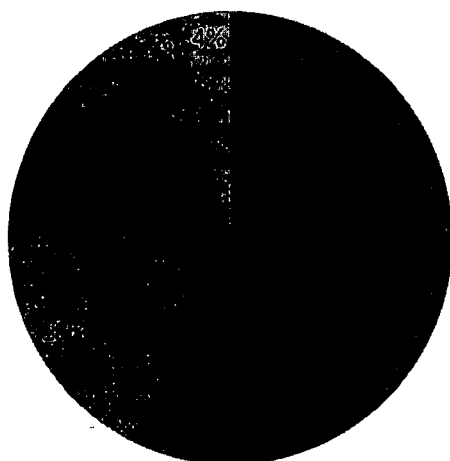


\* Includes freshwater acres of sounds

## General Sources of Stressors to Impaired Reservoirs

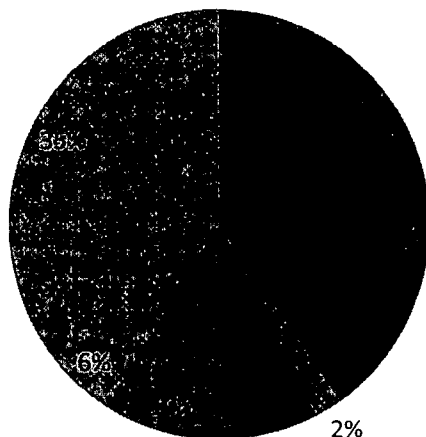


## Top Stressors: Streams



- Degraded Habitat 39%
- Mercury 18%
- Turbidity 18%
- Metals 9%
- REC FCB 8%
- Low DO 4%
- Other 4%

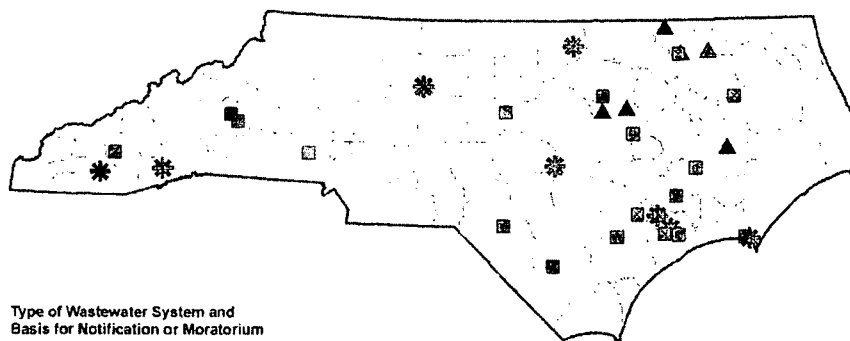
## General Sources of Stressors to Impaired Streams



- Unknown 27%
- Agriculture 13%
- All Land Application 2%
- Construction/Land Use Change 7%
- Forestry 6%
- Other 10%
- Point Source 6%
- Urban Runoff 35%



### Municipal Wastewater Facilities Subject to Moratorium, January 2010



Type of Wastewater System and  
Basis for Notification or Moratorium

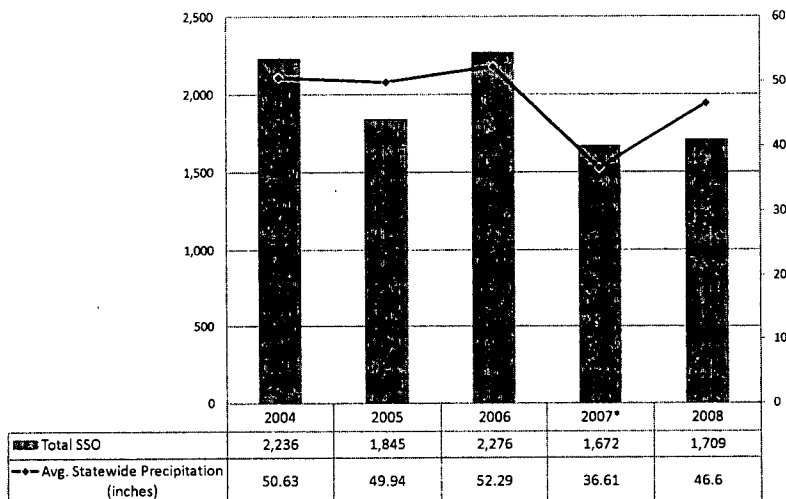
- ☼ Collection System, SOC
- ☼ Collection System, Statutory Moratorium
- ▲ Non-Discharge WWTP, SOC
- ▲ Non-Discharge WWTP, Statutory Moratorium
- ☐ NPDES WWTP, 80% Rule
- ☐ NPDES WWTP, 90% Rule
- ☐ NPDES WWTP, SOC
- ☐ NPDES WWTP, 90% Rule and SOC

### Permit Compliance Information\*

| Type of Permit                  | Notices of Violation | Penalties Assessed (#cases) | Inspections |
|---------------------------------|----------------------|-----------------------------|-------------|
| Development Related             | 734                  | \$368,156 (36)              | 3,136       |
| Animal Feeding Operation        | 106                  | \$22,715 (12)               | 2,158       |
| NPDES Wastewater                | 613                  | \$781,065 (356)             | 928         |
| Nondischarge                    | 189                  | \$194,485 (56)              | 1302        |
| Sanitary Sewer Overflows (1391) | 640                  | \$68,403 (38)               | 254         |

\* Subset of DWQ compliance/enforcement data.

Total SSOs and Average Rainfall



## Basinwide Initiatives

- Web-based Plans
- Agency Coordination
- Stakeholder Focus
- Public Interaction



| Permit    | Imposed Date | Facility                          | Owner                               | Region       | County       | Reason                       | Explanation                                                                     |
|-----------|--------------|-----------------------------------|-------------------------------------|--------------|--------------|------------------------------|---------------------------------------------------------------------------------|
| C0031879  | 03/01/2007   | Corpening Creek WWTP              | City of Marion                      | Asheville    | McDowell     | Under SOC                    | BOD, TSS, CN, TRC violations                                                    |
| C0039578  | 12/06/2006   | Jackson County WWTP               | Tuckaseegee Water & Sewer Authority | Asheville    | Jackson      | Under SOC                    | BOD, Fecal, TSS violations                                                      |
| C0071200  | 08/08/2007   | Catawba River WWTP                | City of Marion                      | Asheville    | McDowell     | Under SOC                    | BOD, TSS, Fecal violations                                                      |
| VQCS00084 | 09/01/2007   | Brevard Collection System         | City of Brevard                     | Asheville    | Transylvania | Under SOC                    | motorium and SOC due to frequent and repetitive SSOs on specified sewer line(s) |
| VQCS00101 | 1/2/2001     | Franklin Collection System        | Town of Franklin                    | Asheville    | Macon        | Statutory moratorium imposed | motorium due to frequent and repetitive SSOs on specified sewer line(s)         |
| IC0021610 | 11/22/2006   | Clarkton WWTP                     | Town of Clarkton                    | Fayetteville | Bladen       | Under SOC                    | BOD & TSS violations                                                            |
| IC0025577 | 02/03/2009   | Red Springs WWTP                  | Town of Red Springs                 | Fayetteville | Robeson      | Under SOC                    | Hg & CN violations                                                              |
| VQCS00073 | 03/26/2007   | Dunn Collection System            | City of Dunn                        | Fayetteville | Harnett      | Under SOC                    | motorium and SOC due to frequent and repetitive SSOs on specified sewer line(s) |
| IC0072940 | 07/16/1998   | State Street WWTP                 | City of High Shoals                 | Mooreville   | Gaston       | 80% Rule imposed             | Annual average flow @ 82.5% in 1997.                                            |
| IC0020061 | 11/01/2008   | Spring Hope WWTP                  | Town of Spring Hope                 | Raleigh      | Nash         | Under SOC                    | BOD, TSS, Fecal violations                                                      |
| IC0025437 | 07/22/2004   | Rich Square WWTP                  | Town of Rich Square                 | Raleigh      | Northampton  | 90% Rule imposed Under SOC   | Annual average flow @ 95.7% in 2003. BOD, NH3, TRC, Fecal violations            |
| IC0035866 | 04/05/2007   | Bynum WWTP                        | County of Chatham                   | Raleigh      | Chatham      | 80% Rule imposed             | Annual average flow @ 83.15% in 2006.                                           |
| IC0057606 | 07/22/2004   | Stantonsburg WWTP                 | Town of Stantonsburg                | Raleigh      | Wilson       | 80% Rule imposed             | Annual average flow @ 84.6% in 2003.                                            |
| VQ0002560 | 07/15/2003   | Bailey Wastewater Treatment Plant | Town of Bailey                      | Raleigh      | Nash         | Statutory moratorium imposed | excessive I/I                                                                   |
| VQ0003405 | 07/09/1998   | Elm City Spray Irrigation WWTP    | Town of Elm City                    | Raleigh      | Wilson       | Statutory moratorium imposed | excessive I/I                                                                   |
| VQ0003299 | 02/26/2007   | Seaboard Town-WWTF/Spray          | Town of Seaboard                    | Raleigh      | Northampton  | Statutory moratorium imposed | excessive I/I                                                                   |
| VQ0023203 | 07/01/2007   | Rich Square WWTP                  | Town of Rich Square                 | Raleigh      | Northampton  | Under SOC                    | excessive I/I, overloaded sprayfields                                           |
| VQCS00055 | 09/01/2007   | Henderson Collection System       | City of Henderson                   | Raleigh      | Vance        | Under SOC                    | motorium due to frequent and repetitive SSOs on specified sewer line(s)         |
| IC0020028 | 07/22/2004   | Plymouth WWTP                     | Town of Plymouth                    | Washington   | Washington   | 90% Rule imposed             | Annual average flow @ 90.9% in 2003.                                            |

| Permit    | Imposed Date | Facility                               | Owner                            | Region     | County   | Reason                         | Explanation                                                                                                                                                                                                        |
|-----------|--------------|----------------------------------------|----------------------------------|------------|----------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NC0021342 | 07/22/2004   | Trenton WWTP                           | Town of Trenton                  | Washington | Jones    | 90% Rule imposed;<br>Under SOC | Town is repairing sewer lines, and plans to build a spray irrigation system and eliminate the discharge.                                                                                                           |
| NC0031828 | 04/17/2006   | Vanceboro WWTP                         | Town of Vanceboro                | Washington | Craven   | 80% Rule imposed               | Annual average flow @ 81.4% in 2005.                                                                                                                                                                               |
| WQ0002520 | 07/16/2007   | Town of Bath Spray Irrigation Facility | Town of Bath                     | Washington | Beaufort | Statutory moratorium imposed   | Diminished sprayfield conditions, additional sprayfields needed                                                                                                                                                    |
| WQ0003885 | 09/21/1998   | Ahoskie Town-<br>WWTP/Spray            | Town of Ahoskie                  | Washington | Hertford | Under SOC                      | excessive I/I, overloaded sprayfields                                                                                                                                                                              |
| NC0020702 | 07/22/2004   | Wallace WWTP                           | Town of Wallace                  | Wilmington | Duplin   | 80% Rule imposed               | Annual average flow @ 88.1% in 2003.                                                                                                                                                                               |
| NC0021831 | 10/01/2004   | Beaufort WWTP                          | Town of Beaufort                 | Wilmington | Carteret | Under SOC                      | see entry for WQCS00102                                                                                                                                                                                            |
| NC0023230 | 07/22/2004   | Richlands WWTP                         | Onslow Water And Sewer Authority | Wilmington | Onslow   | 90% Rule imposed/Under SOC     | Average annual flow @ 109.8% in 2003. See entry for WQCS00249                                                                                                                                                      |
| NC0026018 | 05/23/2000   | Beulaville WWTP                        | Town of Beulaville               | Wilmington | Duplin   | 90% Rule imposed               | Annual average flow @ 89.24% in 1999; 98.99% in 2006.                                                                                                                                                              |
| NC0049387 | 07/22/2004   | Hunters Creek WWTP                     | Onslow Water And Sewer Authority | Wilmington | Onslow   | 80% Rule imposed               | Formerly a privately owned facility. Annual average flow @ 88.8% in 2003.                                                                                                                                          |
| NC0057053 | 7/22/2004    | Springdale Acres WWTP                  | Onslow Water And Sewer Authority | Wilmington | Onslow   | 90% Rule imposed;<br>Under SOC | Formerly a privately owned facility. Annual average flow @ 124.9% in 2003. SOC deals with flow and other areas of deficiency.                                                                                      |
| WQ0009267 | 09/07/2005   | Jacksonville WWTF                      | City of Jacksonville             | Wilmington | Onslow   | Under SOC                      | see entry for WQCS00268                                                                                                                                                                                            |
| WQCS00102 | 10/01/2004   | Beaufort Collection System             | Town of Beaufort                 | Wilmington | Carteret | Under SOC                      | moratorium and SOC due to frequent and repetitive SSOs on specified sewer line(s), and also due to extreme high flows at the Beaufort WWTP NC0021831 in excess of WWTP capacity, contributing to NPDES violations. |
| WQCS00249 | 06/01/2008   | ONWASA Collection System               | Onslow Water And Sewer Authority | Wilmington | Carteret | Under SOC                      | moratorium and SOC due to extreme high flows at the ONWASA Richlands WWTP NC0023230 in excess of WWTP capacity, contributing to NPDES violations.                                                                  |

| Permit                                   | Imposed Date | Facility                       | Owner                | Region        | County   | Reason    | Explanation                                                                                                                                                                                                                                              |
|------------------------------------------|--------------|--------------------------------|----------------------|---------------|----------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| /QCS00268                                | 09/07/2005   | Jacksonville Collection System | City of Jacksonville | Wilmington    | Onslow   | Under SOC | moratorium and SOC due to continual sewer growth along with Inflow and Infiltration causing Town's high flows in excess of Jacksonville spray field WWTP WQ0009267, contributing to permit violations including inability to maintain required freeboard |
| /QCS00010                                | 2/1/2006     | High Point Collection System   | City of High Point   | Winston-Salem | Guilford | Under SOC | moratorium and SOC due to frequent and repetitive SSOs on specified sewer line(s)                                                                                                                                                                        |
| dated 12/21/2009                         |              |                                |                      |               |          |           |                                                                                                                                                                                                                                                          |
| his list is constantly subject to change |              |                                |                      |               |          |           |                                                                                                                                                                                                                                                          |

**Animal Waste Spills that Reached Surface Water in 2008 by County**

| County       | Spills | Gallons that reached surface water | Amount of penalties assessed | County       | Spills   | Gallons that reached surface water | Amount of penalties assessed |
|--------------|--------|------------------------------------|------------------------------|--------------|----------|------------------------------------|------------------------------|
| Alamance     |        |                                    |                              | Johnston     |          |                                    |                              |
| Alexander    |        |                                    |                              | Jones        |          |                                    |                              |
| Alleghany    |        |                                    |                              | Lee          |          |                                    |                              |
| Anson        |        |                                    |                              | Lenoir       |          |                                    |                              |
| Ashe         |        |                                    |                              | Lincoln      |          |                                    |                              |
| Avery        |        |                                    |                              | Macon        |          |                                    |                              |
| Beaufort     |        |                                    |                              | Madison      |          |                                    |                              |
| Bertie       |        |                                    |                              | Martin       |          |                                    |                              |
| Bladen       | 1      | unknown                            | Pending                      | McDowell     |          |                                    |                              |
| Brunswick    |        |                                    |                              | Mecklenburg  |          |                                    |                              |
| Buncombe     |        |                                    |                              | Mitchell     |          |                                    |                              |
| Burke        |        |                                    |                              | Montgomery   |          |                                    |                              |
| Cabarrus     |        |                                    |                              | Moore        |          |                                    |                              |
| Caldwell     |        |                                    |                              | Nash         |          |                                    |                              |
| Camden       |        |                                    |                              | New Hanover  |          |                                    |                              |
| Carteret     |        |                                    |                              | Northampton  |          |                                    |                              |
| Caswell      |        |                                    |                              | Onslow       |          |                                    |                              |
| Catawba      |        |                                    |                              | Orange       |          |                                    |                              |
| Chatham      |        |                                    |                              | Pamlico      |          |                                    |                              |
| Cherokee     |        |                                    |                              | Pasquotank   |          |                                    |                              |
| Chowan       |        |                                    |                              | Pender       |          |                                    |                              |
| Clay         |        |                                    |                              | Perquimans   |          |                                    |                              |
| Clayton      |        |                                    |                              | Person       |          |                                    |                              |
| Columbus     |        |                                    |                              | Pitt         |          |                                    |                              |
| Craven       |        |                                    |                              | Polk         |          |                                    |                              |
| Cumberland   |        |                                    |                              | Randolph     |          |                                    |                              |
| Currituck    |        |                                    |                              | Richmond     |          |                                    |                              |
| Dare         |        |                                    |                              | Robeson      |          |                                    |                              |
| Davidson     |        |                                    |                              | Rockingham   |          |                                    |                              |
| Davie        |        |                                    |                              | Rowan        |          |                                    |                              |
| Duplin       | 1      | 2,000                              | \$0.00                       | Rutherford   |          |                                    |                              |
| Durham       |        |                                    |                              | Sampson      |          |                                    |                              |
| Edgecombe    |        |                                    |                              | Scotland     |          |                                    |                              |
| Forsyth      |        |                                    |                              | Stanly       |          |                                    |                              |
| Franklin     |        |                                    |                              | Stokes       |          |                                    |                              |
| Gaston       |        |                                    |                              | Surry        |          |                                    |                              |
| Gates        |        |                                    |                              | Swain        |          |                                    |                              |
| Graham       |        |                                    |                              | Transylvania |          |                                    |                              |
| Granville    |        |                                    |                              | Tyrrell      |          |                                    |                              |
| Greene       |        |                                    |                              | Union        |          |                                    |                              |
| Guilford     |        |                                    |                              | Vance        |          |                                    |                              |
| Halifax      |        |                                    |                              | Wake         |          |                                    |                              |
| Harnett      |        |                                    |                              | Warren       |          |                                    |                              |
| Haywood      |        |                                    |                              | Washington   |          |                                    |                              |
| Healdson     |        |                                    |                              | Watauga      |          |                                    |                              |
| Hertford     |        |                                    |                              | Wayne        |          |                                    |                              |
| Hoke         |        |                                    |                              | Wilkes       |          |                                    |                              |
| Hyde         |        |                                    |                              | Wilson       |          |                                    |                              |
| Iredell      |        |                                    |                              | Yadkin       |          |                                    |                              |
| Jackson      |        |                                    |                              | Yancey       |          |                                    |                              |
| <b>Total</b> |        |                                    |                              |              | <b>2</b> | <b>2,000</b>                       | <b>\$0.00 (pending)</b>      |

# Animal Waste Spills that Reached Surface Water in 2007 by County

| County       | Spills | Gallons that reached surface water | Amount of penalties assessed | County       | Spills   | Gallons that reached surface water | Amount of penalties assessed |
|--------------|--------|------------------------------------|------------------------------|--------------|----------|------------------------------------|------------------------------|
| Alamance     |        |                                    |                              | Johnston     |          |                                    |                              |
| Alexander    |        |                                    |                              | Jones        |          |                                    |                              |
| Alleghany    |        |                                    |                              | Lee          |          |                                    |                              |
| Anson        |        |                                    |                              | Lenoir       |          |                                    |                              |
| Ashe         |        |                                    |                              | Lincoln      |          |                                    |                              |
| Avery        |        |                                    |                              | Macon        |          |                                    |                              |
| Beaufort     |        |                                    |                              | Madison      |          |                                    |                              |
| Bertie       |        |                                    |                              | Martin       |          |                                    |                              |
| Bladen       |        |                                    |                              | McDowell     |          |                                    |                              |
| Brunswick    |        |                                    |                              | Mecklenburg  |          |                                    |                              |
| Buncombe     |        |                                    |                              | Mitchell     |          |                                    |                              |
| Burke        |        |                                    |                              | Montgomery   |          |                                    |                              |
| Cabarrus     |        |                                    |                              | Moore        |          |                                    |                              |
| Caldwell     |        |                                    |                              | Nash         |          |                                    |                              |
| Camden       |        |                                    |                              | New Hanover  |          |                                    |                              |
| Carteret     |        |                                    |                              | Northampton  |          |                                    |                              |
| Caswell      |        |                                    |                              | Onslow       |          |                                    |                              |
| Catawba      |        |                                    |                              | Orange       | 1        | 1,000,000                          | \$15,402.62                  |
| Chatham      |        |                                    |                              | Pamlico      |          |                                    |                              |
| Cherokee     |        |                                    |                              | Pasquotank   |          |                                    |                              |
| Chowan       |        |                                    |                              | Pender       |          |                                    |                              |
| Clay         |        |                                    |                              | Perquimans   |          |                                    |                              |
| Cleveland    |        |                                    |                              | Person       |          |                                    |                              |
| Columbus     | 2      | 185,000                            | \$21,476.45                  | Pitt         |          |                                    |                              |
| Craven       | 1      | 50                                 | \$1,619.00                   | Polk         |          |                                    |                              |
| Cumberland   |        |                                    |                              | Randolph     |          |                                    |                              |
| Currituck    |        |                                    |                              | Richmond     |          |                                    |                              |
| Dare         |        |                                    |                              | Robeson      | 1        | unknown                            | \$3,948.49                   |
| Davidson     |        |                                    |                              | Rockingham   |          |                                    |                              |
| Davie        |        |                                    |                              | Rowan        |          |                                    |                              |
| Duplin       |        |                                    |                              | Rutherford   |          |                                    |                              |
| Durham       |        |                                    |                              | Sampson      |          |                                    |                              |
| Edgecombe    |        |                                    |                              | Scotland     |          |                                    |                              |
| Forsyth      |        |                                    |                              | Stanly       |          |                                    |                              |
| Franklin     |        |                                    |                              | Stokes       |          |                                    |                              |
| Gaston       |        |                                    |                              | Surry        |          |                                    |                              |
| Gates        |        |                                    |                              | Swain        |          |                                    |                              |
| Graham       |        |                                    |                              | Transylvania |          |                                    |                              |
| Granville    |        |                                    |                              | Tyrrell      |          |                                    |                              |
| Greene       |        |                                    |                              | Union        |          |                                    |                              |
| Guilford     |        |                                    |                              | Vance        |          |                                    |                              |
| Halifax      |        |                                    |                              | Wake         |          |                                    |                              |
| Harnett      |        |                                    |                              | Warren       |          |                                    |                              |
| Haywood      |        |                                    |                              | Washington   |          |                                    |                              |
| Henderson    |        |                                    |                              | Watauga      |          |                                    |                              |
| Hertford     |        |                                    |                              | Wayne        |          |                                    |                              |
| Hoke         |        |                                    |                              | Wilkes       |          |                                    |                              |
| Hyde         |        |                                    |                              | Wilson       |          |                                    |                              |
| Iredell      |        |                                    |                              | Yadkin       |          |                                    |                              |
| Jackson      |        |                                    |                              | Yancey       |          |                                    |                              |
| <b>Total</b> |        |                                    |                              |              | <b>5</b> | <b>1,185,050</b>                   | <b>\$42,446.56</b>           |

# Animal Waste Spills that Reached Surface Water in 2006 by County

| County     | Spills | Gallons that reached surface water | Amount of penalties assessed | County       | Spills   | Gallons that reached surface water | Amount of penalties assessed |
|------------|--------|------------------------------------|------------------------------|--------------|----------|------------------------------------|------------------------------|
| Albemarle  |        |                                    |                              | Johnston     |          |                                    |                              |
| Alexander  |        |                                    |                              | Jones        |          |                                    |                              |
| Alleghany  |        |                                    |                              | Lee          |          |                                    |                              |
| Anson      |        |                                    |                              | Lenoir       |          |                                    |                              |
| Ashe       |        |                                    |                              | Lincoln      |          |                                    |                              |
| Avery      |        |                                    |                              | Macon        |          |                                    |                              |
| Beaufort   |        |                                    |                              | Madison      |          |                                    |                              |
| Bertie     |        |                                    |                              | Martin       |          |                                    |                              |
| Bladen     |        |                                    |                              | McDowell     |          |                                    |                              |
| Brunswick  |        |                                    |                              | Mecklenburg  |          |                                    |                              |
| Buncombe   | 1      | unknown                            | \$4,328.78                   | Mitchell     |          |                                    |                              |
| Burke      |        |                                    |                              | Montgomery   |          |                                    |                              |
| Cabarrus   |        |                                    |                              | Moore        |          |                                    |                              |
| Caldwell   |        |                                    |                              | Nash         |          |                                    |                              |
| Camden     |        |                                    |                              | New Hanover  |          |                                    |                              |
| Carteret   |        |                                    |                              | Northampton  |          |                                    |                              |
| Caswell    |        |                                    |                              | Onslow       |          |                                    |                              |
| Catawba    |        |                                    |                              | Orange       | 1        | unknown                            | \$3,206.61                   |
| Chatham    |        |                                    |                              | Pamlico      | 1        | unknown                            | \$3,318.00                   |
| Cherokee   |        |                                    |                              | Pasquotank   |          |                                    |                              |
| Chowan     |        |                                    |                              | Pender       | 1        | >1000                              | \$9,477.36                   |
| Clay       |        |                                    |                              | Perquimans   |          |                                    |                              |
| Clayton    |        |                                    |                              | Person       |          |                                    |                              |
| Columbus   |        |                                    |                              | Pitt         |          |                                    |                              |
| Craven     |        |                                    |                              | Polk         |          |                                    |                              |
| Cumberland |        |                                    |                              | Randolph     |          |                                    |                              |
| Currituck  |        |                                    |                              | Richmond     |          |                                    |                              |
| Dare       |        |                                    |                              | Robeson      |          |                                    |                              |
| Davidson   |        |                                    |                              | Rockingham   |          |                                    |                              |
| Davie      |        |                                    |                              | Rowan        |          |                                    |                              |
| Duplin     | 1      | 540,000                            | \$11,353.46                  | Rutherford   |          |                                    |                              |
| Durham     |        |                                    |                              | Sampson      |          |                                    |                              |
| Edgecombe  |        |                                    |                              | Scotland     |          |                                    |                              |
| Forsyth    |        |                                    |                              | Stanly       |          |                                    |                              |
| Franklin   |        |                                    |                              | Stokes       |          |                                    |                              |
| Gaston     |        |                                    |                              | Surry        |          |                                    |                              |
| Gates      |        |                                    |                              | Swain        |          |                                    |                              |
| Graham     |        |                                    |                              | Transylvania |          |                                    |                              |
| Granville  |        |                                    |                              | Tyrrell      |          |                                    |                              |
| Greene     |        |                                    |                              | Union        |          |                                    |                              |
| Guilford   |        |                                    |                              | Vance        |          |                                    |                              |
| Halifax    |        |                                    |                              | Wake         |          |                                    |                              |
| Harnett    |        |                                    |                              | Warren       |          |                                    |                              |
| Haywood    | 1      | unknown                            | \$5,351.63                   | Washington   |          |                                    |                              |
| Henderson  | 1      | unknown                            | \$11,878.23                  | Watauga      |          |                                    |                              |
| Hertford   |        |                                    |                              | Wayne        |          |                                    |                              |
| Hoke       |        |                                    |                              | Wilkes       | 1        | unknown                            | \$3,261.65                   |
| Hyde       |        |                                    |                              | Wilson       |          |                                    |                              |
| Iredell    |        |                                    |                              | Yadkin       |          |                                    |                              |
| Jackson    |        |                                    |                              | Yancey       |          |                                    |                              |
|            |        |                                    |                              | <b>Total</b> | <b>8</b> | <b>541,000</b>                     | <b>\$52,175.72</b>           |



**Municipal Sewage Spills that Reached Surface Water in  
2008 by County and Total Penalties by County**

| <b>County</b> | <b>Spills</b> | <b>Gallons that Reached Surface Water</b> | <b>Amount of Penalties Assessed</b> | <b>County</b> | <b>Spills</b> | <b>Gallons that Reached Surface Water</b> | <b>Amount of Penalties Assessed</b> |
|---------------|---------------|-------------------------------------------|-------------------------------------|---------------|---------------|-------------------------------------------|-------------------------------------|
| Alamance      | 27            | 170,530                                   | \$366                               | Johnston      | 26            | 389,375                                   | \$4,071                             |
| Alexander     | 3             | 5,100                                     |                                     | Jones         | 0             | 0                                         |                                     |
| Alleghany     | 0             | 0                                         |                                     | Lee           | 26            | 214,533                                   | \$571                               |
| Anson         | 7             | 403,250                                   | \$5,143                             | Lenoir        | 5             | 2,250                                     |                                     |
| Ashe          | 0             | 0                                         |                                     | Lincoln       | 3             | 250                                       |                                     |
| Avery         | 1             | 700                                       |                                     | Macon         | 9             | 4,950                                     | \$287                               |
| Beaufort      | 7             | 39,388                                    |                                     | Madison       | 0             | 0                                         | \$8,136                             |
| Bertie        | 4             | 1,000                                     |                                     | Martin        | 1             | 500                                       |                                     |
| Bladen        | 3             | 0                                         |                                     | McDowell      | 1             | 200                                       |                                     |
| Brunswick     | 4             | 50                                        |                                     | Mecklenburg   | 326           | 352,107                                   | \$5,764                             |
| Buncombe      | 26            | 19,497                                    |                                     | Mitchell      | 0             | 0                                         |                                     |
| Burke         | 9             | 19,250                                    |                                     | Montgomery    | 7             | 2,200                                     |                                     |
| Cabarrus      | 24            | 19,835                                    |                                     | Moore         | 16            | 67,480                                    |                                     |
| Caldwell      | 10            | 3,975                                     |                                     | Nash          | 6             | 4,950                                     |                                     |
| Camden        | 2             | 1,000                                     |                                     | New Hanover   | 23            | 16,580                                    |                                     |
| Carteret      | 4             | 11,200                                    |                                     | Northampton   | 1             | 250                                       |                                     |
| Caswell       | 1             | 500                                       |                                     | Onslow        | 11            | 1,801,684                                 | \$7,190                             |
| Catawba       | 33            | 212,678                                   | \$1,939                             | Orange        | 18            | 28,590                                    |                                     |
| Chatham       | 13            | 42,325                                    |                                     | Pamlico       | 1             | 0                                         |                                     |
| Cherokee      | 0             | 0                                         |                                     | Pasquotank    | 3             | 950                                       |                                     |
| Chowan        | 0             | 0                                         |                                     | Pender        | 0             | 0                                         |                                     |
| Clay          | 0             | 0                                         |                                     | Perquimans    | 1             | 4,000                                     |                                     |
| Cleveland     | 10            | 16,912                                    | \$2,096                             | Person        | 6             | 27,800                                    |                                     |
| Columbus      | 5             | 44,395                                    |                                     | Pitt          | 10            | 7,876                                     |                                     |
| Craven        | 52            | 86,759                                    |                                     | Polk          | 2             | 11,000                                    |                                     |
| Cumberland    | 35            | 20,415                                    |                                     | Randolph      | 33            | 107,652                                   | \$982                               |
| Currituck     | 2             | 10                                        |                                     | Richmond      | 2             | 8,000                                     |                                     |
| Dare          | 1             | 500                                       |                                     | Robeson       | 53            | 195,050                                   |                                     |
| Davidson      | 17            | 17,710                                    | \$2,116                             | Rockingham    | 37            | 559,921                                   | \$982                               |
| Davie         | 8             | 3,810                                     |                                     | Rowan         | 17            | 60,820                                    |                                     |
| Duplin        | 7             | 17,000                                    |                                     | Rutherford    | 8             | 19,830                                    |                                     |
| Durham        | 71            | 864,042                                   | \$1,642                             | Sampson       | 4             | 25,550                                    |                                     |
| Edgecombe     | 4             | 5,300                                     |                                     | Scotland      | 5             | 26,200                                    |                                     |
| Forsyth       | 119           | 91,999                                    | \$1,432                             | Stanly        | 24            | 321,900                                   | \$4,189                             |
| Franklin      | 22            | 47,566                                    |                                     | Stokes        | 2             | 1,010                                     |                                     |
| Gaston        | 31            | 146,171                                   | \$346                               | Surry         | 6             | 1,003,183                                 |                                     |
| Gates         | 0             | 0                                         |                                     | Swain         | 1             | 1,000                                     |                                     |
| Graham        | 0             | 0                                         |                                     | Transylvania  | 22            | 545,505                                   |                                     |
| Granville     | 15            | 37,139                                    |                                     | Tyrrell       | 0             | 0                                         |                                     |
| Greene        | 0             | 0                                         |                                     | Union         | 55            | 53,275                                    | \$2,839                             |
| Guilford      | 151           | 367,318                                   | \$25,000                            | Vance         | 14            | 33,901                                    |                                     |
| Halifax       | 8             | 49,810                                    |                                     | Wake          | 108           | 3,537,266                                 | \$3,821                             |
| Harnett       | 36            | 7,534,378                                 | \$1,731                             | Warren        | 2             | 1,000                                     |                                     |
| Haywood       | 4             | 101,620                                   | \$1,087                             | Washington    | 1             | 2,970                                     |                                     |
| Henderson     | 12            | 14,155                                    | \$13,334                            | Watauga       | 5             | 4,795                                     | \$516                               |
| Hertford      | 1             | 1                                         |                                     | Wayne         | 9             | 2,599,802                                 | \$4,570                             |
| Hoke          | 0             | 0                                         |                                     | Wilkes        | 1             | 0                                         |                                     |
| Hydco         | 0             | 0                                         |                                     | Wilson        | 0             | 0                                         |                                     |
| Iredell       | 18            | 18,579                                    | \$4,317                             | Yadkin        | 1             | 600                                       |                                     |
| Jackson       | 3             | 71,900                                    |                                     | Yancey        | 1             | 100                                       | \$37,944                            |
|               |               |                                           |                                     | <b>Total</b>  | <b>1,723</b>  | <b>22,554,622</b>                         | <b>\$142,412</b>                    |

**Municipal Sewage Spills that Reached Surface Water in  
2007 by County and Total Penalties by County**

| <b>County</b> | <b>Spills</b> | <b>Gallons that Reached Surface Water</b> | <b>Amount of Penalties Assessed</b> | <b>County</b> | <b>Spills</b> | <b>Gallons that Reached Surface Water</b> | <b>Amount of Penalties Assessed</b> |
|---------------|---------------|-------------------------------------------|-------------------------------------|---------------|---------------|-------------------------------------------|-------------------------------------|
| Alamance      | 12            | 17,960                                    |                                     | Johnston      | 19            | 541,380                                   | \$2,210                             |
| Alexander     | 1             | 500                                       |                                     | Jones         | 0             | 0                                         |                                     |
| Alleghany     | 0             | 0                                         |                                     | Lee           | 32            | 178,846                                   |                                     |
| Anson         | 3             | 2,200                                     |                                     | Lenoir        | 6             | 1,200                                     |                                     |
| Ashe          | 1             | 200,000                                   |                                     | Lincoln       | 1             | 2,500                                     |                                     |
| Avery         | 2             | 0                                         |                                     | Macon         | 7             | 4,400                                     |                                     |
| Beaufort      | 5             | 1,450                                     |                                     | Madison       | 0             | 0                                         |                                     |
| Bertie        | 5             | 1,200                                     | \$4,175                             | Martin        | 2             | 45,000                                    |                                     |
| Bladen        | 0             | 0                                         |                                     | McDowell      | 4             | 6,140                                     |                                     |
| Brunswick     | 4             | 500                                       |                                     | Mecklenburg   | 321           | 1,499,049                                 | \$18,664                            |
| Buncombe      | 47            | 72,291                                    |                                     | Mitchell      | 0             | 0                                         |                                     |
| Burke         | 15            | 19,200                                    |                                     | Montgomery    | 12            | 6,800                                     |                                     |
| Cabarrus      | 21            | 43,380                                    |                                     | Moore         | 27            | 1,312,800                                 | \$5,431                             |
| Caldwell      | 7             | 1,992                                     |                                     | Nash          | 4             | 8,725                                     |                                     |
| Camden        | 0             | 0                                         |                                     | New Hanover   | 39            | 24,712                                    | \$40,471                            |
| Carteret      | 6             | 184,300                                   |                                     | Northampton   | 0             | 0                                         |                                     |
| Caswell       | 0             | 0                                         |                                     | Onslow        | 11            | 15,334                                    |                                     |
| Catawba       | 20            | 119,176                                   |                                     | Orange        | 5             | 1,550                                     |                                     |
| Chatham       | 11            | 46,350                                    |                                     | Pamlico       | 4             | 8,050                                     | \$7,259                             |
| Cherokee      | 1             | 500                                       |                                     | Pasquotank    | 7             | 1,880                                     |                                     |
| Chowan        | 1             | 75                                        |                                     | Pender        | 3             | 10                                        |                                     |
| Clay          | 1             | 10,000                                    |                                     | Perquimans    | 1             | 100                                       |                                     |
| Cleveland     | 10            | 130,020                                   |                                     | Person        | 8             | 47,850                                    |                                     |
| Columbus      | 5             | 200                                       |                                     | Pitt          | 9             | 3,712                                     |                                     |
| Crawford      | 68            | 30,583                                    |                                     | Polk          | 0             | 0                                         |                                     |
| Cumberland    | 24            | 57,745                                    |                                     | Randolph      | 24            | 104,046                                   |                                     |
| Currituck     | 1             | 1,000                                     |                                     | Richmond      | 0             | 0                                         |                                     |
| Dare          | 3             | 10,420                                    |                                     | Robeson       | 4             | 3,500                                     |                                     |
| Davidson      | 33            | 353,317                                   |                                     | Rockingham    | 24            | 353,657                                   |                                     |
| Davie         | 2             | 2,200                                     |                                     | Rowan         | 10            | 12,390                                    |                                     |
| Duplin        | 7             | 501,400                                   |                                     | Rutherford    | 7             | 22,125                                    |                                     |
| Durham        | 69            | 618,548                                   |                                     | Sampson       | 3             | 14,175                                    |                                     |
| Edgecombe     | 1             | 20                                        |                                     | Scotland      | 3             | 8,400                                     |                                     |
| Forsyth       | 174           | 146,139                                   | \$4,176                             | Stanly        | 33            | 477,575                                   |                                     |
| Franklin      | 10            | 20,120                                    |                                     | Stokes        | 2             | 200                                       |                                     |
| Gaston        | 41            | 56,205                                    |                                     | Surry         | 10            | 21,550                                    |                                     |
| Gates         | 0             | 0                                         |                                     | Swain         | 1             | 1,000                                     |                                     |
| Graham        | 0             | 0                                         |                                     | Transylvania  | 16            | 870,064                                   |                                     |
| Granville     | 5             | 1,145                                     |                                     | Tyrrell       | 0             | 0                                         |                                     |
| Greene        | 0             | 0                                         |                                     | Union         | 41            | 122,039                                   |                                     |
| Guilford      | 159           | 421,221                                   | \$34,643                            | Vance         | 11            | 52,200                                    |                                     |
| Halifax       | 5             | 105,900                                   |                                     | Wake          | 99            | 3,922,916                                 |                                     |
| Harnett       | 6             | 6,620                                     |                                     | Warren        | 4             | 2,725                                     |                                     |
| Haywood       | 8             | 51,850                                    |                                     | Washington    | 4             | 4,050                                     | \$4,773                             |
| Henderson     | 6             | 63,100                                    |                                     | Watauga       | 8             | 7,855                                     |                                     |
| Hertford      | 0             | 0                                         |                                     | Wayne         | 16            | 4,142                                     |                                     |
| Hoke          | 2             | 5,000                                     |                                     | Wilkes        | 0             | 0                                         |                                     |
| Hyde          | 0             | 0                                         |                                     | Wilson        | 0             | 0                                         |                                     |
| Iredell       | 18            | 36,003                                    |                                     | Yadkin        | 3             | 3,000                                     |                                     |
| Jackson       | 4             | 2,020                                     |                                     | Yancey        | 0             | 0                                         |                                     |
|               |               |                                           |                                     | <b>Total</b>  | <b>1,669</b>  | <b>13,059,497</b>                         | <b>\$121,802</b>                    |

**Municipal Sewage Spills that Reached Surface Water in 2006 by  
County and Total Penalties by County**

| <b>County</b> | <b>Spills</b> | <b>Gallons that Reached<br/>Surface Water</b> | <b>Penalties<br/>Assessed</b> | <b>County</b> | <b>Spills</b> | <b>Reached<br/>Surface Water</b> | <b>Penalties<br/>Assessed</b> |
|---------------|---------------|-----------------------------------------------|-------------------------------|---------------|---------------|----------------------------------|-------------------------------|
| Alamance      | 23            | 288,760                                       |                               | Johnston      | 12            | 543,100                          | \$7,517                       |
| Alexander     | 1             | 100                                           |                               | Jones         | 0             | 0                                |                               |
| Alleghany     | 1             | 300,000                                       |                               | Lee           | 65            | 517,355                          |                               |
| Anson         | 6             | 247,820                                       |                               | Lenoir        | 12            | 42,200                           |                               |
| Ashe          | 0             | 0                                             |                               | Lincoln       | 4             | 4,000                            |                               |
| Avery         | 1             | 100                                           |                               | Macon         | 10            | 34,200                           | \$4,100                       |
| Beaufort      | 15            | 105,447                                       |                               | Madison       | 0             | 0                                |                               |
| Bertie        | 11            | 28,850                                        |                               | Martin        | 9             | 306,500                          |                               |
| Bladen        | 2             | 800                                           |                               | McDowell      | 1             | 600                              |                               |
| Brunswick     | 12            | 1,641                                         | \$4,047                       | Mecklenburg   | 369           | 956,372                          | \$14,827                      |
| Buncombe      | 69            | 223,845                                       |                               | Mitchell      | 0             | 0                                |                               |
| Burke         | 9             | 10,366                                        |                               | Montgomery    | 20            | 23,105                           |                               |
| Cabarrus      | 19            | 28,571                                        |                               | Moore         | 22            | 142,950                          | \$4,244                       |
| Caldwell      | 14            | 63,927                                        |                               | Nash          | 23            | 86,390                           |                               |
| Camden        | 0             | 0                                             |                               | New Hanover   | 36            | 4,185,521                        |                               |
| Carteret      | 11            | 150,500                                       |                               | Northampton   | 6             | 83,000                           |                               |
| Caswell       | 0             | 0                                             |                               | Onslow        | 18            | 145,355                          | \$4,036                       |
| Catawba       | 25            | 113,023                                       |                               | Orange        | 11            | 21,420                           |                               |
| Chatham       | 9             | 6,100                                         |                               | Pamlico       | 4             | 0                                |                               |
| Cherokee      | 0             | 0                                             |                               | Pasquotank    | 14            | 54,250                           | \$4,420                       |
| Chowan        | 8             | 59,269                                        | \$1,280                       | Pender        | 3             | 430                              | \$4,069                       |
| Clay          | 0             | 0                                             |                               | Perquimans    | 4             | 43,160                           |                               |
| Cleveland     | 10            | 27,366                                        |                               | Person        | 2             | 6,120                            |                               |
| Columbus      | 15            | 30,200                                        |                               | Pitt          | 29            | 569,794                          |                               |
| Craven        | 96            | 170,783                                       | \$52,615                      | Polk          | 0             | 0                                |                               |
| Cumberland    | 26            | 221,210                                       |                               | Randolph      | 41            | 273,905                          |                               |
| Currituck     | 1             | 0                                             |                               | Richmond      | 0             | 0                                |                               |
| Dare          | 2             | 200                                           |                               | Robeson       | 43            | 78,970                           |                               |
| Davidson      | 26            | 571,267                                       |                               | Rockingham    | 31            | 313,753                          |                               |
| Davie         | 0             | 0                                             |                               | Rowan         | 11            | 9,098                            |                               |
| Duplin        | 19            | 259,066                                       |                               | Rutherford    | 3             | 550                              |                               |
| Durham        | 34            | 761,450                                       | \$33,431                      | Sampson       | 4             | 14,300                           |                               |
| Edgecombe     | 33            | 774,965                                       |                               | Scotland      | 10            | 124,750                          |                               |
| Forsyth       | 170           | 453,502                                       |                               | Stanly        | 6             | 516,000                          |                               |
| Franklin      | 17            | 457,850                                       |                               | Stokes        | 1             | 50                               |                               |
| Gaston        | 32            | 65,696                                        |                               | Surry         | 9             | 3,600                            |                               |
| Gates         | 0             | 0                                             |                               | Swain         | 1             | 20,000                           |                               |
| Graham        | 0             | 0                                             |                               | Transylvania  | 35            | 1,829,749                        |                               |
| Granville     | 1             | 50                                            | \$17,766                      | Tyrrell       | 0             | 0                                |                               |
| Greene        | 3             | 1,400                                         |                               | Union         | 39            | 532,340                          |                               |
| Guilford      | 168           | 630,083                                       | \$33,000                      | Vance         | 40            | 292,015                          |                               |
| Halifax       | 18            | 47,780                                        |                               | Wake          | 110           | 2,875,621                        | \$45,410                      |
| Harnett       | 42            | 10,981,518                                    | \$21,622                      | Warren        | 12            | 27,165                           |                               |
| Haywood       | 3             | 13,700                                        |                               | Washington    | 8             | 31,175                           |                               |
| Henderson     | 10            | 21,351                                        |                               | Watauga       | 13            | 14,765                           |                               |
| Hertford      | 0             | 0                                             |                               | Wayne         | 18            | 1,718,085                        | \$648                         |
| Hoke          | 3             | 100,200                                       |                               | Wilkes        | 0             | 0                                |                               |
| Hyde          | 1             | 0                                             |                               | Wilson        | 3             | 7,850                            |                               |
| Iredell       | 5             | 4,250                                         |                               | Yadkin        | 2             | 7,000                            |                               |
| Jackson       | 2             | 2,500                                         |                               | Yancey        | 0             | 0                                |                               |
|               |               |                                               |                               | <b>Total</b>  | <b>2,087</b>  | <b>33,682,069</b>                | <b>\$253,031</b>              |

**Animal Waste Spills that Reached Surface Water in 2008 by County**

| County       | Spills | Gallons that reached surface water | Amount of penalties assessed | County       | Spills   | Gallons that reached surface water | Amount of penalties assessed |
|--------------|--------|------------------------------------|------------------------------|--------------|----------|------------------------------------|------------------------------|
| Alamance     |        |                                    |                              | Johnston     |          |                                    |                              |
| Alexander    |        |                                    |                              | Jones        |          |                                    |                              |
| Alleghany    |        |                                    |                              | Lee          |          |                                    |                              |
| Anson        |        |                                    |                              | Lenoir       |          |                                    |                              |
| Ashe         |        |                                    |                              | Lincoln      |          |                                    |                              |
| Avery        |        |                                    |                              | Macon        |          |                                    |                              |
| Beaufort     |        |                                    |                              | Madison      |          |                                    |                              |
| Bertie       |        |                                    |                              | Martin       |          |                                    |                              |
| Bladen       | 1      | unknown                            | Pending                      | McDowell     |          |                                    |                              |
| Brunswick    |        |                                    |                              | Mecklenburg  |          |                                    |                              |
| Buncombe     |        |                                    |                              | Mitchell     |          |                                    |                              |
| Burke        |        |                                    |                              | Montgomery   |          |                                    |                              |
| Cabarrus     |        |                                    |                              | Moore        |          |                                    |                              |
| Caldwell     |        |                                    |                              | Nash         |          |                                    |                              |
| Camden       |        |                                    |                              | New Hanover  |          |                                    |                              |
| Carteret     |        |                                    |                              | Northampton  |          |                                    |                              |
| Caswell      |        |                                    |                              | Onslow       |          |                                    |                              |
| Catawba      |        |                                    |                              | Orange       |          |                                    |                              |
| Chatham      |        |                                    |                              | Pamlico      |          |                                    |                              |
| Cherokee     |        |                                    |                              | Pasquotank   |          |                                    |                              |
| Chowan       |        |                                    |                              | Pender       |          |                                    |                              |
| Clay         |        |                                    |                              | Perquimans   |          |                                    |                              |
| Clayton      |        |                                    |                              | Person       |          |                                    |                              |
| Columbus     |        |                                    |                              | Pitt         |          |                                    |                              |
| Craven       |        |                                    |                              | Polk         |          |                                    |                              |
| Cumberland   |        |                                    |                              | Randolph     |          |                                    |                              |
| Currituck    |        |                                    |                              | Richmond     |          |                                    |                              |
| Dare         |        |                                    |                              | Robeson      |          |                                    |                              |
| Davidson     |        |                                    |                              | Rockingham   |          |                                    |                              |
| Davie        |        |                                    |                              | Rowan        |          |                                    |                              |
| Duplin       | 1      | 2,000                              | \$0.00                       | Rutherford   |          |                                    |                              |
| Durham       |        |                                    |                              | Sampson      |          |                                    |                              |
| Edgecombe    |        |                                    |                              | Scotland     |          |                                    |                              |
| Forsyth      |        |                                    |                              | Stanly       |          |                                    |                              |
| Franklin     |        |                                    |                              | Stokes       |          |                                    |                              |
| Gaston       |        |                                    |                              | Surry        |          |                                    |                              |
| Gates        |        |                                    |                              | Swain        |          |                                    |                              |
| Graham       |        |                                    |                              | Transylvania |          |                                    |                              |
| Granville    |        |                                    |                              | Tyrrell      |          |                                    |                              |
| Greene       |        |                                    |                              | Union        |          |                                    |                              |
| Guilford     |        |                                    |                              | Vance        |          |                                    |                              |
| Halifax      |        |                                    |                              | Wake         |          |                                    |                              |
| Harnett      |        |                                    |                              | Warren       |          |                                    |                              |
| Haywood      |        |                                    |                              | Washington   |          |                                    |                              |
| Henderson    |        |                                    |                              | Watauga      |          |                                    |                              |
| Hertford     |        |                                    |                              | Wayne        |          |                                    |                              |
| Hoke         |        |                                    |                              | Wilkes       |          |                                    |                              |
| Hyde         |        |                                    |                              | Wilson       |          |                                    |                              |
| Iredell      |        |                                    |                              | Yadkin       |          |                                    |                              |
| Jackson      |        |                                    |                              | Yancey       |          |                                    |                              |
| <b>Total</b> |        |                                    |                              |              | <b>2</b> | <b>2,000</b>                       | <b>\$0.00 (pending)</b>      |

# Animal Waste Spills that Reached Surface Water in 2007 by County

| County     | Spills | Gallons that reached surface water | Amount of penalties assessed | County       | Spills   | Gallons that reached surface water | Amount of penalties assessed |
|------------|--------|------------------------------------|------------------------------|--------------|----------|------------------------------------|------------------------------|
| Alamance   |        |                                    |                              | Johnston     |          |                                    |                              |
| Alexander  |        |                                    |                              | Jones        |          |                                    |                              |
| Alleghany  |        |                                    |                              | Lee          |          |                                    |                              |
| Anson      |        |                                    |                              | Lenoir       |          |                                    |                              |
| Ashe       |        |                                    |                              | Lincoln      |          |                                    |                              |
| Avery      |        |                                    |                              | Macon        |          |                                    |                              |
| Beaufort   |        |                                    |                              | Madison      |          |                                    |                              |
| Bertie     |        |                                    |                              | Martin       |          |                                    |                              |
| Bladen     |        |                                    |                              | McDowell     |          |                                    |                              |
| Brunswick  |        |                                    |                              | Mecklenburg  |          |                                    |                              |
| Buncombe   |        |                                    |                              | Mitchell     |          |                                    |                              |
| Burke      |        |                                    |                              | Montgomery   |          |                                    |                              |
| Cabarrus   |        |                                    |                              | Moore        |          |                                    |                              |
| Caldwell   |        |                                    |                              | Nash         |          |                                    |                              |
| Camden     |        |                                    |                              | New Hanover  |          |                                    |                              |
| Carteret   |        |                                    |                              | Northampton  |          |                                    |                              |
| Caswell    |        |                                    |                              | Onslow       |          |                                    |                              |
| Catawba    |        |                                    |                              | Orange       | 1        | 1,000,000                          | \$15,402.62                  |
| Chatham    |        |                                    |                              | Pamlico      |          |                                    |                              |
| Cherokee   |        |                                    |                              | Pasquotank   |          |                                    |                              |
| Chowan     |        |                                    |                              | Pender       |          |                                    |                              |
| Clay       |        |                                    |                              | Perquimans   |          |                                    |                              |
| Cleveland  |        |                                    |                              | Person       |          |                                    |                              |
| Columbus   | 2      | 185,000                            | \$21,476.45                  | Pitt         |          |                                    |                              |
| Craven     | 1      | 50                                 | \$1,619.00                   | Polk         |          |                                    |                              |
| Cumberland |        |                                    |                              | Randolph     |          |                                    |                              |
| Currituck  |        |                                    |                              | Richmond     |          |                                    |                              |
| Dare       |        |                                    |                              | Robeson      | 1        | unknown                            | \$3,948.49                   |
| Davidson   |        |                                    |                              | Rockingham   |          |                                    |                              |
| Davie      |        |                                    |                              | Rowan        |          |                                    |                              |
| Duplin     |        |                                    |                              | Rutherford   |          |                                    |                              |
| Durham     |        |                                    |                              | Sampson      |          |                                    |                              |
| Edgecombe  |        |                                    |                              | Scotland     |          |                                    |                              |
| Forsyth    |        |                                    |                              | Stanly       |          |                                    |                              |
| Franklin   |        |                                    |                              | Stokes       |          |                                    |                              |
| Gaston     |        |                                    |                              | Surry        |          |                                    |                              |
| Gates      |        |                                    |                              | Swain        |          |                                    |                              |
| Graham     |        |                                    |                              | Transylvania |          |                                    |                              |
| Granville  |        |                                    |                              | Tyrrell      |          |                                    |                              |
| Greene     |        |                                    |                              | Union        |          |                                    |                              |
| Guilford   |        |                                    |                              | Vance        |          |                                    |                              |
| Halifax    |        |                                    |                              | Wake         |          |                                    |                              |
| Harnett    |        |                                    |                              | Warren       |          |                                    |                              |
| Haywood    |        |                                    |                              | Washington   |          |                                    |                              |
| Henderson  |        |                                    |                              | Watauga      |          |                                    |                              |
| Hertford   |        |                                    |                              | Wayne        |          |                                    |                              |
| Hoke       |        |                                    |                              | Wilkes       |          |                                    |                              |
| Hyde       |        |                                    |                              | Wilson       |          |                                    |                              |
| Iredell    |        |                                    |                              | Yadkin       |          |                                    |                              |
| Jackson    |        |                                    |                              | Yancey       |          |                                    |                              |
|            |        |                                    |                              | <b>Total</b> | <b>5</b> | <b>1,185,050</b>                   | <b>\$42,446.56</b>           |

# Animal Waste Spills that Reached Surface Water in 2006 by County

| County     | Spills | Gallons that reached surface water | Amount of penalties assessed | County       | Spills   | Gallons that reached surface water | Amount of penalties assessed |
|------------|--------|------------------------------------|------------------------------|--------------|----------|------------------------------------|------------------------------|
| Albion     |        |                                    |                              | Johnston     |          |                                    |                              |
| Alexander  |        |                                    |                              | Jones        |          |                                    |                              |
| Alleghany  |        |                                    |                              | Lee          |          |                                    |                              |
| Anson      |        |                                    |                              | Lenoir       |          |                                    |                              |
| Ashe       |        |                                    |                              | Lincoln      |          |                                    |                              |
| Avery      |        |                                    |                              | Macon        |          |                                    |                              |
| Beaufort   |        |                                    |                              | Madison      |          |                                    |                              |
| Bertie     |        |                                    |                              | Martin       |          |                                    |                              |
| Bladen     |        |                                    |                              | McDowell     |          |                                    |                              |
| Brunswick  |        |                                    |                              | Mecklenburg  |          |                                    |                              |
| Buncombe   | 1      | unknown                            | \$4,328.78                   | Mitchell     |          |                                    |                              |
| Burke      |        |                                    |                              | Montgomery   |          |                                    |                              |
| Cabarrus   |        |                                    |                              | Moore        |          |                                    |                              |
| Caldwell   |        |                                    |                              | Nash         |          |                                    |                              |
| Camden     |        |                                    |                              | New Hanover  |          |                                    |                              |
| Carteret   |        |                                    |                              | Northampton  |          |                                    |                              |
| Caswell    |        |                                    |                              | Onslow       |          |                                    |                              |
| Catawba    |        |                                    |                              | Orange       | 1        | unknown                            | \$3,206.61                   |
| Chatham    |        |                                    |                              | Pamlico      | 1        | unknown                            | \$3,318.00                   |
| Cherokee   |        |                                    |                              | Pasquotank   |          |                                    |                              |
| Chowan     |        |                                    |                              | Pender       | 1        | >1000                              | \$9,477.36                   |
| Clay       |        |                                    |                              | Perquimans   |          |                                    |                              |
| Cleveland  |        |                                    |                              | Person       |          |                                    |                              |
| Columbus   |        |                                    |                              | Pitt         |          |                                    |                              |
| Craven     |        |                                    |                              | Polk         |          |                                    |                              |
| Cumberland |        |                                    |                              | Randolph     |          |                                    |                              |
| Currituck  |        |                                    |                              | Richmond     |          |                                    |                              |
| Dare       |        |                                    |                              | Robeson      |          |                                    |                              |
| Davidson   |        |                                    |                              | Rockingham   |          |                                    |                              |
| Davie      |        |                                    |                              | Rowan        |          |                                    |                              |
| Duplin     | 1      | 540,000                            | \$11,353.46                  | Rutherford   |          |                                    |                              |
| Durham     |        |                                    |                              | Sampson      |          |                                    |                              |
| Edgecombe  |        |                                    |                              | Scotland     |          |                                    |                              |
| Forsyth    |        |                                    |                              | Stanly       |          |                                    |                              |
| Franklin   |        |                                    |                              | Stokes       |          |                                    |                              |
| Gaston     |        |                                    |                              | Surry        |          |                                    |                              |
| Gates      |        |                                    |                              | Swain        |          |                                    |                              |
| Graham     |        |                                    |                              | Transylvania |          |                                    |                              |
| Granville  |        |                                    |                              | Tyrrell      |          |                                    |                              |
| Greene     |        |                                    |                              | Union        |          |                                    |                              |
| Guilford   |        |                                    |                              | Vance        |          |                                    |                              |
| Halifax    |        |                                    |                              | Wake         |          |                                    |                              |
| Harnett    |        |                                    |                              | Warren       |          |                                    |                              |
| Haywood    | 1      | unknown                            | \$5,351.63                   | Washington   |          |                                    |                              |
| Healdson   | 1      | unknown                            | \$11,878.23                  | Watauga      |          |                                    |                              |
| Heald      |        |                                    |                              | Wayne        |          |                                    |                              |
| Hoke       |        |                                    |                              | Wilkes       | 1        | unknown                            | \$3,261.65                   |
| Hyde       |        |                                    |                              | Wilson       |          |                                    |                              |
| Iredell    |        |                                    |                              | Yadkin       |          |                                    |                              |
| Jackson    |        |                                    |                              | Yancey       |          |                                    |                              |
|            |        |                                    |                              | <b>Total</b> | <b>8</b> | <b>541,000</b>                     | <b>\$52,175.72</b>           |

# ● Coordinating Water/Wastewater ● Infrastructure Funding: Overview of State Practices

Jeff Hughes

[jhughes@sog.unc.edu](mailto:jhughes@sog.unc.edu)

Environmental Finance Center

School of Government

University of North Carolina at Chapel Hill

919 843-4956

[www.efc.unc.edu](http://www.efc.unc.edu)



UNC

SCHOOL OF GOVERNMENT  
ENVIRONMENTAL FINANCE CENTER



# Acknowledgements

---

NC Rural Center  
Appalachian Regional Commission  
Environmental Protection Agency  
Representatives from other state  
coordinating efforts



# ● ● ● General Coordination Objectives

Improved applicant customer service (utilities)

Support funding program efforts and operations (funders)

Stretch public funding dollars (citizens)

# EFC Funding Coordination Study (Spring 2006)

Twenty-five individual interviews and one  
four-person focus group

Respondent Groups

Funding Agencies

Regulatory Agencies

State/Regional Planning Organizations

Local Governments

Technical Assistance Providers

\*\*Funding Provided by NC Rural Center

# Funding Coordination Study: Preferred Coordination Services

| SERVICE OFFERED                     | % STRONGLY AGREE OR AGREE |
|-------------------------------------|---------------------------|
| Needs Database                      | 91%                       |
| Summary of Eligibility Requirements | 91%                       |
| Conferences, Workshops, or Fairs    | 83%                       |
| Planning Assistance for Communities | 82%                       |
| Long-term State-level Planning      | 78%                       |
| Regionalization                     | 61%                       |
| Central Information Repository      | 59%                       |
| Single Uniform Application          | 52%                       |
| Recommend Specific Projects         | 17%                       |

# Structural Differences Among State Coordination Models

---

Enabling documents  
Institutional framework and “glue”  
Membership/participation  
Meetings  
Organization of work efforts/staffing



# Funding Coordination Practices

---

## Common

Structured  
Committed  
participants  
USDA participation  
Strong leadership  
Focus on a few  
services

## Uncommon

Require funders to  
fund projects contrary  
to their funding  
objectives  
Significant staff  
resources  
Comprehensive  
Resemble  
neighboring states

# Examples

---

Water Resource Information System (KY)  
Coordinating Application Process (WV)  
Funding forums (GA, NC)  
Statewide Infrastructure Planning



[Home](#)
[▼](#)
[About](#)
[▼](#)
[FAQ](#)
[▼](#)
[Contact](#)
[▼](#)
[Privacy](#)
[▼](#)
[Terms](#)
[▼](#)
[Page](#)
[▼](#)
[Safety](#)
[▼](#)
[Tools](#)
[▼](#)
[Help](#)

Kentucky.gov

KY Agencies | KY Services

## Search

Kentucky.gov ▾ Go

Kentucky  
Infrastructure Authority

- Home | Site Map | Documents | KIA Board | KIA Staff

- KIA > WRIS > Overview

**Kentucky  
Infrastructure  
Authority**  
*Office of the Governor*

## About Us

## Loan Programs

WYBIS

## Internet Mapping

## Geospatial Data

WRIS Portal

## Water Management Planners

**ADD GIS Staff**

# Water Resource Information System

## What is the WRIS?

## Introduction

The Water Resource Information System (WRIS), has been developed through the cooperative efforts of water and wastewater treatment systems and local, regional, and state agencies. It is used by all these entities, and provides much of the information needed for all aspects of water resource planning--from watershed protection to infrastructure development. The WRIS includes a geographic information system (GIS), and information on water resources, drinking water systems, wastewater treatment systems, project development, emergency response, regulations, and planning.

The WRIS is comprised of strategic plans, water resource maps and publications, systems management information, reporting and regulatory requirements, guidance and training documents, procedural guidance and forms for project implementation and funding, and internet links to support services. Interactive maps in the system support planning and regionalization efforts. The interactive maps also facilitate drought monitoring and response, and rapid response to contamination emergencies. The GIS contains data for water and wastewater treatment facilities, water lines, water sources, storage facilities, sewer lines, and a database of non-spatial systems information. The GIS provides the fundamental data needed for the planning and emergency response activities. Using the GIS infrastructure data in computer models allows for cost-effective analysis of engineering alternatives, and facilitates the efficiencies needed to meet the needs of Kentucky's infrastructure development.

**Contact Person**

Rusty Anderson  
 • 502-573-0260   
 x239  
 Email

## Resources

WARIS GIS Standard  
(PDF - 847KB)

12/11/2011 12:11:11 PM

三、三、三、三

11  
 12  
 13  
 14  
 15  
 16  
 17  
 18  
 19  
 20  
 21  
 22  
 23  
 24  
 25  
 26  
 27  
 28  
 29  
 30  
 31  
 32  
 33  
 34  
 35  
 36  
 37  
 38  
 39  
 40  
 41  
 42  
 43  
 44  
 45  
 46  
 47  
 48  
 49  
 50  
 51  
 52  
 53  
 54  
 55  
 56  
 57  
 58  
 59  
 60  
 61  
 62  
 63  
 64  
 65  
 66  
 67  
 68  
 69  
 70  
 71  
 72  
 73  
 74  
 75  
 76  
 77  
 78  
 79  
 80  
 81  
 82  
 83  
 84  
 85  
 86  
 87  
 88  
 89  
 90  
 91  
 92  
 93  
 94  
 95  
 96  
 97  
 98  
 99  
 100  
 101  
 102  
 103  
 104  
 105  
 106  
 107  
 108  
 109  
 110  
 111  
 112  
 113  
 114  
 115  
 116  
 117  
 118  
 119  
 120  
 121  
 122  
 123  
 124  
 125  
 126  
 127  
 128  
 129  
 130  
 131  
 132  
 133  
 134  
 135  
 136  
 137  
 138  
 139  
 140  
 141  
 142  
 143  
 144  
 145  
 146  
 147  
 148  
 149  
 150  
 151  
 152  
 153  
 154  
 155  
 156  
 157  
 158  
 159  
 160  
 161  
 162  
 163  
 164  
 165  
 166  
 167  
 168  
 169  
 170  
 171  
 172  
 173  
 174  
 175  
 176  
 177  
 178  
 179  
 180  
 181  
 182  
 183  
 184  
 185  
 186  
 187  
 188  
 189  
 190  
 191  
 192  
 193  
 194  
 195  
 196  
 197  
 198  
 199  
 200  
 201  
 202  
 203  
 204  
 205  
 206  
 207  
 208  
 209  
 210  
 211  
 212  
 213  
 214  
 215  
 216  
 217  
 218  
 219  
 220  
 221  
 222  
 223  
 224  
 225  
 226  
 227  
 228  
 229  
 230  
 231  
 232  
 233  
 234  
 235  
 236  
 237  
 238  
 239  
 240  
 241  
 242  
 243  
 244  
 245  
 246  
 247  
 248  
 249  
 250  
 251  
 252  
 253  
 254  
 255  
 256  
 257  
 258  
 259  
 260  
 261  
 262  
 263  
 264  
 265  
 266  
 267  
 268  
 269  
 270  
 271  
 272  
 273  
 274  
 275  
 276  
 277  
 278  
 279  
 280  
 281  
 282  
 283  
 284  
 285  
 286  
 287  
 288  
 289  
 290  
 291  
 292  
 293  
 294  
 295  
 296  
 297  
 298  
 299  
 300  
 301  
 302  
 303  
 304  
 305  
 306  
 307  
 308  
 309  
 310  
 311  
 312  
 313  
 314  
 315  
 316  
 317  
 318  
 319  
 320  
 321  
 322  
 323  
 324  
 325  
 326  
 327  
 328  
 329  
 330  
 331  
 332  
 333  
 334  
 335  
 336  
 337  
 338  
 339  
 340  
 341  
 342  
 343  
 344  
 345  
 346  
 347  
 348  
 349  
 350  
 351  
 352  
 353  
 354  
 355  
 356  
 357  
 358  
 359  
 360  
 361  
 362  
 363  
 364  
 365  
 366  
 367  
 368  
 369  
 370  
 371  
 372  
 373  
 374  
 375  
 376  
 377  
 378  
 379  
 380  
 381  
 382  
 383  
 384  
 385  
 386  
 387  
 388  
 389  
 390  
 391  
 392  
 393  
 394  
 395  
 396  
 397  
 398  
 399  
 400  
 401  
 402  
 403  
 404  
 405  
 406  
 407  
 408  
 409  
 410  
 411  
 412  
 413  
 414  
 415  
 416  
 417  
 418  
 419  
 420  
 421  
 422  
 423  
 424  
 425  
 426  
 427  
 428  
 429  
 430  
 431  
 432  
 433  
 434  
 435  
 436  
 437  
 438  
 439  
 440  
 441  
 442  
 443  
 444  
 445  
 446  
 447  
 448  
 449  
 450  
 451  
 452  
 453  
 454  
 455  
 456  
 457  
 458  
 459  
 460  
 461  
 462  
 463  
 464  
 465  
 466  
 467  
 468  
 469  
 470  
 471  
 472  
 473  
 474  
 475  
 476  
 477  
 478  
 479  
 480  
 481  
 482  
 483  
 484  
 485  
 486  
 487  
 488  
 489  
 490  
 491  
 492  
 493  
 494  
 495  
 496  
 497  
 498  
 499  
 500  
 501  
 502  
 503  
 504  
 505  
 506  
 507  
 508  
 509  
 510  
 511  
 512  
 513  
 514  
 515  
 516  
 517  
 518  
 519  
 520  
 521  
 522  
 523  
 524  
 525  
 526  
 527  
 528  
 529  
 530  
 531  
 532  
 533



# Water Resources Information System

EFRC | Contact Us | [Water Resources](#) | [Submitted](#) | [My Grade Board](#)

[The Bond Buyer](#) | [EPA](#) | [Louisiana Bridge](#) | [UNC School of Law](#) | [Water Resources](#)

## Water Project Profiles For BGADD

| Project ID | Project Name                                                                   | Total Cost Of Project | Households | Schedule | County   | ADDNAME   |
|------------|--------------------------------------------------------------------------------|-----------------------|------------|----------|----------|-----------|
| WX21005002 | South Anderson Phase VI Expansions                                             | \$3,250,000           | 365        | 0-2      | Anderson | BGADD MAP |
| WX21005004 | South Anderson Phase VII Expansions                                            | \$2,345,000           | 225        | 0-2      | Anderson | BGADD MAP |
| WX21005006 | Lawrenceburg Center Street Tank Replacement                                    | \$1,000,000           | 4000       | 0-2      | Anderson | BGADD MAP |
| WX21017005 | City of North Middletown Waterline Replacement Project                         | \$200,000             | 0          | 0-2      | Bourbon  | BGADD MAP |
| WX21017006 | Paris-Bourbon Co. Industrial Park Water Expansion                              | \$245,390             | 0          | 0-2      | Bourbon  | BGADD MAP |
| WX21017007 | City of Paris - U.S. 68 Bypass Water Transmission Main Extension               | \$220,000             | 4700       | 0-2      | Bourbon  | BGADD MAP |
| WX21017008 | City of North Middletown Waterline Replacement, EPA Matching Funds             | \$166,667             | 0          | 0-2      | Bourbon  | BGADD MAP |
| WX21017009 | Bourbon County Fiscal Court--Fire Hydrant Project                              | \$76,500              | 0          | 0-2      | Bourbon  | BGADD MAP |
| WX21017010 | CITY OF PARIS WTP TELEMETRY UPGRADE                                            | \$80,000              | 0          | 0-2      | Bourbon  | BGADD MAP |
| WX21017013 | City of Paris Filter Rehabilitation at water plant                             | \$125,000             | 0          | 0-2      | Bourbon  | BGADD MAP |
| WX21017014 | City of Paris water valve replacement Phase I                                  | \$500,000             | 0          | 3-11     | Bourbon  | BGADD MAP |
| WX21017015 | City of Paris Creekbank stabilization project at water plant intake            | \$40,000              | 0          | 3-11     | Bourbon  | BGADD MAP |
| WX21017016 | City of Paris renovation of By-Pass 1 MG elevated tank                         | \$400,000             | 0          | 3-11     | Bourbon  | BGADD MAP |
| WX21017011 | City of Paris AMR System upgrade (Automatic meter read) project                | \$100,000             | 0          | 3-11     | Bourbon  | BGADD MAP |
| WX21017012 | City of Paris Creek crossing pipe replacement under Houston and Stoner Creeks. | \$60,000              | 0          | 3-11     | Bourbon  | BGADD MAP |
| WX21021002 | Danville WTP Disinfection Byproducts Project Ph II                             | \$1,500,000           | 6700       | 0-2      | Boyle    | BGADD MAP |



# Water Resources Information System

---

Current infrastructure  
Proposed infrastructure  
System information (interconnections,  
fiscal)  
Uniform project numbers  
Applicants required to have projects in  
systems  
Linked to other information systems

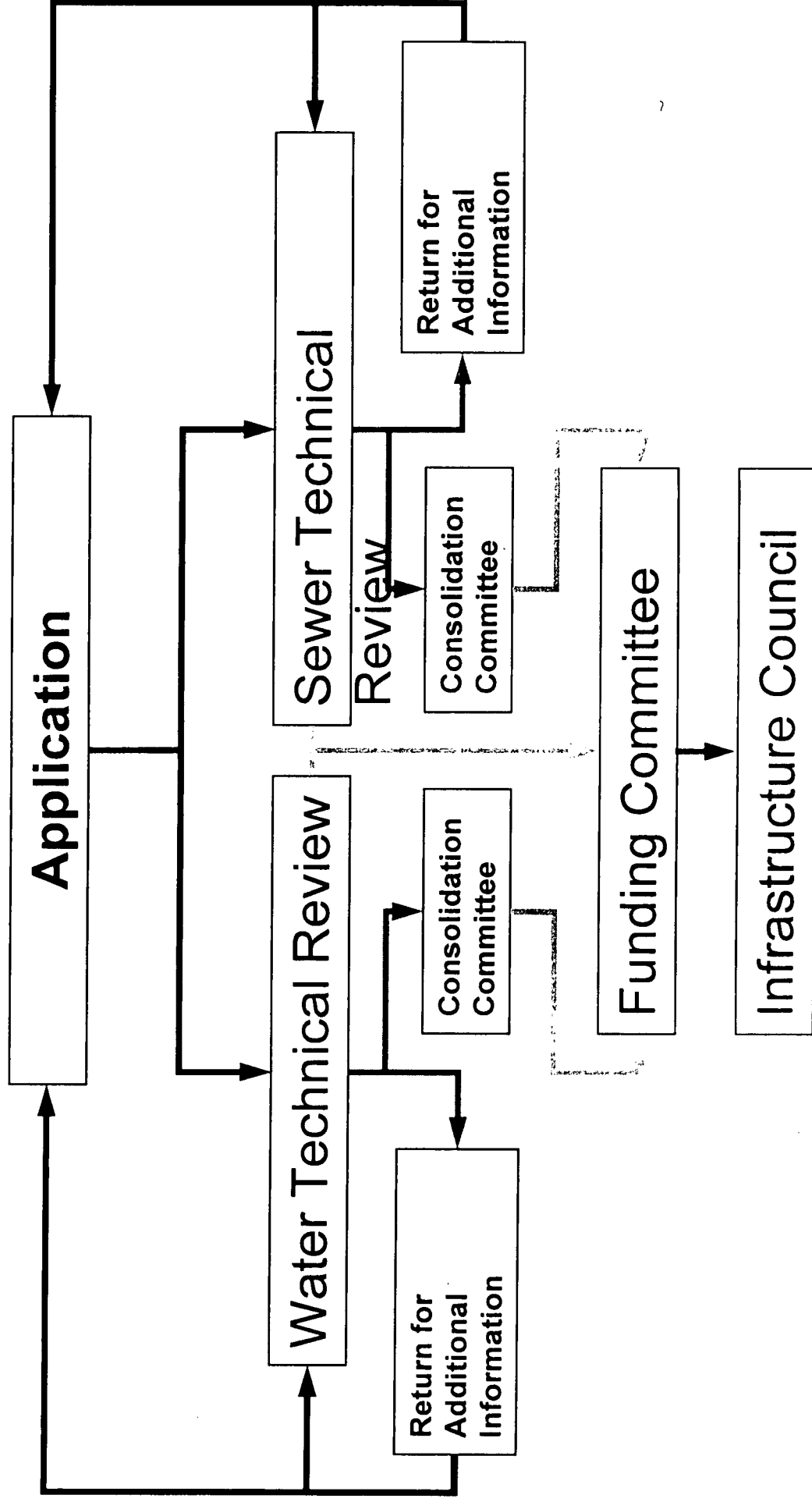
# Water Resources Information System

Coordinated and funded by Kentucky Infrastructure Authority (2 to 3 dedicated employees)

Systems surveyed/visited two times per year by regional planning organizations (Area Development Districts) (annual contracts total approximately \$1.4 M)

Funded by mix of appropriations and loan fees

# WV Infrastructure and Jobs Development Council: Application Review Process



# Outreach Services (GA, NC)

---

Funding Roundtables

Funding Forums

Funding Fairs



# Statewide Infrastructure Planning

Many needs assessments  
Few funding plans  
Inventories with proposed funding sources  
(WV)

# Additional Resources

UNC EFC Funding Coordination Resource  
Page

(<http://www.efc.unc.edu/projects/infrastructurecoordination.htm>)

EPA Handbook of Coordinating Water and  
Wastewater Funding

([http://www.epa.gov/ogwdw000/dwsrf/pdfs/guide\\_dwsrf\\_funding\\_infrastructure.pdf](http://www.epa.gov/ogwdw000/dwsrf/pdfs/guide_dwsrf_funding_infrastructure.pdf))

# Agriculture Water Use

Presentation to the  
Legislative Study Commission on  
Water and Wastewater Infrastructure  
January 20, 2010

Mitch Peele  
Sr. Director of Public Policy  
NC Farm Bureau

The Voice of Agriculture®



2009

## The Year of the Water Bills

- Bills to move funding and operation of existing water and wastewater programs to a new state level authority
- Bill to take away private rights and require permits (WAS recommendation)
- Bill to protect rights of private well owners
- Bill to provide a tax credit for purchasing water efficient products
- Bill to provide tax credits for the installation of cisterns and innovative irrigation systems
- Bill to establish new water quantity cost share program for landowners and farmers
- Bill to create a Legislative Study Commission to study issues related to water, water supply and delivery, wastewater infrastructure as well as funding

The Voice of Agriculture®



## Overview

- Understanding agriculture water use
- Recognizing our capacity for storing water
- Reviewing agriculture's commitment to water resources

The Voice of Agriculture®



Agriculture Water Use

## Amount – Perception

- 60%, 45%. 30%???
- USGS
- National, Midwest patterns

The Voice of Agriculture®





Agriculture Water Use

## Amount – Review of Data

- How do we know?
  - Statewide registration
  - CCPCUA
  - Southern Coastal Plain
  - USDA Agriculture Census
  - Agriculture water use surveys

The Voice of Agriculture®



Agriculture Water Use

## Amount – Current & Extensive Data

- The results
  - <1% withdrawals
  - $\leq$  10% consumptive use

The Voice of Agriculture®



## Amount – Review of Practices

- Efficiencies
  - Animal agriculture has undergone significant advancements
  - Little irrigated corn and grain acreage in NC
  - Green industry extremely efficient in irrigation methods

The Voice of Agriculture®



## Amount – Review of Need

- Importance
  - State's No. 1 industry
  - Agriculture feels effects first
  - Green industry is essential
    - > \$8.6 billion/year to ag economy
    - > 150,000 employees

The Voice of Agriculture®



Agriculture Water Use

## Storage Capacity

- Approximately 17,000 farm ponds in NC
- Water control structures, drainage ditches
- 3 million private wells

The Voice of Agriculture®



Agriculture Water Use

## Commitment

- Central Coastal Plain CUA (missed opportunity?)
- 2002 drought (HB 1215, drought rule)
- 2007-2009 drought (HB 2499)
- 2009 legislation
- Present day

The Voice of Agriculture®



Agriculture Water Use

## Commitment

- Voluntary BMP's
- Education and outreach
- Conservation and efficiency
- Increased storage capacity
- Use of alternative sources
- Use of wastewater
- New cost share program

The Voice of Agriculture®



Agriculture Water Use

## Commitment

- **Development of strategic plan**
  - Includes previous ideas for voluntary BMP's
  - Projections for growth
  - Water resources "areas of concern"
  - Less water dependent crops
  - Capacity for storing water using farm ponds
  - Opportunities to partner with municipal wastewater plants
  - Water audits
  - Need for cost share
  - Credibility and utility

The Voice of Agriculture®



Agriculture Water Use

## Existing Tools

- Water Use Act
- CUA
- Statewide reporting
- Inter-basin transfers
- HB 1215 (and water conservation rule)
- HB 2499
- Executive orders

The Voice of Agriculture®



Agriculture Water Use

## Summary

- We do know a lot about agriculture water use
- Agriculture can play lead role in increasing capacity
- Agriculture remains committed to protecting our resources
- NC has several tools to protect water
- Let's not miss this opportunity
- We need to act now

The Voice of Agriculture®



**Legislative Study Commission on Water and Wastewater Infrastructure**  
**Working group proposal**

**2. *Infrastructure funding priorities***

*Charge:* Review the infrastructure funding priorities currently set out in state statutes and session law and identify gaps between current priorities and available funds, between the priorities and current or emerging needs, and between the priorities and the flexibility communities may require to respond to urgent and critical needs, including encouraging year-round water conservation as a demand management tool, incentives for regionalization, and appropriate levels of local support. (Tasks 4 & 6)

*Suggested leaders:* David Thompson (Kevin Leonard)  
Ellis Hankins (Councilman Buck Kennedy)  
\_\_\_\_\_  
\_\_\_\_\_  
*Staff person:* Tim Dodge

**3. *Financing the current critical gaps***

*Charge:* Review available information and recommend infrastructure funding priorities to ensure that funds are used to meet the state's most pressing needs, especially those needs facing communities with severe financial constraints and those needs that do not easily fall within the top priorities for federally-assisted programs. (Task 5)

*Suggested leaders:* Rep. Jim Crawford  
Sen. A. B. Swindell  
\_\_\_\_\_  
\_\_\_\_\_  
*Staff person:* Kristin Walker

**4. *Long-term state assistance and financing***

*Charge:* Examine the options and determine the parameters for on-going state assistance to address water and wastewater infrastructure needs in North Carolina, including potential sources for assistance, the potential allocation methods, and the types of activities the sources and allocations might support.

*Suggested leaders:* Sen. Charlie Albertson  
Rep. Bill Owens  
\_\_\_\_\_  
\_\_\_\_\_  
*Staff person:* Mark Bondo

**Legislative Study Commission on Water and Wastewater Infrastructure**  
**Working group proposal**

- *Appoint 4 working groups with convener.*
- *Each group will focus on specific elements within Commission's charge*
- *Each group will have 60 days to meet and deliberate.*
- *Working groups will report back to the Commission at March meeting.*

The Commission shall specifically do all of the following: (S.L. 2009-574, Sec. 43.3)

- ...
- (2) Study an ongoing method for regularly determining and reporting on the State's water and wastewater infrastructure needs, including the subject of small towns whose water or sewer rates exceed the high-unit-cost threshold as defined in G.S. 159G-20.
  - (3) Select a method for identifying and reporting on infrastructure needs in the future.
  - (4) Review infrastructure funding priorities currently set out in State law to determine whether the priorities appropriately reflect the State's most pressing needs in light of future growth projections.
  - (5) Recommend changes to infrastructure funding priorities and appropriations processes to ensure that funds are used to meet the State's most pressing needs.
  - (6) Ascertain the capacity and role of the State in bridging identified gaps between funding priorities and available funds.
  - (7) Determine what steps funding agencies can take to improve the delivery of existing funding programs, including the following options:
    - a. Developing common application requirements;
    - b. Scheduling regular joint meetings between funders and applicants;
    - c. Where projects are jointly funded, exploring options to share and improve oversight responsibilities; and
    - d. Coordinating reporting requirements to produce a single integrated funders report on an annual basis.

**Working Groups**

***1. Identifying and reporting infrastructure needs***

*Charge:* Recommend methods and processes to provide information to the General Assembly and to the public on an annual basis that will detail the current status of water and wastewater infrastructure needs, the activities of funding entities to meet those needs (an annual report on the amounts of assistance provided), and the estimated future needs for publicly-assisted infrastructure. (Tasks 2, 3, & 7d)

*Suggested leader:*

Robin Smith

---

---

---

---

*Staff person:*

Emily Johnson

## VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure

Name of Committee

Jan 20, 2010  
Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

| NAME                       | FIRM OR AGENCY AND ADDRESS                |
|----------------------------|-------------------------------------------|
| JOHN SHAW                  | WAKEUP WAKE CO                            |
| Buddy Murrow               | NC Green Industry Council                 |
| Mark Peters                | NC Green Industry Council                 |
| Tommy Stevens              | NCRC                                      |
| Amy Hobbs                  | MWC                                       |
| Jessi Hayes                | NC Home Builders                          |
| Kathy Harkin               | Progress Energy                           |
| Doug Lassiter              | NC STA                                    |
| Doug Hebron                | Williams Mullen                           |
| L. Andrews                 | NCFB                                      |
| Steve Colanough            | Colanough & Associates, P.A.              |
| Jim Lowrey<br>Duke Carlton | NC Utility Contractors Association<br>AMT |



Bobby Blowe  
Sara Stuckey  
~~Billy Guillet~~

Patrick Woodie  
Julie Cubeta

Sarah Clapp

Grady Pickin

Patrick Bugh

NC Rural Ctr.

"

"

"

X

NCWRP

NCN

Nelson Mullins

## VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure  
Name of Committee

Jan 20, 2010  
Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE  
CLERK

| NAME             | FIRM OR AGENCY AND ADDRESS         |
|------------------|------------------------------------|
| Jay Stem         | NCAA                               |
| Dianne Reid      | DWQ                                |
| Elizabeth Taylor | Kuchanek Law Group                 |
| Jeff Hughes      | UNC School of Government           |
| Don Ramo         | NC DENR-DWR                        |
| Elizabeth Biser  | DENR                               |
| Steve Wall       | DENR                               |
| Kelly Porter     | Water Resources Research Institute |
| CHARLES HALL     | NC SOYBEAN PRODUCERS ASSOC.        |
| Jeff Tyson       | NC Soybean Prod. Assoc             |
| John Fleming     | NC Soybean Producers Association   |

## VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure

Name of Committee

Jan. 20, 2010  
Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE  
CLERK

NAME

FIRM OR AGENCY AND ADDRESS

Johnny Crace

DEPARTMENT OF PUBLIC INSTRUCTION

Vernon Cox

DENR-DSWC

Pat Harris

DENR-DSWC

Tom Ellis

NC State Grange

# JOINT COMMISSION ON WATER & WASTEWATER INFRASTRUCTURE

## MINUTES

April 22, 2010

The Joint Commission on Water & Wastewater met on Thursday April 22, 2010, in Room 643 of the Legislative Office Building in Raleigh at 10:00 a.m. Members present were: Senators Charlie Albertson, Co-chair, & Sen. Hoyle; House members were Rep. Jim Crawford, Co-chair, Rep. Mitch Gillespie, & Rep. Cullie Tarleton. Public members were: Mr. Buck Kennedy, Mr. Billy Ray Hall (Rural Center), Mr. Jim Blackburn (Co. Comm. Assoc.), Ms. Robin Smith, & Mr. Mitch Peele (Farm Bureau).

### I. WELCOME & CHAIR REMARKS

Sen. Albertson called the meeting to order and thanked everyone for their attendance. Mr. Tim Dodge, Staff Attorney announced that today we will listen to Working Group Discussions and we will meet again in the future for one additional meeting. All members have been provided with the shell of the Legislative Report which is due to the legislature by short session. (Attachment A)

### II. WORKING GROUP REPORTS

#### Working Group #1 – Identifying & Report Infrastructure Needs

Ms. Robin Smith, Assistant Secretary for Environment, Dept. of Environment & Natural Resources (DENR). (Attachment B) Ms. Smith explained the draft for working group #1. She advised that the state matches a small amount of matched funds because most of the funding is federal funds. This report highlights the EPA Needs Survey for Drinking Water and Clean Water Revolving Funds and NC Rural Center Water 2030 Report. They are collecting good information every four years but they have not been providing this with the General Assembly on a regular basis but they can begin to share this if it is requested. Section II covers Gaps in Current Information and breaks down some bullet points for covering some infrastructure needs. There is some information on system service areas; information on drinking water needs does not include the cost of proposed reservoir construction; failing water/wastewater systems; and need related to water system efficiency. Section three describes Agricultural Water Resource Infrastructure

Draft Recommendations include supplemental federal survey with a state-only survey to gather additional information on economic development and growth related infrastructure needs; requiring water/wastewater systems to base estimated infrastructure needs on an asset management plan; estimate emergency projects to address failing systems; update report to the General Assembly every 4 years on combined water/wastewater infrastructure needs; incorporate water infrastructure needs into local water supply plans (update every 5 years.); and continue to work with farmers to identify agriculture

water/wastewater needs that are not accounted for in the survey of public water/wastewater needs and report those to the GA every 5 years.

**DISCUSSION:** Rep. Tarleton commended the group for their hard work. As Chair of the House Agriculture Committee he would like to add to draft recommendation #6 and propose that NC work with farmers and land owners to encourage water storage and water use and we provide a program to help farmers help implement and protect our water resources.

Sen. Albertson asked if the money that was allocated a few years ago has been spent to help farmers. Mr. Billy Ray Hall didn't have the exact numbers but he advised that the results were outstanding in helping our farmers. He will provide a report that shows the numbers and dollar amounts that have helped so many people.

*Working Group # 2 – Infrastructure Funding Priorities*

Mr. Arthur L. "Buck" Kennedy, Council Member, Town of Garner & Mr. Nick Tasco, Legislative Specialist, NC League of Municipalities.

Mr. Buck Kennedy provided a power point presentation explanation. (Attachments C & D). Their recommended strategies include regionalization; qualifying threshold; quality & quantity; sustainability, and water database. Each point is outlined in the attachment along with their recommendations for each category. Sustainability is the most difficult to identify because it entails empowering the Local Government Commission to require annual audit statements and notices of consistently failing systems and provide this information to state funding agencies.

Mr. Tasco followed up with comments. He advised that the League feels this is an important issue and they had begun working on this earlier than the forming of this Commission. There is no one source to track and local all the water infrastructure needs that go on across the state. This is a good way to track this information. Other states have some state maintained water resources systems. Kentucky has such a system and on the last page of attachment C you will see a copy of their information system. The first step for NC would data collections and compiled. Though we collect data from various sources, it is never compiled into a database. This would enable us to pull together and have a foundation and starting point for needs. The Division of Water Quality Resources (DWR) could house this information and keep it up-to-date. This could begin as a pilot project.

**DISCUSSION:** Sen. Albertson is impressed with all the time put forth with these working groups. Rep. Gillespie addressed the issue of "regionalization". When we talk about this issue it could mean shipping water from water shed to water shed. This hurts the western part of the state in several ways because of the terrain and the sewer. There have been some changes made where points were eliminated for the western part of the state and that has helped. He can't figure out why it seems more money goes to the eastern part of the state verses the western part of the state due to the number of municipalities. They have separate point scales and it has concerns about that. Ms. Smith spoke and she feels there may be other ways to help with this; also this report does not cover costs to set up database systems. This can be quiet costly. Mr. Billy Ray Hall

also addressed this issue in regard to the point system. He also agreed with Ms. Smith in that this is an expensive

Working Group # 3 – Financing The Current Critical Gaps

Rep. Jim Crawford explained the results of this working group. (Attachment E). Their critical needs for 2010-2011 are outlined in this attachment. The General Assembly will try to put some money in for these critical needs. Some areas in our state have to share in times of drought and this is considered “critical”. Rep. Crawford advised that we have some serious problems with our state budget but we will do what we can to put some money forward to help with these issues.

**DISCUSSION:** Sen. Albertson asked Mr. Hall to share how they have helped some areas. Mr. Hall told how they define “critical needs”. They feel that crisis/critical needs have an impact on the families of North Carolina and our rural areas.

Working Group #4 – Long-term State Assistance & Financing

Mr. Mark Bondo, Fiscal Analyst, Fiscal Research Division highlighted their handout. (Attachment F). Their discussions include County Land Transfers; Off Shore Energy Exploration & Production of Energy; Local Contribution to State Related Water & Sewer Grants; Virginia Resources Authority; Water & Sewer Utility Tax; and Other State Examples-Maryland: “State Flush Tax”. This attachment provides potential drawbacks for each category. The current state of our budget needs will certainly impact the needs and funds that could be used to help with our water/wastewater infrastructure needs.

DISCUSSION: Ms. Smith commented on previous studies done by the state to look at programs that we do have relative to loan funds. Under state laws it is difficult to be flexible on some things. Under the Recovery Act there was more flexibility on loan terms vs. grants. One thing to look at would be the structure of our loans and grants and provide more flexibility on state-providing loans to make these more attractive and use these as sources of revenue. Rep. Tarleton spoke on the total number of dollars needed to begin to address these needs it is sure that we can’t appropriate all we need. Taxes and fees may be the only dedicated funding source to earmark dollars to go toward water and sewer needs.

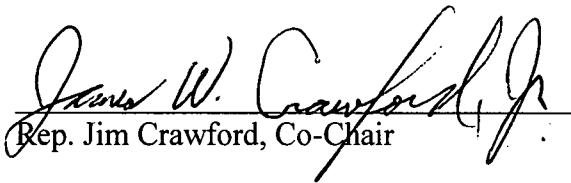
The Rural Center has a handout for ideas they provided. (Attachment G).

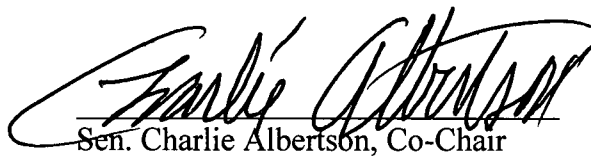
### **III. COMMISSION DISCUSSION**

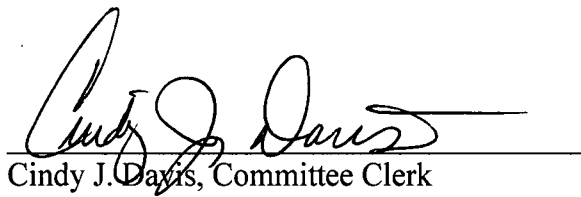
Rep. Crawford advised that the chairs will work with staff and see work out details for another meeting. Notification will be provided.

### **VII. ADJOURNMENT**

The meeting adjourned at 11:30 A.M.

  
Rep. Jim Crawford, Co-Chair

  
Sen. Charlie Albertson, Co-Chair

  
Cindy J. Davis, Committee Clerk

**Legislative Study Commission on  
Water and Wastewater Infrastructure  
Agenda**

**Thursday, April 22, 2010, 10:00 A.M.  
Room 643, Legislative Office Building**

**Representative Crawford, Presiding**

**I. Welcome & Chair Remarks**

Representative James Crawford, Co-Chair  
Senator Charles Albertson, Co-Chair

**II. Working Group reports**

*Working Group #1: Identifying and reporting infrastructure needs*

Robin Smith, Assistant Secretary for the Environment, Department of  
Environment and Natural Resources (DENR)

*Working Group #2: Infrastructure funding priorities*

Arthur L. "Buck" Kennedy, Council Member, Town of Garner  
Nick Tosco, Legislative Specialist, North Carolina League of Municipalities

*Working Group #3: Financing the current critical gaps*

Representative James Crawford

*Working Group #4: Long-term state assistance and financing*

Mark Bondo, Fiscal Analyst, Fiscal Research Division

**III. Commission Discussion**

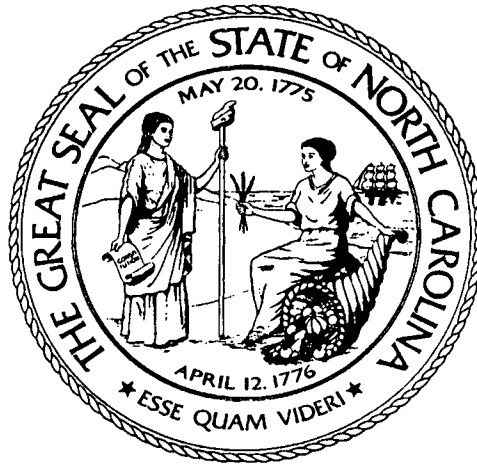
**IV. Adjourn**

---



*DRAFT*

**NORTH CAROLINA GENERAL ASSEMBLY**



---

**LEGISLATIVE STUDY COMMISSION ON  
WATER AND WASTEWATER  
INFRASTRUCTURE**

---

**REPORT TO THE  
2010 SESSION  
of the  
2009 GENERAL ASSEMBLY**

**APRIL 2010**

A LIMITED NUMBER OF COPIES OF THIS REPORT IS AVAILABLE FOR  
DISTRIBUTION THROUGH THE LEGISLATIVE LIBRARY

ROOMS 2126, 2226  
STATE LEGISLATIVE BUILDING  
RALEIGH, NORTH CAROLINA 27611  
TELEPHONE: (919) 733-7778

OR

ROOM 500  
LEGISLATIVE OFFICE BUILDING  
RALEIGH, NORTH CAROLINA 27603-5925  
TELEPHONE: (919) 733-9390

---

## TABLE OF CONTENTS

---

|                       |   |
|-----------------------|---|
| Letter of Transmittal | 5 |
|-----------------------|---|

---

|                             |   |
|-----------------------------|---|
| Background and Introduction | 7 |
|-----------------------------|---|

|                        |   |
|------------------------|---|
| Commission Proceedings | 9 |
|------------------------|---|

|                           |    |
|---------------------------|----|
| Working Group Proceedings | 13 |
|---------------------------|----|

---

|                 |    |
|-----------------|----|
| Recommendations | 19 |
|-----------------|----|

---

|                         |    |
|-------------------------|----|
| Authorizing Legislation | 21 |
|-------------------------|----|

|                      |    |
|----------------------|----|
| Membership and Staff | 23 |
|----------------------|----|

---

## TRANSMITTAL LETTER

---

**Members of the 2009 General Assembly, Regular Session 2010:**

**Attached for your consideration is the interim report of the Legislative Study Commission on Water and Wastewater Infrastructure established pursuant to Part 43 of S.L. 2009-574. The Legislative Study Commission on Water and Wastewater Infrastructure respectfully submits the following report.**

---

**Sen. Charles Woodrow Albertson**  
**Co-Chair**

---

**Rep. James Walker Crawford, Jr.**  
**Co-Chair**

---

## BACKGROUND AND INTRODUCTION

---

Pursuant to Part 43 of S.L. 2009-574, the General Assembly established the Legislative Study Commission on Water and Wastewater Infrastructure. The 17-member Commission consists of four members of the House of Representatives, appointed by the Speaker of the House; four members of the Senate, appointed by the President Pro Tempore of the Senate; two members appointed by the Governor; and seven public members or their designees. The Commission was directed to “focus on the development of an ongoing process to identify and regularly report to the North Carolina General Assembly on water and wastewater needs,” along with other specific tasks.

The Commission met in full four times during the 2010 Session, as follows:

November 10, 2009 - Legislative Office Building, Raleigh

December 14, 2009 - Legislative Office Building, Raleigh

January 20, 2010 - Legislative Office Building, Raleigh

April 22, 2010 - Legislative Office Building, Raleigh

At its January 20, 2010 meeting, the Commission established four working groups from its membership to evaluate and discuss specific tasks. The working groups met on numerous occasions in February, March, and April 2010, and the Commission received the final reports of the working groups on April 22, 2010.

This interim report provides a summation of the Commission’s activities to date. The Commission anticipates continuing its investigation of water and wastewater infrastructure funding issues following the 2010 Session of the General Assembly and will submit a final report, including legislative proposals and recommendations, prior to the convening of the 2011 General Assembly.

A complete record of the Commission proceedings, including minutes from each meeting, is available in the Commission notebook filed in the Legislative Library. Copies of the presentations made and handouts distributed to the Commission are available on the Commission’s website at:

<http://www.ncleg.net/gascripts/DocumentSites/browseDocSite.asp?nID=59>.

---

## COMMISSION PROCEEDINGS

---

The Commission conducted a review of water and wastewater infrastructure issues during the 2009-2010 legislative interim. The following Commission agendas provide an overview of the information received by the Commission to date. Handouts and other materials distributed at these meetings can be viewed on the Commission website at: <http://www.ncleg.net/gascripts/DocumentSites/browseDocSite.asp?nID=59>.

**November 10, 2009 – 10:00 AM**  
Legislative Office Building, Room 414  
300 North Salisbury  
Raleigh, North Carolina  
Agenda

1. Chair's Remarks  
    Sen. Charles W. Albertson, Co-Chair, Presiding  
    Rep. James W. Crawford, Co-Chair
2. Commission Charge  
    Staff
3. Needs Assessment  
    Richard Whisnant, Professor of Public Law and Government, School of  
    Government, University of North Carolina  
  
    Patrick Woodie, Vice President, Rural Economic Development Center  
  
    Robin W. Smith, Assistant Secretary for the Environment  
    Department of Environment and Natural Resources  
  
    Dale Carroll, Deputy Secretary, Department of Commerce  
  
    Richard Rogers, Executive Director, Clean Water Management Trust Fund
4. Update on Funders Cooperation Letter  
    Richard Rogers, Executive Director, Clean Water Management Trust Fund
5. Commission Discussion and Announcements
6. Adjournment

**December 14, 2009 – 1:00 PM**  
Legislative Office Building, Room 544  
300 North Salisbury  
Raleigh, North Carolina  
Agenda

1. Chair's Remarks  
    Sen. Charles W. Albertson, Co-Chair  
    Rep. James W. Crawford, Co-Chair, Presiding
2. Water/Wastewater Finance and Government  
    Jeff Hughes, Director, Environmental Finance Center, University of North Carolina
3. Water Allocation Study  
    Richard Whisnant, Professor of Public Law and Government, School of Government, University of North Carolina
4. State Water Infrastructure Commission Overview and Update  
    Bill Holman, Director of State Policy, Nicholas Institute for Environmental Policy Solutions, Duke University
5. State Water Supply Plan & Local Water Supply Plans  
    Tom Reeder, Director, Division of Water Resources, Department of Environment and Natural Resources
6. Commission Discussion and Announcements
7. Adjournment

**January 20, 2010 – 1:00 PM**  
Legislative Office Building, Room 544  
300 North Salisbury  
Raleigh, North Carolina  
Agenda

1. Chair's Remarks  
    Sen. Charles W. Albertson, Co-Chair, Presiding  
    Rep. James W. Crawford, Co-Chair
2. Staff Comments  
    Staff
3. Pollutant impacts on water quality and water supply  
    Coleen H. Sullins, Director, Division of Water Quality, Department of  
    Environment and Natural Resources
4. Best practices to improve the coordination of water and wastewater infrastructure funding  
    Jeff Hughes, Director, Environmental Finance Center, School of Government,  
    University of North Carolina at Chapel Hill
5. Agricultural water use issues  
    Mitch Peele, Senior Director of Public Policy, North Carolina Farm Bureau  
    Federation
6. Commission Discussion and Announcements
7. Adjournment



**April 22, 2010 – 10:00 AM**  
Legislative Office Building, Room 643  
300 North Salisbury  
Raleigh, North Carolina  
Agenda

1. Chair's Remarks  
    Sen. Charles W. Albertson, Co-Chair  
    Rep. James W. Crawford, Co-Chair, Presiding
2. Working Group #1: Identifying and reporting infrastructure needs  
    Robin Smith, Assistant Secretary for the Environment, Department of  
    Environment and Natural Resources (DENR)
3. Working Group #2: Infrastructure funding priorities  
    Arthur L. "Buck" Kennedy, Council Member, Town of Garner  
  
    Nick Tosco, Legislative Specialist, North Carolina League of Municipalities
4. Working Group #3: Financing the current critical gaps  
    Representative Jim Crawford
5. Working Group #4: Long-term state assistance and financing  
    Mark Bondo, Fiscal Analyst, Fiscal Research Division
6. Commission Discussion and Announcements
7. Adjournment

---

## WORKING GROUP PROCEEDINGS

---

Following the January 20, 2010 meeting of the Commission, the Co-Chairs requested that Commission members divide into the following work groups to allow for more informal discussion of the issues before the Commission.

### ***Working Group #1: Identifying and reporting infrastructure needs***

*Charge:* Recommend methods and processes to provide information to the General Assembly and to the public on an annual basis that will detail the current status of water and wastewater infrastructure needs, the activities of funding entities to meet those needs (an annual report on the amounts of assistance provided), and the estimated future needs for publicly-assisted infrastructure. (Tasks 2, 3, & 7d)

*Suggested leader:* Robin Smith  
Tori Small  
Mitch Peele  
Richard Rogers  
Sen. David Hoyle  
*Staff person:* Emily Johnson

### ***Working Group #2: Infrastructure funding priorities***

*Charge:* Review the infrastructure funding priorities currently set out in state statutes and session law and identify gaps between current priorities and available funds, between the priorities and current or emerging needs, and between the priorities and the flexibility communities may require to respond to urgent and critical needs, including encouraging year-round water conservation as a demand management tool, incentives for regionalization, and appropriate levels of local support. (Tasks 4 & 6)

*Suggested leaders:* David Thompson (Kevin Leonard)  
Ellis Hankins (Councilman Buck Kennedy)  
Bill Holman  
Sen. Tom Apodaca  
*Staff person:* Tim Dodge

### ***Working Group #3: Financing the current critical gaps***

*Charge:* Review available information and recommend infrastructure funding priorities to ensure that funds are used to meet the state's most pressing needs, especially those needs facing communities with severe financial constraints and those needs that do not easily fall within the top priorities for federally-assisted programs. (Task 5)

*Suggested leaders:* Rep. Jim Crawford  
Sen. A. B. Swindell  
Billy Ray Hall  
Dale Carroll  
*Staff person:* Kristin Walker

***Working Group #4: Long-term state assistance and financing***

*Charge:* Examine the options and determine the parameters for on-going state assistance to address water and wastewater infrastructure needs in North Carolina, including potential sources for assistance, the potential allocation methods, and the types of activities the sources and allocations might support.

*Suggested leaders:* Sen. Charlie Albertson  
Rep. Bill Owens  
Rep. Cullie Tarleton  
Rep. Mitch Gillespie  
*Staff person:* Mark Bondo

The reports for each of the working groups are included in the following pages.

Insert Report Here

*Working Group #1: Identifying and reporting infrastructure needs*

Insert Report Here  
*Working Group #2: Infrastructure funding priorities*

Insert Report Here

*Working Group #3: Financing the current critical gaps*

Insert Report Here

*Working Group #4: Long-term state assistance and financing*

---

## RECOMMENDATIONS

---



---

# AUTHORIZING LEGISLATION

---

## S.L. 2009-574, PART 43

### **PART XLIII. LEGISLATIVE STUDY COMMISSION ON WATER AND WASTEWATER INFRASTRUCTURE (Crawford, Owens)**

**SECTION 43.1.** There is created the Legislative Study Commission on Water and Wastewater Infrastructure. The Commission shall consist of 17 members appointed as follows:

- (1) Four members of the House of Representatives, appointed by the Speaker of the House of Representatives.
- (2) Four members of the Senate, appointed by the President Pro Tempore of the Senate.
- (3) Two members appointed by the Governor.
- (4) The Secretary of the North Carolina Department of Environment and Natural Resources or the Secretary's designee.
- (5) The Secretary of the North Carolina Department of Commerce or the Secretary's designee.
- (6) The President of the North Carolina Rural Economic Development Center or the President's designee.
- (7) The Executive Director of the North Carolina Clean Water Management Trust Fund or the Executive Director's designee.
- (8) The Executive Director of the North Carolina League of Municipalities or the Executive Director's designee.
- (9) The Executive Director of the North Carolina Association of County Commissioners or the Executive Director's designee.
- (10) The Chair of the State Water Infrastructure Commission.

**SECTION 43.2.** The Speaker of the House of Representatives and the President Pro Tempore of the Senate shall each designate a cochair. The Commission may meet at any time upon the joint call of the cochairs. A quorum of the Commission shall be a majority of its members.

Vacancies on the Commission shall be filled by the same appointing authority that made the initial appointment.

Subject to the approval of the Legislative Services Commission, the Commission may meet in the Legislative Building or the Legislative Office Building.

The Legislative Services Commission, through the Legislative Services Officer, shall assign professional staff to assist the Commission in its work. The House of Representatives' and the Senate's Director of Legislative Assistants shall assign clerical support staff to the Commission, and the expenses relating to the clerical employees shall be borne by the Commission.

In addition, the State agencies and nonprofits serving on the Commission shall cooperate in providing information and additional staff resources as needed to accomplish the work of the Commission.

The Commission, while in the discharge of its official duties, may exercise all powers provided for under G.S. 120-19 and G.S. 120-19.1 through G.S. 120-19.4. The Commission may contract for professional, clerical, or consultant services as provided by G.S. 120-32.02.

Members of the Commission shall receive subsistence and travel expenses at the rates set forth in G.S. 120-3.1, 138-5, or 138-6, as appropriate.

**SECTION 43.3.** The Legislative Study Commission on Water and Wastewater Infrastructure shall focus on the development of an ongoing process to identify and regularly report to the North Carolina General Assembly on statewide water and wastewater infrastructure needs and to improve the delivery of State appropriated water and wastewater programs. The Commission shall specifically do all of the following:

- (1) Evaluate the information provided through the drinking water and wastewater needs assessment prepared by the Environmental Protection Agency (EPA) every four years; the drinking water and wastewater needs surveys currently done by the North Carolina Department of Environment and Natural Resources in support of the EPA needs assessment; the data compiled as part of Water 2030 by the North Carolina Rural Economic Development Center, Inc.; and any other existing data sets in order to determine what information currently exists and where there may be gaps in the data.
- (2) Study an ongoing method for regularly determining and reporting on the State's water and wastewater infrastructure needs, including the subject of small towns whose water or sewer rates exceed the high-unit-cost threshold as defined in G.S. 159G-20.
- (3) Select a method for identifying and reporting on infrastructure needs in the future.
- (4) Review infrastructure funding priorities currently set out in State law to determine whether the priorities appropriately reflect the State's most pressing needs in light of future growth projections.
- (5) Recommend changes to infrastructure funding priorities and appropriations processes to ensure that funds are used to meet the State's most pressing needs.
- (6) Ascertain the capacity and role of the State in bridging identified gaps between funding priorities and available funds.
- (7) Determine what steps funding agencies can take to improve the delivery of existing funding programs, including the following options:
  - a. Developing common application requirements;
  - b. Scheduling regular joint meetings between funders and applicants;
  - c. Where projects are jointly funded, exploring options to share and improve oversight responsibilities; and
  - d. Coordinating reporting requirements to produce a single integrated funders report on an annual basis.

**SECTION 43.4.** As used in subdivision (7) of Section 43.3, "funding agencies" means the Department of Commerce, the Department of Environment and Natural Resources, the Clean Water Management Trust Fund, and the Rural Economic Development Center.

**SECTION 43.5.** On or before May 1, 2010, the Legislative Study Commission on Water and Wastewater Infrastructure shall submit an interim report to the 2009 General Assembly, Regular Session 2010. This interim report shall include any findings or recommendations of the Commission at that time. In addition, no later than the convening of the 2011 General Assembly, the Commission shall submit a final report to the General Assembly. This final report shall include the Commission's findings and recommendations under this study, including any legislative or administrative proposals. The Commission shall terminate upon the earlier of the filing of its final report or the convening of the 2011 General Assembly.

---

## MEMBERSHIP

---

### Pro Temp's Appointments

Sen. Charlie W. Albertson, Co-chair  
136 Henry Dunn Pickett Rd.  
Beulaville, NC 28518  
910-298-4923

Sen. Thomas Apodaca  
214 N. King St.  
Hendersonville, NC 28792  
828-696-0574

Sen. David Hoyle  
604 Queens Dr.  
Dallas, NC 28034  
704-922-4969

Sen. A. B. Swindell  
700 E. Birchwood Dr.  
Nashville, NC 27856  
252-459-7805

### Other Appointees

Secretary J. Keith Crisco  
Department of Commerce  
4301 Mail Service Center  
Raleigh, NC 27699-4301  
919-733-3449

### Speaker's Appointments

Rep. Jim Crawford, Co-Chair  
509 College St.  
Oxford, NC 27565  
252-492-0185

Rep. Mitch Gillespie  
185 Cross Creek North Ridge Dr.  
Marion, NC 28752  
828-652-5548

Rep. William "Bill" Owens  
113 Hunters Trail East  
Elizabeth City, NC 27909  
252-335-0167

Rep. Cullie Tarleton  
P. O. Box 1269  
Blowing Rock, NC 28605  
828-295-3353

Robin Smith, Assistant Secretary for the  
Environment, Department of Environment  
and Natural Resources  
1601 Mail Service Center  
Raleigh, NC 27699-1601  
919-715-4100

Mr. Billy Ray Hall, President  
NC Rural Economic Dev. Center  
4021 Carya Drive.  
Raleigh, NC 27610-2914  
919-250-4314

Mr. Arthur (Buck) Kennedy  
NC League of Municipalities  
215 N. Dawson St.  
Raleigh, NC 27603-1172  
919-715-4000

Mr. Richard E. Rogers, Jr. Exec. Dir.  
Clean Water Management Trust Fund  
1651 Mail Service Center  
Raleigh, NC 27699-1651  
919-571-6767

Mr. David F. Thompson, Exec. Director  
NC Association of County Commissioners  
215 N. Dawson St.  
Raleigh, NC 27603-1172  
919-715-2893

Mr. Bill Holman, Chairman, State Water Infrastructure Commission  
State Policy Director, Nicholas Institute for Environmental Policy Solutions  
Duke University, Box 90335  
Durham, NC 27708  
919-613-8737

#### **Governor's Appointees**

Mr. Larry Wooten, President  
NC Farm Bureau Federation, Inc.  
P. O. Box 27766  
Raleigh, NC 27611  
919-782-1705  
Cell – 919-306-6305

Ms. Victoria (Tori) Small, PE  
Westcott, Small & Assoc., PLLC  
4015 Meeting Way, Suite 105  
High Point, NC 27265  
336-812-3546  
Cell – 336-558-5978

#### **Commission Staff**

Tim Dodge  
Research Division – 919-733-2578

Kristin Walker & Mark Bondo  
Fiscal Research Division – 919-733-4910

Emily Johnson  
Bill Drafting Division – 919-733-6660

Cindy Brooks Davis/Office of Sen. Albertson  
Room 523-Legislative Office Bldg.  
Commission Clerk – 919-733-5705

## **Water/Wastewater Infrastructure Study Committee Working Group 1 (Identifying Infrastructure Needs)**

### **I. Existing Information on Infrastructure Needs**

#### **EPA Needs Surveys for the State Drinking Water and Clean Water Revolving Funds**

**How the surveys are done:** Conducted every 4 years; limited to publicly owned water/wastewater systems

**EPA Drinking water survey:** All systems with > 100,000 customers surveyed; a sample of systems with > 3,000 and < 100,000 customers. EPA uses modeling to project needs of systems serving < 3,000.

**EPA Wastewater survey:** Sent to 500 municipalities, 100 counties, engineers and other public wastewater utilities. Covers wastewater, stormwater and nonpoint source needs. Must be supported by engineering reports and capital improvement plans.

**Needs that may not be captured:** Purely growth-related projects may not be captured in the surveys, because there are limitations on use of the State Revolving Funds for those projects.

#### **N.C. Rural Center Water 2030 Report**

**Description:** A report on statewide water/wastewater needs completed in 2005. The capital needs inventory looked at both near-term capital improvement needs and needs related to growth projected through 2030. Funded as a one-time overview, Water 2030 provides a snapshot of projected infrastructure needs.

**How it was done:** The Rural Center sent a survey to the owners of all public systems owning or operating drinking water, sewer or stormwater utilities.

- Asked system owners to confirm 1998 water and sewer system boundaries (by reference to the 1998 Rural Center survey and CGIA maps) and to note any changes in service area boundaries since then. (85 systems were mapped in Water 2030.)
- Requested information on rate structure.

- Requested information on future infrastructure needs based on: 1. The capital improvement plan for 2005-2010; and 2. Projected growth (2011-2030).
- Not limited to projects eligible for federal State Revolving Fund awards, so may have captured more economic development and growth-related needs than the EPA surveys.

## **II. GAPS IN CURRENT INFORMATION**

- Regularly updated information on infrastructure needs related to economic development and population growth
- Current information on water/wastewater system service areas. (Note: DENR is working with the Environmental Finance Center at UNC on a project to create a database of water system service areas.)
- Information on drinking water needs does not include the cost of proposed reservoir construction (EPA specifically excludes those costs)
- Infrastructure needed to address failing water/wastewater systems
- Infrastructure needs related to water system efficiency (i.e., addressing water loss)

## **III. AGRICULTURAL WATER RESOURCE INFRASTRUCTURE**

In 2008, DENR's Division of Soil and Water Conservation surveyed farmers on needs related to drought response projects. That survey identified water supply needs in the area of well construction and water storage (i.e., construction of farm ponds for irrigation and other purposes). The agricultural needs survey covers water supply infrastructure on private lands for private use. As a result, those needs fall outside the scope of the Rural Center 2030 Report and the ongoing EPA needs surveys which focus on public infrastructure needs.

The N.C. Farm Bureau reported that agriculture leaders are in the process of developing a strategic plan for protecting agriculture water resources. The plan, which is expected to be complete in the fall of 2010, will identify: current and future agriculture water needs; ways to ensure those needs are met; water conservation practices; and water efficiency measures. The Farm Bureau has proposed to report those needs to the General Assembly every five years.

#### IV. DRAFT RECOMMENDATIONS

1. Build on the base of the existing EPA water/wastewater infrastructure survey process. Supplement the federal survey with a state-only survey to gather additional information on economic development and growth related infrastructure needs; water system efficiency measures; and costs related to development of new water sources.
2. Move toward requiring water/wastewater systems to base estimated infrastructure needs on an asset management plan.
3. Estimate a contingency necessary for emergency projects to address failing water/wastewater systems.
4. Use the surveys and estimates of emergency infrastructure needs as the basis for an updated report to the General Assembly every 4 years on combined water/wastewater infrastructure needs.
5. Incorporate water infrastructure needs into local water supply plans (updated every 5 years).
6. Agricultural agencies and organizations should continue to work with farmers to identify agricultural water infrastructure needs that are not accounted for in the survey of public water/wastewater infrastructure needs and report those needs to the General Assembly every 5 years.

**Recommended Strategies for Perceived  
Gaps in Statutory Requirements Involving  
Water/Wastewater Infrastructure**

**Working Group # 2**



# Charge

- *"review the infrastructure funding priorities currently set out in state statutes and session law and identify gaps between current priorities and available funds, between the priorities and current or emerging needs, and between the priorities and the flexibility communities may require to respond to urgent and critical needs, including encouraging year-round water conservation as a demand management tool, incentives for regionalization, and appropriate levels of local support."*

# Recommended Strategies

- Regionalization
- Qualifying Threshold
- Quality AND Quantity
- Sustainability
- Water Database

# Regionalization

- Amend G.S. 159G-23 to establish “Regionalization” as a common criterion.

# ● ● Qualifying Threshold ●

- **Amend Session Law 1998-132 to establish ascending High Unit Cost (HUC) Criteria above the current threshold of 1.5% of the Median Household Income.**

# Quality AND Quantity

- Amend G.S. 159G-23 to establish “Drought Management” as a common criterion.

# Sustainability

- Empower the Local Government Commission to:
  - Require local government annual audit statements and notices of consistently failing systems be sent to state funding agencies for the purpose of reporting on “system sustainability” and to what extent the water and sewer rates of each system are sufficient to sustain operations as well as debt service.
  - Require a capital reserve fund for the water and sewer utility be established and maintained.
  - Review applications for grant funding to ensure that applicants’ grant match is indeed a local share as opposed to another grant.
  - Develop absolute benchmarks that should be met for proper investing in water and sewer infrastructure specifically.

# Water Database

- **Enact legislation to create a statewide water and wastewater infrastructure funding database for North Carolina to be administered by the Division of Water Resources (DWR) in the NC Department of Environment and Natural Resources (NC DENR).**

# KY Water Resources Information System

KY Kentucky: Infrastructure Authority - Overview

Kentucky.gov



Kentucky  
Infrastructure Authority

Home | Site Map | Documents | KIA Board | KIA Staff

KIA > WRIS > Overview

Kentucky  
Infrastructure Authority  
Office of the Governor

About Us

Loan Programs

WRIS

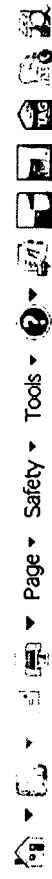
Internet Mapping

Geospatial Data

WRIS Portal

Water Management  
Planners

ADD GIS Staff



Kentucky.gov

Search

KY Agencies | KY Services

## Water Resource Information System

What is the WRIS?

### Introduction

The Water Resource Information System (WRIS), has been developed through the cooperative efforts of water and wastewater treatment systems and local, regional, and state agencies. It is used by all these entities, and provides much of the information needed for all aspects of water resource planning--from watershed protection to infrastructure development. The WRIS includes a geographic information system (GIS), and information on water resources, drinking water systems, wastewater treatment systems, project development, emergency response, regulations, and planning.

The WRIS is comprised of strategic plans, water resource maps and publications, systems management information, reporting and regulatory requirements, guidance and training documents, procedural guidance and forms for project implementation and funding, and internet links to support services. Interactive maps in the system support planning and regionalization efforts. The interactive maps also facilitate drought monitoring and response, and rapid response to contamination emergencies. The GIS contains data for water and wastewater treatment facilities, water lines, water sources, storage facilities, sewer lines, and a database of non-spatial systems information. The GIS provides the fundamental data needed for the planning and emergency response activities. Using the GIS infrastructure data in computer models allows for cost-effective analysis of engineering alternatives, and facilitates the efficiencies needed to meet the needs of Kentucky's infrastructure development.

### Contact Person

Rusty Anderson  
x239  
502-573-0260  
Email

### Resources

WRIS GIS Standards  
(PDF - 847KB)

WRIS Map Gallery

WRIS Water Plans

WRIS Sewer Plans





# KY Water Resources Information System

[Home](#)
[Contact Us](#)
[About Us](#)
[Sitemap](#)
[http://wris.ky.gov/wmpApp/watprofile.aspx?id=bgadd](#)
[The Board Buyer's Guide](#)
[UNIC Software](#)
[The Environment](#)
[Notices](#)
[City of Age Boards](#)

## Water Project Profiles For BGADD

| WRS        | Project Title                                                                 | Total Cost Of Project | Households | Schedule | County   | ADDUOME   |
|------------|-------------------------------------------------------------------------------|-----------------------|------------|----------|----------|-----------|
| WX21005002 | South Anderson Phase VI Expansions                                            | \$3,250,000           | 365        | 0-2      | Anderson | BGADD MAP |
| WX21005004 | South Anderson Phase VII Expansions                                           | \$2,345,000           | 225        | 0-2      | Anderson | BGADD MAP |
| WX21005006 | Lawrenceburg Center Street Tank Replacement                                   | \$1,000,000           | 4000       | 0-2      | Anderson | BGADD MAP |
| WX21017005 | City of North Middletown Waterline Replacement Project                        | \$200,000             | 0          | 0-2      | Bourbon  | BGADD MAP |
| WX21017006 | Paris-Bourbon Co. Industrial Park Water Expansion                             | \$245,390             | 0          | 0-2      | Bourbon  | BGADD MAP |
| WX21017007 | City of Paris - U.S. 68 Bypass Water Transmission Main Extension              | \$220,000             | 4700       | 0-2      | Bourbon  | BGADD MAP |
| WX21017008 | City of North Middletown Waterline Replacement; EPA Matching Funds            | \$166,667             | 0          | 0-2      | Bourbon  | BGADD MAP |
| WX21017009 | Bourbon County Fiscal Court--Fire Hydrant Project                             | \$76,500              | 0          | 0-2      | Bourbon  | BGADD MAP |
| WX21017010 | CITY OF PARIS WTP TELEMETRY UPGRADE                                           | \$80,000              | 0          | 0-2      | Bourbon  | BGADD MAP |
| WX21017013 | City of Paris Filter Rehabilitation at water plant                            | \$125,000             | 0          | 0-2      | Bourbon  | BGADD MAP |
| WX21017014 | City of Paris water valve replacement Phase I                                 | \$500,000             | 0          | 3-11     | Bourbon  | BGADD MAP |
| WX21017015 | City of Paris Creekbank stabilization project at water plant intake           | \$40,000              | 0          | 3-11     | Bourbon  | BGADD MAP |
| WX21017016 | City of Paris renovation of By-Pass 1 MG elevated tank                        | \$400,000             | 0          | 3-11     | Bourbon  | BGADD MAP |
| WX21017011 | City of Paris AMR System upgrade (Automatic meter read) project               | \$100,000             | 0          | 3-11     | Bourbon  | BGADD MAP |
| WX21017012 | City of Paris Creek crossing pipe replacement under Houston and Stoner Creeks | \$60,000              | 0          | 3-11     | Bourbon  | BGADD MAP |
| WX21021002 | Danville WTP Disinfection Byproducts Project Ph II                            | \$1,500,000           | 6700       | 0-2      | Boyle    | BGADD MAP |

TO: The Honorable Charles Albertson, Co-Chairman  
The Honorable James Crawford, Co-Chairman  
Legislative Study Commission Water/Wastewater Infrastructure

FROM: Working Group # 2

cc: Staff to the Legislative Study Commission on Water/Wastewater  
Infrastructure

SUBJECT: Recommended Strategies for Perceived Gaps in Statutory Requirements  
Involving Water/Wastewater Infrastructure

DATE: April 22, 2010

---

At the conclusion of the Water/Wastewater Infrastructure Committee meeting on January 20<sup>th</sup>, Senator Albertson as Chair of the Commission, established four (4) working groups to further the efforts of the Commission and carry out the charge established in the enabling legislation (Session Law 2009-574, Sec. 43.3).

Our Working Group # 2, entitled Infrastructure Funding Priorities, was charged with the responsibility to *"review the infrastructure funding priorities currently set out in state statutes and session law and identify gaps between current priorities and available funds, between the priorities and current or emerging needs, and between the priorities and the flexibility communities may require to respond to urgent and critical needs, including encouraging year-round water conservation as a demand management tool, incentives for regionalization, and appropriate levels of local support."*

The Working Group's membership included: The NC League of Municipalities (Buck Kennedy), The NC Association of County Commissioners (Jim Blackburn), Bill Holman-Director of State Policy at the Nicholas Institute for Environmental Policy Solutions and Senator Tom Apodaca. We were given 90 days to meet, deliberate and report back to the Commission at the meeting on April 22, 2010. Our Working Group met twice, once on March 4<sup>th</sup> at 3:00 pm and once on March 11<sup>th</sup> at 10 am. Working group members discussed and deliberated various policy recommendation options that could address the issues raised in the Working Group charge. With assistance of Tim Dodge, Staff Attorney with the Research Division of the General Assembly and legislative contact for Working Group 2, our working group developed five (5) legislative strategies. Working Group #2 proposes adoption of the following recommendations for consideration by the General Assembly.

**Recommended Strategies  
For  
Perceived GAPS in Statutory Requirements  
Involving  
Water/Wastewater Infrastructure**

**Work Group #2**

April 22, 2010

**1. Regionalization:**

**Recommendation:**

- Amend G.S. 159G-23 to establish “Regionalization” as a common criterion.

Such an addition will provide flexibility to funding agency programs and will place additional emphasis on the emerging issues relating to drought, water shortages due to increased demands and efficiency through regionalization

**Commentary:**

The benefits that accrue from regionalization have increased in importance in recent years in addressing water supply issues in the face of droughts and increased water and wastewater demands due to rapid growth. Examples of such benefits include the economies of scale and enhanced efficiencies and effectiveness of operations. Funding agencies need to modify the priority criteria to enhance the value of regionalization. In order to effectively manage the use of grant and loan funds, the enhanced priority criterion/criteria should be applied to only those project elements that constitute the regional interconnection.

Note 1: At present, funding agencies utilize this criterion in their priority ranking process. Increasing the priority points may provide the necessary incentive for potential applicants to make this a priority for their local unit of government or region.

Note 2: At present, an application for a “regional” infrastructure project can be in the name of whichever unit of local government has the demographic profile that rates the highest on the priority-criteria point scale. Project elements that address local growth or expansion efforts should not be accorded the same priority as the actual interconnection project segment in an effort to effectively manage the use of grant and loan funds.

## 2. Qualifying Threshold:

### Recommendation:

- Amend Session Law 1998-132 to establish ascending High Unit Cost (HUC) Criteria above the current threshold of 1.5% of the Median Household Income.

### Commentary:

The statutory threshold for meeting the High Unit Cost (HUC) priority criterion (and grant eligibility) is currently established as combined water and sewer rates being 1.5% of the Median Household Income (MHI). Since implementation of the statutory requirement, numerous units of local government have increased their water and sewer rates to the point where approximately 67% of local government utilities currently meet this threshold for grant funding eligibility. The minimum criterion has been effective in achieving the statutory objective of local governments increasing utility system revenues in order to adequately operate and maintain their system(s). The HUC threshold is no longer effective in identifying those local units of government that are in greatest need of financial assistance. The minimum threshold of 1.5% of MHI should remain in place as the new Census data will certainly lower the percentage of local government utilities meeting the threshold. An ascending scale of priority points should be established to identify and reward those applicants in true financial need and whose water and sewer rates far exceed the minimum criterion.

Note 1: With an ascending scale above the current minimum criterion, the limited sources of grant funding will be more effectively utilized.

Note 2: An ascending level of priority points will continue to allow applicants only meeting the minimum criterion to compete for funding as other factors such as the applicant's "ability to pay", expressed in multiple criteria, come into play.

## 3. Quality and Quantity:

### Recommendation:

- Amend G.S. 159G-23 to establish "Drought Management" as a common criterion.

Such an addition will provide flexibility to funding agency programs and will place additional emphasis on the emerging issues relating to drought and

water shortages due to increased demands. The new criterion will compliment the emphasis on efficiency through regionalization

- Amend G.S. 143-355.4 and/or G.S. 159G-35 to allow the construction of water supply reservoirs as an eligible project activity/cost.

Current criteria of the CWSRF and the DWSRF loan and grant programs prohibit the use of State funds for the construction of water supply reservoirs.

**Commentary:**

Current program criteria seem to favor infrastructure projects that promote water quality/public health over water quantity (supply). The recent droughts have heightened awareness and this apparent "gap". The greater water supply demands appear to be located in the Piedmont region. Unfortunately, the more affluent communities are located in the Piedmont as well which translates into limited access to available funds. Modifying current priority criteria will place more emphasis on objective statewide water supply needs. Current funding criteria prohibit the use of N.C. loans and grants for the construction of water supply reservoirs. Planning for such infrastructure improvements requires several years and even a limited incentive would help promote this option in drought management.

Note 1: At least one funding agency has addressed the drought issue by setting aside funds specifically to such crisis issues. Modifying the criteria relating to water supply in all funding agencies could not only address water supply/drought related issues but also attenuate issues related to regionalization.

Note 2: The water allocation study recently completed by the N.C. Environmental Review Commission addresses issues of meeting the increasing demand on water supplies in North Carolina. A critical review of the study may shed additional light on potential gaps between current legislation and the actual funding and implementation of water supply initiatives.

4. **Sustainability: (System Maintenance)**

**Recommendation:**

- Empower the Local Government Commission to:
  1. Require local government annual audit statements and notices of consistently failing systems be sent to state funding agencies for the purpose of reporting on "system sustainability" and to what extent the water and sewer rates of each system are sufficient to sustain operations as well as debt service.

2. Require a capital reserve fund for the water and sewer utility be established and maintained.
3. Review applications for grant funding to ensure that applicants' grant match is indeed a local share as opposed to another grant.
4. Develop absolute benchmarks that should be met for proper investing in water and sewer infrastructure specifically.

**Commentary:**

The implied objective in the statutes relating to infrastructure funding is for all applicants for funding to provide for proper operation and maintenance of their systems to be fiscally responsible and sound. Translating those objectives into funding priority categories and/or criteria can be challenging.

Past funding criteria have included a provision for the applicant to establish and maintain a capital reserve fund to help offset the cost of system maintenance and repairs. Criteria currently in place require that each applicant establish water and sewer rates that are sufficient to operate and maintain its water and sewer system. Regulations also require responsive, timely action to protect water quality regardless of the availability of grants and/or loans. Waiting to obtain sufficient grant funding is not a satisfactory strategy. Loan programs are already in place and funds are available to address situations where local reserve funds are insufficient to fund capital improvements. Finally, some funding agency criteria require a minimum local share or match in order to qualify for a grant. The multiple attempts at requirements and incentives for local units of government to establish and provide for a sustainable utility system are evident, yet many local governments delay improvements until optimum grant funding can be secured.

The series of situations and/or inactions outlined above can result in water and sewer systems not being self supporting and sustainable. The statutory intent is in place. Funding priority criteria are in place. System sustainability appears to be a matter of local choice and unless actions are monitored, audited and certified as being in compliance as a part of the funding process, system sustainability will languish. Therefore legislative action addressing system sustainability may be in order. Such legislative action should address the matter of auditing applicants to (1) determine if, in fact, water and sewer rates are sufficient to sustain the operating budget rather than being subsidized by the general fund; (2) budgets include provision for contribution to a capital reserve and that a reserve does, in fact, exist; and (3) grant funding criteria be modified to reward those applicants whose grant match is indeed a local share as opposed to another grant.

Note 1: Funding criteria already require that water and sewer rates be established sufficient to fund water and sewer operations. Debt service, which can be a significant part of the annual utility budget, can be funded through

the general fund (the assessment of *ad valorem* taxes). The utility operating budget should include debt service as well as O&M expenses. Regardless, there is currently no provision to monitor local government utility budgeting practices relating to water and sewer operations and to audit same to determine if the criteria for having received state loan and/or grant funding are being met.

Note 2: Funding criteria require the establishment of a water and sewer utility reserve fund. There is currently no provision to monitor local government utility budgeting practices relating to water and sewer operations and to audit same to determine if the criteria for having received state loan and/or grant funding are being met.

Note 3: At least one funding agency currently implements a priority points system to reward local governments that are actually funding the local share from reserves as opposed to using another grant fund as the local match. Other funding agencies have the flexibility to implement such a priority rating system and are encouraged to do so.

Note 4: The LGC tracks financial results and key ratios for water and sewer enterprises. This information shows or suggests which water systems are operating at a loss, which systems do not have an operating reserve, and which systems undervalue and underprice water services. Given that it is difficult for local elected officials to raise water and wastewater rates on their residential, commercial, institutional, and industrial customers, the LGC should be more active in identifying and challenging the systems that are not adequately investing in their water infrastructure. LGC analysis compares systems to each other and to statistical measures of central tendency and variance, but there is no statement in current LGC reporting of absolute benchmarks that should be met but are not being met. There is no separate scheduling, reporting on, or notification of systems that consistently fail to cover operational and capital needs.

5. **Water Database:**

**Recommendation:**

- Enact legislation to create a statewide water and wastewater infrastructure funding database for North Carolina to be administered by the Division of Water Resources (DWR) in the NC Department of Environment and Natural Resources (NC DENR).

**Commentary:**

Currently there is no one source of information to track and locate all of the current water and wastewater infrastructure project needs and funding patterns in this state. Federal and state agencies (e.g. EPA), funding groups and non-

profits spend a lot of money and resources trying to determine what the water infrastructure needs are in North Carolina.

Other states such as Kentucky and Georgia have state maintained water infrastructure databases that compile:

- current and proposed infrastructure projects
- system information (interconnections, fiscal)
- strategic plans
- water resource maps and publications
- systems management information
- reporting and regulatory requirements
- guidance and training documents
- procedural guidance and forms for project implementation and funding
- internet links to support services

The first step for North Carolina would likely be data consolidation. There is a wealth of information that is currently collected, but not integrated. For instance, every 3 years NC DENR surveys the state's large utilities on the status of its current and future projects, but that data is never compiled electronically. The Division of Water Resources produces the Local Water Supply Plan, but it has never considered what the current needs are. The various funding agencies have been working on common application forms and criteria, but the information on those applications are not currently compiled and integrated electronically. All of these are examples of existing data that could be pulled together as the foundation for a unified database.

Note 1: The database would collect both existing and future projects, assigning each a unique ID, and the project could change in status when it receives funding. In order to receive state funding, all utilities would need to apply through this database. This would lead to instant credibility and transparency in the funding process and would hopefully eliminate some of the duplication and "gamming the system" that currently takes place.

Note 2: As the agency in charge of administering the database, DWR would need at least one FTE to administer and update the database. DWR could also form working groups to address any issues it ran into such as what qualifies as a "project" for database purposes and ensuring that jurisdictions of all size identify future project needs.

Note 3: This sort of unified database of both existing projects and future needs would be of significant benefit to both utilities and funders. Local government system operators and directors would have a "one stop shop" to locate all the technical information and funding patterns in North Carolina.



**Report from:**  
**Water/Wastewater Infrastructure Study Commission**  
**Working Group #3: Financing the Current Critical Gaps**

**April 22, 2010**

The Water/Wastewater Infrastructure Study Commission Working Group #3: Financing the Current Critical Gaps was charged with reviewing available information and recommending infrastructure funding priorities to ensure that funds are used to meet the State's most pressing needs, especially those needs facing communities with severe financial constraints and those needs that do not easily fall within the top priorities for federally-assisted programs. The Group was led by Representative Jim Crawford and Senator A.B. Swindell with Billy Ray Hall and Dale Carroll serving as members.

**The Group reports the following critical needs for FY 2010-11:**

1. The Clean Water Management Trust Fund reported critical needs of \$44 million.
2. The Rural Economic Development Center reported critical needs of \$47-55 million.
3. The Department of Environment and Natural Resources did not have a specific number but did comment that they would need match money for the State Revolving Funds on the order of \$15-17 million.

It should be noted that the figures presented may have some overlap of projects, but it can be reasonably assumed that the current critical needs are close to \$100 million.

**Summary of Group Meetings**

The Group met on March 10, 2010 and again on April 1, 2010. At the March 10 meeting the group reviewed data on current and historical water and wastewater funding levels. The group also received information on the structure of current grant and loan programs in State government for water and wastewater projects. There was a group discussion related to determining what the critical needs are and where the gap is. There was some discussion that grant money is needed for those communities that have the highest costs with the fewest resources. It was agreed that representatives from the Rural Center, the Department of Environment and Natural Resources, and the Clean Water Management Trust Fund would meet separately to discuss defining the critical needs and coming up with needed funding amounts.

On April 1, 2010 the working group met again to hear from the agencies on their critical needs. The Rural Center presented a handout defining and detailing the rural critical funding gap. It defined "current critical need" as projects which promote public health and/or protect the environment and are not more than 24 months old. The Rural Center then used the ARRA SRF applications as a proxy for arriving at how much unfunded need there is in rural areas. The total amount of unfunded rural projects from the ARRA SRF funding was \$553 million, with another \$75 million anticipated to be funded in FY 2010-11, leaving a balance of \$478 million. Using past experience, the Rural Center anticipates that 10% of those projects will be crisis needs – or about \$47 to \$55 million.

There was some discussion that the ARRA projects had a funding cap of \$3 million, which limited who applied. Additionally, the projects that had the greatest crisis or critical needs are the ones that were funded with ARRA funds, so the remaining unfunded projects may not be as critical. There was also discussion of the general rule-of-thumb that for every \$1 million funded for water/wastewater projects, 35 jobs are generated.

Clean Water Management Trust Fund (CWMTF) stated that they had \$97.4 million requested in the 2010 round for wastewater projects. All of these projects had to meet the ability-to-pay criteria. CWMTF stated that about \$44 million in projects were high priority critical needs projects. DENR indicated that they had not come up with a number as to how much funding it needed for critical needs, but it was mentioned that DENR will need State Revolving Fund match money, estimated to be \$14-17 million.

The group then had a discussion about what the funding gap is, with some discussion about communities paying a fair price for water and the State or federal government picking up the rest. Others mentioned that the funding gap should be the difference between what the State currently pays for and what the State *should* pay for, which is not necessarily the total universe of funding needs. There was further discussion that the price of treating and obtaining water varies widely across the State, so the price of water will never be "equal" across the State. The group spoke of the need for regionalism and efficiency and that everyone needs to be held to a set of standards regarding asset management.

## **County Land Transfer Act: (G.S. Art. 60, Sec. 105-600; S.L. 2007-323)**

**Background:** A county is allowed, through a majority vote on a referendum, to levy a local land transfer tax on instruments conveying interests in real property located in the county. Certain types of land transfers are exempt from the levy. The County Land Transfer Act does not apply to transfers of an interest in real property by: a governmental unit or instrumentality of a governmental unit; operation of law; lease for a term of years; or pursuant to the provisions of a will; intestacy; gift; if no consideration in property or money is due or paid by the transferee to the transferor; merger, conversion, or consolidation; by an instrument securing indebtedness. (G.S. 105-228.28 and G.S. 105-228.29). The tax increase is limited to increments of 0.1%, with a maximum rate of 0.4%.

A corresponding state tax does exist. G.S. 105-228.30 requires the Excise Tax on Conveyances, subject to the same exemptions, at a rate of \$1.00 for every \$500 of the value of interest conveyed. Of the funds collected, 50% are credited to the county's general fund. Of the remaining 50%, 25% are credited to the Natural Heritage Trust Fund and 75% are credited to the Parks and Recreation Trust Fund. A county may keep up to 2% of the funds collected that are to be remitted to the state to compensate for the administration of the tax.

Currently, no counties have passed the County Land Transfer Tax. In total, the issue has been put before county voters twenty-three times. Seven counties have local land transfer taxes authorized by the General Assembly, separate from S.L. 2007-323, at the rate of one percent per value of interest conveyed. These counties are Dare, Currituck, Chowan, Camden, Pasquotank, Perquimans, and Washington.

**Proposal:** The state would withdraw the authority granted to the counties to impose, and/or increase the County Land Transfer Tax under G.S. Art. 60; Sec. 105-600. The state would then impose an additional Excise Tax on Conveyances in the amount of the authority rescinded from the counties.

**Expected Revenue:** For each additional 0.1% incremental increase, revenues would increase by \$36 million statewide. An increase to the maximum rate in statute increases revenues to \$144 million.

## **Off Shore Energy Exploration and Production of Energy**

**Background:** On December 20, 2006 the Gulf of Mexico Energy Security Act of 2006 (P.L. 109-432) was signed into law. This Act established a revenue sharing agreement between the states of Alabama, Louisiana, Mississippi, and Texas (Gulf Producing States) and the Federal government. The Gulf Producing States are paid through a formula primarily based on the distance from a state to the producing well. From 2007 to 2016, 50% of royalties are distributed to the US Treasury; 12.5% of royalties are distributed to the Land and Water Conservation Trust Fund; 30% of royalties are distributed to the Gulf Producing States; and 7.5% of royalties are distributed to the Gulf Producing States Coastal Political Subdivisions.<sup>1</sup>

The Outer Continental Shelf Lands Act (OCSLA) of 1953 is the controlling legislation for off shore energy exploration and production. According to OCSLA, the Federal government retains control of all submerged lands that are three miles or more offshore. For lands generating receipts within a three mile boundary, the Federal government is required to distribute all royalties to the affected state. For lands generating receipts within a three to six mile area from a state's shore, twenty-seven percent of all receipts generated in that area.<sup>2</sup>

The U.S. Department of the Interior's Mineral's Management (MMS) Service publishes the five-year Outer Continental Shelf Oil and Gas Leasing program, as required under Section 18 of the OCSLA. Within the 2002-2007 plan, no lands in the adjacent to North Carolina were scheduled for development. Lands off the coast of Virginia are in the 2007-2012 five year plan, at the request of the Commonwealth of Virginia. These lands represent the only lands in the Mid-Atlantic Program Area. Areas off the North Carolina coast are available for study, exploration, and potential development.

**State Action:** In order for the State of North Carolina to obtain a portion of revenues from energy exploration and production, they would need to enter into an agreement with the Federal government, as the Gulf Producing States have done. Such an agreement would require federal legislation. According to conversations with officials at the MMS, official state actions requesting inclusion in the five-year plan, are helpful, but not required.

**Other State Actions in Study Area:** Currently, Virginia has passed House Bill 756 in 2010. Under this bill, "70 percent of all revenues and royalties paid to the Commonwealth for offshore natural gas and oil drilling shall be deposited in the Transportation Trust Fund, 20 percent of revenues are to be appropriated to the Virginia Coastal Research Consortium and 10 percent of revenues are to be appropriated to the

---

<sup>1</sup> United States Code: 48 USC 1331

<sup>2</sup> United States Department of the Interior (No Date). Leasing Oil and Gas Resources: Outer Continental Shelf. Washington, DC: <http://www.ncleg.net/documentsites/committees/OEESC/MMS-Leasing%20Guidebook/GreenBook-LeasingDocument.pdf>.

localities of the Commonwealth for improvements to infrastructure and transportation.”<sup>3</sup> Currently, in South Carolina, there are four bills being considered in the House and Senate pertaining to offshore oil and gas exploration receipts. Under H3194, ninety percent of all state revenues would be placed in the Transportation Trust Fund, and ten percent would be allocated to the Department of Natural Resources.<sup>4</sup>

**Expected Revenue:** The Virginia Department of Planning and Budget prepared a 2010 Fiscal Impact Statement analyzing the potential impacts of offshore energy development. Their analysis is helpful for North Carolina. Estimating revenues from prospective oil and gas development is extremely uncertain. For North Carolina to receive revenue from oil and gas exploration:

1. The Congress would have to grant revenue sharing authority under the Outer Continental Shelf Land Act. Authority has only been granted to the Gulf of Mexico States and Alaska.
2. Lease development would need to be included in the 2007-2012 offshore oil and gas leasing plan. No offshore land adjacent to North Carolina is in the 2007-2012 draft plan
3. Required environmental impact assessments, and a public comment period, would need to occur prior to any lease sale.
4. Companies would have to respond to with interest to offering of a lease.
5. Factors related to the production of energy, such as the amount of oil and gas, the worth of such deposits, and revenue sharing with other states would also affect any potential revenue flowing to North Carolina.

Virginia estimated that \$37.7 to \$56.5 million a year could flow to the state over a 20 to 30 year time period, if the state received a revenue sharing agreement similar to the Gulf Producing States. Virginia estimated the price of oil at \$90 per barrel and the price of natural gas at \$9.50 per thousand cubic feet.

**Projected State Revenues (NC):** Due to the above uncertainties regarding oil and gas leasing, such an issue would require further study before issuing a revenue projection for North Carolina.

**Potential State Actions:** Ultimately, the issue regarding off-shore energy exploration and development is Federal in nature. However, the General Assembly could consider the following: passing legislation allocating potential royalties; passing legislation supporting offshore energy exploration.

---

<sup>3</sup> Virginia Department of Planning and Budget (Feb. 2010) 2010 Fiscal Impact Statement: HB756. Richmond, VA: <http://leg1.state.va.us/cgi-bin/legp504.exe?101+oth+HB756FER122+PDF>

<sup>4</sup> SC General Assembly, 2009-2010 Session: S44, H3194, H3188, H3147

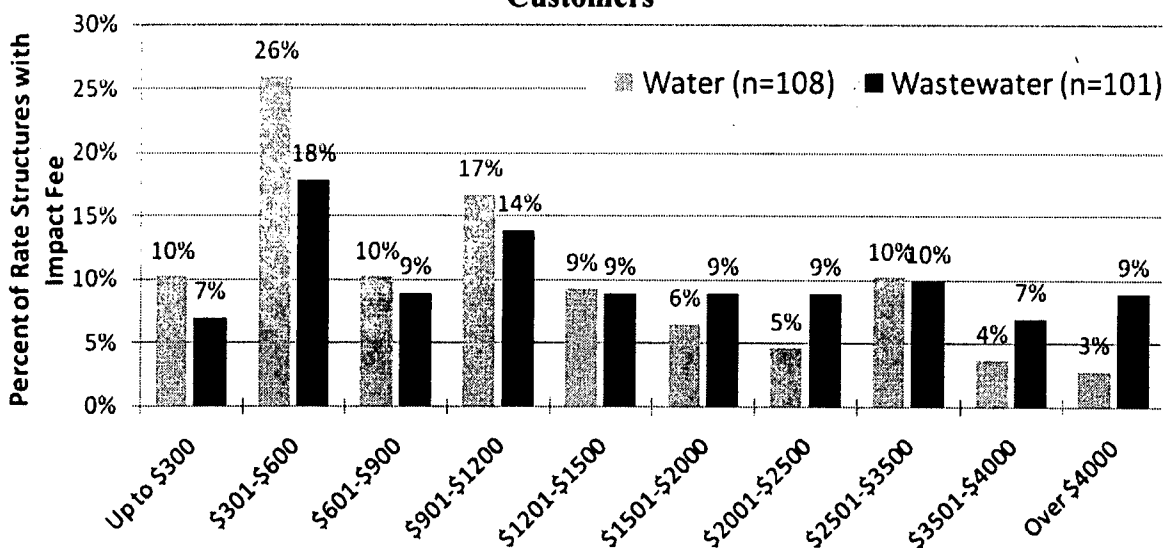
## Local Contribution to State Related Water and Sewer Grants

**Background:** Water and waste water providers typically charge an impact fee to help cover the incremental cost of additional customers on the system. These charges can also be called system development charges or fees. In North Carolina are known as special assessments, such assessments are governed by GS 160A-216, GS 153A-185, 162A-6(a)(14a), and 130A-55(22) for cities and towns, counties, water and sewer authorities, and sanitary districts respectively. System development charges are typically assessed in multiple ways. Typically, these fees are assessed in the following ways:

- *Flat Fee:* Every meter pays a flat fee, regardless of the type of user.
- *User Type:* Residential, Commercial, Industrial, and Agricultural users would each pay a different fee.
- *Water Usage:* The fee would vary by the amount of water usage
- *Tap Size:* The fee would vary by tap size.
- *Land or Unit Size:* Such a fee could vary on the size of the land or building unit being serviced.

**Fee Amount:** Many water and sewer providers in North Carolina currently have special assessment. For North Carolina, the median assessment, as of January 2009 was \$1,000 for residential water customers and \$1,283 for residential sewer customers. Please refer to the figure and table below for additional information.

**Figure 1: North Carolina Impact Fees as of January 2009 for Residential Customers<sup>5</sup>**



<sup>5</sup> Eskaf, S and Nida, C. (2009) Tap Fees and System Development Charges for Residential Water and Wastewater Connections in North Carolina as of January 2009. *University of North Carolina Environmental Finance Center*. [http://www.efc.unc.edu/publications/pdfs/NCTapFeesandSDC\\_Memo2009.pdf](http://www.efc.unc.edu/publications/pdfs/NCTapFeesandSDC_Memo2009.pdf)

**Table 1: Median Residential System Development Charges**

|                      | <i>Water</i><br>(n = 108 rate structures) | <i>Wastewater</i><br>(n = 101 rate structures) |
|----------------------|-------------------------------------------|------------------------------------------------|
| Inside               | \$1,000                                   | \$1,283                                        |
| Outside Jurisdiction | \$1,075                                   | \$1,310                                        |

**Fees vs. Taxes:** A fee is charged for a charge imposed for the use of property, the provision of a service, or the regulation or protection of an item or an activity. A tax is imposed equally on everyone in the same class to provide revenue for the support of government in general.

**Clean Water Management Trust Fund:** The Clean Water Management Trust Fund funded four projects that involved new connections in 2008. These projects established 73,935 linear square feet of sewer line and connected 285 additional residences. Using the median figures above, this could generate an amount to \$365,655 in funding to the State.

**NC Rural Center:** The Rural Center reported that two programs connected additional residences to water and wastewater infrastructure. Of two programs that the Rural Center runs, Clean Water Partners' Infrastructure Program and Economic Infrastructure Program, resulted in 1888 new connections. Using median water assessments, this would result in \$1,888,000 to the State.

**NC DENR:** No longer funds line extensions.

**Potential Drawbacks:**

- Current General Statutes limit the use of special assessments to needs of the facility or locality assessing the charge (GS 130A-55(22); GS 153A-185; 160A-216; 162A-6(14a.)) Uses of such funds are broadly defined in statute and limit the city, county, district, or authority, but ultimately must be used for the water and sewer system.
- An entity may not charge a system development charge. If it does not, would it be able to receive funds from the program?
- There is concern that removal of the assessment from the local entity assessing it may make such an assessment a tax.
- Special Assessments ideally are used to fund the capital needs of the system in the future, which include much more than new lines.

## Virginia Resources Authority

**Background:** The Virginia Resources Authority is a self financed state entity and was created in 1984 under Chapter 21, Title 62.1 of the Code of Virginia and houses a number of programs: Virginia Pooled Financing Program, Virginia Water Facilities Revolving Fund, Virginia Water Supply Revolving Fund Loan, Virginia Dam Safety and Flood Prevention Fund, and the Virginia Airports Revolving Fund. A number of funds are co-administered with other state agencies, with the Virginia Resources Authority providing financial management and various other agencies providing the regulatory and programmatic management.<sup>6</sup>

Of interest to the Committee is the Virginia Pooled Financing Program (VPFP). Essentially, this entity is a municipal bond bank. Essentially, such banks consolidate local government bond issues into a single pooled issue. This program provides communities in Virginia with access to credit markets. Currently, Virginia's program carries ratings of AAA for senior bonds. This enables the program to offer lower interest rates for projects that would otherwise be asked to pay a higher interest rate or would lack access to the debt markets. Projects that are typically funded from such offerings include: facilities related to water supply, wastewater treatment, solid waste management, recycling, resource recovery, energy conservation and efficiency, public safety, and local government buildings, as well as interests in land related thereto. From FY 2004-2008, the VPFP provided approximately \$718 million in funding for 57 local governments and regional authorities.<sup>7</sup> The Program accepts applications from local entities for access to VPFP bond proceeds, to be paid back from the local and regional authority. The applications are evaluated on a number of factors, but primarily on the economic feasibility of the project. Bonds are issued at least twice per year. The chart below shows the flow of funds from the VRA to local projects.<sup>8</sup>

---

<sup>6</sup> Virginia Resources Authority (FY 2008). Annual Report: 2008. Richmond, VA.  
<http://www.virginiaresources.org/pdf/VRA%20Annual%20Report%20and%20CAFR%20FY08.pdf>

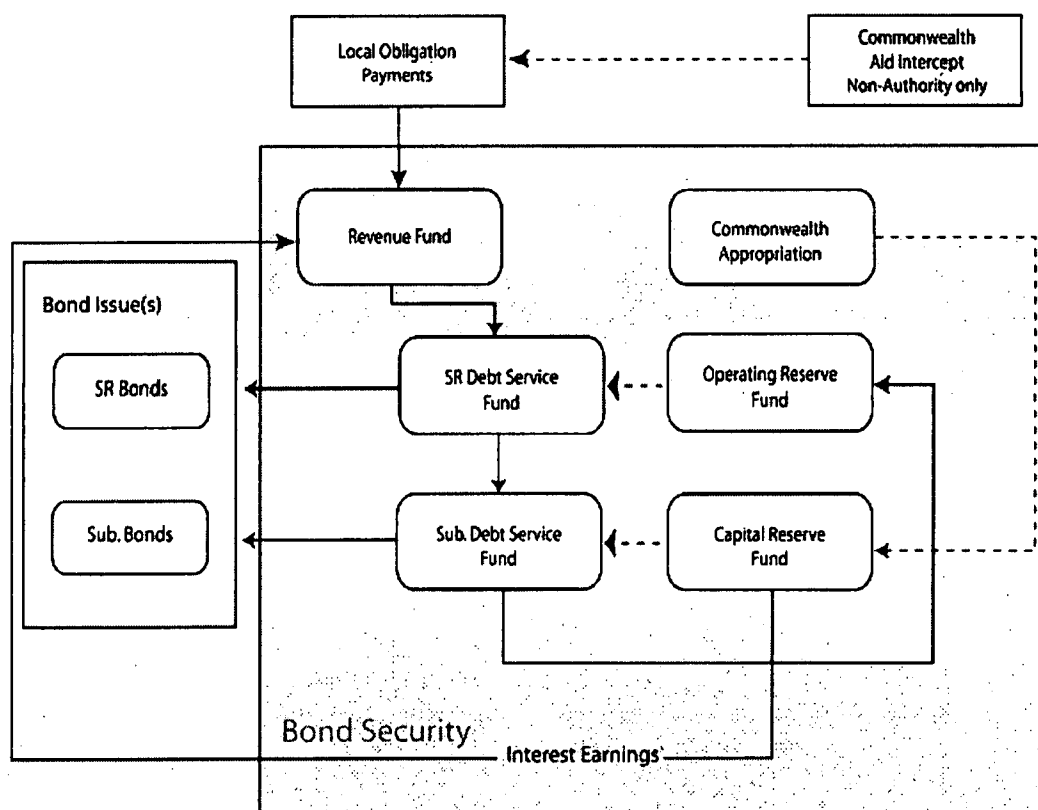
<sup>7</sup> Virginia Resources Authority (Sept. 2009). Comprehensive Annual Financial Report for the Virginia Resources Authority. Richmond, VA.

<http://www.virginiaresources.org/pdf/FINAL%20CAFR%202009.pdf>

<sup>8</sup> Fidelity Investments (No date). Virginia Resources Authority: Virginia Pooled Financing Program. Boston, MA. <https://www.fidelitycapitalmarkets.com/newsdocs/VRA.pdf>.



# Virginia Resources Authority Virginia Pooled Financing Program Flow of Funds\*



\*Simplified for graphic presentation purposes

### **Potential Drawbacks:**

- According the to the 2010 Debt Affordability Study by the Debt Affordability Advisory Committee, the State currently has extremely limited available debt if needed to back a such an authority.
- Some local governments may not take advantage of the authority because they can already access debt markets.<sup>9</sup>
- Some argue that such banks can overly interfere with local government finances.
- Some appropriations may be required to facilitate the program, and provide as needed funding.

---

<sup>9</sup> Council of Development Finance Agencies (No Date). State Bond Banks: Municipal Borrowing Made Easy. <http://www.cdfa.net/cdfa/cdfaweb.nsf/pages/statebondbanksanderson.html>.

## Water and Sewer Utility Tax

**Background:** Currently, there is no customer level tax on water and sewer usage in the state. G.S. 105-116 currently applies the Franchise or Privilege Tax on Electric Power, Water, and Sewerage Companies. The tax rate on a water company is 4% and on a sewer company is 6%. However, the Franchise and Privilege Tax would not apply to public entity (for example, Orange County Water and Sewer Authority). However, there is a model for applying this tax to a utility. GS 105-164.4(a) applies a rate of 3% to gross receipts derived from the sales of electricity.

**Potential Revenue:** Using the US Environmental Protection Agency's Safe Drinking Water Database, there were 2,870,765 accounts in North Carolina, being served by 2,128 community water systems. This represents a total population of 7,331,753 as being served by a community system.<sup>10</sup> Using data collected by the UNC Environmental Finance Center and NC League of Municipalities, the median water bill for residents was \$27.15 per month (assumes 6,000 gsf usage).<sup>11</sup> This would represent a \$9.72 per customer tax with a total amount of \$28,085,856 generated per year. Reliable data on wastewater systems residential connections was not available. However, the UNC Environmental Finance Center and NC League of Municipalities found that median sewer bill for residents was \$32.99 per month. This equates to \$11.88 per customer tax.

---

<sup>10</sup> United States Environmental Protection Agency (2009). Safe Water Drinking System/State Version. Washington, DC. [http://www.epa.gov/ogwdw000/sdwis\\_st/current.html](http://www.epa.gov/ogwdw000/sdwis_st/current.html).

<sup>11</sup> Nida, K and Eskaf, S. (March 2009) Water and Wastewater Rates and Structures in North Carolina. North Carolina League of Municipalities and the University of North Carolina Environmental Finance Center. Raleigh and Chapel Hill, NC:  
[http://www.efc.unc.edu/publications/pdfs/NCLM\\_EFC\\_AnnualW&WWRatesReport-2009.pdf](http://www.efc.unc.edu/publications/pdfs/NCLM_EFC_AnnualW&WWRatesReport-2009.pdf).

### **Other State Example: Maryland: "State Flush Tax."<sup>12</sup>**

In 2004, Senate Bill 320, The Bay Restoration Fund, was signed into law in the State of Maryland. According to the State of Maryland's Department of Environment, wastewater treatment plants are one of the top three contributors of nutrients into the Chesapeake Bay. The Bill created a dedicated fund to upgrade wastewater treatment plants to achieve wastewater effluent treatment standards.

The Wastewater Treatment Plants Fund receives revenue from the following sources:

- \$2.50 monthly fee collected from each home served by a wastewater treatment plant.
- \$2.50 monthly fee per Equivalent Dwelling Unit (EDU) from each commercial and industrial users served by a wastewater treatment plant.

The Department then issues bonds backed by this revenue stream to upgrade wastewater treatment facilities. Certain facilities that discharge into the Bay have priority for funds.

The Onsite Disposal Systems Fund receives revenue from a \$30 annual fee from each residence served by an onsite (septic tank) system. The funds are used for to cover septic system upgrades (60% of funds) and cover crops (40% of funds). Cover crops are crops planted after the fall harvest that help reduce unused fertilizers. Priority is given to failing septic systems in certain areas.

---

<sup>12</sup> Maryland Department of Environment (No Date). Bay Restoration Fund (Senate Bill 320). <http://www.mde.state.md.us/water/CBWRP/index.asp>.



Valeria L. Lee  
Chair

Billy Ray Hall  
President

TO: The Honorable Charles Albertson, Co-Chairman  
The Honorable James Crawford, Co-Chairman  
Water/Wastewater Infrastructure Study Commission

FROM: Billy Ray Hall *BRH*

cc: Staff to the Study Commission

SUBJECT: Short-term Items for Commission Consideration

DATE: April 15, 2010

---

As our staff completed their review of the latest round of applications, we identified several areas that might be appropriate for the study commission's attention. The projects we have seen through four rounds of Clean Water Partners grants have led to the identification of several areas that may be appropriate for the study commission's consideration for short-term action. To make sure these points are among the options that the members may want to examine, I propose to offer the attached five options for consideration by the study commission.

I look forward to working with you and the other members of the study commission to develop interim recommendations that address the committee's charge. By copy of this memorandum, I am sending my suggestions to the other members. Please let me know if any of these points need further explanation.

North Carolina

Rural Economic

Development Center, Inc.

4021 Carya Drive

Raleigh, NC 27610

Phone: (919) 250-4314

FAX: (919) 250-4325

## **Possible options for short session/interim report action**

- **Require action before the water's gone**

Authorize DENR to establish a requirement for water systems to initiate planning for an expanded water supply when the average daily demand reaches 80% of capacity (currently a guideline for water and a requirement for sewer)

- Note: the requirement on the sewer facilities affects treatment plant capacity (80% of treatment capacity requires the system to begin planning and at 90% of capacity must act). The current 80% guideline for water systems affects the water supply, not the water treatment capacity.

- **Make leaking line repairs a priority**

Authorize state funded programs to give funding priority to the repair or replacement of leaking water lines in communities where financial constraints limit the water system's ability to implement water conservation and efficiency measures.

- Note: applications to repair leaking lines receive priority points under the common criteria (GS 159G-23(3) d.). The rules for the Drinking Water SRF provide eligibility for projects that install or replace distribution or transmission pipe to prevent contamination. The proposal here is to make clear that repair of leaking lines (consistent with the imperative provided in the drought bill) is a state priority.

- **Consolidate water system reports**

To reduce the number of reports required for communities, consolidate the local water system efficiency requirements that are part of the drought bill (G.S. 143-355.4) into the material required for local water supply plans (G.S. 143-355(l)).

- Note: water systems that apply for state assistance to extend water lines or to increase water treatment capacity must provide information that also is contained (at least in part) in their water supply plans. With the exception of the financial information required for drought bill compliance, this option would incorporate the drought bill's system information into the water supply plan and be available by reference, reducing the number of reports of the same/similar information required for water systems.

- **Standardize the number source**

To eliminate confusion for potential communities applying to multiple agencies for assistance, specify that all state funded programs that use

median household income will use the updated census numbers in calculating the income amount.

- Note: requires a legislative change to one program operated by the Rural Center (Clean Water Partners Infrastructure) that is directed to use the 2000 Census numbers.

- **Facilitate assimilation of failing systems**

As an incentive to regionalize services, authorize assistance to improve the infrastructure in order to consolidate a failing non-profit system with another system that is eligible for state assistance.

- Note: this action permits the receiving system to make improvements in infrastructure it does not own in order to reduce the system's risk of adding non-compliant infrastructure. Should be promoted in cases where the receiving system is taking on the failing system to further the state's aims for consolidating services, or for alleviating environmental or public health concerns, or where the failing system is bankrupt and will leave its customers without potable water. Public Water Supply has a new program designed to facilitate the consolidation of systems. One project has been funded under the "disadvantaged communities" program thus far. By establishing this aim as a priority, other programs could be permitted to target their assistance to this area, as well.

## VISITOR REGISTRATION SHEET

Revenue Laws Study Committee

April 21, 2010

Name of Committee

Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO DeANNE MANGUM

NAME

FIRM OR AGENCY AND ADDRESS

Cady Thomas

NCAR

Elizabeth Taylor

Kochanek Law Group

Fred Baggett

City of High Point

Curtis Hayes

NC Farm Bureau

DANIEL BLAISDELL

NC DENR-DWG

Mark Hubbard

NC DENR - DWQ

Ken Melton

K.M.A.

Deanne Mangum

Commissioner  
Legislative Council of N.C.



## VISITOR REGISTRATION SHEET

Revenue Laws Study Committee

April 21, 2010

Name of Committee

Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO DeANNE MANGUM

| NAME            | FIRM OR AGENCY AND ADDRESS |
|-----------------|----------------------------|
| JOAN GOODMAN    | NC CHAMBER                 |
| Vernon Cox      | NCDH&CS                    |
| Jay Stem        | NCAA                       |
| Ben Matthews    | NC DPI                     |
| Sara Stuckey    | NC Rural Center            |
| Patrick Woodie  | NC Rural Center            |
| Bruce Gureco    | NCRC                       |
| Candy McWhir    | NC Currents North          |
| Jeff Hughes     | UNC EFL                    |
| Elizabeth Biser | DOH                        |
|                 |                            |
|                 |                            |

**Cindy Davis (Sen. Albertson)**

---

**From:** Cindy Davis (Sen. Albertson)

**Sent:** Tuesday, April 06, 2010 9:32 AM

**To:** @InterimCommitteeNotice; Airen Blaine (Sen. Apodaca); Allen Gray, Director, Utility Division; Beverly Adams (Legislative Services Office); Bill Holman; Billy Guillet; Billy Ray Hall; Buck Kennedy; Cindy Davis (Sen. Albertson); Cindy Hobbs (Rep. Gillespie); Dale Carroll; David Thompson; Dee Freeman; Elizabeth Biser; Ellis Hankins; Emily Johnson (Bill Drafting); Faith Hill; Kristin Walker (Fiscal Research); Larry Wooten; Linda Winstead (Rep. Jim Crawford); Mark Bondo (Fiscal Research); Mark Hubbard; Mitch Peele; Mo Hudson (Sen. Swindell); Nick Tosco; Patricia Johnson; Penny Williams (Sen. Hoyle); Rep. Bill Owens; Rep. Cullie M. Tarleton; Rep. Jim Crawford; Rep. Mitch Gillespie; Richard Rogers; Rita Harris; robin smith; Sen. A.B. Swindell; Sen. Charlie Albertson; Sen. David Hoyle; Sen. Tom Apodaca; Sheba Person-Whitley; Steve Webb (Sen. Albertson); Susan Whitehead (Rep. Tarleton); Tim Dodge (Research); Victoria (Tori) Small

**Subject:** Water & Wastewater Infrastructure Meeting-Cancellation

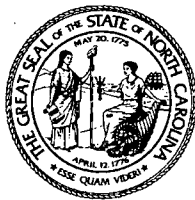
Please note that the meeting for the full committee of Water & Wastewater Infrastructure has been CANCELLED for Thursday, April 8th, and rescheduled for Thursday, APRIL 22ND AT 10:00 A.M. IN ROOM 643.

Some of the working groups have asked for a little more time to complete their work and recommendations.

Thank you.

Cindy J. B. Davis/Sen. Charlie Albertson  
Room 523-LOB 733-5705

04/13/2010



**NORTH CAROLINA GENERAL ASSEMBLY**  
**LEGISLATIVE BUILDING**  
**RALEIGH NC 27601**

March 12, 2010

**MEMORANDUM**

**TO: Members of the Legislative Study Commission on Water and Wastewater Infrastructure**

**FROM: Senator Charles W. Albertson, Co-Chair**  
**Representative James W. Crawford, Co-Chair**

**SUBJECT: Meeting Notice**

The Legislative Study Commission on Water and Wastewater Infrastructure will as follows:

**DAY: Thursday, April 8, 2010**  
**TIME: 10:00 a.m.**  
**LOCATION: Room 643 Legislative Office Building**

If you have any questions concerning this meeting or are unable to attend, please contact Cindy Davis, Commission Clerk, at 919-733-5705 or by e-mail at [albertsonla@ncleg.net](mailto:albertsonla@ncleg.net).

JOINT COMMISSION ON WATER & WASTEWATER  
INFRASTRUCTURE

**MINUTES**

May 12, 2010

The Joint Commission on Water & Wastewater met on Tuesday, May 11, 2010 in Room 415 of the Legislative Office Building in Raleigh at 2:00 a.m. Members present were: Senators Charlie Albertson, Co-chair, and Sen. Hoyle. House members were: Rep. Jim Crawford, Co-chair, Rep. Mitch Gillespie, Rep. Cullie Tarleton & Rep. Owens. Public members were: Mr. Richard Rogers, Mr. Buck Kennedy, Mr. Billy Ray Hall (Rural Center), Mr. Jim Blackburn (Co. Comm. Assoc.), Ms. Robin Smith, Mr. Mitch Peele (Farm Bureau), Ms. Tori Small and Dale Carroll, (Dept. of Commerce).

**I. WELCOME & CHAIR REMARKS**

Sen. Albertson called the meeting to order and thanked everyone for their attendance. Rep. Crawford is excited about the work we've done but advised that hopes for funds will not be available during this short session.

**II. DISCUSSION & CONSIDERATION OF COMMISSION INTERIM REPORT & LEGISLATIVE PROPOSALS**

Mr. Tim Dodge, staff counsel, explained the Draft Legislative Proposal (Attachment A).

On Page 40, under the Agriculture Cost Sharing section Mr. Mitch Peele asked that the wording be changed to remove "wastewater", for clarification purposes. There was also another change of wording he proposed at the end of the paragraph and Ms. Emily Johnson read it as it would be. Everyone agreed with the change of wording staff will make these changes.

Water Funding Priorities; Local Government Comm. Review Water Systems; and Water Supply System Capacity Planning (Pages 42 – 50) were explained by Mr. Tim Dodge, Staff Counsel.

Rep. Gillespie asked for clarification on regionalization for over 2 million gallons of water a day. Mr. Tim Dodge advised that this will not make any changes to those ABT requirements.

Mr. Bill Holman spoke on the timing of effective dates due to funding cycles and how to phase these incentives in. Sen. Albertson advised this would be taken into advisement.

Ms. Robin Smith questioned rule-making statutes. She said this is usually done through DENR rule-making processes. Sen. Albertson said this will be noted as well.

Mr. Billy Ray Hall pointed out on Page 69, Asset Changes, and we needed to make a note of this process for future planning.

Ms. Smith thinks it would be a good idea to let the legislature take care of the water supply system capacity planning rather than the Environment Management Commission. Commission members feel this could be a good idea and staff will look at this under the appropriate statutes.

Funds/Clean Water Management Trust Fund. (Page 51 of Attachment A), was explained by Ms. Emily Johnson, Staff Counsel. These were Working Group #3 recommendations. Sen. Hoyle asked if the Appropriations team had been made aware of this amount of money. Mr. Buck Kennedy asked if some of the \$44 million is to help retrieve some of the funds that was pulled by the Governor in past years. Ms. Johnson explained and Sen. Albertson reminded members this is a "draft".

Funds/Match for Fed. Water & Wastewater Funds: After Ms. Johnson explained, Mr. Holman and Ms. Smith advised the Governor's budget also has appropriations for this as well.

Rural Center Funds/Water Infrastructure: Ms. Johnson explained this recommendation. No questions or comments.

Water Infrastructure Needs/Close Info Caps: was the next bill briefed by Ms. Johnson. This was a Working Group #1 recommendation. Ms. Smith pointed out all of the October 1, 2010 makes for a pushed deadline for work to continue. On Page 62 Mr. Billy Ray Hall requested to strike out that gives the Rural Center the decision making process and just have them as a participating member. Rep. Crawford recommended a November 1, 2010 for a reporting date rather than October 1, 2010.

Survey Ag. Water Infrastructure Needs: was explained by Ms. Johnson. The wording on Line 8, Page 65 was to strike the word "wastewater". Members agreed to this change. Members agreed to also change the reporting date to November 1, 2010 from October 1, 2010.

Conserve & Protect Ag Water Resources: The reporting date was also changed to November 1, 2010.

Water Infrastructure Database/Task Force: Recommendation from Working Group #2. This will have an estimated cost to create and maintain the task force. Mr. Blackburn recommended a November 1, 2010 reporting date. Ms. Smith feels this needs guidance from Information Technology since this will be needed. Members agreed to have staff add them into this report.

Mr. Billy Ray Hall moved to accept this report as amended to be so reported to the legislative session. Vote taken and so moved.

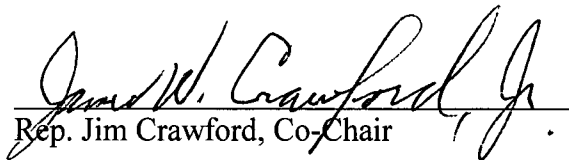
### III. COMMISSION DISCUSSION

Rep. Owens said there will be problems with a stream-line way to find funds. Sen. Albertson said this is an on-going need and finding sources for funding is a difficult process during this tough economic time.

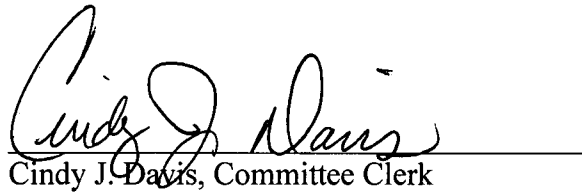
Sen. Albertson thanked everyone for their help and input for this Commission. He added that this Commission could resume work during the next interim.

### VII. ADJOURNMENT

The meeting adjourned at 2:45 P.M.

  
Rep. Jim Crawford, Co-Chair

  
Sen. Charlie Albertson, Co-Chair

  
Cindy J. Davis, Committee Clerk

# **Legislative Study Commission on Water and Wastewater Infrastructure**

**Tuesday, May 11, 2010, 2:00 P.M.  
Room 415 Legislative Office Building  
Senator Albertson, Presiding**

## **Agenda**

- I. Welcome & Chair remarks**  
Senator Charles Albertson, Co-Chair  
Representative James Crawford, Co-Chair
- II. Discussion and consideration of Commission interim report and legislative proposals**
- III. Commission discussion**
- IV. Adjourn**

Persons having questions about the Commission meeting or other matters related to the Commission may contact Cindy Davis, Commission Clerk, at (919) 733-5705, or may visit the Commission's website at <http://www.ncleg.net/gascripts/DocumentSites/browseDocSite.asp?nID=59>.

# **Legislative Study Commission on Water and Wastewater Infrastructure**

**Tuesday, May 11, 2010, 2:00 P.M.  
Room 415 Legislative Office Building  
Senator Albertson, Presiding**

## **Agenda**

- I. Welcome & Chair remarks**  
Senator Charles Albertson, Co-Chair  
Representative James Crawford, Co-Chair
- II. Discussion and consideration of Commission interim report and legislative proposals**
- III. Commission discussion**
- IV. Adjourn**

Persons having questions about the Commission meeting or other matters related to the Commission may contact Cindy Davis, Commission Clerk, at (919) 733-5705, or may visit the Commission's website at <http://www.ncleg.net/gascripts/DocumentSites/browseDocSite.asp?nID=59>.



# Legislative Study Commission on Water and Wastewater Infrastructure

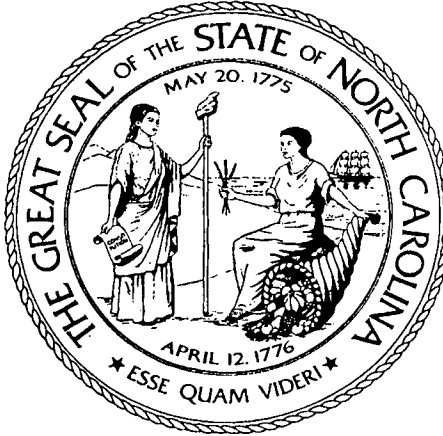
Tuesday, May 11, 2010, 2:00 P.M.  
Room 415 Legislative Office Building  
Senator Albertson, Presiding

## Agenda

- I. **Welcome & Chair remarks**  
Senator Charles Albertson, Co-Chair  
Representative James Crawford, Co-Chair
- II. **Discussion and consideration of Commission interim report and legislative proposals**
- III. **Commission discussion**
- IV. **Adjourn**

Persons having questions about the Commission meeting or other matters related to the Commission may contact Cindy Davis, Commission Clerk, at (919) 733-5705, or may visit the Commission's website at <http://www.ncleg.net/gascripts/DocumentSites/browseDocSite.asp?nID=59>.

# NORTH CAROLINA GENERAL ASSEMBLY



---

## LEGISLATIVE STUDY COMMISSION ON WATER AND WASTEWATER INFRASTRUCTURE

---

***DRAFT***

REPORT TO THE  
2010 SESSION  
of the  
2009 GENERAL ASSEMBLY

MAY 2010

A LIMITED NUMBER OF COPIES OF THIS REPORT IS AVAILABLE FOR  
DISTRIBUTION THROUGH THE LEGISLATIVE LIBRARY

ROOMS 2126, 2226  
STATE LEGISLATIVE BUILDING  
RALEIGH, NORTH CAROLINA 27611  
TELEPHONE: (919) 733-7778

OR

ROOM 500  
LEGISLATIVE OFFICE BUILDING  
RALEIGH, NORTH CAROLINA 27603-5925  
TELEPHONE: (919) 733-9390

---

## TABLE OF CONTENTS

---

|                                                         |    |
|---------------------------------------------------------|----|
| Letter of Transmittal                                   | 5  |
| <hr/>                                                   |    |
| Background and Introduction                             | 7  |
| Commission Proceedings                                  | 9  |
| Working Group Proceedings                               | 13 |
| <hr/>                                                   |    |
| Recommendations for Future Consideration                | 39 |
| Legislative Proposals                                   | 41 |
| <hr/>                                                   |    |
| Authorizing Legislation                                 | 73 |
| Membership and Staff                                    | 75 |
| <hr/>                                                   |    |
| Appendix A: April 15, 2010 Memorandum from Rural Center | 79 |

---

## TRANSMITTAL LETTER

---

Members of the 2009 General Assembly, Regular Session 2010:

Attached for your consideration is the interim report of the Legislative Study Commission on Water and Wastewater Infrastructure established pursuant to Part 43 of S.L. 2009-574. The Legislative Study Commission on Water and Wastewater Infrastructure respectfully submits the following report.

---

Sen. Charles Woodrow Albertson  
Co-Chair

---

Rep. James Walker Crawford, Jr.  
Co-Chair

---

## BACKGROUND AND INTRODUCTION

---

Pursuant to Part 43 of S.L. 2009-574, the General Assembly established the Legislative Study Commission on Water and Wastewater Infrastructure. The 17-member Commission consists of four members of the House of Representatives, appointed by the Speaker of the House; four members of the Senate, appointed by the President Pro Tempore of the Senate; two members appointed by the Governor; and seven public members or their designees. The Commission was directed to “focus on the development of an ongoing process to identify and regularly report to the North Carolina General Assembly on water and wastewater needs,” along with other specific tasks.

The Commission met in full five times during the 2009-2010 interim, as follows:

November 10, 2009 - Legislative Office Building, Raleigh  
December 14, 2009 - Legislative Office Building, Raleigh  
January 20, 2010 - Legislative Office Building, Raleigh  
April 22, 2010 - Legislative Office Building, Raleigh  
May 11, 2010 - Legislative Office Building, Raleigh

At its January 20, 2010 meeting, the Commission established four working groups from its membership to evaluate and discuss specific tasks. The working groups met on numerous occasions in February, March, and April 2010, and the Commission received the final reports of the working groups on April 22, 2010. The working group reports and the other comments submitted by Commission members and interested parties formed the basis for the legislative proposals contained in this report.

This interim report provides a summation of the Commission’s activities to date. The Commission anticipates continuing its investigation of water and wastewater infrastructure funding issues following the 2010 Session of the General Assembly and will submit a final report, including legislative proposals and recommendations, prior to the convening of the 2011 General Assembly.

A complete record of the Commission proceedings, including minutes from each meeting, is available in the Commission notebook filed in the Legislative Library. Copies of the presentations made and handouts distributed to the Commission are available on the Commission’s website at:  
<http://www.ncleg.net/gascripts/DocumentSites/browseDocSite.asp?nID=59>.

---

## COMMISSION PROCEEDINGS

---

The Commission conducted a review of water and wastewater infrastructure issues during the 2009-2010 legislative interim. The following Commission agendas provide an overview of the information received by the Commission to date. Handouts and other materials distributed at these meetings can be viewed on the Commission website at: <http://www.ncleg.net/gascripts/DocumentSites/browseDocSite.asp?nID=59>.

**November 10, 2009 – 10:00 AM**  
Legislative Office Building, Room 414  
300 North Salisbury  
Raleigh, North Carolina  
Agenda

1. Chair's Remarks
  - Sen. Charles W. Albertson, Co-Chair, Presiding
  - Rep. James W. Crawford, Co-Chair
2. Commission Charge
  - Staff
3. Needs Assessment
  - Richard Whisnant, Professor of Public Law and Government, School of Government, University of North Carolina
  - Patrick Woodie, Vice President, Rural Economic Development Center
  - Robin W. Smith, Assistant Secretary for the Environment  
Department of Environment and Natural Resources
  - Dale Carroll, Deputy Secretary, Department of Commerce
  - Richard Rogers, Executive Director, Clean Water Management Trust Fund
4. Update on Funders Cooperation Letter
  - Richard Rogers, Executive Director, Clean Water Management Trust Fund
5. Commission Discussion and Announcements
6. Adjournment

**December 14, 2009 – 1:00 PM**  
Legislative Office Building, Room 544  
300 North Salisbury  
Raleigh, North Carolina  
Agenda

1. Chair's Remarks  
    Sen. Charles W. Albertson, Co-Chair  
    Rep. James W. Crawford, Co-Chair, Presiding
2. Water/Wastewater Finance and Government  
    Jeff Hughes, Director, Environmental Finance Center, University of North Carolina
3. Water Allocation Study  
    Richard Whisnant, Professor of Public Law and Government, School of Government, University of North Carolina
4. State Water Infrastructure Commission Overview and Update  
    Bill Holman, Director of State Policy, Nicholas Institute for Environmental Policy Solutions, Duke University
5. State Water Supply Plan & Local Water Supply Plans  
    Tom Reeder, Director, Division of Water Resources, Department of Environment and Natural Resources
6. Commission Discussion and Announcements
7. Adjournment



**January 20, 2010 – 1:00 PM**  
Legislative Office Building, Room 544  
300 North Salisbury  
Raleigh, North Carolina  
Agenda

1. Chair's Remarks  
    Sen. Charles W. Albertson, Co-Chair, Presiding  
    Rep. James W. Crawford, Co-Chair
2. Staff Comments  
    Staff
3. Pollutant impacts on water quality and water supply  
    Coleen H. Sullins, Director, Division of Water Quality, Department of  
    Environment and Natural Resources
4. Best practices to improve the coordination of water and wastewater infrastructure funding  
    Jeff Hughes, Director, Environmental Finance Center, School of Government,  
    University of North Carolina at Chapel Hill
5. Agricultural water use issues  
    Mitch Peele, Senior Director of Public Policy, North Carolina Farm Bureau  
    Federation
6. Commission Discussion and Announcements
7. Adjournment

**April 22, 2010 – 10:00 AM**  
Legislative Office Building, Room 643  
300 North Salisbury  
Raleigh, North Carolina  
Agenda

1. Chair's Remarks  
    Sen. Charles W. Albertson, Co-Chair  
    Rep. James W. Crawford, Co-Chair, Presiding
2. Working Group #1: Identifying and reporting infrastructure needs  
    Robin Smith, Assistant Secretary for the Environment, Department of  
    Environment and Natural Resources (DENR)
3. Working Group #2: Infrastructure funding priorities  
    Arthur L. "Buck" Kennedy, Council Member, Town of Garner  
  
    Nick Tosco, Legislative Specialist, North Carolina League of Municipalities
4. Working Group #3: Financing the current critical gaps  
    Representative Jim Crawford
5. Working Group #4: Long-term state assistance and financing  
    Mark Bondo, Fiscal Analyst, Fiscal Research Division
6. Commission Discussion and Announcements
7. Adjournment

## **WORKING GROUP PROCEEDINGS**

Following the January 20, 2010 meeting of the Commission, the Co-Chairs requested that Commission members divide into the following work groups to allow for more informal discussion of the issues before the Commission.

### ***Working Group #1: Identifying and reporting infrastructure needs***

*Charge:* Recommend methods and processes to provide information to the General Assembly and to the public on an annual basis that will detail the current status of water and wastewater infrastructure needs, the activities of funding entities to meet those needs (an annual report on the amounts of assistance provided), and the estimated future needs for publicly-assisted infrastructure. (Tasks 2, 3, & 7d)

*Group Leader:* Robin Smith  
Tori Small  
Mitch Peele  
Richard Rogers  
Sen. David Hoyle  
*Staff person:* Emily Johnson

### ***Working Group #2: Infrastructure funding priorities***

*Charge:* Review the infrastructure funding priorities currently set out in state statutes and session law and identify gaps between current priorities and available funds, between the priorities and current or emerging needs, and between the priorities and the flexibility communities may require to respond to urgent and critical needs, including encouraging year-round water conservation as a demand management tool, incentives for regionalization, and appropriate levels of local support. (Tasks 4 & 6)

*Group Leaders:* David Thompson (Kevin Leonard)  
Ellis Hankins (Councilman Buck Kennedy)  
Bill Holman  
Sen. Tom Apodaca  
*Staff person:* Tim Dodge

### ***Working Group #3: Financing the current critical gaps***

*Charge:* Review available information and recommend infrastructure funding priorities to ensure that funds are used to meet the state's most pressing needs, especially those needs facing communities with severe financial constraints and those needs that do not easily fall within the top priorities for federally-assisted programs. (Task 5)

*Group Leaders* : Rep. Jim Crawford  
Sen. A. B. Swindell  
Billy Ray Hall  
Dale Carroll  
*Staff person:* Kristin Walker

***Working Group #4: Long-term state assistance and financing***

*Charge:* Examine the options and determine the parameters for on-going state assistance to address water and wastewater infrastructure needs in North Carolina, including potential sources for assistance, the potential allocation methods, and the types of activities the sources and allocations might support.

*Group Leaders:* Sen. Charlie Albertson  
Rep. Bill Owens  
Rep. Cullie Tarleton  
Rep. Mitch Gillespie  
*Staff person:* Mark Bondo

The reports for each of the working groups are included in the following pages.

## ***Working Group #1: Identifying and reporting infrastructure needs***

### **I. Existing Information on Infrastructure Needs**

#### **EPA Needs Surveys for the State Drinking Water and Clean Water Revolving Funds**

**How the surveys are done:** Conducted every 4 years; limited to publicly owned water/wastewater systems

EPA Drinking water survey: All systems with > 100,000 customers surveyed; a sample of systems with > 3,000 and < 100,000 customers.

EPA uses modeling to project needs of systems serving < 3,000.

EPA Wastewater survey: Sent to 500 municipalities, 100 counties, engineers and other public wastewater utilities. Covers wastewater, stormwater and nonpoint source needs. Must be supported by engineering reports and capital improvement plans.

**Needs that may not be captured:** Purely growth-related projects may not be captured in the surveys, because there are limitations on use of the State Revolving Funds for those projects.

#### **N.C. Rural Center Water 2030 Report**

**Description:** A report on statewide water/wastewater needs completed in 2005. The capital needs inventory looked at both near-term capital improvement needs and needs related to growth projected through 2030. Funded as a one-time overview, Water 2030 provides a snapshot of projected infrastructure needs.

**How it was done:** The Rural Center sent a survey to the owners of all public systems owning or operating drinking water, sewer or stormwater utilities.

- Asked system owners to confirm 1998 water and sewer system boundaries (by reference to the 1998 Rural Center survey and CGIA maps) and to note any changes in service area boundaries since then. (85 systems were mapped in Water 2030.)
- Requested information on rate structure.
- Requested information on future infrastructure needs based on: 1. The capital improvement plan for 2005-2010; and 2. Projected growth (2011-2030).

## ***Working Group #1: Identifying and reporting infrastructure needs***

- Not limited to projects eligible for federal State Revolving Fund awards, so may have captured more economic development and growth-related needs than the EPA surveys.

## **II. GAPS IN CURRENT INFORMATION**

- Regularly updated information on infrastructure needs related to economic development and population growth
- Current information on water/wastewater system service areas. (Note: DENR is working with the Environmental Finance Center at UNC on a project to create a database of water system service areas.)
- Information on drinking water needs does not include the cost of proposed reservoir construction (EPA specifically excludes those costs)
- Infrastructure needed to address failing water/wastewater systems
- Infrastructure needs related to water system efficiency (i.e., addressing water loss)

## **III. AGRICULTURAL WATER RESOURCE INFRASTRUCTURE**

In 2008, DENR's Division of Soil and Water Conservation surveyed farmers on needs related to drought response projects. That survey identified water supply needs in the area of well construction and water storage (i.e., construction of farm ponds for irrigation and other purposes). The agricultural needs survey covers water supply infrastructure on private lands for private use. As a result, those needs fall outside the scope of the Rural Center 2030 Report and the ongoing EPA needs surveys which focus on public infrastructure needs.

The N.C. Farm Bureau reported that agriculture leaders are in the process of developing a strategic plan for protecting agriculture water resources. The plan, which is expected to be complete in the fall of 2010, will identify: current and future agriculture water needs; ways to ensure those needs are met; water conservation practices; and water efficiency measures. The Farm Bureau has proposed to report those needs to the General Assembly every five years.

## *Working Group #1: Identifying and reporting infrastructure needs*

### **IV. WORKING GROUP DRAFT RECOMMENDATIONS**

1. Build on the base of the existing EPA water/wastewater infrastructure survey process. Supplement the federal survey with a state-only survey to gather additional information on economic development and growth related infrastructure needs; water system efficiency measures; and costs related to development of new water sources.
2. Move toward requiring water/wastewater systems to base estimated infrastructure needs on an asset management plan.
3. Estimate a contingency necessary for emergency projects to address failing water/wastewater systems.
4. Use the surveys and estimates of emergency infrastructure needs as the basis for an updated report to the General Assembly every 4 years on combined water/wastewater infrastructure needs.
5. Incorporate water infrastructure needs into local water supply plans (updated every 5 years).
6. Agricultural agencies and organizations should continue to work with farmers to identify agricultural water infrastructure needs that are not accounted for in the survey of public water/wastewater infrastructure needs and report those needs to the General Assembly every 5 years.

*Working Group #1: Identifying and reporting infrastructure needs*



## ***Working Group #2: Infrastructure Funding Priorities***

TO: The Honorable Charles Albertson, Co-Chairman  
The Honorable James Crawford, Co-Chairman  
Legislative Study Commission Water/Wastewater Infrastructure

FROM: Working Group # 2

cc: Staff to the Legislative Study Commission on Water/Wastewater  
Infrastructure

SUBJECT: Recommended Strategies for Perceived Gaps in Statutory Requirements  
Involving Water/Wastewater Infrastructure

DATE: April 22, 2010

---

At the conclusion of the Water/Wastewater Infrastructure Committee meeting on January 20<sup>th</sup>, Senator Albertson as Chair of the Commission, established four (4) working groups to further the efforts of the Commission and carry out the charge established in the enabling legislation (Session Law 2009-574, Sec. 43.3).

Our Working Group # 2, entitled Infrastructure Funding Priorities, was charged with the responsibility to *"review the infrastructure funding priorities currently set out in state statutes and session law and identify gaps between current priorities and available funds, between the priorities and current or emerging needs, and between the priorities and the flexibility communities may require to respond to urgent and critical needs, including encouraging year-round water conservation as a demand management tool, incentives for regionalization, and appropriate levels of local support."*

The Working Group's membership included: The NC League of Municipalities (Buck Kennedy), The NC Association of County Commissioners (Jim Blackburn), Bill Holman-Director of State Policy at the Nicholas Institute for Environmental Policy Solutions and Senator Tom Apodaca. We were given 90 days to meet, deliberate and report back to the Commission at the meeting on April 22, 2010. Our Working Group met twice, once on March 4<sup>th</sup> at 3:00 pm and once on March 11<sup>th</sup> at 10 am. Working group members discussed and deliberated various policy recommendation options that could address the issues raised in the Working Group charge. With assistance of Tim Dodge, Staff Attorney with the Research Division of the General Assembly and legislative contact for Working Group 2, our working group developed five (5) legislative strategies. Working Group #2 proposes adoption of the following recommendations for consideration by the General Assembly.

## ***Working Group #2: Infrastructure Funding Priorities***

### **Recommended Strategies for Perceived Gaps in Statutory Requirements Involving Water/Wastewater Infrastructure**

#### **Work Group #2**

April 22, 2010

#### **Regionalization:**

##### **Recommendation:**

- Amend G.S. 159G-23 to establish “Regionalization” as a common criterion.

Such an addition will provide flexibility to funding agency programs and will place additional emphasis on the emerging issues relating to drought, water shortages due to increased demands and efficiency through regionalization

##### **Commentary:**

The benefits that accrue from regionalization have increased in importance in recent years in addressing water supply issues in the face of droughts and increased water and wastewater demands due to rapid growth. Examples of such benefits include the economies of scale and enhanced efficiencies and effectiveness of operations. Funding agencies need to modify the priority criteria to enhance the value of regionalization. In order to effectively manage the use of grant and loan funds, the enhanced priority criterion/criteria should be applied to only those project elements that constitute the regional interconnection.

Note 1: At present, funding agencies utilize this criterion in their priority ranking process. Increasing the priority points may provide the necessary incentive for potential applicants to make this a priority for their local unit of government or region.

Note 2: At present, an application for a “regional” infrastructure project can be in the name of whichever unit of local government has the demographic profile that rates the highest on the priority-criteria point scale. Project elements that address local growth or expansion efforts should not be accorded the same priority as the actual interconnection project segment in an effort to effectively manage the use of grant and loan funds.

## ***Working Group #2: Infrastructure Funding Priorities***

### **Qualifying Threshold:**

#### **Recommendation:**

- Amend G.S. 159G-20 and/or G.S. 159G-23 to establish ascending High Unit Cost (HUC) Criteria above the current threshold of 1.5% of the Median Household Income.

#### **Commentary:**

The statutory threshold for meeting the High Unit Cost (HUC) priority criterion (and grant eligibility) is currently established as combined water and sewer rates being 1.5% of the Median Household Income (MHI). Since implementation of the statutory requirement, numerous units of local government have increased their water and sewer rates to the point where approximately 67% of local government utilities currently meet this threshold for grant funding eligibility. The minimum criterion has been effective in achieving the statutory objective of local governments increasing utility system revenues in order to adequately operate and maintain their system(s). The HUC threshold is no longer effective in identifying those local units of government that are in greatest need of financial assistance. The minimum threshold of 1.5% of MHI should remain in place as the new Census data will certainly lower the percentage of local government utilities meeting the threshold. An ascending scale of priority points should be established to identify and reward those applicants in true financial need and whose water and sewer rates far exceed the minimum criterion.

Note 1: With an ascending scale above the current minimum criterion, the limited sources of grant funding will be more effectively utilized.

Note 2: An ascending level of priority points will continue to allow applicants only meeting the minimum criterion to compete for funding as other factors such as the applicant's "ability to pay", expressed in multiple criteria, come into play.

## *Working Group #2: Infrastructure Funding Priorities*

### **Quality and Quantity:**

#### **Recommendation:**

- Amend G.S. 159G-23 to establish “Drought Management” as a common criterion.

Such an addition will provide flexibility to funding agency programs and will place additional emphasis on the emerging issues relating to drought and water shortages due to increased demands. The new criterion will compliment the emphasis on efficiency through regionalization

- Amend G.S. 143-355.4 and/or G.S. 159G-35 to allow the construction of water supply reservoirs as an eligible project activity/cost.

Current criteria of the CWSRF and the DWSRF loan and grant programs prohibit the use of State funds for the construction of water supply reservoirs.

#### **Commentary:**

Current program criteria seem to favor infrastructure projects that promote water quality/public health over water quantity (supply). The recent droughts have heightened awareness and this apparent “gap”. The greater water supply demands appear to be located in the Piedmont region. Unfortunately, the more affluent communities are located in the Piedmont as well which translates into limited access to available funds. Modifying current priority criteria will place more emphasis on objective statewide water supply needs. Current funding criteria prohibit the use of N.C. loans and grants for the construction of water supply reservoirs. Planning for such infrastructure improvements requires several years and even a limited incentive would help promote this option in drought management.

Note 1: At least one funding agency has addressed the drought issue by setting aside funds specifically to such crisis issues. Modifying the criteria relating to water supply in all funding agencies could not only address water supply/drought related issues but also attenuate issues related to regionalization.

Note 2: The water allocation study recently completed by the N.C. Environmental Review Commission addresses issues of meeting the increasing demand on water supplies in North Carolina. A critical review of the study may shed additional light on potential gaps between current legislation and the actual funding and implementation of water supply initiatives.

## ***Working Group #2: Infrastructure Funding Priorities***

### **Sustainability: (System Maintenance)**

#### **Recommendation:**

- Empower the Local Government Commission to:
  1. Require local government annual audit statements and notices of consistently failing systems be sent to state funding agencies for the purpose of reporting on “system sustainability” and to what extent the water and sewer rates of each system are sufficient to sustain operations as well as debt service.
  2. Require a capital reserve fund for the water and sewer utility be established and maintained.
  3. Review applications for grant funding to ensure that applicants’ grant match is indeed a local share as opposed to another grant.
  4. Develop absolute benchmarks that should be met for proper investing in water and sewer infrastructure specifically.

#### **Commentary:**

The implied objective in the statutes relating to infrastructure funding is for all applicants for funding to provide for proper operation and maintenance of their systems to be fiscally responsible and sound. Translating those objectives into funding priority categories and/or criteria can be challenging.

Past funding criteria have included a provision for the applicant to establish and maintain a capital reserve fund to help offset the cost of system maintenance and repairs. Criteria currently in place require that each applicant establish water and sewer rates that are sufficient to operate and maintain its water and sewer system. Regulations also require responsive, timely action to protect water quality regardless of the availability of grants and/or loans. Waiting to obtain sufficient grant funding is not a satisfactory strategy. Loan programs are already in place and funds are available to address situations where local reserve funds are insufficient to fund capital improvements. Finally, some funding agency criteria require a minimum local share or match in order to qualify for a grant. The multiple attempts at requirements and incentives for local units of government to establish and provide for a sustainable utility system are evident, yet many local governments delay improvements until optimum grant funding can be secured.

The series of situations and/or inactions outlined above can result in water and sewer systems not being self supporting and sustainable. The statutory intent is in place. Funding priority criteria are in place. System sustainability appears to be a matter of local choice and unless actions are monitored, audited and certified as being in compliance as a part of the funding process, system

## ***Working Group #2: Infrastructure Funding Priorities***

sustainability will languish. Therefore legislative action addressing system sustainability may be in order. Such legislative action should address the matter of auditing applicants to (1) determine if, in fact, water and sewer rates are sufficient to sustain the operating budget rather than being subsidized by the general fund; (2) budgets include provision for contribution to a capital reserve and that a reserve does, in fact, exist; and (3) grant funding criteria be modified to reward those applicants whose grant match is indeed a local share as opposed to another grant.

Note 1: Funding criteria already require that water and sewer rates be established sufficient to fund water and sewer operations. Debt service, which can be a significant part of the annual utility budget, can be funded through the general fund (the assessment of *ad valorem* taxes). The utility operating budget should include debt service as well as O&M expenses. Regardless, there is currently no provision to monitor local government utility budgeting practices relating to water and sewer operations and to audit same to determine if the criteria for having received state loan and/or grant funding are being met.

Note 2: Funding criteria require the establishment of a water and sewer utility reserve fund. There is currently no provision to monitor local government utility budgeting practices relating to water and sewer operations and to audit same to determine if the criteria for having received state loan and/or grant funding are being met.

Note 3: At least one funding agency currently implements a priority points system to reward local governments that are actually funding the local share from reserves as opposed to using another grant fund as the local match. Other funding agencies have the flexibility to implement such a priority rating system and are encouraged to do so.

Note 4: The LGC tracks financial results and key ratios for water and sewer enterprises. This information shows or suggests which water systems are operating at a loss, which systems do not have an operating reserve, and which systems undervalue and underprice water services. Given that it is difficult for local elected officials to raise water and wastewater rates on their residential, commercial, institutional, and industrial customers, the LGC should be more active in identifying and challenging the systems that are not adequately investing in their water infrastructure. LGC analysis compares systems to each other and to statistical measures of central tendency and variance, but there is no statement in current LGC reporting of absolute benchmarks that should be met but are not being met. There is no separate scheduling, reporting on, or notification of systems that consistently fail to cover operational and capital needs.

## ***Working Group #2: Infrastructure Funding Priorities***

### **Water Database:**

#### **Recommendation:**

- Enact legislation to create a statewide water and wastewater infrastructure funding database for North Carolina to be administered by the Division of Water Resources (DWR) in the NC Department of Environment and Natural Resources (NC DENR).

#### **Commentary:**

Currently there is no one source of information to track and locate all of the current water and wastewater infrastructure project needs and funding patterns in this state. Federal and state agencies (e.g. EPA), funding groups and non-profits spend a lot of money and resources trying to determine what the water infrastructure needs are in North Carolina.

Other states such as Kentucky and Georgia have state maintained water infrastructure databases that compile:

- current and proposed infrastructure projects
- system information (interconnections, fiscal)
- strategic plans
- water resource maps and publications
- systems management information
- reporting and regulatory requirements
- guidance and training documents
- procedural guidance and forms for project implementation and funding
- internet links to support services

The first step for North Carolina would likely be data consolidation. There is a wealth of information that is currently collected, but not integrated. For instance, every 3 years NC DENR surveys the state's large utilities on the status of its current and future projects, but that data is never compiled electronically. The Division of Water Resources produces the Local Water Supply Plan, but it has never considered what the current needs are. The various funding agencies have been working on common application forms and criteria, but the information on those applications are not currently compiled and integrated electronically. All of these are examples of existing data that could be pulled together as the foundation for a unified database.

## ***Working Group #2: Infrastructure Funding Priorities***

Note 1: The database would collect both existing and future projects, assigning each a unique ID, and the project could change in status when it receives funding. In order to receive state funding, all utilities would need to apply through this database. This would lead to instant credibility and transparency in the funding process and would hopefully eliminate some of the duplication and “gaming the system” that currently takes place.

Note 2: As the agency in charge of administering the database, DWR would need at least one FTE to administer and update the database. DWR could also form working groups to address any issues it ran into such as what qualifies as a “project” for database purposes and ensuring that jurisdictions of all size identify future project needs.

Note 3: This sort of unified database of both existing projects and future needs would be of significant benefit to both utilities and funders. Local government system operators and directors would have a “one stop shop” to locate all the technical information and funding patterns in North Carolina.



## ***Working Group #3: Financing the Current Critical Gaps***

**Report from:**  
**Water/Wastewater Infrastructure Study Commission**  
**Working Group #3: Financing the Current Critical Gaps**  
April 22, 2010

The Water/Wastewater Infrastructure Study Commission Working Group #3: Financing the Current Critical Gaps was charged with reviewing available information and recommending infrastructure funding priorities to ensure that funds are used to meet the State's most pressing needs, especially those needs facing communities with severe financial constraints and those needs that do not easily fall within the top priorities for federally-assisted programs. The Group was led by Representative Jim Crawford and Senator A.B. Swindell with Billy Ray Hall and Dale Carroll serving as members.

**The Group reports the following critical needs for FY 2010-11:**

1. The Clean Water Management Trust Fund reported critical needs of \$44 million.
2. The Rural Economic Development Center reported critical needs of \$47-55 million.
3. The Department of Environment and Natural Resources did not have a specific number but commented that they would need match money for the State Revolving Funds on the order of \$15-17 million.

It should be noted that the figures presented may have some overlap of projects, but it can be reasonably assumed that the current critical needs are close to \$100 million.

### **Summary of Group Meetings**

The Group met on March 10, 2010 and again on April 1, 2010. At the March 10 meeting the group reviewed data on current and historical water and wastewater funding levels. The group also received information on the structure of current grant and loan programs in State government for water and wastewater projects. There was a group discussion related to determining what the critical needs are and where the gap is. There was some discussion that grant money is needed for those communities that have the highest costs with the fewest resources. It was agreed that representatives from the Rural Center, the Department of Environment and Natural Resources, and the Clean Water Management Trust Fund would meet separately to discuss defining the critical needs and coming up with needed funding amounts.

On April 1, 2010 the working group met again to hear from the agencies on their critical needs. The Rural Center presented a handout defining and detailing the rural critical funding gap. It defined "current critical need" as projects which promote public health and/or protect the environment and are not more than 24 months old. The Rural Center then used the ARRA SRF applications as a proxy for arriving at how much unfunded need there is in rural areas. The total amount of unfunded rural projects from the ARRA SRF funding was \$553 million, with another \$75 million anticipated to be funded in FY

### ***Working Group #3: Financing the Current Critical Gaps***

2010-11, leaving a balance of \$478 million. Using past experience, the Rural Center anticipates that 10% of those projects will be crisis needs – or about \$47 to \$55 million. There was some discussion that the ARRA projects had a funding cap of \$3 million, which limited who applied. Additionally, the projects that had the greatest crisis or critical needs are the ones that were funded with ARRA funds, so the remaining unfunded projects may not be as critical. There was also discussion of the general rule-of-thumb that for every \$1 million funded for water/wastewater projects, 35 jobs are generated.

Clean Water Management Trust Fund (CWMTF) stated that they had \$97.4 million requested in the 2010 round for wastewater projects. All of these projects had to meet the ability-to-pay criteria. CWMTF stated that about \$44 million in projects were high priority critical needs projects. DENR indicated that they had not come up with a number as to how much funding it needed for critical needs, but it was mentioned that DENR will need State Revolving Fund match money, estimated to be \$14-17 million.

The group then had a discussion about what the funding gap is, with some discussion about communities paying a fair price for water and the State or federal government picking up the rest. Others mentioned that the funding gap should be the difference between what the State currently pays for and what the State *should* pay for, which is not necessarily the total universe of funding needs. There was further discussion that the price of treating and obtaining water varies widely across the State, so the price of water will never be “equal” across the State. The group spoke of the need for regionalism and efficiency and that everyone needs to be held to a set of standards regarding asset management.

## ***Working Group #4: Long-term State assistance and financing***

*Please note that the items identified by Working Group #4 represent possible revenue options that the working group identified that should be explored by the Commission. The inclusion of the options in this report does not indicate any recommendation or endorsement by any of the working group members.*

### **County Land Transfer Act: (G.S. Art. 60, Sec. 105-600; S.L. 2007-323)**

**Background:** A county is allowed, through a majority vote on a referendum, to levy a local land transfer tax on instruments conveying interests in real property located in the county. Certain types of land transfers are exempt from the levy. The County Land Transfer Act does not apply to transfers of an interest in real property by: a governmental unit or instrumentality of a governmental unit; operation of law; lease for a term of years; or pursuant to the provisions of a will; intestacy; gift; if no consideration in property or money is due or paid by the transferee to the transferor; merger, conversion, or consolidation; by an instrument securing indebtedness. (G.S. 105-228.28 and G.S. 105-228.29). The tax increase is limited to increments of 0.1%, with a maximum rate of 0.4%.

A corresponding state tax does exist. G.S. 105-228.30 requires the Excise Tax on Conveyances, subject to the same exemptions, at a rate of \$1.00 for every \$500 of the value of interest conveyed. Of the funds collected, 50% are credited to the county's general fund. Of the remaining 50%, 25% are credited to the Natural Heritage Trust Fund and 75% are credited to the Parks and Recreation Trust Fund. A county may keep up to 2% of the funds collected that are to be remitted to the state to compensate for the administration of the tax.

Currently, no counties have passed the County Land Transfer Tax. In total, the issue has been put before county voters twenty-three times. Seven counties have local land transfer taxes authorized by the General Assembly, separate from S.L. 2007-323, at the rate of one percent per value of interest conveyed. These counties are Dare, Currituck, Chowan, Camden, Pasquotank, Perquimans, and Washington.

**Proposal:** The state would withdraw the authority granted to the counties to impose, and/or increase the County Land Transfer Tax under G.S. Art. 60, Sec. 105-600. The state would then impose an additional Excise Tax on Conveyances in the amount of the authority rescinded from the counties.

**Expected Revenue:** For each additional 0.1% incremental increase, revenues would increase by \$36 million statewide. An increase to the maximum rate in statute increases revenues to \$144 million.

## ***Working Group #4: Long-term State assistance and financing***

### **Off Shore Energy Exploration and Production of Energy**

**Background:** On December 20, 2006 the Gulf of Mexico Energy Security Act of 2006 (P.L. 109-432) was signed into law. This Act established a revenue sharing agreement between the states of Alabama, Louisiana, Mississippi, and Texas (Gulf Producing States) and the Federal government. The Gulf Producing States are paid through a formula primarily based on the distance from a state to the producing well. From 2007 to 2016, 50% of royalties are distributed to the US Treasury; 12.5% of royalties are distributed to the Land and Water Conservation Trust Fund; 30% of royalties are distributed to the Gulf Producing States; and 7.5% of royalties are distributed to the Gulf Producing States Coastal Political Subdivisions.<sup>1</sup>

The Outer Continental Shelf Lands Act (OCSLA) of 1953 is the controlling legislation for off shore energy exploration and production. According to OCSLA, the Federal government retains control of all submerged lands that are three miles or more offshore. For lands generating receipts within a three mile boundary, the Federal government is required to distribute all royalties to the affected state. For lands generating receipts within a three to six mile area from a state's shore, twenty-seven percent of all receipts generated in that area.<sup>2</sup>

The U.S. Department of the Interior's Mineral's Management (MMS) Service publishes the five-year Outer Continental Shelf Oil and Gas Leasing program, as required under Section 18 of the OCSLA. Within the 2002-2007 plan, no lands in the adjacent to North Carolina were scheduled for development. Lands off the coast of Virginia are in the 2007-2012 five year plan, at the request of the Commonwealth of Virginia. These lands represent the only lands in the Mid-Atlantic Program Area. Areas off the North Carolina coast are available for study, exploration, and potential development.

**State Action:** In order for the State of North Carolina to obtain a portion of revenues from energy exploration and production, they would need to enter into an agreement with the Federal government, as the Gulf Producing States have done. Such an agreement would require federal legislation. According to conversations with officials at the MMS, official state actions requesting inclusion in the five-year plan, are helpful, but not required.

**Other State Actions in Study Area:** Currently, Virginia has passed House Bill 756 in 2010. Under this bill, "70 percent of all revenues and royalties paid to the Commonwealth for offshore natural gas and oil drilling shall be deposited in the Transportation Trust Fund, 20 percent of revenues are to be appropriated to the Virginia Coastal Research Consortium and 10 percent of revenues are to be appropriated to the

---

<sup>1</sup> United States Code: 48 USC 1331

<sup>2</sup> United States Department of the Interior (No Date). Leasing Oil and Gas Resources: Outer Continental Shelf. Washington, DC: <http://www.ncleg.net/documentsites/committees/OEESC/MMS-Leasing%20Guidebook/GreenBook-LeasingDocument.pdf>.

#### ***Working Group #4: Long-term State assistance and financing***

localities of the Commonwealth for improvements to infrastructure and transportation.”<sup>3</sup> Currently, in South Carolina, there are four bills being considered in the House and Senate pertaining to offshore oil and gas exploration receipts. Under H3194, ninety percent of all state revenues would be placed in the Transportation Trust Fund, and ten percent would be allocated to the Department of Natural Resources.<sup>4</sup>

**Expected Revenue:** The Virginia Department of Planning and Budget prepared a 2010 Fiscal Impact Statement analyzing the potential impacts of offshore energy development. Their analysis is helpful for North Carolina. Estimating revenues from prospective oil and gas development is extremely uncertain. For North Carolina to receive revenue from oil and gas exploration:

1. The Congress would have to grant revenue sharing authority under the Outer Continental Shelf Land Act. Authority has only been granted to the Gulf of Mexico States and Alaska.
2. Lease development would need to be included in the 2007-2012 offshore oil and gas leasing plan. No offshore land adjacent to North Carolina is in the 2007-2012 draft plan
3. Required environmental impact assessments, and a public comment period, would need to occur prior to any lease sale.
4. Companies would have to respond to with interest to offering of a lease.
5. Factors related to the production of energy, such as the amount of oil and gas, the worth of such deposits, and revenue sharing with other states would also affect any potential revenue flowing to North Carolina.

Virginia estimated that \$37.7 to \$56.5 million a year could flow to the state over a 20 to 30 year time period, if the state received a revenue sharing agreement similar to the Gulf Producing States. Virginia estimated the price of oil at \$90 per barrel and the price of natural gas at \$9.50 per thousand cubic feet.

**Projected State Revenues (NC):** Due to the above uncertainties regarding oil and gas leasing, such an issue would require further study before issuing a revenue projection for North Carolina.

**Potential State Actions:** Ultimately, the issue regarding off-shore energy exploration and development is Federal in nature. However, the General Assembly could consider the following: passing legislation allocating potential royalties; passing legislation supporting offshore energy exploration.

---

<sup>3</sup> Virginia Department of Planning and Budget (Feb. 2010) 2010 Fiscal Impact Statement: HB756. Richmond, VA: <http://leg1.state.va.us/cgi-bin/legp504.exe?101+oth+HB756FER122+PDF>

<sup>4</sup> SC General Assembly, 2009-2010 Session: S44, H3194, H3188, H3147

## Working Group #4: Long-term State assistance and financing

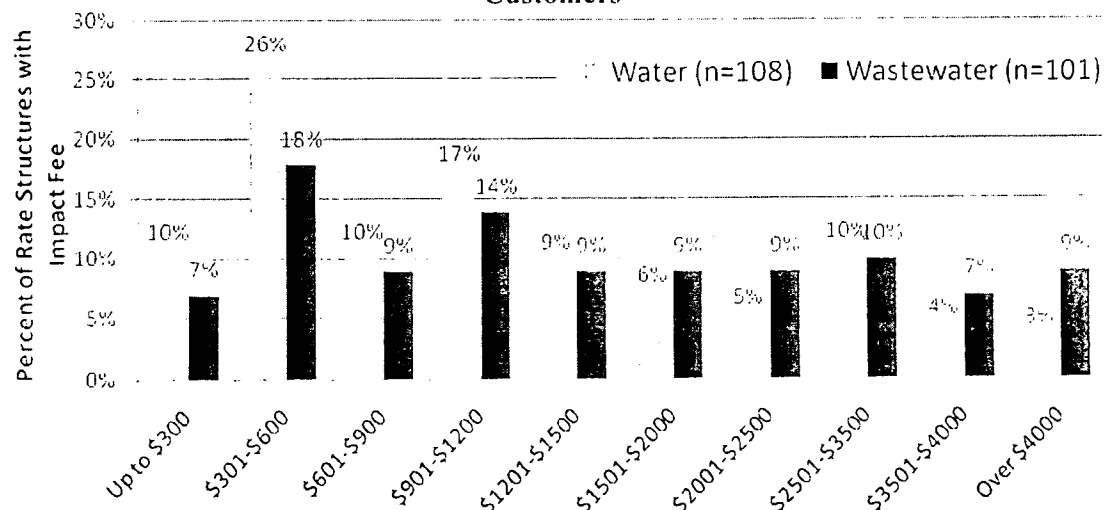
### Local Contribution to State Related Water and Sewer Grants

**Background:** Water and waste water providers typically charge an impact fee to help cover the incremental cost of additional customers on the system. These charges can also be called system development charges or fees. In North Carolina are known as special assessments, such assessments are governed by GS 160A-216, GS 153A-185, 162A-6(a)(14a), and 130A-55(22) for cities and towns, counties, water and sewer authorities, and sanitary districts respectively. System development charges are typically assessed in multiple ways. Typically, these fees are assessed in the following ways:

- *Flat Fee:* Every meter pays a flat fee, regardless of the type of user.
- *User Type:* Residential, Commercial, Industrial, and Agricultural users would each pay a different fee.
- *Water Usage:* The fee would vary by the amount of water usage
- *Tap Size:* The fee would vary by tap size.
- *Land or Unit Size:* Such a fee could vary on the size of the land or building unit being serviced.

**Fee Amount:** Many water and sewer providers in North Carolina currently have special assessment. For North Carolina, the median assessment, as of January 2009 was \$1,000 for residential water customers and \$1,283 for residential sewer customers. Please refer to the figure and table below for additional information.

**Figure 1: North Carolina Impact Fees as of January 2009 for Residential Customers<sup>5</sup>**



<sup>5</sup> Eskaf, S and Nida, C. (2009) Tap Fees and System Development Charges for Residential Water and Wastewater Connections in North Carolina as of January 2009. *University of North Carolina Environmental Finance Center*. [http://www.efc.unc.edu/publications/pdfs/NC\\_Tap\\_Fees\\_and\\_SDC\\_Memo2009.pdf](http://www.efc.unc.edu/publications/pdfs/NC_Tap_Fees_and_SDC_Memo2009.pdf)

#### ***Working Group #4: Long-term State assistance and financing***

**Table 1: Median Residential System Development Charges**

|                      | <i>Water</i><br>(n = 108 rate structures) | <i>Wastewater</i><br>(n = 101 rate structures) |
|----------------------|-------------------------------------------|------------------------------------------------|
| Inside               | \$1,000                                   | \$1,283                                        |
| Outside Jurisdiction | \$1,075                                   | \$1,310                                        |

**Fees vs. Taxes:** A fee is charged for a charge imposed for the use of property, the provision of a service, or the regulation or protection of an item or an activity. A tax is imposed equally on everyone in the same class to provide revenue for the support of government in general.

**Clean Water Management Trust Fund:** The Clean Water Management Trust Fund funded four projects that involved new connections in 2008. These projects established 73,935 linear square feet of sewer line and connected 285 additional residences. Using the median figures above, this could generate an amount to \$365,655 in funding to the State.

**NC Rural Center:** The Rural Center reported that two programs connected additional residences to water and wastewater infrastructure. Of two programs that the Rural Center runs, Clean Water Partners' Infrastructure Program and Economic Infrastructure Program, resulted in 1888 new connections. Using median water assessments, this would result in \$1,888,000 to the State.

**NC DENR:** No longer funds line extensions.

**Potential Drawbacks:**

- Current General Statutes limit the use of special assessments to needs of the facility or locality assessing the charge (GS 130A-55(22); GS 153A-185; 160A-216; 162A-6(14a.) Uses of such funds are broadly defined in statute and limit the city, county, district, or authority, but ultimately must be used for the water and sewer system.
- An entity may not charge a system development charge. If it does not, would it be able to receive funds from the program?
- There is concern that removal of the assessment from the local entity assessing it may make such an assessment a tax.
- Special Assessments ideally are used to fund the capital needs of the system in the future, which include much more than new lines.

## *Working Group #4: Long-term State assistance and financing*

### **Virginia Resources Authority**

**Background:** The Virginia Resources Authority is a self financed state entity and was created in 1984 under Chapter 21, Title 62.1 of the Code of Virginia and houses a number of programs: Virginia Pooled Financing Program, Virginia Water Facilities Revolving Fund, Virginia Water Supply Revolving Fund Loan, Virginia Dam Safety and Flood Prevention Fund, and the Virginia Airports Revolving Fund. A number of funds are co-administered with other state agencies, with the Virginia Resources Authority providing financial management and various other agencies providing the regulatory and programmatic management.<sup>6</sup>

Of interest to the Committee is the Virginia Pooled Financing Program (VPFP). Essentially, this entity is a municipal bond bank. Essentially, such banks consolidate local government bond issues into a single pooled issue. This program provides communities in Virginia with access to credit markets. Currently, Virginia's program carries ratings of AAA for senior bonds. This enables the program to offer lower interest rates for projects that would otherwise be asked to pay a higher interest rate or would lack access to the debt markets. Projects that are typically funded from such offerings include: facilities related to water supply, wastewater treatment, solid waste management, recycling, resource recovery, energy conservation and efficiency, public safety, and local government buildings, as well as interests in land related thereto. From FY 2004-2008, the VPFP provided approximately \$718 million in funding for 57 local governments and regional authorities.<sup>7</sup> The Program accepts applications from local entities for access to VPFP bond proceeds, to be paid back from the local and regional authority. The applications are evaluated on a number of factors, but primarily on the economic feasibility of the project. Bonds are issued at least twice per year. The chart below shows the flow of funds from the VRA to local projects.<sup>8</sup>

---

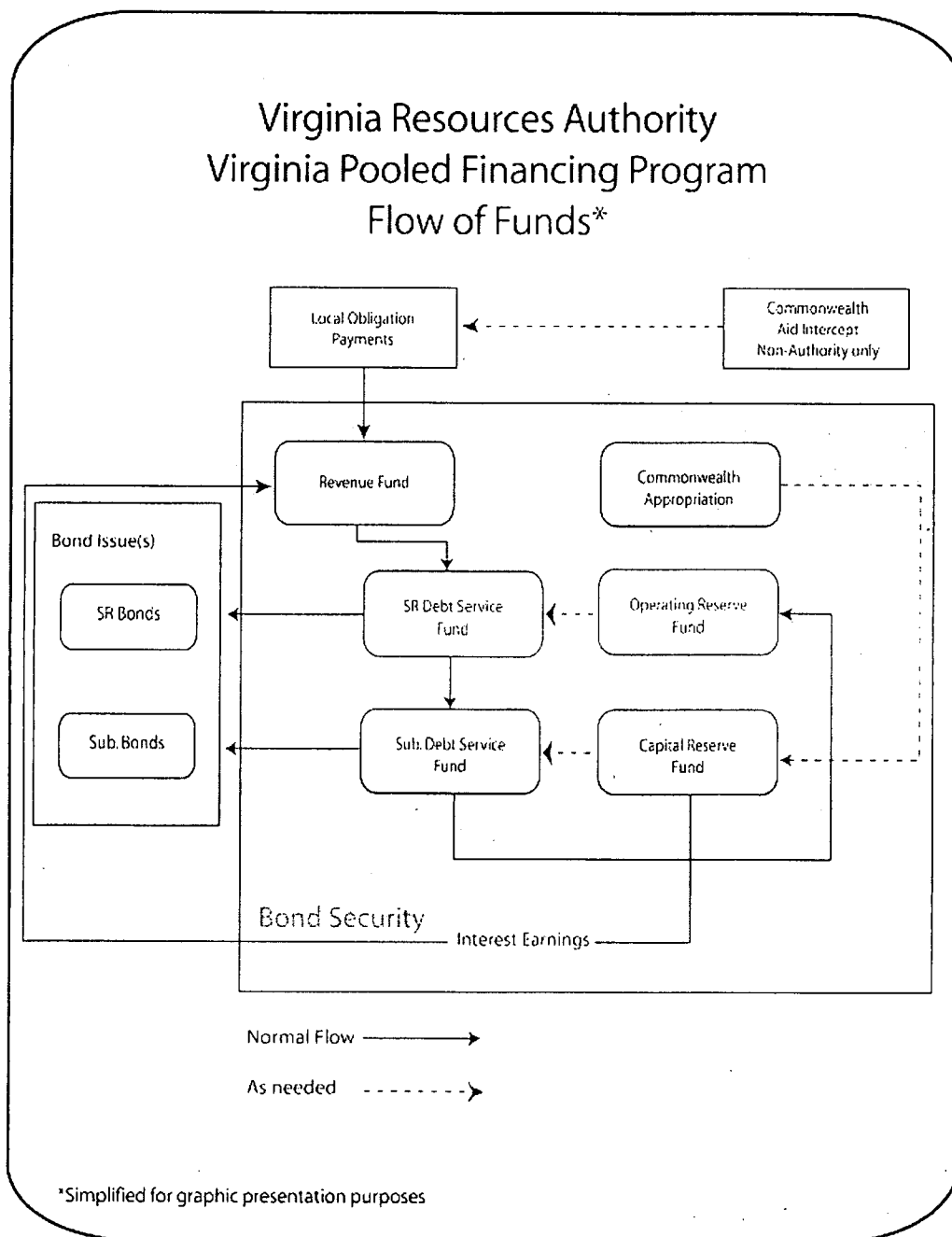
<sup>6</sup> Virginia Resources Authority (FY 2008). Annual Report: 2008. Richmond, VA.  
<http://www.virginiaresources.org/pdf/VRA%20Annual%20Report%20and%20CAFR%20FY08.pdf>

<sup>7</sup> Virginia Resources Authority (Sept. 2009). Comprehensive Annual Financial Report for the Virginia Resources Authority. Richmond, VA.  
<http://www.virginiaresources.org/pdf/FINAL%20CAFR%202009.pdf>

<sup>8</sup> Fidelity Investments (No date). Virginia Resources Authority: Virginia Pooled Financing Program. Boston, MA. <https://www.fidelitycapitalmarkets.com/newsdocs/VRA.pdf>.



*Working Group #4: Long-term State assistance and financing*



## ***Working Group #4: Long-term State assistance and financing***

### **Potential Drawbacks:**

- According the to the 2010 Debt Affordability Study by the Debt Affordability Advisory Committee, the State currently has extremely limited available debt if needed to back a such an authority.
- Some local governments may not take advantage of the authority because they can already access debt markets.<sup>9</sup>
- Some argue that such banks can overly interfere with local government finances.
- Some appropriations may be required to facilitate the program, and provide as needed funding.

### **Water and Sewer Utility Tax**

**Background:** Currently, there is no customer level tax on water and sewer usage in the state. G.S. 105-116 currently applies the Franchise or Privilege Tax on Electric Power, Water, and Sewerage Companies. The tax rate on a water company is 4% and on a sewer company is 6%. However, the Franchise and Privilege Tax would not apply to public entity (for example, Orange County Water and Sewer Authority). However, there is a model for applying this tax to a utility. GS 105-164.4(a) applies a rate of 3% to gross receipts derived from the sales of electricity.

**Potential Revenue:** Using the US Environmental Protection Agency's Safe Drinking Water Database, there were 2,870,765 accounts in North Carolina, being served by 2,128 community water systems. This represents a total population of 7,331,753 as being served by a community system.<sup>10</sup> Using data collected by the UNC Environmental Finance Center and NC League of Municipalities, the median water bill for residents was \$27.15 per month (assumes 6,000 gsf usage).<sup>11</sup> This would represent a \$9.72 per customer tax with a total amount of \$28,085,856 generated per year. Reliable data on wastewater systems residential connections was not available. However, the UNC Environmental Finance Center and NC League of Municipalities found that median sewer bill for residents was \$32.99 per month. This equates to \$11.88 per customer tax.

---

<sup>9</sup> Council of Development Finance Agencies (No Date). State Bond Banks: Municipal Borrowing Made Easy. <http://www.cdfa.net/cdfa/cdfaweb.nsf/pages/statebondbanksanderson.html>.

<sup>10</sup> United States Environmental Protection Agency (2009). Safe Water Drinking System/State Version. Washington, DC. [http://www.epa.gov/ogwdw000/sdwis\\_st/current.html](http://www.epa.gov/ogwdw000/sdwis_st/current.html).

<sup>11</sup> Nida, K and Eskaf, S. (March 2009) Water and Wastewater Rates and Structures in North Carolina. North Carolina League of Municipalities and the University of North Carolina Environmental Finance Center. Raleigh and Chapel Hill, NC: [http://www.efc.unc.edu/publications/pdfs/NCLM\\_EFC\\_AnnualW&WWRatesReport-2009.pdf](http://www.efc.unc.edu/publications/pdfs/NCLM_EFC_AnnualW&WWRatesReport-2009.pdf).

## ***Working Group #4: Long-term State assistance and financing***

### **Other State Example: Maryland: "State Flush Tax."<sup>12</sup>**

In 2004, Senate Bill 320, The Bay Restoration Fund, was signed into law in the State of Maryland. According to the State of Maryland's Department of Environment, wastewater treatment plants are one of the top three contributors of nutrients into the Chesapeake Bay. The Bill created a dedicated fund to upgrade wastewater treatment plants to achieve wastewater effluent treatment standards.

The Wastewater Treatment Plants Fund receives revenue from the following sources:

- \$2.50 monthly fee collected from each home served by a wastewater treatment plant.
- \$2.50 monthly fee per Equivalent Dwelling Unit (EDU) from each commercial and industrial users served by a wastewater treatment plant.

The Department then issues bonds backed by this revenue stream to upgrade wastewater treatment facilities. Certain facilities that discharge into the Bay have priority for funds.

The Onsite Disposal Systems Fund receives revenue from a \$30 annual fee from each residence served by an onsite (septic tank) system. The funds are used for to cover septic system upgrades (60% of funds) and cover crops (40% of funds). Cover crops are crops planted after the fall harvest that help reduce unused fertilizers. Priority is given to failing septic systems in certain areas.

---

<sup>12</sup> Maryland Department of Environment (No Date). Bay Restoration Fund (Senate Bill 320). <http://www.mde.state.md.us/water/CBWRF/index.asp>.

***Working Group #4: Long-term State assistance and financing***

DRAFT

---

## RECOMMENDATIONS FOR FURTHER STUDY

---

**Items for Further Study:** Upon hearing recommendations from the various Working Groups and Commission Members, the Commission recommends the following items for further discussion and study:

- *Polices to Enhance Local System Maintenance:* The Commission recommends further study on methods to enhance local water and wastewater system sustainability. Such study should include, but not be limited to, the following:
  - *Enhanced Reporting:* Require local systems to submit annual audit statements and fee operating coverage ratios to the various State funding agencies.
  - *Capital Reserve Fund:* Require local water and wastewater systems to establish and maintain a capital reserve fund.
  - *Disclosure of Local Match:* Require local water and wastewater systems to disclose the source of the local match for State grants to the various funding agencies; and, disallow the use of other State grants to be used as the local match.
  - *Fiscal Benchmarks:* Develop fiscal benchmarks to be set in Statute in order to guide State water and wastewater infrastructure investment decisions.
- *Financing Options:* The Commission recommends further study on methods to finance local water and wastewater infrastructure projects by the following means:
  - *Local Infrastructure Bank:* Establish an infrastructure bank within the state to improve local access to capital markets. As a model, the State should consider the Virginia Resources Authority's Virginia Pooled Financing Program.
  - *Establish a Water and Wastewater Utility Tax:* Establish a local water and wastewater tax. As a model, the State should consider the gross receipts from the sale of electricity (GS 105-164.4(a)).
  - *Establish a State Flush Tax:* Establish a "State Flush Tax" based on the State of Maryland's Bay Restoration Fund (2004 Regular Session, Senate Bill 320).
- *Failing Water and Wastewater Systems:* The Commission recommends further study on methods to address failing private and not-for-profit water and wastewater systems. Such study should include, but not be limited to:
  - *Existing programs:* Evaluation of existing programs to address failing systems, including the following:
    - The Disadvantaged Communities Program managed by the Public Water Supply Section of the Division of Environmental Health of DENR.
    - Funding by the Rural Center for the extension of service to a disadvantaged community.

- The establishment of acquisition incentive accounts by private water and sewer companies regulated by the North Carolina Utilities Commission for the acquisition and upgrade of nonviable water and sewer systems in the State.
  - *Incentivize assimilation:* Encourage, through incentives and other means, the consolidation of failing systems into financially healthy neighboring systems.
- *Agriculture Cost Sharing:* The Commission recommends further study on creating an agriculture cost sharing program for agricultural users water and wastewater projects. Such a program could be run through the Department of Environment and Natural Resources or Department of Agriculture and Consumer Services. The purpose of the program would be to provide matching grant funds to agricultural water users to develop and implement efficient water resource practices and improve agriculturally impaired water sources.
- *Contingency Fund:* The Commission recommends further study on whether to establish a contingency fund for emergency projects to address failing water/wastewater systems and the amount of funds that should be placed in the contingency fund.
- *Reservoir construction:* The Commission recommends further study on whether to amend the common criteria to allow funds to be utilized towards the construction of water supply reservoirs as an eligible project activity or cost, where allowed under federal law.

*DRAFT*

---

## LEGISLATIVE PROPOSALS

---

### **2009-SYz-13. Modify Water Funding Priorities.**

Sources:

- Working Group #1: Move toward requiring water/wastewater systems to base estimated infrastructure needs on an asset management plan.
- Working Group #2: Establish regionalization as a common criterion, with "where practicable" language based on comments at April 22, 2010 meeting of Commission.
- Working Group #2: Establish ascending High Unit Cost (HUC) Criteria above the current threshold of 1.5% of the Median Household Income.
- Working Group #2: Establishes drought management as a common criterion.
- Rural Center comments: Make leaking line repairs a priority.

### **2009-SYz-14. Local Government Commission Evaluate Water Systems.**

Source:

- Working Group 32: Authorizes DENR and the Local Government Commission to study the value of increasing their role in the review and oversight of the financial operations of water and wastewater systems.

### **2009-SYz-15. Water Supply System Capacity Planning.**

Source:

- Rural Center comments: Authorize Commission to establish a requirement for water systems to initiate planning for an expanded water supply when the average daily demand reaches 80% of capacity (currently a guideline for water and a requirement for sewer).

### **2009-LHz-272. Clean Water Management Trust Fund.**

Source:

- Working Group #3: Clean Water Management Trust Fund critical needs appropriation.

### **2009-LHz-273. DENR matching funds.**

Source:

- Working Group #3: Appropriates funds to DENR to provide State match for federal revolving funds.

**DRAFT**

**2009-LHz-274. Rural Center Funds.**

Source:

- Working Group #3: Rural Center critical needs appropriation. The amount of the appropriation and the draft language revised pursuant to correspondence with Rural Center.

**2009-LHz-275. Water Infrastructure/Close Info Gaps.**

Source:

- Working Group #1: Build on the base of the existing EPA water/wastewater infrastructure survey process. Supplement the federal survey with a state-only survey to gather additional information on economic development and growth related infrastructure needs; water system efficiency measures; and costs related to development of new water sources.
- Working Group #1: Use the surveys as the basis for an updated report to the General Assembly every 4 years on combined water/wastewater infrastructure needs.
- Working Group #1: Incorporate water infrastructure needs into local water supply plans (updated every 5 yrs).

**2009-LHz-276. Survey Ag Water Infrastructure Needs.**

Source:

- Working Group #1: Agricultural agencies and organizations should continue to work with farmers to identify agricultural water infrastructure needs that are not accounted for in the survey of public water/wastewater infrastructure needs and report those needs to the General Assembly every 5 years.

**2009-LHz-279. Conserve & Protect Ag Water Resources.**

Source:

- Addresses recommendation made by Rep. Tarleton at the April 22, 2010 Commission meeting.

**2009-LHz-281. Water infrastructure database/Task Force.**

Source:

- Working Group #2: Enact legislation to create a statewide water and wastewater infrastructure funding database for NC.

**DRAFT**



GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2009

U

D

BILL DRAFT 2009-SYz-13 [v.5] (04/22)

(THIS IS A DRAFT AND IS NOT READY FOR INTRODUCTION)  
5/6/2010 4:52:14 PM

Short Title: Water Funding Priorities.

(Public)

Sponsors:

**DRAFT**

Referred to:

1 A BILL TO BE ENTITLED  
2 AN ACT TO MODIFY THE COMMON CRITERIA APPLICABLE TO LOANS  
3 AND GRANTS FOR WATER AND WASTEWATER INFRASTRUCTURE  
4 PROJECTS TO: (1) CLARIFY THAT LEAKING WATERLINES ARE A  
5 PRIORITY FOR BOTH WATER QUALITY AND WATER QUANTITY  
6 PURPOSES; (2) INCLUDE ASSET MANAGEMENT PLANNING,  
7 REGIONALIZATION, STATE WATER SUPPLY PLANNING, AND  
8 DROUGHT MANAGEMENT IN THE LIST OF COMMON CRITERIA  
9 THAT RECEIVE PRIORITY FOR FUNDING; (3) ESTABLISH A SLIDING  
10 SCALE SYSTEM FOR DETERMINING THE PRIORITY GIVEN TO  
11 PROJECTS THAT EXCEED THE HIGH-UNIT-COST THRESHOLD; AND  
12 (4) PROVIDE THAT A PROJECT THAT DEMONSTRATES IT IS NOT  
13 PRACTICABLE FOR THE PROJECT TO PURSUE REGIONALIZATION  
14 BASED ON TOPOGRAPHY OR OTHER FACTORS SHALL BE GIVEN  
15 THE SAME PRIORITY FOR REGIONALIZATION AS A PROJECT THAT  
16 INCLUDES REGIONALIZATION, AS RECOMMENDED BY THE  
17 LEGISLATIVE STUDY COMMISSION ON WATER AND WASTEWATER  
18 INFRASTRUCTURE.

19 The General Assembly of North Carolina enacts:

20 **SECTION 1.** G.S. 159G-20 is amended by adding a new subsection to  
21 read:

22 "(28) Asset management plan. – The strategic and systematic  
23 application of management practices applied to the infrastructure  
24 assets of a local government unit in order to minimize the total  
25 costs of acquiring, operating, maintaining, improving and  
26 replacing the assets while at the same time maximizing the  
27 efficiency, reliability, and value of the assets."

28 **SECTION 2.** G.S. 159G-23 reads as rewritten:

1   **"§ 159G-23. Common criteria for loan or grant from Wastewater Reserve or**  
2       **Drinking Water Reserve.**

3       The criteria in this section apply to a loan or grant from the Wastewater  
4       Reserve or the Drinking Water Reserve. The Division of Water Quality and the  
5       Division of Environmental Health must each establish a system of assigning points  
6       to applications based on the following criteria:

- 7           (1)   Public necessity. – An applicant must explain how the project  
8               promotes public health and protects the environment. A project  
9               that improves a system that is not in compliance with permit  
10              requirements or is under orders from the Department, enables a  
11              moratorium to be lifted, or replaces failing septic tanks with a  
12              wastewater collection system has priority.
- 13          (2)   Effect on impaired waters. – A project that improves designated  
14              impaired waters of the State has priority.
- 15          (3)   Efficiency. – A project that achieves efficiencies in meeting the  
16              State's water infrastructure needs or reduces vulnerability to  
17              drought consistent with Part 2A of Article 21 and Article 38 of  
18              Chapter 143 of the General Statutes by one of the following  
19              methods has priority:
- 20              a.    The combination of two or more wastewater or public  
21                   water systems into a regional wastewater or public water  
22                   system by merger, consolidation, or another means.
- 23              b.    Conservation or reuse of water, including bulk water reuse  
24                   facilities and waterlines to supply reuse water for  
25                   irrigation and other approved uses.
- 26              c.    Construction of an interconnection between water systems  
27                   intended for use in drought or other water shortage  
28                   emergency.
- 29              d.    Repair or replacement of leaking ~~waterlines~~ waterlines to  
30                   prevent contamination and to improve water conservation  
31                   and efficiency.
- 32              e.    Replacement of meters and installation of new metering  
33                   systems.
- 34          4)    Comprehensive land-use plan. – A project that is located in a city  
35              or county that has adopted or has taken significant steps to adopt  
36              a comprehensive land-use plan under Article 18 of Chapter 153A  
37              of the General Statutes or Article 19 of Chapter 160A of the  
38              General Statutes has priority over a project located in a city or  
39              county that has not adopted a plan or has not taken steps to do so.  
40              The existence of a plan has more priority than steps taken to  
41              adopt a plan, such as adoption of a zoning ordinance. A plan that  
42              exceeds the minimum State standards for protection of water  
43              resources has more priority than one that does not. A project is

1 considered to be located in a city or county if it is located in  
2 whole or in part in that unit. A land-use plan is not considered a  
3 comprehensive land-use plan unless it has provisions that protect  
4 existing water uses and ensure compliance with water quality  
5 standards and classifications in all waters of the State affected by  
6 the plan.

7 (5) Flood hazard ordinance. – A project that is located in a city or  
8 county that has adopted a flood hazard prevention ordinance  
9 under G.S. 143-215.54A has priority over a project located in a  
10 city or county that has not adopted an ordinance. A plan that  
11 exceeds the minimum standards under G.S. 143-215.54A for a  
12 flood hazard prevention ordinance has more priority than one that  
13 does not. A project is considered to be located in a city or county  
14 if it is located in whole or in part in that unit. If no part of the  
15 service area of a project is located within the 100-year floodplain,  
16 the project has the same priority under this subdivision as if it  
17 were located in a city or county that has adopted a flood hazard  
18 prevention ordinance. The most recent maps prepared pursuant to  
19 the National Flood Insurance Program or approved by the  
20 Department determine whether an area is within the 100-year  
21 floodplain.

22 (6) Sound management. – A project submitted by a local government  
23 unit that has demonstrated a willingness and ability to meet its  
24 responsibilities through sound fiscal policies and efficient  
25 operation and management has priority.

26 (6a) Asset management plan. – A project submitted by a local  
27 government unit that has developed and is implementing an asset  
28 management plan has priority over a project submitted by a local  
29 government unit that has not developed or is not implementing  
30 an asset management plan.

31 (7) Capital improvement plan. – A project that implements the  
32 applicant's capital improvement plan for the wastewater system  
33 or public water system it manages has priority over a project that  
34 does not implement a capital improvement plan. To receive  
35 priority, a capital improvement plan must set out the applicant's  
36 expected water infrastructure needs for at least 10 years.

37 (8) Coastal habitat protection. – A project that implements a  
38 recommendation of a Coastal Habitat Protection Plan adopted by  
39 the Environmental Management Commission, the Coastal  
40 Resources Commission, and the Marine Fisheries Commission  
41 pursuant to G.S. 143B-279.8 has priority over other projects that  
42 affect counties subject to that Plan.

- 1           (9)   High-unit-cost threshold. – A high-unit-cost project has priority  
2           over projects that are not high-unit-cost projects. The priority  
3           given to a high-unit-cost-project shall be set using a sliding scale  
4           based on the amount by which the applicant exceeds the  
5           high-unit-cost threshold.
- 6           (10) Regionalization. – A project to provide for the planning of  
7           regional public water and wastewater systems, to provide for the  
8           orderly coordination of local actions relating to public water and  
9           wastewater systems, or to help realize economies of scale in  
10          regional public water and wastewater systems through  
11          consolidation, merger, or interconnection of public water and  
12          wastewater systems has priority. A project that demonstrates it is  
13          not practicable for the project to pursue regionalization based on  
14          topography or other factors shall be given the same priority for  
15          regionalization as a project that includes regionalization.
- 16          (11) State water supply plan. – A project that addresses potential  
17          conflicts between local plans or implements measures in which  
18          the local water supply plans could be better coordinated, as  
19          identified in the State water supply plan pursuant to  
20          G.S. 143-355(m), has priority.
- 21          (12) Water conservation measures for drought. – A project that  
22          includes adoption of water conservation measures by a local  
23          government unit that are more stringent than the minimum water  
24          conservation measures required pursuant to G.S. 143-355.2 has  
25          priority."

26       **SECTION 3.** This act is effective when it becomes law.  
27

GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2009

U

D

BILL DRAFT 2009-SYz-14 [v.2] (04/22)

(THIS IS A DRAFT AND IS NOT READY FOR INTRODUCTION)

5/5/2010 5:41:09 PM

Short Title: Local Government Comm. Review Water Systems.

(Public)

Sponsors:

Referred to:

**DRAFT**

1 A BILL TO BE ENTITLED  
2 AN ACT TO DIRECT THE DEPARTMENT OF ENVIRONMENT AND  
3 NATURAL RESOURCES AND THE LOCAL GOVERNMENT  
4 COMMISSION OF THE OFFICE OF THE STATE TREASURER TO  
5 EVALUATE THE POTENTIAL BENEFITS OF MONITORING THE  
6 FINANCIAL CONDITION OF PUBLIC WATER SUPPLY AND  
7 WASTEWATER SYSTEMS, AS RECOMMENDED BY THE  
8 LEGISLATIVE STUDY COMMISSION ON WATER AND WASTEWATER  
9 INFRASTRUCTURE.

10 The General Assembly of North Carolina enacts:

11 **SECTION 1.** The Department of Environment and Natural Resources  
12 and the Local Government Commission in the Office of State Treasurer shall  
13 evaluate the costs and benefits of conducting financial reviews of public water  
14 supply and wastewater systems to ensure that public water supply or wastewater  
15 systems raise revenue sufficient to cover the costs associated with the system,  
16 including the costs of maintenance, repair, and replacement of treatment and  
17 distribution or collection infrastructure. The Department and the Commission  
18 shall evaluate the desirability of requiring the following actions by public water  
19 supply and wastewater systems:

- 20 (1) Submission of annual audit statements by local governments to  
21 State funding agencies for the purpose of reporting on system  
22 operations and to demonstrate whether the water and sewer rates  
23 of each system are sufficient to maintain system operations and  
24 meet debt service obligations.\
- 25 (2) In the event that a shortfall is found, requiring remedial measures  
26 such as the submission of a written explanation for the revenue  
27 shortfall from the governing board of the system and the

1 development of a plan to ensure that system revenues cover  
2 system costs.

3 (2) Maintenance of a capital reserve fund by public water supply and  
4 wastewater systems.

5 (3) Review of applications for grant funds to ensure that applicants'  
6 grant match is funded from local revenues as opposed to another  
7 grant.

8 (4) Development of benchmarks that systems must meet for proper  
9 investing in water and sewer infrastructure.

10 (5) Notification of funding agencies when systems are failing to  
11 operate in compliance with applicable state and federal water  
12 quality standards.

13 **SECTION 2.** The agencies shall report on their findings and  
14 recommendations to the Legislative Study Commission on Water and Wastewater  
15 Infrastructure no later than October 1, 2010.

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

GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2009

U

D

BILL DRAFT 2009-SYz-15 [v.1] (04/22)

(THIS IS A DRAFT AND IS NOT READY FOR INTRODUCTION)  
5/6/2010 4:50:08 PM

Short Title: Water Supply System Capacity Planning.

(Public)

Sponsors:

Referred to:

**DRAFT**

1 A BILL TO BE ENTITLED  
2 AN ACT TO PROVIDE THAT THE ENVIRONMENTAL MANAGEMENT  
3 COMMISSION MAY ADOPT RULES TO REQUIRE A PUBLIC WATER  
4 SYSTEM TO INITIATE PLANNING FOR AN EXPANDED WATER  
5 SUPPLY OR WATER TREATMENT CAPACITY ONCE THE PUBLIC  
6 WATER SYSTEM REACHES 80 PERCENT OF ITS APPROVED  
7 CAPACITY, AS RECOMMENDED BY THE LEGISLATIVE STUDY  
8 COMMISSION ON WATER AND WASTEWATER INFRASTRUCTURE.  
9 The General Assembly of North Carolina enacts:  
10 **SECTION 1.** G.S. 130A-315(b1) is amended by adding a new  
11 subdivision to read:  
12 "(8) Require a public water system to initiate planning for an  
13 expanded water supply or water treatment capacity once the  
14 public water system reaches 80 percent of its approved capacity."  
15 **SECTION 2.** This act is effective when it becomes law.





GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2009

H

D

BILL DRAFT 2009-LHz-272\* [v.4] (5/1)

(THIS IS A DRAFT AND IS NOT READY FOR INTRODUCTION)  
5/6/2010 5:02:55 PM

Short Title: Funds/Clean Water Management Trust Fund.

(Public)

Sponsors:

Referred to:

**DRAFT**

1 A BILL TO BE ENTITLED  
2 AN ACT TO APPROPRIATE FUNDS TO THE CLEAN WATER  
3 MANAGEMENT TRUST FUND TO BE AWARDED AS GRANTS FOR  
4 CERTAIN WATER AND WASTEWATER INFRASTRUCTURE CRITICAL  
5 NEEDS AS RECOMMENDED BY THE LEGISLATIVE STUDY  
6 COMMISSION ON WATER AND WASTEWATER INFRASTRUCTURE.  
7 The General Assembly of North Carolina enacts:  
8 **SECTION 1.** There is appropriated from the General Fund to the Clean  
9 Water Management Trust Fund the sum of forty-four million dollars  
10 (\$44,000,000) for the 2010-2011 fiscal year to be awarded as grants pursuant to  
11 Chapter 113A of the General Statutes; however, the funds appropriated by this act  
12 shall be used only to fund grants that address critical water and wastewater  
13 infrastructure needs.  
14 **SECTION 2.** This act becomes effective July 1, 2010.

GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2009

H

D

BILL DRAFT 2009-LHz-273\* [v.5] (5/1)

(THIS IS A DRAFT AND IS NOT READY FOR INTRODUCTION)

5/6/2010 4:45:02 PM

Short Title: Funds/Match For Fed. Water & Wastewater Funds.

(Public)

Sponsors:

Referred to:

**DRAFT**

- 1 A BILL TO BE ENTITLED  
2 AN ACT TO APPROPRIATE FUNDS TO THE STATE'S WATER  
3 INFRASTRUCTURE FUND TO BE USED TO MATCH THE FEDERAL  
4 FUNDS AVAILABLE FOR WATER SUPPLY AND WASTEWATER  
5 NEEDS AS RECOMMENDED BY THE LEGISLATIVE STUDY  
6 COMMISSION ON WATER AND WASTEWATER INFRASTRUCTURE.  
7 The General Assembly of North Carolina enacts:  
8 **SECTION 1.** There is appropriated from the General Fund to the  
9 Water Infrastructure Fund established in G.S. 159G-22 the sum of thirteen million  
10 five hundred seventy-seven thousand six hundred seventy-three dollars  
11 (\$13,577,673) for the 2010-2011 fiscal year to be used to match the federal funds  
12 available for drinking water and water supply needs and for wastewater needs. The  
13 funds appropriated by this act shall be allocated as follows:  
14 (1) \$6,223,073 shall be allocated to the Drinking Water State  
15 Revolving Fund to be used to match federal funds available for  
16 water supply and drinking water needs; and  
17 (2) \$7,354,600 shall be allocated to the Clean Water State Revolving  
18 Fund to match federal funds available for wastewater needs.  
19 **SECTION 2.** This act becomes effective July 1, 2010.

GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2009

H

D

BILL DRAFT 2009-LHz-274\* [v.10] (5/1)

(THIS IS A DRAFT AND IS NOT READY FOR INTRODUCTION)

5/6/2010 6:08:37 PM

Short Title: Rural Center Funds/Water Infrastructure.

(Public)

Sponsors:

Referred to:

**DRAFT**

1 A BILL TO BE ENTITLED  
2 AN ACT TO APPROPRIATE FUNDS TO THE RURAL ECONOMIC  
3 DEVELOPMENT CENTER FOR CRITICAL WATER AND  
4 WASTEWATER GRANTS AS RECOMMENDED BY THE LEGISLATIVE  
5 STUDY COMMISSION ON WATER AND WASTEWATER  
6 INFRASTRUCTURE.

7 The General Assembly of North Carolina enacts:

8 **SECTION 1.(a)** Appropriation. – There is appropriated from the  
9 General Fund to the Rural Economic Development Center, Inc., (Rural Center) the  
10 sum of fifty million dollars (\$50,000,000) for the 2010-2011 fiscal year to be used  
11 to provide grants to local government units for wastewater-related projects and for  
12 public water system-related projects as provided by this section. Funds may also  
13 be used to provide emergency water and sewer grants.

14 **SECTION 1.(b)** Definitions. – The definitions in G.S. 159G-20 apply  
15 in this section. In addition, the following definitions shall apply in this section  
16 unless otherwise provided:

17 (1) Ability to pay. – An assessment of the ability of a local  
18 government unit to pay for a water infrastructure project as  
19 calculated annually by the Division of Community Assistance in  
20 the Department of Commerce.

21 (2) Economically distressed area. – Any of the following:

22 a. An economically distressed county as defined in  
23 G.S. 143B-437.01.

24 b. That part of a county in which the poverty rate is at least  
25 one hundred fifty percent (150%) of the State poverty rate.  
26 The poverty rate is the percentage of the population whose  
27 income is below the most recent federal poverty level set  
28 by the U.S. Bureau of the Census.

1 c. If it is not a county, its ability to pay is less than fifty  
2 percent (50%) of the ability to pay of the county in which  
3 it is located.

4 (3) Rural county. – A county with a population density of fewer than  
5 250 people per square mile based on the most recent federal  
6 decennial census.

7 **SECTION 1.(c) Eligible Applicants; Eligible Projects.** – A local  
8 government unit is eligible for a grant under this section if it meets the eligibility  
9 requirements under subsection (d) of this section. The funds appropriated under  
10 this section may be used to provide a supplemental grant that meets the  
11 requirements of subsection (d) and subsection (e) of this section. The following  
12 projects are eligible for receiving a grant under this section:

- 13 (1) Wastewater collection system.  
14 (2) Wastewater treatment works.  
15 (3) Public water system.

16 **SECTION 1.(d) Supplemental Grants.** – A supplemental grant is  
17 available to match other funds to be applied to the construction costs of an eligible  
18 project. Other funds include federal funds, State funds, and local funds. A  
19 supplemental grant is subject to the following restrictions:

20 (1) Eligibility. – A local government unit is eligible for a  
21 supplemental grant if it meets the following criteria:

- 22 a. It is a rural county or is located in one of these counties.  
23 b. It adopts a resolution to set the household user fee for  
24 water and sewer service in the area served by the project  
25 at an amount that equals or exceeds the high-unit-cost  
26 threshold.

27 (2) Maximum. – A supplemental grant shall not exceed five hundred  
28 thousand dollars (\$500,000) unless the applicant meets one or  
29 more of these descriptions:

- 30 a. It is an economically distressed county or is located in an  
31 economically distressed county.  
32 b. Its poverty rate is at least one hundred fifty percent  
33 (150%) of the State poverty rate.  
34 c. If it is not a county, its ability to pay is less than fifty  
35 percent (50%) of the ability to pay of the county in which  
36 it is located.

37 The maximum supplemental grant for an applicant meeting at  
38 least one of these descriptions is the lesser of one million dollars  
39 (\$1,000,000) or twenty-five percent (25%) of the total project  
40 cost.

41 (3) Matching funds. – A local government unit shall match a  
42 supplemental grant on a dollar-for-dollar basis unless the unit  
43 meets one or more of the following descriptions, in which

1 instance the Rural Center may require a match of fifty percent  
2 (50%) or less:

- 3 a. It is an economically distressed county or is located in an  
4 economically distressed county.
- 5 b. Its poverty rate is at least one hundred fifty percent  
6 (150%) of the State poverty rate.
- 7 c. If it is not a county, its ability to pay is less than fifty  
8 percent (50%) of the ability to pay of the county in which  
9 it is located.

10 A local government unit that meets one or more of these  
11 descriptions may not provide less than a dollar-for-dollar match  
12 if the supplemental grant amount requested exceeds five hundred  
13 thousand dollars (\$500,000).

14 **SECTION 1.(e) Criteria for Grants.** – All projects must document a  
15 current critical water or wastewater need affecting human health or the  
16 environment or must document a critical economic development need. The criteria  
17 in G.S. 159G-23, the criteria set out in this section, and any other criteria  
18 established by the Board of Directors of the Rural Center shall apply to a grant  
19 provided under this section. An application for a project that serves an  
20 economically distressed area shall have priority over a project that does not. The  
21 Board of Directors of the Rural Center may determine that a crisis need exists that  
22 merits special consideration and may establish one or more subcategories of this  
23 program to address applications that will meet the needs identified.

24 **SECTION 1.(f) Grant Applications.** – Any application for a grant  
25 under this section shall be submitted by the local government unit to the Rural  
26 Center. An application shall be submitted on a form prescribed by the Rural  
27 Center and shall contain the information required by the Rural Center. An  
28 applicant shall submit to the Rural Center any additional information requested by  
29 the Rural Center to enable the Rural Center to make a determination on the  
30 application. An application that does not contain information required for the  
31 application or requested by the Rural Center is incomplete and is not eligible for  
32 consideration.

33 **SECTION 1.(g) Environmental Assessment.** – An application  
34 submitted under this section for a supplemental grant shall state whether the  
35 project to be funded by the grant requires an environmental assessment. If the  
36 application indicates that an environmental assessment is not required, it must  
37 identify the exclusion in the North Carolina Environmental Policy Act, Article 1  
38 of Chapter 113A of the General Statutes that applies to the project. An application  
39 that does not identify an exclusion in the North Carolina Environmental Policy Act  
40 shall include evidence that the environmental assessment of the project's probable  
41 impacts on the environment was submitted to the Department of Environment and  
42 Natural Resources or to the relevant federal agency providing financing for the  
43 project.

1           **SECTION 1.(h)** Review of Applications and Award of Grant. – The  
2 Rural Center shall review grant applications and award grants as provided by this  
3 subsection:

4           (1) Point assignment. – The Rural Center shall review all grant  
5 applications submitted under this section for an application  
6 period, to be determined by the Rural Center, and shall rank each  
7 application in accordance with the points assigned to the  
8 evaluation criteria. Applications addressing a crisis need may be  
9 ranked according to a special set of criteria or be reviewed for a  
10 specifically determined application period. The Rural Center's  
11 determination of rank is conclusive.

12          (2) Reconsideration. – When an application's rank is too low to  
13 receive an award of a grant for the application period, the Rural  
14 Center may consider a new application for the same project,  
15 provided the application addresses questions from the previous  
16 grant round. The Rural Center may reject any resubmission of the  
17 same project that does not adequately address questions from the  
18 previous grant round. The Rural Center's determination of  
19 adequacy is conclusive.

20          (3) Notification of decision. – When the Rural Center determines  
21 that an application's rank makes it eligible for an award of a  
22 grant, the Rural Center shall send the applicant a letter of intent  
23 to award the grant. The notice shall set out any conditions the  
24 applicant must meet to receive an award of a grant. When the  
25 applicant satisfies the conditions set out in the letter of intent, the  
26 Rural Center shall send the applicant an offer to award a grant.  
27 The applicant shall give the Rural Center written notice of  
28 whether it accepts or rejects the offer. A grant is considered  
29 awarded the date the offer to award the grant is sent by the Rural  
30 Center.

31           **SECTION 1.(i)** Disbursement of Grant. – A grant awarded under this  
32 section shall be disbursed in two or more payments based on the progress of the  
33 project for which the grant was awarded. To obtain a payment, a grant recipient  
34 shall submit a request for payment to the Rural Center and shall document the  
35 expenditures for which the payment is requested. The Rural Center shall review  
36 the payment request for compliance with all grant conditions.

37           **SECTION 1.(j)** Withdrawal of Grant. – An award for a supplemental  
38 grant for a project is withdrawn if the applicant fails to enter into a construction  
39 contract for the project within one year after the date of the award, unless the  
40 Board of Directors of the Rural Center finds that the applicant has good cause for  
41 the failure. If the Rural Center finds good cause for an applicant's failure, the Rural  
42 Center shall set a date by which the applicant must take action or forfeit the grant.

1           **SECTION 1.(k)** Inspection of Project. – The Rural Center may inspect  
2 a project as provided by this subsection:

3           (1) Authority. – The Rural Center may inspect a project for which it  
4 awards a grant under this section to determine the progress made  
5 on the project and whether the construction of the project is  
6 consistent with the project described in the grant application. The  
7 inspection may be performed by personnel of the Rural Center or  
8 by a professional engineer licensed under Chapter 89C of the  
9 General Statutes.

10          (2) Disqualification. – An individual may not perform an inspection  
11 of a project under this section if the individual meets any of the  
12 following criteria:

13           a. Is an officer or employee of the local government unit that  
14 received the grant award for the project.

15           b. Is an owner, officer, employee, or agent of a contractor or  
16 subcontractor engaged in the construction of the project  
17 for which the grant was made.

18           **SECTION 1.(l)** Administration Costs. – The Rural Center may use a  
19 portion of the funds appropriated under this section for administration, not to  
20 exceed two percent (2%), for the life of the grant program created by this section.

21           **SECTION 1.(m)** Reporting Requirement. – The Rural Center shall  
22 report annually to the Joint Legislative Commission on Governmental Operations  
23 regarding the progress of the grant program created under this section. The report  
24 required by this subsection may be included as part of the Rural Center's annual  
25 report required by subsection 14.27(e) of S.L. 2009-451. The first report required  
26 under this subsection is due no later than September 1, 2011.

27           **SECTION 1.(n)** Separate Accounts. – Each grant that is provided  
28 under this section shall be administered through a separate account.

29           **SECTION 1.(o)** Loans Prohibited. – The Rural Center shall not use the  
30 funds appropriated under this section to make loans.

31           **SECTION 2.** This act becomes effective July 1, 2010.

GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2009

H

D

BILL DRAFT 2009-LHz-275\* [v.12] (5/2)

(THIS IS A DRAFT AND IS NOT READY FOR INTRODUCTION)

5/6/2010 6:38:16 PM

Short Title: Water Infrastructure Needs/Close Info Gaps.

(Public)

Sponsors:

Referred to:

**DRAFT**

1 A BILL TO BE ENTITLED  
2 AN ACT TO DIRECT THE DEPARTMENT OF ENVIRONMENT AND  
3 NATURAL RESOURCES, IN CONJUNCTION WITH OTHERS, TO  
4 DEVELOP A STATEWIDE SURVEY TO SUPPLEMENT THE CURRENT  
5 INFORMATION USED TO ASSESS THE STATE'S WATER AND  
6 WASTEWATER INFRASTRUCTURE NEEDS AND TO DEVELOP A  
7 PLAN FOR INCORPORATING THE INFORMATION COMPILED FROM  
8 THE ENVIRONMENTAL PROTECTION AGENCY SURVEYS INTO THE  
9 STATE WATER SUPPLY PLAN, AS RECOMMENDED BY THE  
10 LEGISLATIVE STUDY COMMISSION ON WATER AND WASTEWATER  
11 INFRASTRUCTURE.

12 Whereas, the data currently available to determine the State's water and  
13 wastewater needs are the Environmental Protection Agency surveys of publicly  
14 owned water and wastewater systems conducted every four years by the  
15 Department of Environment and Natural Resources and the North Carolina Rural  
16 Economic Development Center Water 2030 report; and

17 Whereas, the Water 2030 report, completed in 2005, provides a snapshot of  
18 projected water and wastewater infrastructure needs through 2030, but was funded  
19 as a one-time overview, and has not been updated since 2005; and

20 Whereas, while both the EPA surveys and Water 2030 are useful tools,  
21 there continue to be gaps in the information used to determine the State's water  
22 and wastewater infrastructure needs, particularly with regard to economic  
23 development and growth related infrastructure needs, water system efficiency  
24 measures, and costs related to the development of new water sources; Now  
25 therefore,

26 The General Assembly of North Carolina enacts:

27 **SECTION 1.(a)** Statewide survey of water and wastewater  
28 infrastructure needs to supplement EPA survey. -- The Department of



1 Environment and Natural Resources in conjunction with the Environmental  
2 Finance Center at the School of Government at the University of North Carolina at  
3 Chapel Hill shall establish a task force to develop a statewide survey to build on  
4 the base of the existing Environmental Protection Agency water and wastewater  
5 infrastructure survey process that will provide a more accurate assessment of  
6 Statewide water and wastewater infrastructure needs. The Rural Economic  
7 Development Center shall be included as a member of this task force if it chooses  
8 to participate. If the Rural Economic Development Center does participate, then  
9 the task force may also consider requesting information required to update the  
10 Water 2030 report as part of the survey design. The Department of Environment  
11 and Natural Resources shall be the lead agency in this group effort.

12 The survey shall be designed to obtain information relevant to and that  
13 addresses the following information gaps that have been identified in the current  
14 databases:

- 15 (1) Information on water and wastewater infrastructure needs related  
16 to economic development and population growth.
- 17 (2) Information on water and wastewater system service areas.
- 18 (3) Information on drinking water needs relevant to determining the  
19 need and the cost of proposed reservoir construction.
- 20 (4) Information on infrastructure needed to address failing water and  
21 wastewater systems.
- 22 (5) Information on the infrastructure needs related to water system  
23 efficiency to address the issue of water loss.

24 **SECTION 1.(b)** Update and reporting of survey information. -- When  
25 designing the survey described in subsection (a) of this section, the task force shall  
26 also consider how often the information provided by the survey should be updated.  
27 The task force shall also consider how the survey results can be formulated and  
28 summarized to provide an updated and easily understood report for use by the  
29 General Assembly on combined water and wastewater infrastructure needs and  
30 shall develop a model and format for that report.

31 **SECTION 1.(c)** Reporting requirement for statewide survey plan. --  
32 The task force shall report its findings and recommendations and shall present the  
33 proposed statewide survey and the proposed methodology for conducting the  
34 survey to the Legislative Study Commission on Water and Wastewater  
35 Infrastructure by October 1, 2010. The report shall include the estimated cost to  
36 implement the survey and shall also include any legislative changes that may be  
37 needed to implement the proposed survey.

38 **SECTION 2.(a)** Plan to incorporate information from needs survey  
39 into State water supply plan. -- The Department of Environment and Natural  
40 Resources shall develop a plan to incorporate relevant information obtained from  
41 the Environmental Protection Agency surveys into the State water supply plan  
42 which is based on information provided by local water supply plans prepared  
43 pursuant to G.S. 143-355.1. In devising the plan to incorporate the needs survey

1 information into the State water supply plan the Department may consider whether  
2 there are modifications regarding the information collected as part of the local  
3 water supply plans or the methodology used to prepare the local water supply  
4 plans that would make it easier to incorporate the needs survey information into  
5 the State water supply plans, and if so, what those modifications would be.

6 **SECTION 2.(b)** Reporting requirement for plan to incorporate  
7 infrastructure needs survey information into State water supply plan. -- The  
8 Department of Environment and Natural Resources shall present its plan for  
9 incorporating the information from the Environmental Protection Agency water  
10 and wastewater infrastructure needs surveys into the State water supply plan to the  
11 Legislative Study Commission on Water and Wastewater Infrastructure by  
12 October 1, 2010. The Department of Environment and Natural Resources shall  
13 include in its presentation the estimated cost of the plan and any legislative  
14 changes that may be required to implement the plan.

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

GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2009

H

D

BILL DRAFT 2009-LHz-276\* [v.5] (05/03)

(THIS IS A DRAFT AND IS NOT READY FOR INTRODUCTION)

5/6/2010 1:40:47 PM

Short Title: Survey Ag. Water Infrastructure Needs.

(Public)

Sponsors:

Referred to:

**DRAFT**

1 A BILL TO BE ENTITLED  
2 AN ACT TO DIRECT THE DEPARTMENT OF AGRICULTURE AND  
3 CONSUMER SERVICES AND THE DIVISION OF SOIL AND WATER  
4 CONSERVATION IN THE DEPARTMENT OF ENVIRONMENT AND  
5 NATURAL RESOURCES TO CONTINUE TO WORK WITH THE FARM  
6 BUREAU AND OTHER AGRICULTURAL LEADERS AND  
7 ORGANIZATIONS TO DEVELOP A PLAN TO IDENTIFY AND REPORT  
8 AGRICULTURAL WATER AND WASTEWATER INFRASTRUCTURE  
9 NEEDS AS RECOMMENDED BY THE LEGISLATIVE STUDY  
10 COMMISSION ON WATER AND WASTEWATER INFRASTRUCTURE.

11 The General Assembly of North Carolina enacts:

12 **SECTION 1.** The Department of Agriculture and Consumer Services  
13 in conjunction with the Division of Soil and Water Conservation, Department of  
14 Environment and Natural Resources, Farm Bureau, and the State's other  
15 agricultural leaders and organizations are currently in the process of developing a  
16 strategic plan for protecting agricultural water resources. The General Assembly  
17 directs the Department of Agriculture and Consumer Services and the Division of  
18 Soil and Water Conservation, Department of Environment and Natural Resources  
19 to continue to work with the Farm Bureau, farmers, and other agricultural leaders  
20 and organizations to develop a plan, to be updated on a regular basis, that will  
21 identify agricultural water and wastewater infrastructure needs that are not  
22 accounted for in the Environmental Protection Agency surveys of water and  
23 wastewater infrastructure needs. The plan shall also provide a mechanism for  
24 reporting the results of the data gathered to the General Assembly in a manner that  
25 is helpful in assessing legislative and budgetary issues that the General Assembly  
26 may need to address. The plan may also address methods to identify current and  
27 future agricultural water use needs and methods to ensure that those needs are met;  
28 water conservation practices; and water efficiency measures.

1           The Department of Agriculture and Consumer Services and the Division  
2 of Soil and Water Conservation, Department of Environment and Natural  
3 Resources shall report to the Legislative Study Commission on Water and  
4 Wastewater Infrastructure by October 1, 2010, regarding the development of the  
5 plan, the proposed methodology and timeframe for implementing the plan, the  
6 estimated cost of the plan, and any legislative changes needed to implement the  
7 plan.

8           **SECTION 2.** This act is effective when it becomes law.

GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2009

H

D

BILL DRAFT 2009-LHz-279 [v.4] (05/06)

(THIS IS A DRAFT AND IS NOT READY FOR INTRODUCTION)  
5/6/2010 8:09:51 PM

Short Title: Conserve & Protect Ag Water Resources.

(Public)

Sponsors: Representative Crawford.

Referred to:

**DRAFT**

1 A BILL TO BE ENTITLED  
2 AN ACT DIRECTING THE DEPARTMENT OF AGRICULTURE AND  
3 CONSUMER SERVICES AND THE DEPARTMENT OF ENVIRONMENT  
4 AND NATURAL RESOURCES TO DESIGN A COST SHARE PROGRAM  
5 TO ASSIST FARMERS AND LANDOWNERS WHO IMPLEMENT BEST  
6 MANAGEMENT PRACTICES TO CONSERVE AND PROTECT WATER  
7 RESOURCES RELATED TO AGRICULTURAL USE. AS  
8 RECOMMENDED BY THE LEGISLATIVE STUDY COMMISSION ON  
9 WATER AND WASTEWATER INFRASTRUCTURE.

10 The General Assembly of North Carolina enacts:

11 **SECTION 1.** The General Assembly recognizes the important role that  
12 farmers and individual landowners can play in helping to protect current and  
13 future water resources. Therefore, the General Assembly directs the Department  
14 of Agriculture and Consumer Services and the Department of Environment and  
15 Natural Resources to work with farmers and landowners to encourage voluntary  
16 practices that conserve water use, increase the efficiency of private water use, and  
17 increase the water storage capacity by landowners. The General Assembly further  
18 directs the Department of Agriculture and Consumer Services and the Department  
19 of Environment and Natural Resources jointly to design a cost share program to  
20 provide technical and financial support to farmers and landowners who want to  
21 implement best management practices to protect water resources related to  
22 agricultural use. The Department of Agriculture and Consumer Services and the  
23 Department of Environment and Natural Resources shall report to the Legislative  
24 Study Commission on Water and Wastewater Infrastructure by October 1, 2010,  
25 regarding its progress in designing a cost share program. The report shall include  
26 the estimated cost of establishing and maintaining such a program and any  
27 legislative changes that may be needed to implement the program.

28 **SECTION 2.** This act is effective when it becomes law.

GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2009

H

D

BILL DRAFT 2009-LHz-281\* [v.3] (05/06)

(THIS IS A DRAFT AND IS NOT READY FOR INTRODUCTION)

5/6/2010 8:08:25 PM

Short Title: Water Infrastructure Database/Task Force.

(Public)

Sponsors:

Referred to:

**DRAFT**

1 A BILL TO BE ENTITLED  
2 AN ACT TO ESTABLISH A TASK FORCE TO DEVELOP A PLAN FOR THE  
3 ESTABLISHMENT AND MAINTENANCE OF A STATEWIDE WATER  
4 AND WASTEWATER INFRASTRUCTURE RESOURCE AND FUNDING  
5 DATABASE AS RECOMMENDED BY THE LEGISLATIVE STUDY  
6 COMMISSION ON WATER AND WASTEWATER INFRASTRUCTURE.

7 The General Assembly of North Carolina enacts:

8 **SECTION 1.(a)** The Department of Environment and Natural  
9 Resources, the Department of Commerce, the Department of the Treasurer, the  
10 Clean Water Management Trust Fund, the State Water Infrastructure Commission,  
11 and the Environmental Finance Center at the School of Government at the  
12 University of North Carolina at Chapel Hill shall establish a task force to work  
13 together jointly to design a plan for the establishment and maintenance of a  
14 statewide water and wastewater infrastructure resource and funding database. The  
15 North Carolina League of Municipalities, the North Carolina Association of  
16 County Commissioners, the Rural Economic Development Center, and the United  
17 States Department of Agriculture shall also be included as joint members of the  
18 task force if they choose to participate in the study. The Department of  
19 Environment and Natural Resources shall be the lead agency for the task force.  
20 The task force may also work with other interested stakeholders in its discretion.

21 **SECTION 1.(b)** The purpose of the water and wastewater resource  
22 funding database is to provide one source of information with the ability to track  
23 and locate all of the current water and wastewater infrastructure project needs and  
24 funding patterns in this State. Federal and State agencies (e.g. EPA), funding  
25 groups and non-profits spend a lot of money and resources trying to determine  
26 what the water infrastructure needs are in North Carolina.

27 In developing the plan the task force shall consider the consolidation  
28 and integration of information that is currently being collected by State agencies.

1 nonprofit corporations, institutions of higher education, and other entities that is  
2 relevant to water and wastewater infrastructure and water use.

3 The task force shall consider a system design that is capable of  
4 compiling and indexing all of the items listed in subdivisions (1) through (11) of  
5 this subsection and shall identify which of those items should be included in the  
6 database compiled by the system. The task force shall also indicate in its findings  
7 the merits of including or excluding each item. The items for consideration are as  
8 follows:

- 9 (1) Current and proposed infrastructure projects.
- 10 (2) Funding patterns and the status of each infrastructure project.
- 11 (3) System information (interconnections, fiscal).
- 12 (4) Strategic plans.
- 13 (5) Local water supply plans.
- 14 (6) Water resource maps and publications,
- 15 (7) Systems management information.
- 16 (8) Reporting and regulatory requirements.
- 17 (9) Guidance and training documents.
- 18 (10) Procedural guidance and forms for project implementation and  
19 funding.
- 20 (11) Internet links to support services.

21 **SECTION 1.(c)** In addition to the items set out in subsection (b) of this  
22 section the task force may also consider the following:

- 23 (1) The consolidation and integration of information that is currently  
24 being collected by State agencies, nonprofit corporations,  
25 institutions of higher education, and other entities that is relevant  
26 to water and wastewater infrastructure and water use.
- 27 (2) The possibility of digitizing common application forms currently  
28 being utilized by certain funding agencies as well as digitizing  
29 past funding documents and records.
- 30 (3) Information streamlining processes that can be implemented in  
31 the system design.
- 32 (4) The preliminary design and structural options for developing a  
33 database of water and wastewater needs.
- 34 (5) How current resources and existing efforts can be leveraged to  
35 maximize funding for local water systems.
- 36 (6) Determination of what low and no incremental cost data  
37 integration or implementation methods for assessment of water  
38 system needs exist.
- 39 (7) Implementing methods and data that enhance the sharing of  
40 infrastructure development plans and documents.
- 41 (8) The design for a more comprehensive and robust database to be  
42 built and constructed if more funds become available for the  
43 database in the future.

1           (9) Any other information relevant to the design of the database  
2           system described in subsection (b) of this section.

3           **SECTION 1.(d)** The task force shall present its proposed plan and  
4 report its findings and recommendations to the Legislative Study Commission on  
5 Water and Wastewater Infrastructure by October 1, 2010. The report shall include  
6 the estimated cost to create the database and the estimated cost to maintain such a  
7 system. The report shall also include any legislative changes that may be needed  
8 to implement the proposed plan.

9           **SECTION 2.** This act is effective when it becomes law.



---

# AUTHORIZING LEGISLATION

---

## S.L. 2009-574, PART 43

### PART XLIII. LEGISLATIVE STUDY COMMISSION ON WATER AND WASTEWATER INFRASTRUCTURE (Crawford, Owens)

**SECTION 43.1.** There is created the Legislative Study Commission on Water and Wastewater Infrastructure. The Commission shall consist of 17 members appointed as follows:

- (1) Four members of the House of Representatives, appointed by the Speaker of the House of Representatives.
- (2) Four members of the Senate, appointed by the President Pro Tempore of the Senate.
- (3) Two members appointed by the Governor.
- (4) The Secretary of the North Carolina Department of Environment and Natural Resources or the Secretary's designee.
- (5) The Secretary of the North Carolina Department of Commerce or the Secretary's designee.
- (6) The President of the North Carolina Rural Economic Development Center or the President's designee.
- (7) The Executive Director of the North Carolina Clean Water Management Trust Fund or the Executive Director's designee.
- (8) The Executive Director of the North Carolina League of Municipalities or the Executive Director's designee.
- (9) The Executive Director of the North Carolina Association of County Commissioners or the Executive Director's designee.
- (10) The Chair of the State Water Infrastructure Commission.

**SECTION 43.2.** The Speaker of the House of Representatives and the President Pro Tempore of the Senate shall each designate a cochair. The Commission may meet at any time upon the joint call of the cochairs. A quorum of the Commission shall be a majority of its members.

Vacancies on the Commission shall be filled by the same appointing authority that made the initial appointment.

Subject to the approval of the Legislative Services Commission, the Commission may meet in the Legislative Building or the Legislative Office Building.

The Legislative Services Commission, through the Legislative Services Officer, shall assign professional staff to assist the Commission in its work. The House of Representatives' and the Senate's Director of Legislative Assistants shall assign clerical support staff to the Commission, and the expenses relating to the clerical employees shall be borne by the Commission.

In addition, the State agencies and nonprofits serving on the Commission shall cooperate in providing information and additional staff resources as needed to accomplish the work of the Commission.

The Commission, while in the discharge of its official duties, may exercise all powers provided for under G.S. 120-19 and G.S. 120-19.1 through G.S. 120-19.4. The Commission may contract for professional, clerical, or consultant services as provided by G.S. 120-32.02.

Members of the Commission shall receive subsistence and travel expenses at the rates set forth in G.S. 120-3.1, 138-5, or 138-6, as appropriate.

**SECTION 43.3.** The Legislative Study Commission on Water and Wastewater Infrastructure shall focus on the development of an ongoing process to identify and regularly report to the North Carolina General Assembly on statewide water and wastewater infrastructure needs and to improve the delivery of State appropriated water and wastewater programs. The Commission shall specifically do all of the following:

- (1) Evaluate the information provided through the drinking water and wastewater needs assessment prepared by the Environmental Protection Agency (EPA) every four years; the drinking water and wastewater needs surveys currently done by the North Carolina Department of Environment and Natural Resources in support of the EPA needs assessment; the data compiled as part of Water 2030 by the North Carolina Rural Economic Development Center, Inc.; and any other existing data sets in order to determine what information currently exists and where there may be gaps in the data.
- (2) Study an ongoing method for regularly determining and reporting on the State's water and wastewater infrastructure needs, including the subject of small towns whose water or sewer rates exceed the high-unit-cost threshold as defined in G.S. 159G-20.
- (3) Select a method for identifying and reporting on infrastructure needs in the future.
- (4) Review infrastructure funding priorities currently set out in State law to determine whether the priorities appropriately reflect the State's most pressing needs in light of future growth projections.
- (5) Recommend changes to infrastructure funding priorities and appropriations processes to ensure that funds are used to meet the State's most pressing needs.
- (6) Ascertain the capacity and role of the State in bridging identified gaps between funding priorities and available funds.
- (7) Determine what steps funding agencies can take to improve the delivery of existing funding programs, including the following options:
  - a. Developing common application requirements;
  - b. Scheduling regular joint meetings between funders and applicants;
  - c. Where projects are jointly funded, exploring options to share and improve oversight responsibilities; and
  - d. Coordinating reporting requirements to produce a single integrated funders report on an annual basis.

**SECTION 43.4.** As used in subdivision (7) of Section 43.3, "funding agencies" means the Department of Commerce, the Department of Environment and Natural Resources, the Clean Water Management Trust Fund, and the Rural Economic Development Center.

**SECTION 43.5.** On or before May 1, 2010, the Legislative Study Commission on Water and Wastewater Infrastructure shall submit an interim report to the 2009 General Assembly, Regular Session 2010. This interim report shall include any findings or recommendations of the Commission at that time. In addition, no later than the convening of the 2011 General Assembly, the Commission shall submit a final report to the General Assembly. This final report shall include the Commission's findings and recommendations under this study, including any legislative or administrative proposals. The Commission shall terminate upon the earlier of the filing of its final report or the convening of the 2011 General Assembly.

---

## MEMBERSHIP

---

Pursuant to S.L. 2009-574, Part 43, the Legislative Study Commission on Water and Wastewater Infrastructure consists of 17 members. Four of these members are appointed by the President Pro Tempore of the Senate, four members are appointed by the Speaker of the House of Representatives, two members are appointed by the Governor, and the remaining seven members are ex-officio voting members.

**President Pro Tempore of the Senate**  
**Appointments:**

***Sen. Charles W. Albertson, Co-Chair***  
136 Henry Dunn Picket Road  
Beulaville, NC 28518  
Home: (910) 298-4923  
Business: (919) 733-5705  
E-mail: [Charlie.Albertson@ncleg.net](mailto:Charlie.Albertson@ncleg.net)

***Sen. Thomas Apodaca***  
214 N. King Street  
Hendersonville, NC 28792  
Home: (828) 696-0574  
Business: (919) 733-5745  
Email: [Tom.Apodaca@ncleg.net](mailto:Tom.Apodaca@ncleg.net)

***Sen. David Hoyle***  
604 Queens Drive  
Dallas, NC 28034  
Home: (704) 922-4969  
Business: (919) 733-5734  
Email: [David.Hovle@ncleg.net](mailto:David.Hovle@ncleg.net)

***Senator A.B. Swindell***  
P.O. Box 788  
Nashville, NC 27856  
Home: (252) 462-0190; Fax (252) 459-4385  
Business: (919) 715-3030  
Email: [AB.Swindell@ncleg.net](mailto:AB.Swindell@ncleg.net)

**Speaker of the House of**  
**Representatives Appointments:**

***Rep. Jim Crawford, Co-Chair***  
509 College Street  
Oxford, NC 27565  
Home: (252) 492-0185  
Business: (919) 733-5824  
E-mail: [Jim.Crawford@ncleg.net](mailto:Jim.Crawford@ncleg.net)

***Rep. Mitch Gillespie***  
185 Cross Creek North Ridge Drive  
Marion, NC 28752  
Home: (828) 652-5548  
Business: (919) 733-5862  
Email: [Mitchg@ncleg.net](mailto:Mitchg@ncleg.net)

***Rep. William "Bill" Owens***  
113 Hunters Trail East  
Elizabeth City, NC 27909  
Home: (252) 335-0167  
Business: (919) 733-0010  
Email: [Bill.Owens@ncleg.net](mailto:Bill.Owens@ncleg.net)

***Rep. Cullie Tarleton***  
P. O. Box 1269  
Blowing Rock, NC 28605  
Home: (828) 295-3353  
Business: (919) 733-7727  
E-mail: [Cullie.Tarleton@ncleg.net](mailto:Cullie.Tarleton@ncleg.net)

**Appointments by Governor:**

**Mr. Larry Wooten**

NC Farm Bureau Federation, Inc.  
P. O. Box 27766  
Raleigh, NC 27611  
Home: (919) 782-1705  
Cell: (919) 306-6305

**Ms. Victoria (Tori) Small, PE**

Westcott, Small & Assoc., PLLC  
4015 Meeting Way, Suite 105  
High Point, NC 27265  
Home: (336) 812-3546  
Cell: (336) 558-5978

**Ex Officio Members:**

The Secretary of Environment and Natural  
Resources or the Secretary's designee

**Ms. Robin Smith**

Assistant Secretary for the Environment  
Department of Environment and Natural  
Resources  
1601 Mail Service Center  
Raleigh, NC 27699-1601  
(919) 715-4100

The Secretary of Commerce or the  
Secretary's Designee

**Mr. Dale Carroll**

Deputy Secretary  
Department of Commerce  
4301 Mail Service Center  
Raleigh, NC 27699-4301  
(919) 733-3449

The President of the North Carolina Rural  
Economic Development Center or the  
President's Designee

**Mr. Billy Ray Hall**

President  
North Carolina Rural Center  
4021 Carya Drive  
Raleigh, NC 27610-2914  
(919) 250-4314

The Executive Director of the North Carolina  
Clean Water Management Trust Fund or the  
Executive Director's Designee

**Mr. Richard E. Rogers, Jr.,**

Executive Director  
Clean Water Management Trust Fund  
1651 Mail Service Center  
Raleigh, NC 27699-1651  
(919) 571-6767

The Executive Director of the North Carolina  
League of Municipalities or the Executive  
Director's Designee

**Mr. Arthur (Buck) Kennedy**

Council Member, Town of Garner  
North Carolina League of Municipalities  
215 N. Dawson Street  
Raleigh, NC 27603-1172  
(919) 715-4000

The Executive Director of the North Carolina  
Association of County Commissioners or the  
Executive Director's Designee

**Mr. David F. Thompson**  
Executive Director  
North Carolina Association of County  
Commissioners  
215 N. Dawson Street  
Raleigh, NC 27603-1172  
(919) 715-2893

The Chair of the State Water Infrastructure  
Commission

**Mr. Bill Holman**  
Director of State Policy  
Nicholas Institute for Environmental Policy  
Solutions  
Duke University  
Box 90335  
Durham, NC 27708  
(919) 919-613-8737

**Commission Staff:**

Research Division

Tim Dodge, Commission Counsel: (919) 733-2578 ([timd@ncleg.net](mailto:timd@ncleg.net))

Fiscal Research Division

Kristin Walker, Commission Analyst: (919) 733-4910 ([Kristinw@ncleg.net](mailto:Kristinw@ncleg.net))

Mark Bondo, Commission Analyst: (919) 733-4910 ([markb@ncleg.net](mailto:markb@ncleg.net))

Bill Drafting Division

Emily Johnson, Commission Counsel: (919) 733-6660 ([emilyj@ncleg.net](mailto:emilyj@ncleg.net))

Commission Clerk

Cindy Davis, (919) 733-5705 ([cindy.davis@ncleg.net](mailto:cindy.davis@ncleg.net))

Legislative Office Bldg

Room 523

300 N. Salisbury Street

Raleigh, NC 27603

---

**APPENDIX A:**  
**MEMORANDUM FROM THE RURAL**  
**CENTER DATED APRIL 15, 2010**

---

TO:       The Honorable Charles Albertson, Co-Chairman  
          The Honorable James Crawford, Co-Chairman  
          Water/Wastewater Infrastructure Study Commission

FROM:     Billy Ray Hall

cc:       Staff to the Study Commission

SUBJECT:   Short-term Items for Commission Consideration

DATE:     April 15, 2010

---

As our staff completed their review of the latest round of applications, we identified several areas that might be appropriate for the study commission's attention. The projects we have seen through four rounds of Clean Water Partners grants have led to the identification of several areas that may be appropriate for the study commission's consideration for short-term action. To make sure these points are among the options that the members may want to examine, I propose to offer the attached five options for consideration by the study commission.

I look forward to working with you and the other members of the study commission to develop interim recommendations that address the committee's charge. By copy of this memorandum, I am sending my suggestions to the other members. Please let me know if any of these points need further explanation.

## **Possible options for short session/interim report action**

- **Require action before the water's gone**

Authorize DENR to establish a requirement for water systems to initiate planning for an expanded water supply when the average daily demand reaches 80% of capacity (currently a guideline for water and a requirement for sewer)

- Note: the requirement on the sewer facilities affects treatment plant capacity (80% of treatment capacity requires the system to begin planning and at 90% of capacity must act). The current 80% guideline for water systems affects the water supply, not the water treatment capacity.

- **Make leaking line repairs a priority**

Authorize state funded programs to give funding priority to the repair or replacement of leaking water lines in communities where financial constraints limit the water system's ability to implement water conservation and efficiency measures.

- Note: applications to repair leaking lines receive priority points under the common criteria (GS 159G-23(3) d.). The rules for the Drinking Water SRF provide eligibility for projects that install or replace distribution or transmission pipe to prevent contamination. The proposal here is to make clear that repair of leaking lines (consistent with the imperative provided in the drought bill) is a state priority.

- **Consolidate water system reports**

To reduce the number of reports required for communities, consolidate the local water system efficiency requirements that are part of the drought bill (G.S. 143-355.4) into the material required for local water supply plans (G.S. 143-355(l)).

- Note: water systems that apply for state assistance to extend water lines or to increase water treatment capacity must provide information that also is contained (at least in part) in their water supply plans. With the exception of the financial information required for drought bill compliance, this option would incorporate the drought bill's system information into the water supply plan and be available by reference, reducing the number of reports of the same/similar information required for water systems.

- **Standardize the number source**

To eliminate confusion for potential communities applying to multiple agencies for assistance, specify that all state funded programs that use median household income will use the updated census numbers in calculating the income amount.

- Note: requires a legislative change to one program operated by the Rural Center (Clean Water Partners Infrastructure) that is directed to use the 2000 Census numbers.

- **Facilitate assimilation of failing systems**

As an incentive to regionalize services, authorize assistance to improve the infrastructure in order to consolidate a failing non-profit system with another system that is eligible for state assistance.

- Note: this action permits the receiving system to make improvements in infrastructure it does not own in order to reduce the system's risk of adding non-compliant infrastructure. Should be promoted in cases where the receiving system is taking on the failing system to further the state's aims for consolidating services, or for alleviating environmental or public health concerns, or where the failing system is bankrupt and will leave its customers without potable water. Public Water Supply has a new program designed to facilitate the consolidation of systems. One project has been funded under the "disadvantaged communities" program thus far. By establishing this aim as a priority, other programs could be permitted to target their assistance to this area, as well.



**Water and Wastewater Infrastructure Study Commission**  
**Bill Explanations**

**LHz-272 (Funds/Clean Water Management Trust Fund)**

Bill does the following:

Appropriates \$44 million to the Clean Water Management Trust Fund to be used as grants for projects that address critical water and wastewater infrastructure needs.

Effective July 1, 2010

**LHz-273 (Funds/State Match for Federal Water and Wastewater Funds)**

Bill does the following:

Appropriates a total of \$13,577, 673 to the Water Infrastructure Fund to be used as State matching funds to secure federal funds. The funds are to be allocated as follows:

- \$6,223,073 to the Drinking Water State Revolving Fund to match federal funds
- \$7,354,600 to the Clean Water State Revolving Fund to be used to match federal funds

Effective July 1, 2010.

**LHz-274(Rural Center Funds/Water Infrastructure Critical Needs)**

Bill does the following:

Appropriates \$50 million to the Rural Center to be used to provide grants to local government units for wastewater and public water supply system projects. Funds may also be used for emergency water and sewer grants.

Sets out definitions, eligibility criteria, grant awarding and disbursement procedures and other terms applicable to the grants.

Provides that the grants available are supplemental grants that may be awarded to eligible local government units for projects that are any of the following: Wastewater collection system; Wastewater treatment works; or Public water system

The supplemental grants, which are used to match other funds to be applied to the construction costs of an eligible project, are available at a maximum of \$500,000. However, if the applicant meets specified criteria then that maximum is increased to the lesser of \$1 million or 25% of the total project cost. A local government is eligible for a grant if it is, or is located in, a rural county and it adopts a resolution to set the household user fee for water and sewer service in the area served by the project at an amount that equals or exceeds the high-unit-cost threshold. Requires matching funds as specified. Requires projects to document a current critical water or wastewater need affecting human health or the environment. Requires grant applications to indicate whether the project requires an environmental assessment. If the application does not identify an exclusion from the Environmental Policy Act, the applicant must include evidence that the environmental assessment was submitted to the Department of Environment and Natural Resources or relevant federal agency providing the financing for the project.

Provides that the Rural Center may inspect a project for which it awards a grant to determine the progress made on the project and whether the construction of the project is consistent with the project described in the grant application. Prohibits certain individuals from performing inspections.

Authorizes the Rural Center to use a maximum of 2% of the appropriated funds for administration costs for the life of the grant program.

Requires the Rural Center to report annually to the Joint Legislative Commission on Governmental Operations on the progress of the grant program, with the first report due by September 1, 2011.

**LHz-275(Water Infrastructure Needs/Close Information Gaps)**

Bill does the following:

"Whereas" clauses provide background on current data bases in DENR and Rural Center for water and wastewater infrastructure needs.

Sets out directives to design or develop two different plans: (i) a statewide survey of water and wastewater infrastructure needs that would build on the data already collected through EPA surveys that are done every 4 years, and (ii) a plan to incorporate the information collected from the EPA surveys into the State water supply plan.

**Statewide survey of water and wastewater infrastructure needs**

Directs DENR in conjunction with the Environmental Finance Center at UNC School of Government and the Rural Center if it chooses to participate to establish a task force to develop a statewide water and wastewater infrastructure needs survey. Purpose of statewide survey is to build on the base of the existing EPA survey of infrastructure needs to close specific information gaps. May also consider as part of the survey design requesting information required to update Water 2030 Report. Survey must be designed to address the following information gaps:

- Information on water and wastewater infrastructure needs related to economic development and population growth.
- Information on water and wastewater system service areas.
- Information on drinking water needs relevant to determining the need and the cost of proposed reservoir construction.
- Information on infrastructure needed to address failing water and wastewater systems.
- Information on the infrastructure needs related to water system efficiency to address the issue of water loss.

In addition to the above, the task force shall also consider how to update the survey information and provide the information in format readily and easily used by the General Assembly.

Reporting requirement: must report by October 1, 2010 to the Commission. Report must include cost estimate and legislative changes that may be needed.

**Plan to incorporate information from EPA needs survey into State water supply plan.**

Directs DENR to develop a plan to incorporate the information obtained from EPA surveys into the State Water Supply Plan (which is based on local water supply plans submitted to DENR). Must present the plan to the Commission by October 1, 2010

and must include in the report to the Commission a cost estimate for the plan and legislative changes that would be needed to implement the plan.

Bill is effective when it becomes law.

**LHz-276(Survey Ag. Water Infrastructure Needs)**

Bill does the following:

Notes that Dept of Ag in conjunction with the Division of Soil and Water, Farm Bureau, and other agricultural leaders and organizations are currently in the process of developing a strategic plan for protecting and conserving agricultural water resources. Directs Dept. of Ag and the Division of Soil and Water to continue to work with these agricultural organizations and leaders to develop a plan that identifies agricultural water and wastewater needs that are not accounted for in the EPA survey. Plan should also include mechanism for reporting to the General Assembly that will assist it addressing legislative and budgetary issues in this area. Plan may also address methods to identify current and future ag water use needs, water conservation practices, and water efficiency measures.

Must report to Commission by October 1, 2010, regarding development of plan, timeframe for implementing plan, estimated cost of plan, and legislative changes that may be needed.

**LHz-279 (Conserve & Protect Ag Water Resources)**

Bill does the following:

Directs Dept of AG and Consumer Services and DENR to work with farmers and landowners to encourage voluntary practices that conserve water, increase efficiency of water use, and increase water storage capacity. Also, directs these agencies jointly to develop a cost share program that would assist farmers and landowners who want to implement best management practices to protect agricultural water resources. Must report to Commission by October 1, 2010, and report must include cost estimate and legislative changes needed.

Bill is effective when it becomes law.

**LHz-281 (Water Infrastructure Database/Task Force)**

Bill does the following:

Directs the following State agencies to establish a task force that will work together jointly to design a plan for the establishment and maintenance of a statewide water and wastewater infrastructure resource and funding database: DENR, Commerce, Clean Water Management Trust Fund, State Water Infrastructure Commission, and Environmental Finance Center. Other entities to be included as joint members of the task force if they wish to participate are : NC League of Municipalities, NC Association of County Commissioners, Rural Economic Dev't Center; and US Dept of Agriculture. DENR is designated as the lead agency.

Defines the database as one that will be able to provide one source of information with ability to track and locate all of the current water and wastewater infrastructure project needs and funding patterns in the State. Sets out a number of items for the task force to consider when determining the appropriate system design.

Must report to Commission by October 1, 2010, and report must include cost estimate to create and maintain the system and legislative changes that may be needed to implement the proposed system.

Bill is effective when it becomes law.

## VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure

Name of Committee

5-11-10

Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE  
CLERK

NAME

FIRM OR AGENCY AND ADDRESS

|                 |            |
|-----------------|------------|
| Pat Harris      | NC DENR    |
| BILLY GUILLET   | NCRC       |
| Sara Stuckey    | NCRC       |
| Patrick Woodie  | NCRC       |
| JERRY HURLEY    | NC PC/NCSA |
| JOHN GOODMAN    | NC CHAMBER |
| Vernon Cox      | NCDA/CES   |
| Patrick Buffkin | NC AEC     |
| Colleen Kochack | KLC        |
| Amy Hobbs       | MWC        |
|                 |            |

## VISITOR REGISTRATION SHEET

Water & Wastewater Infrastructure

Name of Committee

5-11-10

Date

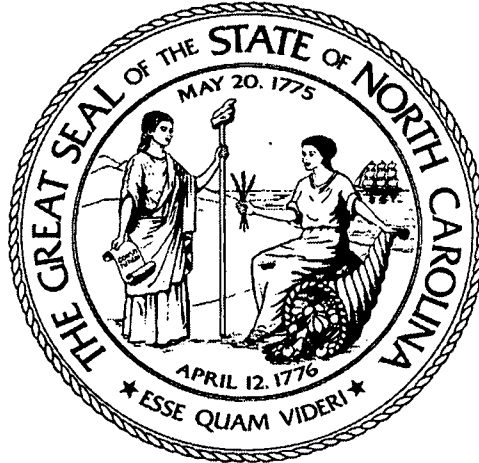
VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE  
CLERK

NAME

FIRM OR AGENCY AND ADDRESS

|                |                         |
|----------------|-------------------------|
| Emily Spear    | Nicholas Institute      |
| Douglass       | NCSTA                   |
| Cady Thomas    | NC Assn of REALTORS     |
| Chris Hayes    | NC Home Builders Assn   |
| Lisa Martin    | NC HBA                  |
| Jay Stem       | NCAA                    |
| Tommy Stevens  | NCPC                    |
| Grady McCallie | NC Conservation Network |
| Peter Raabe    | American Rivers         |
| Tom BEAN       | NC EDF, NCWF            |
| Steve Polakoff | Corbylongh              |

# **NORTH CAROLINA GENERAL ASSEMBLY**



---

## **LEGISLATIVE STUDY COMMISSION ON WATER AND WASTEWATER INFRASTRUCTURE**

---

### **REPORT TO THE 2011 GENERAL ASSEMBLY**

**JANUARY 2011**

A LIMITED NUMBER OF COPIES OF THIS REPORT IS AVAILABLE FOR  
DISTRIBUTION THROUGH THE LEGISLATIVE LIBRARY

ROOMS 2126, 2226  
STATE LEGISLATIVE BUILDING  
RALEIGH, NORTH CAROLINA 27611  
TELEPHONE: (919) 733-7778

OR

ROOM 500  
LEGISLATIVE OFFICE BUILDING  
RALEIGH, NORTH CAROLINA 27603-5925  
TELEPHONE: (919) 733-9390



---

## TABLE OF CONTENTS

---

|                                                                                                                                                                                                       |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Transmittal Letter .....                                                                                                                                                                              | 5  |
| Background and Introduction .....                                                                                                                                                                     | 7  |
| Authorizing Legislation .....                                                                                                                                                                         | 9  |
| Membership .....                                                                                                                                                                                      | 11 |
| Reports Received by the Commission .....                                                                                                                                                              | 15 |
| <br><i>Attachment A - Infrastructure Needs and Database Taskforce Report</i><br>(Sec. 1 of S.L. 2010-144)                                                                                             |    |
| <br><i>Attachment B - Department of Environment and Natural Resources (DENR) Transmittal Letter for the Report on Financial Oversight of Water and Wastewater Systems</i><br>(Dated November 4, 2010) |    |
| <br><i>Attachment C - Financial Oversight of Water and Wastewater Systems</i><br>(Sec. 2 of S.L. 2010-144)                                                                                            |    |
| <br><i>Attachment D - Department of Agriculture and Consumer Services and DENR Transmittal Letter for the Report on Agriculture Water Resources Assistance</i><br>(Dated October 27, 2010)            |    |
| <br><i>Attachment E - Report on Agriculture Water Resources Assistance</i><br>(S.L. 2010-149)                                                                                                         |    |

*This page is intentionally left blank.*

---

## TRANSMITTAL LETTER

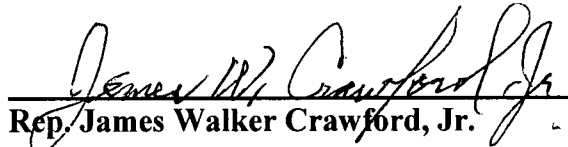
---

**Members of the 2011 General Assembly, Regular Session 2011:**

**Attached for your consideration is the final report of the Legislative Study Commission on Water and Wastewater Infrastructure established pursuant to Part 43 of S.L. 2009-574. The Legislative Study Commission on Water and Wastewater Infrastructure respectfully submits the following report.**



**Charles Woodrow Albertson**  
**Co-Chair**



**Rep. James Walker Crawford, Jr.**  
**Co-Chair**

*This page is intentionally left blank.*

---

## BACKGROUND AND INTRODUCTION

---

Pursuant to Part 43 of S.L. 2009-574, the General Assembly established the Legislative Study Commission on Water and Wastewater Infrastructure. The 17-member Commission consists of four members of the House of Representatives, appointed by the Speaker of the House; four members of the Senate, appointed by the President Pro Tempore of the Senate; two members appointed by the Governor; and seven public members or their designees. The Commission was directed to “focus on the development of an ongoing process to identify and regularly report to the North Carolina General Assembly on water and wastewater needs,” along with other specific tasks.

The Commission met in full five times in the Legislative Office Building in Raleigh as follows:

|                   |                   |                  |
|-------------------|-------------------|------------------|
| November 10, 2009 | December 14, 2009 | January 20, 2010 |
| April 22, 2010    | May 11, 2010      |                  |

At its January 20, 2010 meeting, the Commission established four working groups from its membership to evaluate and discuss specific tasks. The working groups met on numerous occasions in February, March, and April 2010, and the Commission received the final reports of the working groups on April 22, 2010. The working group reports and the other comments submitted by Commission members and interested parties formed the basis for the legislative proposals that were presented in the interim report of this Commission submitted to the General Assembly in May 2010.

This final report includes copies and electronic references to three reports that were submitted to the Commission during the 2010-2011 legislative interim in response to the 2010 legislative recommendations of the Commission and legislation enacted mandating those reports. The Commission did not meet in full during such time and respectfully provides the materials included in this report to the General Assembly.

A complete record of the Commission proceedings, including minutes from each meeting, is available in the Commission notebook filed in the Legislative Library. Copies of the presentations made and handouts distributed to the Commission are available on the Commission’s website at:  
<http://www.ncleg.net/gascripts/DocumentSites/browseDocSite.asp?nID=59>.

*This page is intentionally left blank.*

---

# AUTHORIZING LEGISLATION

---

## S.L. 2009-574, PART 43

### **PART XLIII. LEGISLATIVE STUDY COMMISSION ON WATER AND WASTEWATER INFRASTRUCTURE (Crawford, Owens)**

**SECTION 43.1.** There is created the Legislative Study Commission on Water and Wastewater Infrastructure. The Commission shall consist of 17 members appointed as follows:

- (1) Four members of the House of Representatives, appointed by the Speaker of the House of Representatives.
- (2) Four members of the Senate, appointed by the President Pro Tempore of the Senate.
- (3) Two members appointed by the Governor.
- (4) The Secretary of the North Carolina Department of Environment and Natural Resources or the Secretary's designee.
- (5) The Secretary of the North Carolina Department of Commerce or the Secretary's designee.
- (6) The President of the North Carolina Rural Economic Development Center or the President's designee.
- (7) The Executive Director of the North Carolina Clean Water Management Trust Fund or the Executive Director's designee.
- (8) The Executive Director of the North Carolina League of Municipalities or the Executive Director's designee.
- (9) The Executive Director of the North Carolina Association of County Commissioners or the Executive Director's designee.
- (10) The Chair of the State Water Infrastructure Commission.

**SECTION 43.2.** The Speaker of the House of Representatives and the President Pro Tempore of the Senate shall each designate a cochair. The Commission may meet at any time upon the joint call of the cochairs. A quorum of the Commission shall be a majority of its members.

Vacancies on the Commission shall be filled by the same appointing authority that made the initial appointment.

Subject to the approval of the Legislative Services Commission, the Commission may meet in the Legislative Building or the Legislative Office Building.

The Legislative Services Commission, through the Legislative Services Officer, shall assign professional staff to assist the Commission in its work. The House of Representatives' and the Senate's Director of Legislative Assistants shall assign clerical support staff to the Commission, and the expenses relating to the clerical employees shall be borne by the Commission.

In addition, the State agencies and nonprofits serving on the Commission shall cooperate in providing information and additional staff resources as needed to accomplish the work of the Commission.

The Commission, while in the discharge of its official duties, may exercise all powers provided for under G.S. 120-19 and G.S. 120-19.1 through G.S. 120-19.4. The Commission may contract for professional, clerical, or consultant services as provided by G.S. 120-32.02.

Members of the Commission shall receive subsistence and travel expenses at the rates set forth in G.S. 120-3.1, 138-5, or 138-6, as appropriate.

**SECTION 43.3.** The Legislative Study Commission on Water and Wastewater Infrastructure shall focus on the development of an ongoing process to identify and regularly report to the North Carolina General Assembly on statewide water and wastewater infrastructure needs and to improve the delivery of State appropriated water and wastewater programs. The Commission shall specifically do all of the following:

- (1) Evaluate the information provided through the drinking water and wastewater needs assessment prepared by the Environmental Protection Agency (EPA) every four

years; the drinking water and wastewater needs surveys currently done by the North Carolina Department of Environment and Natural Resources in support of the EPA needs assessment; the data compiled as part of Water 2030 by the North Carolina Rural Economic Development Center, Inc.; and any other existing data sets in order to determine what information currently exists and where there may be gaps in the data.

- (2) Study an ongoing method for regularly determining and reporting on the State's water and wastewater infrastructure needs, including the subject of small towns whose water or sewer rates exceed the high-unit-cost threshold as defined in G.S. 159G-20.
- (3) Select a method for identifying and reporting on infrastructure needs in the future.
- (4) Review infrastructure funding priorities currently set out in State law to determine whether the priorities appropriately reflect the State's most pressing needs in light of future growth projections.
- (5) Recommend changes to infrastructure funding priorities and appropriations processes to ensure that funds are used to meet the State's most pressing needs.
- (6) Ascertain the capacity and role of the State in bridging identified gaps between funding priorities and available funds.
- (7) Determine what steps funding agencies can take to improve the delivery of existing funding programs, including the following options:
  - a. Developing common application requirements;
  - b. Scheduling regular joint meetings between funders and applicants;
  - c. Where projects are jointly funded, exploring options to share and improve oversight responsibilities; and
  - d. Coordinating reporting requirements to produce a single integrated funders report on an annual basis.

**SECTION 43.4.** As used in subdivision (7) of Section 43.3, "funding agencies" means the Department of Commerce, the Department of Environment and Natural Resources, the Clean Water Management Trust Fund, and the Rural Economic Development Center.

**SECTION 43.5.** On or before May 1, 2010, the Legislative Study Commission on Water and Wastewater Infrastructure shall submit an interim report to the 2009 General Assembly, Regular Session 2010. This interim report shall include any findings or recommendations of the Commission at that time. In addition, no later than the convening of the 2011 General Assembly, the Commission shall submit a final report to the General Assembly. This final report shall include the Commission's findings and recommendations under this study, including any legislative or administrative proposals. The Commission shall terminate upon the earlier of the filing of its final report or the convening of the 2011 General Assembly.



---

## MEMBERSHIP

---

Pursuant to S.L. 2009-574, Part 43, the Legislative Study Commission on Water and Wastewater Infrastructure consists of 17 members. Four of these members are appointed by the President Pro Tempore of the Senate, four members are appointed by the Speaker of the House of Representatives, two members are appointed by the Governor, and the remaining seven members are ex-officio voting members.

### **President Pro Tempore of the Senate** **Appointments:**

#### ***Charles W. Albertson, Co-Chair***

136 Henry Dunn Picket Road  
Beulaville, NC 28518  
Home: (910) 298-4923  
Cell: (910) 296-4413

#### **Sen. Thomas Apodaca**

214 N. King Street  
Hendersonville, NC 28792  
Home: (828) 696-0574  
Business: (919) 733-5745  
Email: [Tom.Apodaca@ncleg.net](mailto:Tom.Apodaca@ncleg.net)

#### **David Hoyle**

604 Queens Drive  
Dallas, NC 28034  
Home: (704) 922-4969  
Business: 919-733-7211  
Email: [david.hoyle@dornc.com](mailto:david.hoyle@dornc.com)

#### **A.B. Swindell**

P.O. Box 788  
Nashville, NC 27856  
Home: (252) 459-7805  
Fax (252) 459-4385

### **Speaker of the House of Representatives** **Appointments:**

#### ***Rep. Jim Crawford, Co-Chair***

509 College Street  
Oxford, NC 27565  
Home: (252) 492-0185  
Business: (919) 733-5824  
E-mail: [Jim.Crawford@ncleg.net](mailto:Jim.Crawford@ncleg.net)

#### **Rep. Mitch Gillespie**

185 Cross Creek North Ridge Drive  
Marion, NC 28752  
Home: (828) 652-5548  
Business: (919) 733-5862  
Email: [Mitchg@ncleg.net](mailto:Mitchg@ncleg.net)

#### **Rep. William "Bill" Owens**

113 Hunters Trail East  
Elizabeth City, NC 27909  
Home: (252) 335-0167  
Business: (919) 733-0010  
Email: [Bill.Owens@ncleg.net](mailto:Bill.Owens@ncleg.net)

#### **Cullie Tarleton**

P. O. Box 1269  
Blowing Rock, NC 28605  
Home: (828) 295-3353  
Cell: (828) 733-3620  
E-mail: [tarletoncs@aol.com](mailto:tarletoncs@aol.com)

**Appointments by Governor:**

**Mr. Larry Wooten**

NC Farm Bureau Federation, Inc.  
P. O. Box 27766  
Raleigh, NC 27611  
Home: (919) 782-1705  
Cell: (919) 306-6305

**Ms. Victoria (Tori) Small, PE**

Westcott, Small & Assoc., PLLC  
4015 Meeting Way, Suite 105  
High Point, NC 27265  
Home: (336) 812-3546  
Cell: (336) 558-5978

**Ex Officio Members:**

The Secretary of Environment and Natural  
Resources or the Secretary's designee

**Ms. Robin Smith**

Assistant Secretary for the Environment  
Department of Environment and Natural  
Resources  
1601 Mail Service Center  
Raleigh, NC 27699-1601  
(919) 715-4100

The Secretary of Commerce or the  
Secretary's Designee

**Mr. Dale Carroll**

Deputy Secretary  
Department of Commerce  
4301 Mail Service Center  
Raleigh, NC 27699-4301  
(919) 733-3449

The President of the North Carolina Rural  
Economic Development Center or the  
President's Designee

**Mr. Billy Ray Hall**

President  
North Carolina Rural Center  
4021 Cary Drive  
Raleigh, NC 27610-2914  
(919) 250-4314

The Executive Director of the North Carolina  
Clean Water Management Trust Fund or the  
Executive Director's Designee

**Mr. Richard E. Rogers, Jr.,**

Executive Director  
Clean Water Management Trust Fund  
1651 Mail Service Center  
Raleigh, NC 27699-1651  
(919) 571-6767

The Executive Director of the North Carolina  
League of Municipalities or the Executive  
Director's Designee

**Mr. Arthur (Buck) Kennedy**

Council Member, Town of Garner  
North Carolina League of Municipalities  
215 N. Dawson Street  
Raleigh, NC 27603-1172  
(919) 715-4000

The Executive Director of the North Carolina Association of County Commissioners or the Executive Director's Designee

**Mr. David F. Thompson**  
Executive Director  
North Carolina Association of County Commissioners  
215 N. Dawson Street  
Raleigh, NC 27603-1172  
(919) 715-2893

The Chair of the State Water Infrastructure Commission

**Mr. Bill Holman**  
Director of State Policy  
Nicholas Institute for Environmental Policy Solutions  
Duke University  
Box 90335  
Durham, NC 27708  
(919) 919-613-8737

**Commission Staff:**

Research Division

Jeff Hudson, Commission Counsel: (919) 733-2578 ([Jeffrey.Hudson@ncleg.net](mailto:Jeffrey.Hudson@ncleg.net))

Fiscal Research Division

Kristin Walker, Commission Analyst: (919) 733-4910 ([Kristinw@ncleg.net](mailto:Kristinw@ncleg.net))

Mark Bondo, Commission Analyst: (919) 733-4910 ([markb@ncleg.net](mailto:markb@ncleg.net))

Bill Drafting Division

Emily Johnson, Commission Counsel: (919) 733-6660 ([emilyj@ncleg.net](mailto:emilyj@ncleg.net))

Commission Clerk

Cindy Davis, (919) 733-5621 (<mailto:Jacksonbla@ncleg.net>)

Legislative Office Bldg  
Room 525A  
300 N. Salisbury Street  
Raleigh, NC 27603

*This page is intentionally left blank.*

## **REPORTS RECEIVED BY THE COMMISSION**

---

The following three reports were received by the Commission during the 2010-2011 legislative interim pursuant to the following Session Laws:

Infrastructure Needs and Database Taskforce Report. (Sec. 1, S.L. 2010-144)

Department of Environment and Natural Resources and the Local Government Commission Report on Financial Oversight of Water and Wastewater Systems. (Section 2, S.L. 2010-144)

Department of Agriculture and Consumer Services and Department of Environment and Natural Resources Report on Agriculture Water Resources Assistance. (S.L. 2010-149)

*This page is intentionally left blank.*

# **NORTH CAROLINA INFRASTRUCTURE NEEDS AND DATABASE TASK FORCE**

**REPORT TO THE LEGISLATIVE STUDY  
COMMISSION ON WATER AND WASTEWATER INFRASTRUCTURE  
November 1, 2010**

## CONTENTS

|                                                         |    |
|---------------------------------------------------------|----|
| Executive Summary.....                                  | 3  |
| Background .....                                        | 5  |
| Report .....                                            | 6  |
| Infrastructure Needs Survey.....                        | 6  |
| Inclusion of Needs in State Water Supply Plan.....      | 9  |
| Creation of a Database or Other Information System..... | 10 |
| Recommendations.....                                    | 14 |
| Appendix A Session Law 2010-144.....                    | 16 |
| Appendix B Task Force Members.....                      | 20 |
| Appendix C Wastewater Needs Survey.....                 | 22 |



## EXECUTIVE SUMMARY

State funding agencies have a significant amount of information on water and wastewater infrastructure needs that has not previously been compiled for state policy makers. Every four years, DENR participates in EPA's drinking water and wastewater infrastructure needs survey. The EPA surveys were designed to inform Congressional funding decisions; information from the surveys has gone to EPA, but has not been shared with state officials. The surveys only gather information on projects eligible for awards under the federally funded State Revolving Funds, but with a few additional questions could be a good source of information on infrastructure needs for legislators and other state officials. A slightly expanded survey, combined with information from other existing state sources, could be the basis for a biennial report to the General Assembly on statewide drinking water and wastewater infrastructure needs.

Incorporation of information on drinking water infrastructure needs into the State Water Supply Plan may not be the most effective way to provide that information to state and local decision-makers. The State Water Supply Plan focuses on water quantity – demand, supply and water shortage response. Many drinking water infrastructure needs are unrelated to the primary purpose of the State Water Supply Plan and would be lost in the large volume of information on water quantity. Local water system planning could be improved by incorporating an asset management plan, capital improvement plan, and financial plan into the local water supply plan. A similar comprehensive plan for wastewater systems would benefit local planning for wastewater system maintenance and growth. A biennial report to the General Assembly focused specifically on statewide infrastructure needs would be more likely to meet the needs of state policy makers.

The different state infrastructure funding agencies currently operate individual program databases that were created for program management purposes and to meet the specific information needs of each agency. Some program databases are also used to generate information for the public and for federal agencies. Information in these databases can be put to additional uses. For example, existing information in the funding databases can be combined into a single report on state infrastructure funding activity. The state funding agencies will submit a consolidated funding report to the General Assembly for the first time this year, using data obtained from the different agency databases. The report will, for the first time, provide an overview of all state agency drinking water and wastewater infrastructure funding awards for the 2009-2010 fiscal year and cumulatively for all projects that have not yet been completed.

A single state database for both infrastructure needs and funding is not needed for program management purposes and faces several barriers, including the need for a common project identification system; entry and access to data by multiple funding agencies; public access to data; and cost. Before moving toward a single database, there needs to be additional study of: 1. Intended uses and scope of the database (including the feasibility of a single database as a program management tool for six different state funding agencies); 2. Information needs and reporting requirements of the individual funding agencies; and 3. Costs and benefits of a single database.

In the near term, the genuine need for more comprehensive information on both infrastructure needs and funding activity can be met by compiling information from the different agencies into combined reports to the General Assembly.

## Recommendations

- The EPA drinking water and wastewater needs surveys should be expanded to include questions about planned water resource development (including reservoir construction); growth-related drinking water infrastructure needs; and the estimated costs for those additional infrastructure needs.
- The Task Force recommends further study of the feasibility and cost of expanding the drinking water needs survey to include all North Carolina water systems.
- Results of the needs survey should be combined with information on failing systems; unfunded infrastructure project applications; and infrastructure needs identified by local and regional economic development or planning entities and provided to the General Assembly in a biennial report.
- State funding agencies should cooperate to develop a common definition of “failing system” and develop a method for assessing the costs of consolidating failing systems with more viable systems.
- Local governments should be encouraged to provide GIS maps of water and wastewater systems to the Center for Geographic Information and Analysis for inclusion on statewide infrastructure GIS data layers based on a consistent data standard developed by CGIA.
- Information on drinking water infrastructure needs should not be added to the State Water Supply Plan. Instead, the State should encourage local governments to create a comprehensive drinking water system plan at the local level that includes an asset management plan, capital improvement plan and financial plan as well as water supply information included in the local water supply plan.
- The State should encourage local governments to create a similar comprehensive wastewater system plan (including an asset management plan, capital improvement plan and financial plan) for local planning purposes.
- The State should identify ways to assist public water and wastewater systems in preparing comprehensive local management plans. One possibility would be to provide planning grants directly to water/wastewater systems or to regional organizations such as the COGs.
- State infrastructure funding agencies should build on the first combined funding report (for FY 2009-2010) and provide an annual combined report to the General Assembly on water and wastewater infrastructure funding activity. The report should allow state officials and the public to see how infrastructure funds have been allocated geographically and by project type.
- Before considering creation of a single infrastructure need and funding database, there should be additional study focused on the intended use of the database; individual funding agency data needs; access to data; cost; and the feasibility of meeting statewide information needs in more cost-effective ways.

## **BACKGROUND**

Session Law 2010-144 (attached as Appendix A) created the North Carolina Infrastructure Needs and Database Task Force and directed the Task Force to report back to the Legislative Study Commission on Water and Wastewater Infrastructure by November 1, 2010 on the following:

- (1) Development of a statewide needs 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.
- (2) Development of a plan to incorporate relevant information obtained from the United States Environmental Protection Agency survey and any additional state needs survey into the State water supply plan.
- (3) Recommendations 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.

Session Law 2010-144 identified a number of state agencies and local government organizations to be represented on the Task Force. In August, 2010 the Secretary of Environment and Natural Resources, Dee Freeman, invited the named agencies and organizations to identify a representative to serve on the Task Force. A list of Task Force members is attached as Appendix B.

## REPORT

### 1. State Infrastructure Needs Survey

**EPA drinking water and wastewater infrastructure surveys.** DENR participates in infrastructure needs surveys conducted by the United States Environmental Protection Agency every 4 years. These surveys identify infrastructure needs that may be eligible for funding from the State Revolving Fund (SRF) loan programs; survey results are used to advise Congress on the amount of federal funding required for the SRF nationwide. The surveys go to both public and private systems, but under North Carolina law only publicly owned systems are eligible for SRF loans.

The scope of the EPA drinking water and wastewater surveys are slightly different:

EPA drinking water infrastructure needs survey: All systems with > 100,000 customers are surveyed; the state then surveys a sample of systems with > 3,300 and < 100,000 customers. The survey does not reach systems with fewer than 3,000 customers; EPA uses modeling to project the need of those systems.

EPA wastewater infrastructure needs survey: The survey is sent to 500 municipalities, 100 counties, engineers and other public wastewater utilities. As a practical matter, the wastewater survey, unlike the drinking water survey, reaches all publicly owned and operated wastewater systems in North Carolina. Survey questions cover wastewater, stormwater and nonpoint source needs. To be included in the survey, the needs must be supported by engineering reports or a capital improvement plan.

(As an example of the EPA surveys, a copy of the EPA small community wastewater needs survey is attached as Appendix C).

**Needs that may not be captured:** Purely growth-related projects may not be captured in the surveys, because there are limitations on use of the SRF monies for those projects. The drinking water SRF fund cannot be used for projects intended to address future growth. The wastewater SRF fund can consider growth-related projects, but these projects are not prioritized. The drinking water SRF cannot be used for reservoir construction, so costs associated with proposed reservoir development are not captured in the survey.

The EPA-required surveys do not capture the following types of information:

- Regularly updated information on infrastructure needs related to economic development and future population growth
- Current information on water/wastewater system service areas

- Infrastructure needed to address failing water/wastewater systems, except to the extent those needs are included in a capital improvement plan or engineering report
- Infrastructure needs related to water system efficiency, drought resilience, and development of new water sources (such as reservoirs)

**Filling the gaps:** The EPA survey can be expanded to include additional questions about issues of interest to the State, such as planned spending on reservoir construction and growth-related infrastructure needs. Other potential sources of information on infrastructure needs would include: the list of projects not funded by state infrastructure funding agencies in the most recent grant/loan awards; enforcement records identifying systems with ongoing compliance problems (such as a Special Order by Consent); and infrastructure needs identified by local and regional economic development or planning organizations.

More specific information on drinking water infrastructure needs could be obtained by surveying all water systems. (The EPA survey only goes to systems that serve more than 100,000 customers and a sample of systems that serve between 3,000 and 100,000 customers; EPA uses modeling to project the infrastructure needs of systems serving fewer than 3,000 customers.) Because of the large number of water systems in North Carolina, there may be significant additional costs involved in expanding the survey to reach all water systems. The feasibility and cost of expanding the number of drinking water systems surveyed should be the subject of further study.

To identify infrastructure needed to facilitate takeover of a failing system, it may be necessary to develop an accepted definition of “failing system” and a method for estimating the costs of repairs and/or new infrastructure needed to facilitate consolidation of systems.

At the recommendation of the Legislative Study Commission on Water and Wastewater Infrastructure, the General Assembly amended G.S. 159G-23 to include preparation of an asset management plan in the list of priority factors for consideration in providing state funding for water and wastewater system improvements. Session Law 2010-151. The law defines “asset management plan” as:

The strategic and systematic application of management practices applied to the infrastructure assets of a local government unit in order to minimize the total costs of acquiring, operating, maintaining, improving, and replacing the assets while at the same time maximizing the efficiency, reliability, and value of the assets. G.S. 159G-20.

As a result, development of an asset management plan has become one of the “common criteria” used in awarding state infrastructure funds. (Having a capital improvement plan had been incorporated into the common criteria earlier.) The State should continue to encourage water and wastewater systems to develop asset management plans. Information in the plans can be used to support inclusion of an infrastructure project in the infrastructure needs survey. EPA already requires validation of projects included in the federal needs survey; local governments provide that validation by showing that the project is part of a capital improvement plan or supported by a specific governing body action.

Maintaining an ongoing asset management plan would strengthen system management, but it would also validate the project as a genuine infrastructure need.

A list of infrastructure needs based on results of the infrastructure needs surveys, projects identified by economic development and planning organizations, and compliance information on failing systems should be provided in a biennial report to the General Assembly at the beginning of each legislative session. Although the EPA surveys are done only every four years, the survey could be updated in the out years with current information from the other sources. Since the needs survey process already exists, there would likely be no significant new costs associated with adding a small number of new survey questions or in gathering and reporting the information. The state is already collecting a significant amount of information on infrastructure needs, but much of that information has never been gathered into a single report accessible to state policy-makers.

**Water/Wastewater System Service Areas:** The Task Force concluded that a needs survey is not an effective way to gather information on water and wastewater system service areas. To be useful, service areas should be mapped and available in GIS format. Water systems that submit a Local Water Supply Plan are requested to submit a service area map as part of their plan. However, many of these maps are not available in GIS formats. The Division of Water Resources converted the initial map submissions into a set of GIS formatted data files but since then have lacked the resources to update the files. The Rural Center's Water 2030 study updated service area information based on conditions in 2004 and these GIS data files are available through the Center for Geographic Information and Analysis (CGIA).

The North Carolina League of Municipalities surveyed a number of its members to determine whether municipalities would be willing to share information on addresses served by its water/wastewater system for purposes of generating GIS maps. The municipalities surveyed did not want to share customer addresses as a basis for creating a service area map because of confidentiality concerns. But members indicated that many --if not most -- municipalities already produce service area maps for their own use and would be willing to share the maps. Members of the Association of County Commissioners indicated a willingness to share customer addresses (without identifying information). The Task Force concluded that even local governments that do not actually produce maps could generally provide digitized address information to be used in mapping and there are ways to share that information without violating customer confidentiality.

The North Carolina Center for Geographic Information and Analysis (CGIA) provides a platform for statewide GIS information. CGIA already has data layers for water and wastewater service areas. The maps currently in the system are based on 2004 information collected by the N.C. Rural Center in preparation of the Water 2030 report. The most efficient way to make service area information more easily available would be to encourage local governments to provide new or updated maps to CGIA to be incorporated into the existing data layers. Since water systems that have water supply plans already provide service area maps as part of the plan updates, the Division of Water Resources could share those maps with CGIA.

The Task Force recommends that CGIA develop a consistent standard for service area GIS data to simplify future updates of both water and wastewater system service areas. A means for regularly updating service area information -- particularly for wastewater systems -- would also be needed. The Task Force believes that additional study will be required to develop a method for updating service area data on a regular basis, including estimation of costs.

## **2. Incorporation of infrastructure needs into the State Water Supply Plan.**

The Session Law directed the Task Force to recommend ways to incorporate information on infrastructure needs into the State Water Supply Plan (SWSP). The Plan, required under G.S. 143-355(m), collects and reports information from local government and other large community water systems concerning water supply needs. The Plan focuses on current and future demand for water supply; identification of water sources; and planning for water shortage, including conservation measures corresponding to different levels of drought, as included in local water supply plans. The plan focuses on raw water available to supply community water systems. It does not address infrastructure needed for the treatment and distribution of drinking water to water system customers.

Information on projected population growth and water demand found in the State Water Supply Plan could be useful in projecting some future infrastructure needs -- particularly those that are growth-related or involve construction of new water sources (such as reservoirs). In that respect, the State Water Supply Plan may be a useful source of information for infrastructure planning.

Incorporation of infrastructure needs information into the State Water Supply Plan would require a significant change in its scope. Many infrastructure needs -- such as rehabilitation of existing water lines; extension of lines (within existing treatment capacity); and improvements in water treatment -- do not directly involve the issues of water quantity that have been the subject of the State Water Supply Plan.

The Task Force concluded that adding infrastructure information to the Plan would not result in a useful tool for statewide infrastructure planning. The sheer volume of information makes the State Water Supply Plan an unwieldy vehicle for conveying information on drinking water infrastructure needs. As an alternative, the Task Force suggests moving forward with creation of a biennial report to the General Assembly specifically on drinking water and wastewater infrastructure needs.

The Task Force believes, however, that there is value in encouraging water systems to supplement the local water supply plan with an asset management plan and capital improvement plan. For purposes of planning, water system managers and local officials need to see information on water supply needs and infrastructure needs (in terms of both maintenance and growth) side by side.

G.S. 159G-23 already directs state infrastructure funding agencies to give priority to water and wastewater systems that have capital improvement plans; asset management plans; sound fiscal policies; and efficient operation and management. In the long-term, infrastructure and fiscal planning could be improved by incorporation of an asset management plan, capital improvement plan and a financial plan into the local water supply plan and development of a similar comprehensive plan for wastewater systems. Small systems may lack the planning resources necessary to create a comprehensive plan; before moving toward a comprehensive planning requirement, the State should identify ways to provide that assistance. One possibility would be to provide planning grants directly to water/wastewater systems or to regional organizations such as the COGs.

### **3. Database or other information system on water and wastewater infrastructure.**

**Existing Databases:** Infrastructure needs and funding data collected by the various state funding agencies are currently being managed using several different database computer programs. The Construction Grants and Loan Section in DENR's Division of Water Quality uses a Microsoft Access database to track loan/grant awards and construction contracts for the wastewater State Revolving Fund (SRF). One of the primary purposes of the database is to allow DENR to meet EPA reporting requirements for the Clean Water State Revolving Fund. EPA requires an annual report that covers project awards, project starts, project completions and compliance with requirements on use of women and minority-owned businesses. The database could also generate a list of unfunded project applications. Information gathered through the EPA wastewater infrastructure needs survey goes into a separate Oracle database.

The Public Water Supply (PWS) Section in DENR's Division of Environmental Health has a drinking water project database that was originally created to track expenditures from the last state bond issue. The database has been expanded to track milestones for projects that receive loans through the Drinking Water SRF. Public Water Supply tracks project awards; compliance with requirements on use of women and minority-owned businesses; project starts; project milestones; project completions; and project readiness. Public Water Supply does not currently have a database of drinking water infrastructure needs information gathered through the EPA drinking water needs survey. The program is currently working with the Environmental Finance Center to create a needs database. Currently, the only source of drinking water infrastructure needs information available in a PWS database would be in the form of an Access database of unfunded applications submitted by local governments in prior years.

The Safe Drinking Water Information System (SDWIS) developed by EPA tracks water system violations and may be useful in identifying water systems that require infrastructure improvements for compliance reasons. Division of Water Quality tracks wastewater violations in the Basinwide Information Management System (BIMS); the BIMS system was intended largely to meet EPA reporting requirements for wastewater discharge systems.



Both the drinking water and wastewater SRF programs also have unfunded project lists from the 2009 American Recovery and Reinvestment Act (ARRA) awards process. ARRA funds could be used for certain types of projects not previously funded through the regular SRF program. For example, there was a specific allocation for "green" projects (i.e., projects providing water efficiency or energy efficiency benefits).

The N.C. Rural Center uses an off-the-shelf Microsoft product -- GIFTS -- to track grant funding. The system can track both funded and unfunded project applications.

Both the Clean Water Management Trust Fund and the Department of Commerce funding programs use a Microsoft Access database. CWMTF uses its database to track funding requests, funded projects and unfunded applications. CWMTF also uses information in its database to generate web-based reports on program activities. The Department of Commerce has a database to track fund awards and funded projects.

The existing databases were developed to manage the individual infrastructure funding programs -- and sometimes different functions within the same program. The databases work well for that purpose and may also be capable of generating new information-- such as unfunded project lists and reports based on the results of EPA needs surveys -- that would be useful in planning for infrastructure funding. Information in the separate databases can also, in the near term, be used to create reports on total state infrastructure funding by feeding the data into a single spreadsheet.

**Creation of a Single Infrastructure Database.** A single state database on infrastructure needs and funding activity would make comprehensive reporting significantly easier. As described below, the state funding agencies are producing a joint infrastructure funding report this year that will provide an overview of all state water/wastewater funding activity. The report combines information from the individual program databases into a single report. Since data had to be collected and then reviewed to eliminate duplication, creation of the first report involved a significant amount of communication between program staff. The ability to enter all funding information and the results of the infrastructure needs surveys into a single state database would undoubtedly make report generation both quicker and easier.

A single infrastructure database is not needed for fund management purposes, however, because no single state agency receives and distributes infrastructure funding. A number of different state or federal/state funding programs - housed in six different agencies - make grants or loans for water and wastewater infrastructure. Each program operates under its own statutory authority and funding criteria. Many of the funding programs in DENR and the Department of Commerce involve federal pass-through funding; those programs operate under criteria set by a combination of federal and state law. The Clean Water Management Trust Fund and N.C. Rural Center have programs established under state law to meet specific types of needs and often to serve defined categories of recipients (such as rural areas and economically distressed communities). Creation of a single fund management

database for all of those programs would be a significant effort because of the need to accommodate the different federal and state information needs and reporting requirements. Each program would also need to be able to both enter and access information in the database. Given the different missions of the existing infrastructure programs – and differing funding criteria – a more in depth study of each agency's information needs would be required before developing a specific recommendation on creation of a comprehensive state infrastructure database.

Since the existing databases meet program management needs, the Task Force believes that the most likely benefit of a comprehensive infrastructure database would be improved public access to information on infrastructure needs and funding activity. A single database would make it easier to provide the General Assembly, local government officials, and the public with a complete picture of infrastructure needs and progress toward meeting those needs. A database for public information purposes should be more limited in scope than a database intended for fund management purposes, however. In the short time available for this study, the Task Force could not study the comparative scope, costs and benefits of a comprehensive funds management database versus a database designed to collect and provide access to information of interest to state and local policy makers. Additional study would be needed before reaching a conclusion about the feasibility of creating a statewide database on infrastructure needs and funding. It would be particularly important to clarify the purpose and scope of such a database

A cost-benefit analysis would be important to any database recommendation. Depending on project scope, cost may be a significant barrier to development of a statewide infrastructure database in the near term. The database for the Water 2030 Report – which provided a snapshot of infrastructure needs for a 25-year period beginning in 2005 – cost approximately \$3 ½ million. The N.C. Rural Center, which developed the Water 2030 Report, lacked resources for ongoing maintenance of the infrastructure needs information. As a result, much of the information -- such as water and wastewater system service areas – has not been updated since 2004. The Water 2030 Report also did not include detailed information on actual allocation of state infrastructure funds which fell outside the scope of the report. Developing a cost estimate for a statewide infrastructure database capable of maintaining current information on both infrastructure needs and funding activity will require further work to define the purposes of the database; the desired level of public access to information; and maintenance costs.

The Task Force identified some other specific obstacles that would need to be overcome to create a single infrastructure database. Although there is now a common application form for certain information required by state funding agencies, there is not yet a system for assigning a common project identifier. A common project identification number would be helpful in tracking projects funded by multiple agencies and a necessary step toward a single database of infrastructure funding information. A common project identification system would need the capability to incorporate later phases or additions to a project under the same identifier. It is not clear that any state funding agency

has an existing project identification system that could become the basis for generating a common project identification number that could be used by all programs.

One option would be to create a new project identification system based on the jurisdiction in which the project is located. EPA's infrastructure needs survey, for example, assigns a permanent identification number to each jurisdiction. Staff noted that EPA tracks Recovery Act awards based on the local government's DUNS number.

**Development of targeted databases:** There is ongoing work on development of additional databases within and between the individual state infrastructure funding programs. DENR is working with UNC's Environmental Finance Center on development of a database for drinking water infrastructure needs using information collected in the EPA needs survey. (A database already exists in DENR's Division of Water Quality for information on wastewater infrastructure needs.) All state infrastructure funding agencies cooperated this year on a combined funding activity report that is described in more detail below; that process has created at least a template for a shared database on funding activity. These incremental efforts could become the basis in the future for a larger sharing of infrastructure needs and funding information.

**Combined Funding Report:** All state infrastructure funding agencies (including the N.C. Rural Center, DENR, Department of Commerce and the Clean Water Management Trust Fund) have cooperated to produce a combined infrastructure funding report for the first time this year. The report will provide information on drinking water and wastewater projects funded during the 2009-2010 fiscal year and a cumulative list of active infrastructure projects that have received state funding. The cumulative list will provide, by county, a brief description of every project, including: total project cost; amount of state funding; identification of the funding agency or agencies; and local contribution.

The combined report will allow state officials, local governments and the public to more easily see the total distribution of state infrastructure funds in the most recent fiscal year and cumulatively. Some preliminary conclusions based on review of the combined data include the following:

- In 2009-2010, state agencies allocated \$247 million in infrastructure funding to local government water and wastewater systems. [Note: The amount of funding available in 2009-2010 was unusually high because it includes \$105 million in federal Recovery Act funds for water and wastewater infrastructure.]
- Projects funded in 2009-2010 were distributed across 80 counties.
- The cumulative project list includes over 700 projects located in all 100 counties.

- In a typical year, state and federal infrastructure funding represents only about 30% of total infrastructure funding in N.C. Approximately 70% of the funding comes from private financing obtained by local governments.
- Because of funding criteria governing the state infrastructure funding programs, much of the state infrastructure funding goes to small towns and to rural systems and often gives priority to economically distressed areas.

Preparation of the 2009-2010 combined report required a significant amount of staff time because of the need to collect and reconcile information on funding activity from multiple sources for the first time. Creation of a shared system for generating project identification numbers could eliminate much of the time spent this year in identifying multiple listings for the same project. (Nearly one-third of the state-funded infrastructure projects receive funds from multiple funding programs.) There are also ways to simplify data sharing in the future even in the absence of a common database. At the most simple level, the first report can be used to create a template for a shared spreadsheet into which the different programs can enter funding activities.

### **RECOMMENDATIONS**

- The EPA drinking water and wastewater needs survey process should be supplemented by a brief set of additional state survey questions about planned water resource development (including reservoir construction); growth-related drinking water infrastructure needs and the estimated costs of those additional infrastructure needs.
- The Task Force recommends further study of the feasibility and cost of expanding the drinking water needs survey to include all North Carolina water systems.
- Results of the needs survey should be combined with information on failing systems; unfunded infrastructure project applications; and infrastructure needs identified by local and regional economic development or planning entities and provided to the General Assembly in a biennial report.
- State funding agencies should cooperate to develop a common definition of “failing system” and develop a method for assessing the costs of consolidating a failing system with a more viable system.
- Local governments should be encouraged to provide GIS maps of water and wastewater systems to the Center for Geographic Information and Analysis for inclusion on statewide infrastructure GIS data layers based on a consistent data standard developed by CGIA.

- Information on drinking water infrastructure needs should not be added to the State Water Supply Plan. Instead, the State should encourage local governments to create a comprehensive drinking water system plan at the local level that includes an asset management plan, capital improvement plan and financial plan as well as water supply information included in the local water supply plan.
- The State should encourage local governments to create a similar comprehensive wastewater system plan (including an asset management plan, capital improvement plan and financial plan) for local planning purposes.
- The State should identify ways to assist public water and wastewater systems in preparing comprehensive local management plans. One possibility would be to provide planning grants directly to water/wastewater systems or to regional organizations such as the COGs.
- The state funding agencies should build on the first combined funding report (FY 2009-2010) and provide an annual combined report to the General Assembly on water and wastewater infrastructure funding activity. The report should allow state officials and the public to see how infrastructure funds have been allocated geographically and by project type.
- Before considering creation of a single infrastructure need and funding database, there needs to be additional study focused on the intended use of the database; individual funding agency data needs; access to data; cost; and the feasibility of meeting statewide information needs in more cost-effective ways at least in the near term.

**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.
  - 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

## **APPENDIX B**

### **Water/Wastewater Infrastructure Needs Task Force Members**

#### **State Water Infrastructure Council**

Bill Holman, Chair SWIC

[bill.holman@duke.edu](mailto:bill.holman@duke.edu)

919-613-8709

#### **UNC/Environmental Finance Center**

Jeff Hughes

[jhughes@sog.unc.edu](mailto:jhughes@sog.unc.edu)

919-843-4956

Alternate: Shadi Eskaf

[eskaf@sog.unc.edu](mailto:eskaf@sog.unc.edu)

919-962-2785

#### **State Treasurer's Office**

Vance Holloman

[vance.holloman@nctreasurer.com](mailto:vance.holloman@nctreasurer.com)

919-807-2351

Alternate: Sharon Edmundson

[Sharon.Edmundson@nctreasurer.com](mailto:Sharon.Edmundson@nctreasurer.com)

919-807-2381

#### **North Carolina League of Municipalities**

Buck Kennedy, Garner City Council

[bkennedy@garnernc.gov](mailto:bkennedy@garnernc.gov)

919-624-3696

#### **Office of Information Technology Services**

Julia Owen

[Julia.owen@nc.gov](mailto:Julia.owen@nc.gov)

919-754-6246

#### **N.C. Association of County Commissioners**

David Thompson, Director

[David.Thompson@ncacc.org](mailto:David.Thompson@ncacc.org)

919-715-2893

#### **Councils of Government**

Jim Perry, Director Lumber River COG

[James.Perry@lumberrivercog.org](mailto:James.Perry@lumberrivercog.org)

910-272-5058

**N.C. Rural Economic Development Center**

Billy Ray Hall, President

[brhall@ncruralcenter.org](mailto:brhall@ncruralcenter.org)

919-250-4314

Alternate: Patrick Woodie

[pwoodie@ncruralcenter.org](mailto:pwoodie@ncruralcenter.org)

919-250-4314

**Clean Water Management Trust Fund**

Richard Rogers, Executive Director

[richard.rogers@ncdenr.gov](mailto:richard.rogers@ncdenr.gov)

919-571-6767

**Dept. of Environment and Natural Resources**

Robin Smith, Assistant Secretary for Environment (Chair)

[Robin.w.smith@ncdenr.gov](mailto:Robin.w.smith@ncdenr.gov)

919-715-4141

Clean Watersheds Needs Survey 2008

**SMALL COMMUNITY (POPULATION <10,000) NEEDS FORM**

**Step 1: Basic Facility/Project Information**

This step asks you to identify basic facility/project information for your community's facility/project including location, point of contact, type of facility/project, flow, and population. Add additional pages, if necessary.

**Step 2: Needs and Costs Information**

Identify any water quality or public health-based capital needs and costs that are not already described in Step 2. Submit the portion of the needs not funded by January 1, 2008. They can include estimates for new infrastructure, sustaining current infrastructure, and/or meeting future growth needs (through December 31, 2027).

Submit a copy of documentation describing your community's new needs and costs, such as:

(See Appendix 1 for a complete list of acceptable documents to justify needs and costs):

- For unsewered communities: signed statement from the health department citing onsite wastewater treatment system failure, water quality problem, and/or violations of safe drinking water standards.
- Application for funding (e.g. USDA Rural Development, US EPA, and state grants and loans; Clean Water State Revolving Fund loans)
- Capital Improvement Report
- Preliminary engineering study or Plan of Study
- General Plan or Facilities Plan
- Preliminary or Final Engineer's Estimate
- Sewer System Evaluation Documents
- Administrative Orders, Court Orders, or Consent Decrees
- National Pollutant Discharge Elimination System (NPDES) permit or State Permit (with Schedule)
- CSO Long-Term Control Plan (LTCP)

**Alternative:** If you do not have sufficient documentation, complete the tables and questions in Step 2 to document new capital needs and costs in your community. Signature Box #2 must be completed to certify the new needs and cost.

**Return the completed form to:**

**State CWNS Coordinator:**

**Fax:**

**Address:**

**Phone:**

**Email:**

## Step 1: Basic Facility/ Project Information

|                                                |  |             |  |          |  |
|------------------------------------------------|--|-------------|--|----------|--|
| Facility/ Project Name:                        |  |             |  |          |  |
| The facility is part of the following system:  |  |             |  |          |  |
| Organization responsible for facility/project: |  |             |  |          |  |
| Point of Contact                               |  | Role/ Title |  |          |  |
| Address                                        |  |             |  |          |  |
| City                                           |  | State       |  | Zip Code |  |
| Phone                                          |  | Fax         |  |          |  |
| Email                                          |  |             |  |          |  |
| Permit Number(s):                              |  |             |  |          |  |
| County:                                        |  |             |  |          |  |

### Facility/ Project Type

Choose the appropriate descriptors from the list Appendix 2 to complete the columns "Type" and "Planned Changes." Indicate whether the facility/project is "Present" or "Projected" by placing a check mark in the appropriate column(s).

| Type | Present | Projected | Planned Changes |
|------|---------|-----------|-----------------|
|      |         |           |                 |
|      |         |           |                 |
|      |         |           |                 |
|      |         |           |                 |

Does this facility discharge to another facility (ies)? Yes ☐ No ☐

If yes, name facility(ies): \_\_\_\_\_

### Flow Information

Complete for following facility/ project types: Treatment Plant, Treatment Lagoon or Pond, Collection: Combined Sewers, Collection: Separate Sewers, Collection: Interceptor Sewers, Collection: Pump Stations, Storage Facility, Biosolids Handling Facility, Individual On-Site System Area, Decentralized, and Treatment System.

|                               | Millions of Gallons per Day (MGD) |                |               |
|-------------------------------|-----------------------------------|----------------|---------------|
|                               | Existing                          | Present Design | Future Design |
| Municipal Flow                |                                   |                |               |
| Industrial Flow               |                                   |                |               |
| Infiltration from Groundwater |                                   |                |               |
| <b>Total Flow</b>             |                                   |                |               |
| Wet Weather Flow (Peak)       |                                   |                |               |

## Population Receiving Treatment

Complete for following facility/ project types: Treatment Plant, Treatment Lagoon or Pond, Collection: Combined Sewers, Collection: Separate Sewers, Collection: Interceptor Sewers, Collection: Pump Stations, Storage Facility, Biosolids Handling Facility, Individual On-Site System Area, Decentralized, and Treatment System.

|                                      | Resident Population |           |                | Non- Resident Population* |           |                |
|--------------------------------------|---------------------|-----------|----------------|---------------------------|-----------|----------------|
|                                      | Present             | Projected | Projected Year | Present                   | Projected | Projected Year |
| From this system                     |                     |           |                |                           |           |                |
| From upstream collection system(s)** |                     |           |                |                           |           |                |
| <b>Total Receiving Collection</b>    |                     |           |                |                           |           |                |
| Cluster Systems                      |                     |           |                |                           |           |                |
| Onsite Wastewater Treatment Systems  |                     |           |                |                           |           |                |
| <b>Total</b>                         |                     |           |                |                           |           |                |

\* The portion of the population that does not live within the services area of the facility, but still utilizes the facility's infrastructure. Non-resident population includes transient, seasonal, and commuter workers and tourists.

\*\* "From upstream collection systems" describes the total population whose wastewater is discharged to this facility from other facilities upstream in the sewershed.

## Step 2: Needs and Costs Information

Identify any water quality or public health-based capital needs. Needs must exist as of January 1, 2008 and are a cost estimate to sustain current infrastructure and meet the future needs (through December 31, 2027) due to population growth.

To complete:

- **NEEDS:** Identify the category(ies) of needs applicable for your community. Definitions of each the needs categories are available at [www.epa.gov/cwns/cwns2008.htm](http://www.epa.gov/cwns/cwns2008.htm).
- **REASON:** Mark the reason (public health problem [PH], water quality problem [WQ], or both).
- **DESCRIPTION:** Describe the needs and project benefits in as much detail as possible:
  - Provide units if applicable) (e.g., length of sewer, capacity of pump, NPS or stormwater best management practices, etc).
  - Include discharge BOD limits and nutrient removal practices for Secondary and Advance Treatment needs
  - Include a description of the environmental benefits of the project/facility
  - Identify the target implementation year and projected end year of needs
- **COSTS:** If available, provide cost information for each need. Indicate the source (document name) and the base month and year of the cost information. Attach a copy of the source document. If no cost information is available, indicate NA in cost column.
- Add additional pages, if necessary.

| NEEDS                                                       | REASON                                                     | DESCRIPTION | COSTS |
|-------------------------------------------------------------|------------------------------------------------------------|-------------|-------|
| Secondary Treatment<br>(including sludge handling/disposal) | PH <input type="checkbox"/><br>WQ <input type="checkbox"/> |             |       |
| Advanced Wastewater Treatment                               | PH <input type="checkbox"/><br>WQ <input type="checkbox"/> |             |       |
| Infiltration/Inflow Correction                              | PH <input type="checkbox"/><br>WQ <input type="checkbox"/> |             |       |



| NEEDS                             | REASON                                                     | DESCRIPTION | COSTS |
|-----------------------------------|------------------------------------------------------------|-------------|-------|
| Sewer Replacement/ Rehabilitation | PH <input type="checkbox"/><br>WQ <input type="checkbox"/> |             |       |
| New Collector Sewers              | PH <input type="checkbox"/><br>WQ <input type="checkbox"/> |             |       |
| New Interceptor Sewers            | PH <input type="checkbox"/><br>WQ <input type="checkbox"/> |             |       |
| Stormwater Management Programs    | PH <input type="checkbox"/><br>WQ <input type="checkbox"/> |             |       |
| Cluster Systems (Decentralized)   | PH <input type="checkbox"/><br>WQ <input type="checkbox"/> |             |       |

| NEEDS                                                           | REASON                                                     | DESCRIPTION | COSTS |
|-----------------------------------------------------------------|------------------------------------------------------------|-------------|-------|
| Onsite Wastewater Treatment Systems (Decentralized)             | PH <input type="checkbox"/><br>WQ <input type="checkbox"/> |             |       |
| Nonpoint Source Pollution Control <sup>1</sup> (Please specify) | PH <input type="checkbox"/><br>WQ <input type="checkbox"/> |             |       |
| Other                                                           | PH <input type="checkbox"/><br>WQ <input type="checkbox"/> |             |       |

<sup>1</sup> Nonpoint Source (NPS) Pollution Control includes activities that prevent water pollution due to agriculture, silviculture, resource extraction, activities at marinas, storage tanks, and sanitary landfills. It also includes projects that prevent or mitigate negative impacts to ground water and stream bank channels.

## OPTIONAL COST CALCULATION FOR SEWER REPLACEMENT/ REHABILITATION COSTS

*Note: This section of the Small Community Survey is OPTIONAL. If you did not provide cost information for **Sewer Replacement/ Rehabilitation needs** identified in the previous table, this information will allow your state and EPA to better estimate costs associated with your needs.*

Provide the current sewer length and estimated replacement rates for sewers in your community. Note: the maximum replacement rate allowable without supporting documentation is 10% over 20 years (0.5% per year).

| Sewer Diameter | Length (feet) | Rehabilitation Rate (in % over next 20 years) | Replacement Rate (in % over next 20 years) | Comments |
|----------------|---------------|-----------------------------------------------|--------------------------------------------|----------|
| ≤8"            |               |                                               |                                            |          |
| 9"-15"         |               |                                               |                                            |          |
| 16"-21"        |               |                                               |                                            |          |
| ≥22"           |               |                                               |                                            |          |

### SIGNATURE BOX #2

#### Needs Certification

As the local official representing this community, I agree that the water quality needs and technical information described herein is accurate for this community. Note: A local official can be an elected official (e.g., mayor) or other qualified official (e.g., public works manager).

Name:

Title:

Signature:

Date:

#### Cost Certification

There are three alternatives to estimate the costs, presented in order of preference:

1. A professional engineer (PE) signs the cost certification below.
2. A local government official signs the cost certification below and a State Professional Engineer (PE) certifies the cost as reasonable after reviewing the estimate.
3. No cost certification signature is provided; cost curves will be used, if possible, to generate estimated costs. To use cost curves for sewer replacement/ rehabilitation costs, complete the Alternative Cost Calculation for Sewer Replacement Costs box above.

I certify that to the best of my knowledge the cost of the community's clean water needs described herein are accurate.

Name:

Title:

Professional Engineer (PE):    Yes ☐    No ☐

Signature:

Date:

#### TO BE COMPLETED BY STATE

State Professional Engineer (PE) (Signature):

Date:

Only needed if cost certification signature is not from a professional engineer (PE)

Note to State: **State engineers should not calculate community's costs, only validate them.**

## Appendix 1: List of Acceptable Documents for CWNS 2008

|                                                                            | Used to<br>Justify<br>Needs | Used to<br>Justify<br>Costs |
|----------------------------------------------------------------------------|-----------------------------|-----------------------------|
| <b>All Types of Needs</b>                                                  |                             |                             |
| Intended Use Plan                                                          | Y                           | Y                           |
| State and Federal Loan and Grant Applications                              | Y                           | Y                           |
| CWSRF Loan Applications                                                    | Y                           | Y                           |
| Non-governmental Grant Applications                                        | Y                           | Y                           |
| Cost of Previous Comparable Construction                                   | N                           | Y                           |
| State-Approved Area-wide or Regional Basin Plan                            | Y                           | Y                           |
| State-Approved Local Comprehensive Water and Sewer<br>Plan                 | Y                           | Y                           |
| Total Maximum Daily Load (TMDL)                                            | Y                           | N*                          |
| National Estuary Program Comprehensive Conservation<br>and Management Plan | Y                           | N*                          |
| Nutrient Criteria Studies                                                  | Y                           | N                           |
| Impaired Waters or TMDL Listing                                            | Y                           | N                           |
| <b>Wastewater Facility Needs</b>                                           |                             |                             |
| Capital Improvement Plan (CIP)                                             | Y                           | Y                           |
| Facility Plan                                                              | Y                           | Y                           |
| Preliminary Engineer's Estimate                                            | Y                           | Y                           |
| Final Engineer's Estimate                                                  | Y                           | Y                           |
| Sewer System Evaluation Documents                                          | Y                           | Y                           |
| Diagnostic Evaluation                                                      | Y                           | Y                           |
| Sanitary Survey                                                            | Y                           | N                           |
| State-Approved Municipal Wasteload Allocation Plan                         | Y                           | Y                           |
| New Municipal, State, or Federal Regulation                                | Y                           | N                           |
| Administrative Orders, Court Orders, or Consent Decrees                    | Y                           | N                           |

|                                                   |     |   |
|---------------------------------------------------|-----|---|
| NPDES or State Permit Requirement (with Schedule) | Y   | N |
| CSO Long-Term Control Plan (LTCP)                 | Y   | Y |
| Approved CSO Long-Term Control Plan (LTCP)        | Y   | Y |
| CSO Cost Curve Needs                              | n/a | Y |

#### **NPS Needs**

|                                                                                         |    |    |
|-----------------------------------------------------------------------------------------|----|----|
| Watershed-Based Plans                                                                   | Y  | Y  |
| Section 319 Funded or EPA Reviewed Watershed-Based Plans                                | Y  | Y  |
| Approved State Annual 319 Workplans                                                     | Y  | N* |
| Approved State 319 Project Implementation Plans                                         | Y  | Y  |
| Nonpoint Source Management Program/Assessment Report                                    | Y  | N* |
| Nonpoint Source Management Program/Ground Water Protection Strategy Report              | Y  | N* |
| Nonpoint Source Management Program/Wellhead Protection Program and Plan                 | Y  | N* |
| Nonpoint Source Management Program/Delegated Underground Injection Control Program Plan | Y  | N* |
| Source Water Assessment/Source Water Protection Plans                                   | Y  | N  |
| NRCS Conservation Plans and Farm Plans                                                  | Y  | N* |
| Electronic Field Office Technical Guide (eFOTOG)                                        | N* | Y  |
| State/Federal Agricultural Cost-Share Program Cost Tables                               | N  | Y  |
| Professional Appraisals                                                                 | N  | Y  |

#### **Stormwater Needs**

|                                      |   |    |
|--------------------------------------|---|----|
| Municipal Stormwater Management Plan | Y | N* |
|--------------------------------------|---|----|

#### **Small Communities**

|                                         |   |   |
|-----------------------------------------|---|---|
| Information from an Assistance Provider | Y | N |
|-----------------------------------------|---|---|

\*With exceptions

## Appendix 2: Facility/Project Types Information

Use for updating the table "Facility/Project Type" in Step 1.

### Facility/Project Types

- |                                        |                                                   |
|----------------------------------------|---------------------------------------------------|
| 1. Treatment Plant                     | 17. Nonpoint Source-Agriculture - Cropland        |
| 2. Treatment Lagoon or Pond            | 18. Nonpoint Source-Agriculture - Animals         |
| 3. Collection: Combined Sewers         | 19. Nonpoint Source-Silviculture                  |
| 4. Collection: Separate Sewers         | 20. Nonpoint Source-Urban                         |
| 5. Collection: Interceptor Sewer       | 21. Nonpoint Source-Marinas                       |
| 6. Collection: Pump Stations           | 22. Nonpoint Source-Resource Extraction           |
| 7. Storage Facility                    | 23. Nonpoint Source-Brownfields                   |
| 8. Biosolids Handling Facility         | 24. Nonpoint Source-Storage Tanks                 |
| 9. Recycled Water Distribution         | 25. Nonpoint Source-Sanitary Landfills            |
| 10. Individual On-Site System Area     | 26. Nonpoint Source-Ground Water - Unknown Source |
| 11. Decentralized System               | 27. Nonpoint Source-Hydromodification             |
| 12. Facility Classified As 'Other' 7   | 28. Confined Animals(Point Source)                |
| 13. Phase I MS4                        | 29. Mining (Point Source)                         |
| 14. Phase II MS4                       | 30. Estuary Management                            |
| 15. Non-traditional MS4                | 31. TMDL Plan Development                         |
| 16. Unregulated Community (Stormwater) | 32. Watershed Management Plan Development         |

### Planned Changes

1. No Change
2. New
3. Increase Capacity
4. Increase Level Of Treatment
5. Rehabilitation
6. Replacement
7. Abandonment
8. Expansion
9. Process Improvement
10. Instrumentation/Electrical/Laboratory



North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue, Governor

Dee Freeman, Secretary

November 4, 2010

The Honorable Charles W. Albertson  
Room 523  
Legislative Office Building  
Raleigh, N.C. 27603

The Honorable James W. Crawford, Jr.  
Room 1326  
Legislative Building  
Raleigh, N.C. 27601

Re: Report on Financial Oversight of Water and Wastewater Systems

Dear Sen. Albertson and Rep. Crawford:

Enclosed please find a report on financial oversight of local government water and wastewater systems prepared by the Department of Environment and Natural Resources in consultation with staff in the State and Local Government Finance Division of the Department of State Treasurer (which provides staff support to the Local Government Commission). The report was prepared in response to Section 2 of S.L. 2010-144 which directed DENR and the Local Government Commission to report back to the Legislative Study Commission on Water and Wastewater Infrastructure on several issues related to the financial health of publicly owned water and wastewater systems.

The report concludes that the Local Government Commission provides a significant degree of financial oversight for these systems. Financial information collected by the LGC already provides a basis for comparing system expenditures to system revenues. The report identifies some ideas for improving communication among the LGC, infrastructure funding agencies and DENR regulatory programs. I hope the Study Commission will find the information and recommendations set out in the report helpful.

Sincerely,

Robin W. Smith  
Assistant Secretary for Environment

Cc: Tim Dodge

1601 Mail Service Center, Raleigh, North Carolina 27699-1601  
Phone: 919-733-4984 \ FAX: 919-715-3060 \ Internet: [www.enr.state.nc.us/ENR/](http://www.enr.state.nc.us/ENR/)

An Equal Opportunity / Affirmative Action Employer - 50 % Recycled \ 10 % Post Consumer Paper

One  
North Carolina  
*Naturally*

*This page is intentionally left blank.*



## **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

---

<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

---

<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.

2. expenditures, the utility's rates were too low to cover day to day expenditures for operation and maintenance.
3. 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

---

<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

---

<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

---

<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.

- 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.

- 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

*This page is intentionally left blank.*



North Carolina Department of Environment and Natural Resources  
Division of Soil & Water Conservation

Beverly Eaves Perdue  
Governor

Patricia K. Harris  
Director

Dee Freeman  
Secretary

**MEMORANDUM**

**TO:** Tim Dodge  
Fiscal Research Division

**FROM:** *Patricia K. Harris*  
Patricia K. Harris, Director  
Division of Soil and Water Conservation

**SUBJECT:** *Design of a North Carolina Agriculture Water Resources Assistance Program*  
Report

**DATE:** October 27, 2010

On behalf of the NC Department of Agriculture and Consumer Services and the NC Department of Environment and Natural Resources, I respectfully submit the *Design of a North Carolina Agriculture Water Resources Assistance Program* report pursuant to Section 3 of S.L. 2010-149.

Please contact me at (919) 715-6097 if you have any questions or need additional information.

1614 Mail Service Center, Raleigh, North Carolina 27699-1614  
Phone: 919-733-2302 \ FAX: 919-715-3559 \ Internet: [www.enr.state.nc.us/DSWC](http://www.enr.state.nc.us/DSWC)  
An Equal Opportunity \ Affirmative Action Employer

One  
North Carolina  
*Naturally*

*This page is intentionally left blank.*

---

THE NORTH CAROLINA GENERAL ASSEMBLY  
LEGISLATIVE STUDY COMMISSION ON WATER AND  
WASTEWATER INFRASTRUCTURE

*DESIGN OF A NORTH CAROLINA AGRICULTURE  
WATER RESOURCES ASSISTANCE PROGRAM  
(AgWRAP)*

November 1, 2010

North Carolina Department of Agriculture & Consumer Services  
North Carolina Department of Environment and Natural Resources  
Division of Soil and Water Conservation

---

I. REPORT CONTENTS

- II. Introduction and Program Objectives
- III. Strategic Planning Process and Update
- IV. Program Delivery
- V. Program Oversight
- VI. Technical Assistance
- VII. Potential Program Impacts
- VIII. Program Cost
- IX. Proposed Implementation Timeframe
- X. Sources of Funding

## **II. INTRODUCTION AND PROGRAM OBJECTIVES**

Session Law 2010-149 (H1748) directs the North Carolina Department of Agriculture and Consumer Services (NCDA&CS) and the Department of Environment and Natural Resources (DENR) to jointly design a cost-share program to:

Provide technical and financial support to farmers and agricultural landowners who want to implement best management practices that conserve water,  
Increase the efficiency of private water use, and  
Increase the water storage capacity of agricultural lands.

In addition, NCDA&CS and NCDENR are directed to submit a report to the Legislative Study Commission on Water and Wastewater Infrastructure by November 1, 2010 regarding the design of the proposed cost-share program, as well as estimated program costs, proposed methodology and timeframe for program implementation, possible sources of funding and any legislative changes needed to implement the program.

## **III. STRATEGIC PLANNING PROCESS AND UPDATE**

In the fall of 2009, the NC Foundation for Soil and Water Conservation secured a \$100,000 grant from the Altria Corporation to develop a strategic plan for protecting agricultural water resources in North Carolina. To accomplish this objective, a 14-member Agriculture Water Work Group was convened in January 2010. Members are:

- 1 Co-Chairman Steve Troxler, Commissioner of Agriculture, NCDA&CS
- 2 Co-Chairman Larry Wooten, President, NC Farm Bureau Federation
- 3 Dr. Bill H. Davis, Jr., President, NC Foundation of Soil & Water Conservation
- 4 Mr. James Ferguson, President, NC Association of Soil & Water Conservation Districts
- 5 Mr. J.B. Martin Jr., State Conservationist, Natural Resources Conservation Service
- 6 Ms. Pat Harris, Director, Division of Soil & Water Conservation, DENR
- 7 Dr. Robert Evans, Professor and Department Head, Department of Biological & Agricultural Engineering, NC State University
- 8 Dr. Louis Jackai, Professor and Chairman, Department of Natural Resources & Environmental Design, NC A&T State University
- 9 Mr. Jimmy Gentry, President, NC State Grange
- 10 Mr. Buddy Murrow, Second Vice President, NC Green Industry Council
- 11 Mr. Kraig Westerbeek, President, NC Irrigation Society
- 12 Ms. Deborah Johnson, CEO, NC Pork Council
- 13 Mr. Robert Ford, Executive Director, NC Poultry Federation
- 14 Mr. Bryan Blinson, Executive Director, NC Cattlemen's Association



Outside facilitator, the Eastern Leadership Group, LLC, has met monthly with the Agriculture Water Work Group and solicited input from over 100 agricultural commodity groups, private organizations and governmental agencies to help shape this comprehensive strategic plan and approach to agricultural water resources protection.

*For the plan, agricultural water is considered to be any water on farms, from surface or subsurface sources, that is used in the production, maintenance, protection, or on-farm preparation or treatment of agriculture commodities or products as necessary to grow and/or prepare them for on-farm use or transfer into any form of trade as normally done with agricultural plant or animal commerce.*

At this time “*The Strategic Plan for Protecting Agricultural Water Resources in North Carolina*” is draft and nearing completion. NCDA&CS and DENR staff intends to utilize this comprehensive plan as the basis for the Agriculture Water Resources Assistance Program (AgWRAP).

#### **IV. PROGRAM DELIVERY**

- **Soil and Water Conservation Districts (SWCD) will function as the primary delivery mechanism for AgWRAP.**

Established in 1937 and organized under the provisions of General Statute Chapter 139, a Soil and Water Conservation District “is a governmental subdivision of the state and public body corporate and politic.” SWCDs are responsible at the local level for coordinating and carrying out local natural resources conservation programs for the working lands of North Carolina. There are 96 SWCDs governed by 492 elected and appointed district supervisors, covering all 100 counties in North Carolina. Each SWCD has an established relationship with its local county government; state government through the Division of the Soil & Water Conservation -NC Department of Environment and Natural Resources; and federal government through the Natural Resources Conservation Service -US Department of Agriculture as formalized through Memoranda of Agreement and Operational Agreements.

Throughout G.S.139-8 *Powers of Districts and Supervisors*, it states SWCDs are authorized to carry out various duties for “the conservation, utilization and disposal of water, and the development of water resources.” SWCDs have been very successful in providing leadership and administering voluntary, incentive-driven, locally-led initiatives and programs such as the NC Agriculture Cost Share Program for Nonpoint Source Pollution Control (G.S. 143-215.74) and the Community Conservation Assistance Program (G.S. 143-215.74M).

Soil and Water Conservation Districts are the logical choice for local program delivery as there is an existing statewide infrastructure in place to deliver conservation programs, as well as existing technical and administrative expertise necessary for successful program delivery.

## **V. PROGRAM OVERSIGHT**

- **The Soil and Water Conservation Commission (SWCC) and North Carolina Board of Agriculture will work cooperatively to provide program oversight.**
- **A Program Advisory Committee will provide input on program development and implementation.**

S.L. 2010-149 directs NCDA&CS and DENR to jointly design a cost-share program to provide technical and financial support to farmers and agricultural landowners who want to implement best management practices for water resource development and conservation. The Departments propose a 3-pronged approach involving a program Advisory Committee, the NC Board of Agriculture and the NC Soil and Water Conservation Commission. The AgWRAP Advisory Committee, comprised of the existing Agriculture Water Workgroup, will provide direct input into program development and implementation. Responsibilities of each party are briefly described below:

- **Advisory Committee:**
  - Develop an annual draft plan of work to establish program priorities.
  - Identify water resource needs and potential funding sources.
  - Identify and evaluate potential best management practices for program implementation.
  - Provide recommendations for improving program implementation to the NC Board of Agriculture and NC Soil and Water Conservation Commission.
- **NC Board of Agriculture:**
  - Jointly approve the annual plan of work.
  - Seek funding sources for program implementation.
  - Monitor program success through feedback from various agricultural sectors.
  - Work with the NC Soil and Water Conservation Commission and the Advisory Committee to address specific concerns.
- **NC Soil and Water Conservation Commission:**
  - Jointly approve the annual plan of work.
  - Implement the program through SWCDs.
  - Assimilate data and report program results.
  - Address specific concerns in conjunction with the NC Board of Agriculture and the Advisory Committee.

## **VI. TECHNICAL ASSISTANCE**

- **Adequate technical assistance is essential for program success.**
- **AgWRAP must have flexibility to utilize technical assistance from a variety of sources.**

AgWRAP cannot be successful without adequate technical assistance. Technical assistance involves one-on-one assistance with landowners to evaluate resource needs, and to provide planning, design, construction oversight, and technical verification of the installed best management practice(s).

An overall technical assistance strategy must include additional resources for SWCDs, and other state and federal agencies. AgWRAP must also include a mechanism and funding for the use of private engineering firms and certified irrigation designers.

## **VII. POTENTIAL PROGRAM PRACTICES**

- **Program practices shall have agricultural water resource development as the primary purpose.**

The following is a partial list of potential practices that should be considered for AgWRAP assistance:

1. Water use audits
2. Wells for livestock watering and crop irrigation
3. Farm pond construction
4. Farm pond renovation
5. Cisterns
6. Irrigation efficiency improvements
7. Livestock watering efficiency improvements
8. Water re-use practices including reclaimed water
9. Other practices as identified and recommended by the AgWRAP Advisory Committee

## **VIII. PROGRAM COST**

- **\$10,000,000 per year**

For the 2008-09 drought response initiative, the Division surveyed districts to assess potential demand for cost share assistance for drought-related practices. Nearly 3,600 farmers submitted requests of approximately \$32 million for drought relief funds. Of this total amount, districts received nearly \$14 million in requests for pond construction and renovation, well construction and renovation, and irrigation efficiency improvement.

A more recent September 2010 survey projects potential demand for cost-sharing for water quantity practices. Through the survey, local SWCDs provided an estimate for the current number of potential applicants, funding needed for specific practices, and for local technical assistance. Results indicated a potential current demand of over \$37.4 million for AgWRAP cost-share for practice implementation. Technical assistance and operating costs are estimated to be approximately \$4.3 million annually for local SWCDs and the Division of Soil and Water Conservation. This estimate does not include additional costs for technical assistance to be provided by the private sector or other governmental agencies.

The existing drought response initiative, results of the Agricultural Water Workgroup's strategic plan, and the recent survey of SWCDs all provide indicators of potential resource needs and associated costs. Assuming a five year planning and implementation period, an estimated cost of \$10 million per year would be needed to effectively implement AgWRAP and meet the program objectives.

## **IX. PROPOSED IMPLEMENTATION TIMEFRAME**

### **2010-11**

- Finalize Plan for AgWRAP.
- Propose and promote legislation to establish the program.
- Develop grant funding proposals and submit to potential funding organizations.
- Convene AgWRAP Advisory Committee to develop proposed program policies and guidelines.

### **2011-12**

- AgWRAP Advisory Committee continues program development activities.
- Develop outreach strategy and program training for SWCD staff/supervisors, other governmental agency staff and private sector technical specialists.
- Assist local districts to develop selection and contracting procedures.
- Allocate funds and begin producer contract development to implement approved best management practices.

### **2012-13 and beyond**

- AgWRAP Advisory Committee meets quarterly to evaluate implementation and recommend changes.
- Continue to seek funding.
- Continue implementation.

## **X. SOURCES OF FUNDING**

- **A variety of funding sources must be utilized to ensure program success.**

Federal, State, local and private sources of funding must all be pursued. The following potential funding sources have been identified.

Golden Leaf Foundation

NC Tobacco Trust Fund

NC Agricultural Development & Farmland Preservation Trust Fund

USDA-NRCS Agricultural Water Enhancement Program

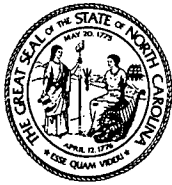
NC Foundation for Soil & Water Conservation

NC Rural Economic Development Center -Family Farm Innovation Fund

State Appropriations

Others

*This page is intentionally left blank.*



# NORTH CAROLINA GENERAL ASSEMBLY

## Legislative Services Office

George R. Hall, Legislative Services Officer

### Research Division

300 N. Salisbury Street, Suite 545  
Raleigh, NC 27603-5925  
Tel. 919-733-2578 Fax 919-715-5460

O. Walker Reagan  
Director

November 2, 2009

The Honorable Charles W. Albertson, Co-Chair  
Legislative Study Commission on Water and  
Wastewater Infrastructure  
North Carolina Senate  
300 North Salisbury Street, Room 523  
Raleigh, NC 27603-5925

Dear Senator Albertson:

Congratulations on your designation as Co-Chair of the Legislative Study Commission on Water and Wastewater Infrastructure.

I have asked Mr. Tim Dodge, with the Research Division; Ms. Kristin Walker and Mr. Mark Bondo, with the Fiscal Research Division; and Ms. Emily Johnson, with the Bill Drafting Division, to serve as staff to this Commission. In accordance with the Commission's directions as expressed through the Co-Chairs, they will aid in all aspects of the Commission's work, and will attend the meetings of the Commission when it convenes upon the call of the Co-Chairs. Please note that all these individuals also will be responsible for staffing other study committees and commissions during the Interim.

Should you wish to contact Mr. Dodge, he may be reached by telephone at (919) 733-2578. Ms. Walker and Mr. Bondo may be reached at (919) 733-4910. Ms. Johnson may be reached at (919) 733-6660.

My best wishes to you and the Commission in its work. If I can be of any service to you or the Commission, please contact me.

Yours truly,

O. Walker Reagan  
Director of Research

OWR/lba

cc: Hon. Joe Hackney, Speaker  
Hon. Marc Basnight, President Pro Tempore  
Hon. James W. Crawford, Jr., Co-Chair  
Mr. George Hall  
Ms. Marilyn Chism  
Mr. Gerry Cohen

Mr. Tim Dodge  
Ms. Kristin Walker  
Mr. Mark Bondo  
Ms. Emily Johnson  
Mr. Brian Peck  
Ms. Christy Henson



# NORTH CAROLINA GENERAL ASSEMBLY

## Legislative Services Office

George R. Hall, Legislative Services Officer

### Research Division

300 N. Salisbury Street, Suite 545  
Raleigh, NC 27603-5925  
Tel. 919-733-2578 Fax 919-715-5460

O. Walker Reagan  
Director

November 2, 2009

The Honorable James W. Crawford, Jr., Co-Chair  
Legislative Study Commission on Water and  
Wastewater Infrastructure  
North Carolina House of Representatives  
16 West Jones Street, Room 1326  
Raleigh, NC 27601-1096

Dear Representative Crawford:

Congratulations on your designation as Co-Chair of the Legislative Study Commission on Water and Wastewater Infrastructure.

I have asked Mr. Tim Dodge, with the Research Division; Ms. Kristin Walker and Mr. Mark Bondo, with the Fiscal Research Division; and Ms. Emily Johnson, with the Bill Drafting Division, to serve as staff to this Commission. In accordance with the Commission's directions as expressed through the Co-Chairs, they will aid in all aspects of the Commission's work, and will attend the meetings of the Commission when it convenes upon the call of the Co-Chairs. Please note that all these individuals also will be responsible for staffing other study committees and commissions during the Interim.

Should you wish to contact Mr. Dodge, he may be reached by telephone at (919) 733-2578. Ms. Walker and Mr. Bondo may be reached at (919) 733-4910. Ms. Johnson may be reached at (919) 733-6660.

My best wishes to you and the Commission in its work. If I can be of any service to you or the Commission, please contact me.

Yours truly,

A handwritten signature in cursive script that reads "O. Walker Reagan".

O. Walker Reagan  
Director of Research

OWR/lba

cc: Hon. Joe Hackney, Speaker  
Hon. Marc Basnight, President Pro Tempore  
Hon. Charles W. Albertson, Co-Chair  
Mr. George Hall  
Ms. Marilyn Chism  
Mr. Gerry Cohen

Mr. Tim Dodge  
Ms. Kristin Walker  
Mr. Mark Bondo  
Ms. Emily Johnson  
Mr. Brian Peck  
Ms. Christy Henson



**Cindy Davis (Sen. Albertson)****From:** Kohler, Jackie H [jackie.kohler@nc.gov]**Sent:** Monday, November 09, 2009 9:17 AM**To:** Cindy Davis (Sen. Albertson)

tsmall@wsaaeng.com

Jackie Hunt Kohler

E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law, "NCGS.Ch.132". It may be subject to monitoring and disclosed to third parties, including law enforcement personnel, by an authorized state official. **IMPORTANT:** When sending confidential or sensitive information, encryption should be used.

**PHONE CALL**

*Jackie* *Gov. Perdue Appointee*

FOR *SLARAY, Wooten @ ncfb.org* DATE *11-6-09* TIME *11:00* A.M. / P.M.

M *Larry Wooten - Mich*

OF *782-1705* FAX/CELL

PHONE *306-6305*

MESSAGE *Victoria Small Professor*

*Westcott Small & Associates*

SIGNED *336-558-5978* 1154

☐ TELEPHONED

☐ RETURNED YOUR CALL

☐ PLEASE CALL

☐ WILL CALL AGAIN

☐ CAME TO SEE YOU

☐ WANTS TO SEE YOU

11/09/2009

## Legislative Study Commission on Water and Wastewater Infrastructure (2009)

### Members

#### **SENATE APPOINTMENTS**

- Sen. Charles Woodrow Albertson (Co-Chair)
- Sen. Thomas M. Apodaca
- Sen. David W. Hoyle
- Sen. Albin B. Swindell, IV

#### **HOUSE APPOINTMENTS**

- Rep. James Walker Crawford, Jr. (Co-Chair)
- Rep. Robert Mitchell Gillespie
- Rep. William Clarence Owens, Jr.
- Rep. Cullie M. Tarleton

#### **OTHER APPOINTMENTS**

- Hon. J. Keith Crisco
- Hon. Dee Freeman
- Mr. Billy Ray Hall
- Mr. S. Ellis Hankins
- Mr. Richard E. Rogers, Jr.
- Mr. David F. Thompson

**Cindy Davis (Sen. Albertson)**

---

**From:** Lea Dunn Tackett (Pres Pro Tem's Office)  
**Sent:** Wednesday, September 30, 2009 11:32 AM  
**To:** Sen. A.B. Swindell; Cindy Davis (Sen. Albertson); Sen. Tom Apodaca; Sen. David Hoyle; Allen Rogers; Barbara O'Sullivan; Beth Carpenter; Beverly Adams (Legislative Services Office); Beverly Core; Brian Peck (Research/Library); Cheryl McLean; Christy Henson; DeAnne Mangum (Finance CA); Governor's Office; Janet Pruitt (Senate Principal Clerk); Joyce Hodge (Senate LA Director); Lesley; Michelle Adams Poole (HPC's Office); Rep. Lucy T. Allen; Stacey Phipps; Walker Reagan (Research, Director)  
**Cc:** Schorr Johnson (Pres Pro Tem's Office)  
**Subject:** Study Commission on Water & Wastewater.doc  
**Attachments:** Study Commission on Water & Wastewater.doc



Study Commission  
on Water & Wa...

**Senator Basnight's appointments to the Study Commission on Water and Wastewater**

**The Honorable Charlie Albertson of Duplin County - Co-Chair**  
**The Honorable A.B. Swindell of Nash County**  
**The Honorable Tom Apodaca of Henderson County**  
**The Honorable David Hoyle of Gaston County**

*FBI*  
*(Return to me)*  
*cds*



NORTH CAROLINA GENERAL ASSEMBLY  
PRESIDENT PRO TEMPORE  
SENATOR MARC BASNIGHT  
RALEIGH 27601-2808

September 30, 2009

The Honorable Charlie Albertson  
523 Legislative Office Building  
Raleigh, North Carolina 27601

Dear Charlie,

Pursuant to the authority granted in S.L. 2009-574, PART XLIII. Section 43.1(2) and Section 43.2, I am pleased to appoint you to serve as Co-Chair on the Study Commission on Water and Wastewater Infrastructure. Your appointment is effective immediately and shall terminate upon the earlier of the filing of its final report or the convening of the 2011 General Assembly.

Thank you for your willingness to serve in this capacity. I am deeply grateful for people like you who are willing to give their time and talent to move North Carolina forward. I know that you will have much to offer to the Study Commission on Water and Wastewater Infrastructure and will be effective and diligent in your service to our State.

Sincerely,

A handwritten signature in black ink, appearing to read "Marc Basnight".

Marc Basnight

MB:lmtd

cc: Honorable Beverly E. Perdue  
Honorable Walter Dalton  
Honorable Elaine F. Marshall  
Honorable Joe Hackney  
Janet Pruitt, Senate Principal Clerk  
Denise Weeks, House Principal Clerk  
George Hall, Legislative Services Officer  
Walker Reagan, Director of Research  
Office of State Controller  
Legislative Library  
State Library



NORTH CAROLINA GENERAL ASSEMBLY  
PRESIDENT PRO TEMPORE  
SENATOR MARC BASNIGHT  
RALEIGH 27601-2808

September 30, 2009

The Honorable A.B. Swindell  
629 Legislative Office Building  
Raleigh, North Carolina 27601

Dear A.B.,

Pursuant to the authority granted in S.L. 2009-574, PART XLIII. Section 43.1(2), I am pleased to appoint you to serve on the Study Commission on Water and Wastewater Infrastructure. Your appointment is effective immediately and shall terminate upon the earlier of the filing of its final report or the convening of the 2011 General Assembly.

Thank you for your willingness to serve in this capacity. I am deeply grateful for people like you who are willing to give their time and talent to move North Carolina forward. I know that you will have much to offer to the Study Commission on Water and Wastewater Infrastructure and will be effective and diligent in your service to our State.

Sincerely,

A handwritten signature in black ink, appearing to read "Marc Basnight".

Marc Basnight

MB:lmtdt

cc: Honorable Beverly E. Perdue  
Honorable Walter Dalton  
Honorable Elaine F. Marshall  
Honorable Joe Hackney  
Janet Pruitt, Senate Principal Clerk  
Denise Weeks, House Principal Clerk  
George Hall, Legislative Services Officer  
Walker Reagan, Director of Research  
Office of State Controller  
Legislative Library  
State Library



NORTH CAROLINA GENERAL ASSEMBLY  
PRESIDENT PRO TEMPORE  
SENATOR MARC BASNIGHT  
RALEIGH 27601-2808

September 30, 2009

The Honorable Tom Apodaca  
1127 Legislative Building  
Raleigh, North Carolina 27601

Dear Tom,

Pursuant to the authority granted in S.L. 2009-574, PART XLIII. Section 43.1(2), I am pleased to appoint you to serve on the Study Commission on Water and Wastewater Infrastructure. Your appointment is effective immediately and shall terminate upon the earlier of the filing of its final report or the convening of the 2011 General Assembly.

Thank you for your willingness to serve in this capacity. I am deeply grateful for people like you who are willing to give their time and talent to move North Carolina forward. I know that you will have much to offer to the Study Commission on Water and Wastewater Infrastructure and will be effective and diligent in your service to our State.

Sincerely,

A handwritten signature in cursive script, appearing to read "Marc Basnight".

Marc Basnight

MB:lmtd

cc: Honorable Beverly E. Perdue  
Honorable Walter Dalton  
Honorable Elaine F. Marshall  
Honorable Joe Hackney  
Janet Pruitt, Senate Principal Clerk  
Denise Weeks, House Principal Clerk  
George Hall, Legislative Services Officer  
Walker Reagan, Director of Research  
Office of State Controller  
Legislative Library  
State Library



NORTH CAROLINA GENERAL ASSEMBLY  
PRESIDENT PRO TEMPORE  
SENATOR MARC BASNIGHT  
RALEIGH 27601-2808

September 30, 2009

The Honorable David Hoyle  
300A Legislative Office Building  
Raleigh, North Carolina 27601

Dear David,

Pursuant to the authority granted in S.L. 2009-574, PART XLIII. Section 43.1(2), I am pleased to appoint you to serve on the Study Commission on Water and Wastewater Infrastructure. Your appointment is effective immediately and shall terminate upon the earlier of the filing of its final report or the convening of the 2011 General Assembly.

Thank you for your willingness to serve in this capacity. I am deeply grateful for people like you who are willing to give their time and talent to move North Carolina forward. I know that you will have much to offer to the Study Commission on Water and Wastewater Infrastructure and will be effective and diligent in your service to our State.

Sincerely,

A handwritten signature in dark ink, appearing to read "Marc Basnight".

Marc Basnight

MB:Imdt

cc: Honorable Beverly E. Perdue  
Honorable Walter Dalton  
Honorable Elaine F. Marshall  
Honorable Joe Hackney  
Janet Pruitt, Senate Principal Clerk  
Denise Weeks, House Principal Clerk  
George Hall, Legislative Services Officer  
Walker Reagan, Director of Research  
Office of State Controller  
Legislative Library  
State Library

**Cindy Davis (Sen. Albertson)**

---

**From:** Linda Winstead (Rep. Jim Crawford)  
**Sent:** Thursday, October 22, 2009 12:57 PM  
**To:** Crocker, Joseph D; Harris, Rita E; Worrell, Kristin B  
**Cc:** Carroll, Dale B; Davis-Giddens, Annette M  
**Subject:** RE: Legislative Committee to Study Sewer & Water Infrastructure

Cindy Davis in Senator Albertson's office will be the clerk to this committee. I will copy her on this email and ask that she provide you with details about the November 10 meeting. I will be out of the country for 3 weeks and will not be available to notify you. She will handle.

Linda Winstead  
 Legislative Assistant for  
 Rep. Jim Crawford  
 Committee Assistant: House Appropriations  
 1326 Legislative Building  
 crawfordla@ncleg.net  
 Phone - 919 733-5824 Fax-919-733-2599

---

**From:** Crocker, Joseph D [mailto:jcrocker@nccommerce.com]  
**Sent:** Thursday, October 22, 2009 12:28 PM  
**To:** Harris, Rita E; Worrell, Kristin B  
**Cc:** Carroll, Dale B; Linda Winstead (Rep. Jim Crawford); Davis-Giddens, Annette M  
**Subject:** RE: Legislative Committee to Study Sewer & Water Infrastructure

Thanks Rita and Kristin. I will ask Annette to add to my calendar and look forward to receiving more details regarding the content of the meeting.

Joe

Joseph D. Crocker  
 Assistant Secretary of Community Development

Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

---

**From:** Harris, Rita E  
**Sent:** Thursday, October 22, 2009 12:02 PM  
**To:** Worrell, Kristin B  
**Cc:** Carroll, Dale B; Linda Winstead (Rep. Jim Crawford); Crocker, Joseph D  
**Subject:** RE: Legislative Committee to Study Sewer & Water Infrastructure

Thx Kristin

Linda Winstead will have all details and I'm copying her to get the room number and GA staff names who will be assigned to this committee.

---

**From:** Worrell, Kristin B  
**Sent:** Thursday, October 22, 2009 11:55 AM  
**To:** Crocker, Joseph D; Harris, Rita E  
**Cc:** Carroll, Dale B

10/22/2009



**Subject:** Legislative Committee to Study Sewer & Water Infrastructure

Joe and Rita,

Dale did a conference call with Representative Jim Crawford this morning. He has invited us to participate in a legislative study committee on November 10 at 10am in the LOB. Representative Crawford said that more details will be forthcoming.

Kristin

Kristin B. Worrell  
Executive Assistant to Deputy Secretary Dale B. Carroll  
North Carolina Department of Commerce  
301 N. Wilmington Street  
Raleigh NC 27601  
919.733.4976 Direct  
919.733.4990 Secretary's Office  
919.733.4151 Main  
919.733.9265 Fax

Mailing Address  
4301 Mail Service Center  
Raleigh, NC 27699-4301

E-mail correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

10/22/2009



NORTH CAROLINA GENERAL ASSEMBLY

PRESIDENT PRO TEMPORE

SENATOR MARC BASNIGHT

RALEIGH 27601-2808

September 30, 2009

*File* *FHI*

The Honorable Charlie Albertson  
523 Legislative Office Building  
Raleigh, North Carolina 27601

Dear Charlie,

Pursuant to the authority granted in S.L. 2009-574, ~~PART XLIII~~, Section 43.1(2) and Section 43.2, I am pleased to appoint you to serve as Co-Chair on the Study Commission on Water and Wastewater Infrastructure. Your appointment is effective immediately and shall terminate upon the earlier of the filing of its final report or the convening of the 2011 General Assembly.

Thank you for your willingness to serve in this capacity. I am deeply grateful for people like you who are willing to give their time and talent to move North Carolina forward. I know that you will have much to offer to the Study Commission on Water and Wastewater Infrastructure and will be effective and diligent in your service to our State.

Sincerely,

Marc Basnight

MB:lmdt

cc: Honorable Beverly E. Perdue  
Honorable Walter Dalton  
Honorable Elaine F. Marshall  
Honorable Joe Hackney  
Janet Pruitt, Senate Principal Clerk  
Denise Weeks, House Principal Clerk  
George Hall, Legislative Services Officer  
Walker Reagan, Director of Research  
Office of State Controller  
Legislative Library  
State Library

**Cindy Davis (Sen. Albertson)**

**From:** Walker Reagan (Research, Director)  
**Sent:** Wednesday, October 28, 2009 2:51 PM  
**To:** Cindy Davis (Sen. Albertson)  
**Subject:** RE: Commission Assignments

It appears that this will have a serious fiscal component so I have asked Marilyn to see what role Fiscal should play. We will have one or two folks (probably Jeff and one other) assigned from Research, but more guidance may need to come for Fiscal. I have goosed Marilyn and will let you know as soon as we have worked it out. You are my top priority on studies right now. Thanks.

---

**From:** Cindy Davis (Sen. Albertson)  
**Sent:** Wednesday, October 28, 2009 02:07 PM  
**To:** Walker Reagan (Research, Director)  
**Cc:** Jeffrey Hudson (Research)  
**Subject:** Commission Assignments

Walker,

Have the assignments been made yet for the Water & Waste Water Infrastructure Commission yet? Rep. Crawford has called a meeting for November 10th and I'm beginning to get some inquiries. I would like to coordinate this meeting with staff before I send out a notice. Thanks again for your help! cjd

Cindy J. B. Davis/Sen. Charlie Albertson  
Room 523-LOB 733-5705

|            |                                           |                                             |                |
|------------|-------------------------------------------|---------------------------------------------|----------------|
| PHONE CALL | FOR                                       | DATE <u>10/30/09</u> TIME _____             | A.M.<br>P.M.   |
|            | M.                                        | <u>Edingbath -</u>                          |                |
|            | OF                                        | <u>Gov. Perdue</u>                          |                |
|            | PHONE                                     | <u>715 02 75</u>                            | FAX/CELL _____ |
|            | MESSAGE                                   | <u>Opp. for AG + Forestry</u>               |                |
|            |                                           | <u>Dist</u>                                 |                |
|            |                                           | <u>Water + Waste Water Infrastructure</u>   |                |
|            | SIGNED                                    | 1154                                        |                |
|            |                                           | <input type="checkbox"/> TELEPHONED         |                |
|            |                                           | <input type="checkbox"/> RETURNED YOUR CALL |                |
|            | <input type="checkbox"/> PLEASE CALL      |                                             |                |
|            | <input type="checkbox"/> WILL CALL AGAIN  |                                             |                |
|            | <input type="checkbox"/> CAME TO SEE YOU  |                                             |                |
|            | <input type="checkbox"/> WANTS TO SEE YOU |                                             |                |

10/28/2009

**Cindy Davis (Sen. Albertson)**

---

**From:** Cindy Davis (Sen. Albertson)  
**Sent:** Wednesday, October 28, 2009 2:07 PM  
**To:** Walker Reagan (Research, Director)  
**Cc:** Jeffrey Hudson (Research)  
**Subject:** Commission Assignments

Walker,

Have the assignments been made yet for the Water & Waste Water Infrastructure Commission yet? Rep. Crawford has called a meeting for November 10th and I'm beginning to get some inquiries. I would like to coordinate this meeting with staff before I send out a notice. Thanks again for your help! cjd

Cindy J. B. Davis/Sen. Charlie Albertson  
Room 523-LOB 733-5705

10/28/2009

**Cindy Davis (Sen. Albertson)**

---

**From:** Walker Reagan (Research, Director)  
**Sent:** Thursday, October 15, 2009 3:05 PM  
**To:** Cindy Davis (Sen. Albertson)  
**Cc:** Jeffrey Hudson (Research)  
**Subject:** RE: Water & Wastewater Infrastructure Study Commission

We will go to work on this and I will let you know by early next week. I anticipate that our environmental folks will be involved but there may also be a significant fiscal or financing piece to this as well. Thanks.

---

**From:** Cindy Davis (Sen. Albertson)  
**Sent:** Thursday, October 15, 2009 01:21 PM  
**To:** Walker Reagan (Research, Director)  
**Cc:** Jeffrey Hudson (Research)  
**Subject:** Water & Wastewater Infrastructure Study Commission

Hi Walker,

The Co-chairs (Sen. Albertson & Rep. Crawford) talked this morning and they would like to meet on Tuesday, November 10th, at 10:00 am, (full committee). Rep. Crawford is contacting The Rural Center, DENR, and Clean Water Management and asking them to put together a presentation on that day. I have secured Room 1027-LB, but I informed them both that I had not been notified who staff counsel would be. Has an assignment been made yet? (They are anticipating that Jeff Hudson/team will take care of this one.) Can you advise so that I can begin working with the proper staff? Thanks! cjd

Cindy J. B. Davis/Sen. Charlie Albertson  
Room 523-LOB 733-5705

10/15/2009