State Water Infrastructure Authority
North Carolina Department of Environment and Natural Resources

September 17, 2015

Environment and Natural Resources Building
217 West Jones Street
Room 5001
Raleigh, North Carolina

The State Government Ethics Act (North Carolina General Statute § 138A) mandates that the Chair inquire as to whether there is any known conflict of interest or potential conflict of interest with respect to any matters before the Authority today. If any member knows of a conflict of interest or potential conflict of interest, please identify the conflict at the time the conflict becomes apparent.

The times indicated for each Agenda Item are merely for guidance. The Authority will proceed through the Agenda until completed.

AGENDA

Kim H. Colson, Authority Chair, Presiding

9:00 A. Call to Order – Chair Colson

9:05 B. Approval of Minutes of July 23, 2015 Authority Meeting (Action Item)

9:10 C. Attorney General's Office Report

9:15 D. Chair's Remarks – Chair Colson

9:20 E. Legislative Update – Chair Colson

9:30 F. Draft 2016 Meeting Schedule – Francine Durso

9:35 G. Affordability Criteria Development – Jennifer Haynie

10:05 Break

10:30 H. Asset Management Update – Amy Simes

10:50 I. Merger/Regionalization Feasibility Grant Update – Matthew Rushing

11:00 J. State of the States: Water Loss Management in the US – Will Jernigan, PE and Tory Wagoner, PE – Cavanaugh

11:45 Lunch

1:00 K. Troubled System Protocol

- Staff work update – Jessica Leggett and Francine Durso
- Small system challenges discussion with Town of Fremont and Town of Eureka

2:00 L. Master Plan Committee Report – Committee Chair Maria Hunnicutt

2:15 M. Draft 2015 Authority Annual Report – Francine Durso

- Will need conference calls in October to receive final Authority approval

2:30 N. Informal Comments from the Public

3:05 O. Concluding Remarks by Authority Members, Chair and Counsel

3:15 P. Adjourn

Reminder to All Authority Members: *Members having a question about a conflict of interest or potential conflict should consult with the Chair or with legal counsel.*

Reminder to Authority Members Appointed by the Governor: *Executive Order 34 mandates that in transacting Commission business each person appointed by the Governor shall act always in the best interest of the public without regard for his or her financial interests. To this end, each appointee must recuse himself or herself from voting on any matter on which the appointee has a financial interest.*

State Water Infrastructure Authority
North Carolina Department of Environment and Natural Resources
July 23, 2015
Meeting Minutes

State Water Infrastructure Authority Members Attending Meeting

- Kim Colson, Chair; Director, Division of Water Infrastructure
- Leila Goodwin, Water Resources Manager, Town of Cary
- Robin Hammond, Assistant General Counsel, Local Government Commission
- Maria Hunnicutt, Manager, Broad River Water Authority
- Dr. Patricia Mitchell, Assistant Secretary, Rural Development Division, Department of Commerce
- JD Solomon, Vice President, CH2MHill
- Cal Stiles, Cherokee County Commissioner
- Charles Vines, Manager, Mitchell County

Division of Water Infrastructure Staff Attending Meeting

- Julie Haigler Cubeta, Supervisor, Community Block Development Grant – Infrastructure Unit
- Francine Durso, Project Manager, Special/Technical Issues Unit
- Jennifer Haynie, Supervisor, Environmental and Special Projects Unit
- Seth Robertson, Chief, State Revolving Funds Section
- Jessica Leggett, Project Manager, Environmental and Special Projects Unit
- Jeanne Fletcher, Administrative Services Unit

Department of Justice Staff Attending Meeting

- Phillip Reynolds, North Carolina Department of Justice; Assistant Attorney General, Environmental Division

Item A. Call to Order

Mr. Colson opened the meeting and reminded the members of the State Water Infrastructure Authority (SWIA) of General Statute 138A-15 which states that any member who is aware of a known conflict of interest or an appearance of a conflict of interest with respect to matters before the Authority today is required to identify the conflict or appearance of a conflict at the time the conflict becomes apparent.

Item B. Approval of Minutes of May 2015 Authority Meeting

Mr. Colson presented the draft meeting minutes from the May 2015 Authority meeting for review and approval.

Action Item B:

- Dr. Mitchell made a motion to approve the May 21, 2015 Authority meeting minutes. Ms. Hammond seconded the motion. The motion passed unanimously.

Item C. Attorney General's Office Report

Mr. Reynolds had no items on which to report.

Item D. Chair's Remarks

The Authority and Division have been invited by the Buried Asset Management Institute – International (BAMI-I) to attend certification training classes in Raleigh on August 17-20, 2015. The Division will be holding six application training workshops across the state in the next few weeks in preparation for the Sept. 30th application deadline for the CWSRF, DWSRF and CDBG-I programs; 140 people have already registered to attend. Since the legislature has not approved a budget for fiscal year 2015/2016, it will not be possible to accept fall applications for the State Reserve programs.

The Chair noted that Agenda Items K and L would be presented next due to a potential time conflict with staff needing to be on a conference call when these items were originally scheduled.

Item K. 2015 Amended Intended Use Plans (IUPs) for CWSRF and DWSRF Programs

At its May 2015 meeting, the Authority approved staff to present the drafts of the fall 2015 application cycle CWSRF and DWSRF Priority Rating Systems at a June 15, 2015 public meeting. Written comments were received from Two Rivers Utilities and Johnston County. Many of the comments will be addressed in the respective guidance documents. Staff noted that a comment was received from the EPA Region 4 Program Manager for North Carolina that additional considerations may not be utilized in the ranking of DWSRF projects. The Authority requested that the Division put this question in writing to the EPA for a formal reply; Mr. Colson noted that the answer would not likely be received prior to the fall application deadline. Regarding Johnston County's comments, staff noted that the CWSRF and DWSRF procedures are not consistent regarding environmental review of categorical exclusions (CEs). The Division is working on a new comprehensive State Environmental Review Procedures (SERP) agreement with EPA in which the procedures will be finalized. Comments from Two Rivers Utilities centered on merger/ regionalization and the specifics of how they are structured.

The Authority questioned the 2% origination fee charged for loans and whether this was competitive when compared with bond markets or banks. Mr. Colson noted that these fees are set in statute at 2% and that it is offset by the SRF programs not charging interest during construction, which differs from loans in which interest charges begin immediately, and there are also other expenses associated with the bond market.

Action Item K:

- Ms. Goodwin confirmed that changes would be made to the guidance documents as described by staff and then made a motion to approve the use of the new CWSRF and DWSRF Priority Rating Systems in the Amended 2015 IUP and to apply the new Priority Rating Systems to applications that will be received in Sept. 2015. Mr. Vines seconded the motion. The motion passed unanimously.

Item L. 2015 Changes to the CDBG-I Water Infrastructure Grant Program

At its May 2015 meeting, the Authority approved staff to present the draft of the fall 2015 CDBG-I Priority Rating System at a June 15, 2015 public hearing. Written comments were received from the Western Piedmont Council of Governments. Many of the comments will be addressed in the guidance document regarding the definition of a 'dry well' and whether a permit was required when the well was constructed, recognizing that many wells were installed before there were permit requirements.

Action Item L:

- Dr. Mitchell made a motion to approve the use of the new CDBG-I Priority Rating System in the 2015 Annual Action Plan and to apply the new Priority Rating System to applications that will be received in Sept. 2015. Mr. Stiles seconded the motion. The motion passed unanimously.

Item E. Legislative Update

Mr. Colson resumed with Agenda Item E and presented the differences in the House and Senate NER/ANER Budgets with respect to the Division. The Department had made a verbal presentation to the conference committee but did not specifically address this item which will instead be addressed in a written document of technical issues. It was noted that the Authority cannot make a loan or grant that would result in an interbasin transfer (IBT); the Environmental Management Commission (EMC) approves IBTs.

Item F. Overview of Active Work Items

This item was a brief overview of the discussion topics for Agenda Items G through J.

Item G. Master Plan Committee Report

Master Plan Committee Chair Hunnicutt summarized the work of the Committee. The overall direction of the Plan will be to set the short- and longer-term vision for infrastructure, identify the gaps to get to the vision, identify tools needed to close the gaps, and to ensure that the Plan will be a living document that will continue to be worked on over time. The gap in funding of water and sewer infrastructure needs in the state is not truly known, partly due to the fact that the industry has not been encouraged to look ahead and do the planning needed to adequately quantify needs. There was concern that including a dollar value of needs in the Master Plan would give the impression that all the needs are known and quantified which is not the case. Division staff will discuss with the UNC-CH School of Government Environmental Finance Center (EFC) their potential ability to provide data analysis to at least begin to develop a possible range of needs, acknowledging the uncertainty around the numbers, and based on information that is already available.

The Authority generally supported using the term "viable" to describe the vision for infrastructure systems and that viability may be expressed in terms of organizational, financial and technical capacity. The message of working to become viable, taking responsibility for becoming self-sufficient, and not expecting grant funds to support a utility is key to the Plan. It was noted that while the LGC does not define viable, per statute the LGC can take over a system's enterprise fund if it lacks positive working capital, lacks a positive quick ratio, and if it has a net loss of revenue; these three components indicate the system may not be financially stable.

There was also general agreement that it is difficult for local decision-makers to set aside funds for future needs unless there is some issue prompting them to begin this practice and the Master Plan should encourage this type of planning. The need to engage stakeholders as the plan is further developed was discussed. The Committee will report to the Authority again in September.

Item H. Affordability Criteria Development

The House and Senate budget proposals both include the Authority's recommendation to use affordability criteria as a way to pair a grant with a loan offer thereby maximizing the current funding resources. The pairing of funding could potentially be implemented for the spring 2016 application round. A number of parameters that could be considered had been vetted with subject matter experts (SMEs) with the LGC, the EFC, and the USDA Rural Development NC office. Some parameters are inherent to the system (such as income, population, and poverty rate) and some are set by the LGU (such as net debt, operating ratio and utility rates). Considering a combination of parameters would provide a balanced approach to developing the criteria but the parameters must be independent and not overlapping. The Authority completed a quick ranking exercise for 12 system parameters and 10 LGU parameters. Division staff will compare the Authority's results with the SME's results and will

prepare a narrowed list of parameters for discussion and potential weighting at the September Authority meeting. The concept of definitive versus graduated boundaries was presented and will be also be discussed in September.

Item I. Troubled Systems Protocol Update

One of the Authority's statutory responsibilities is to assess the need for a troubled systems protocol. Division staff has observed similarities between being a troubled system and being a system that is not viable; therefore three potential components of troubled systems may also be expressed in terms of organizational, financial and technical capacity as discussed in Agenda Item G. The Authority generally concurred that the issues may be similar. Division staff will present more information at the September Authority meeting.

Item J. Asset Management Update

The House and Senate budget proposals both include the Authority's recommendation to provide State Reserve grant funds for utilities to identify and assess its water/sewer infrastructure. Division staff is developing the criteria for applicant prioritization and the deliverables of the grant. Offering these grants could potentially be implemented for the spring 2016 application round. Information was presented about the criteria, funding levels and match requirements used by several states providing asset management type funding. The Authority noted that affordability might be a consideration when determining the need for matching funds. Division staff will present more information at the September Authority meeting.

Item M. Informal Comments from the Public

Mr. Colson stated that public comments could be made at this time with the reminder that in accordance with the Authority's Internal Operating Procedures, comments must be limited to the subject of business falling within the jurisdiction of the Authority and should not be project specific. There were no informal comments from the public.

Item N. Concluding Remarks by Authority Members, Chair, and Counsel

The next Authority meeting dates were confirmed for September 17 and December 10, 2015. Mr. Colson requested that the date of the January 2016 Authority meeting be established at this time; the Authority agreed to meet on January 21, 2016. A draft schedule for 2016 meetings will be presented in September.

Item O. Adjourn – The meeting was adjourned.

State Water Infrastructure Authority
Meeting Date: September 17, 2015
Agenda Item F – Draft 2016 Meeting Schedule

Division of Water Infrastructure Staff Report

Background:

Under the Internal Operating Procedures for the North Carolina State Water Infrastructure Authority, adopted by the Authority on February 20, 2014, Article III, Section 2 provides that prior to the first meeting of each calendar year the Authority shall approve a schedule of regular meetings for the subsequent calendar year (regular meetings).

Note, however, that after the year's schedule has been approved, the Chair is authorized under Article III, Section 2 to make changes to the meeting dates if required with at least 7 calendar days' notice.

Planning for 2016 Meetings

Staff suggests that the Authority review the following schedule of regular meetings for the calendar year 2016, and plan to approve the schedule at its December 10, 2015 meeting:

Proposed Date of Regular Meetings in 2016
January 21 (note that the Authority already approved this date at its July 23 meeting)
March 17
June 23
August 18
October 20
December 15

Parameters Kept for Further Consideration in Affordability Analysis				
Parameter	**Definition**	**Pros**	**Cons**	**Rationale for Acceptance**
System Parameters				
Days Cash on Hand	How long a system could run if customers stopped paying their water and sewer bills. $DCH = \frac{(Unrestricted\ Cash + Cash\ Equivalents) \times 365}{Total\ Operating\ Expenses - Depreciation - amortization}$	• Provides information regarding how long a system could run with no income (e.g., worst-case scenario)	• Scenario of suddenly being without any income seems unrealistic, as most systems lose customers gradually. • Volatility of data may occur since Days Cash on Hand can vary from day to day.	• Keeping for now due to support of Authority (Ranked #2) **<u>Concerns</u>** • The scenario of suddenly being without income does not seem to be realistic. • Volatility of data is a concern.
Debt Service Coverage Ratio	The ability of a utility to cover its debts and expenses over a given year. $DSCR = \frac{Operating\ Revenue - Operating\ Exp - Depreciation}{Principal + Interest^{a}}$ [a]Long-term Debt	• Gives an indication of the ability of the system to cover its debt (ratio of less than 1 indicates that a system is not covering its debt). • Gives an indication of the ability of the system to cover its expenses (ratio of less than 1 means that the system is not covering its expenses). • Can serve as a way to show how much capacity a system has for taking on debt.	• Does not give an indication of how well a system is run.	• Parameter can pull "double duty" by showing that a system is or is not covering both expenses and debt.
Net Debt per Connection	The total amount of debt that a system has per account it has.	• Gives an overall indication of how much debt a system has and the debt burden per connection.	• May be duplicative of other parameters considered. • May not be as informative as other parameters.	• Shows the impact of all debt (potentially including project) on a per connection basis.

Operating Ratio	The ability of a system to cover its day-to-day expenditures, including debt. $OR = \frac{Operating\ Revenue}{(Total\ Expenditures + Debt\ Principal + Interest + Capital\ Outlay)}$	• Looks purely at how well a system is able to cover its operating expenses and debt. • Below 1 shows that they must utilize other resources to cover expenses.	• Does not differentiate between whether or not a system cannot cover its expenditures or both expenditures and debt. • Can be duplicative of DSCR.	• Ranked highest by the Authority (#1). • Indicates how well a system is run.
Project Cost/ Connection	The cost to construct the project for which a system is applying on a per connection basis.	• Gives an indication of how the project will directly impact connections.	• Dependent upon application, meaning that it can vary widely.	• Directly influences the debt situation of an Applicant in a worst-case situation (e.g., 100% loan).
Rates/MHI	The amount of money users pay for water and sewer (rates per 5,000 gallons) shown as a percentage of income	• Give an accurate number of how much a connection pays for a set volume usage.	• Rates must be used in conjunction with another parameter.	• Provides an idea of how much users may pay in terms of how it impacts MHI.
System Size (connections)	The number of water and sewer accounts to support a water or sewer utility. What the system sees when looking at finances.	• Gives a solid indication of the amount of customers that a system has and can be charged to pay for water and sewer.	• Not meaningful when used on its own.	• Used in conjunction with other parameters.

LGU Parameters				
Median Household Income	Money received on a regular basis. Includes the income of the householder and all other individuals 15 years or over in the household.	• Gives income by household, which is the way water and sewer customers are billed. • Gives an indication of the collective paying power of a household. • MHI is generally understood. • Income is considered in bond ratings.	• Covers groups rather than individuals.	• MHI is a commonly understood parameter. • There was no basis found by the Division to diverge from MHI. • Can be used as a surrogate with other parameters (e.g., Rates/MHI) as well as on its own.
Population Change	The amount of population a LGU gains or loses over a set period of time (2009-2013).	• Can show if a community is struggling economically due to loss of economic driver or other reasons. • Can provide an idea of future trends.	• Does not show a change in user accounts, which is the way systems collect revenue.	• Provides an indirect, quantitative indication of economic hardship and potential trends.
Poverty Rate	The percentage of people who lived in poverty for a calendar year. Poverty rate is based upon the poverty threshold. The poverty threshold varies by family size but does not vary geographically. Updated for inflation.	• Gives a representation about how many people in a LGU live beneath the poverty threshold. • Considered in bond ratings. • Varies by size and composition of families. • When used in conjunction with other parameters, can give an indication of under-employment and unemployment.	• Does not vary across the country due to the impossibility of calculating the cost of living.	• Provides a good indication about the amount of poor population within a LGU. • Can provide a good indication of under-employed and unemployed. • Ranked #1 by Authority.

Property Valuation per capita	The worth of a LGU's tax base on a per person basis.	• Provides an idea of the wealth of a LGU.	• Does not provide an indication of the wealth of a system if different from the LGU	• Provides information on the general wealth of a community. • Ranked #2 by the Authority.

Parameters Removed from Further Consideration in Affordability Analysis		
Parameter	**Definition**	**Rationale for Removal**
System Parameters		
Bond/Credit Rating	The ability, as rated by bond rating agencies, to be able to pay back a loan.	• A lot of communities do not have bond ratings. • Bonding agencies look at a lot more information than the status of water and sewer utilities. • The information related to water and sewer utilities that they do look at is covered under other parameters being considered. • Bonding agencies make predictive judgments about future conditions.
Internal Control Issues	The ability of a local government unit (LGU) to manage themselves in an effective manner.	• Encompasses overall management of a LGU and not just the system. • Could be potentially controversial if all data are made public.
Other Available Funding	Other funding a system might consider to supplement DWI funding.	• Parameter does not indicate the financial state of a system.
Quick Ratio	The ability of a utility to pay its current bills, a measure of short-term liquidity.	• Can vary widely throughout the year. • Other parameters are more stable and provide more information about the financial status of a system.
System Age	The average age of a system.	• Age is impossible to determine due to variation of the age of different system components. • Age does not provide an indication of the rate of deterioration within a system. Older systems may be well maintained while newer systems may not be well maintained.
LGU Parameters		
Income Distribution	The percentage of population within certain income brackets.	• Does not provide additional information not covered by other parameters.
Loss of Economic Driver	Determination of whether or not a LGU has lost an industry (e.g., factory, hospital, military base) that provides a large source of employment and upon which other auxiliary services (e.g., groceries, big box stores) depend.	• Very subjective by nature. • Covered under the Special Considerations portion of the application for funding.
Percent Population over 65	The population that is over 65 (retirement age).	• The state has no excessively large retirement populations. • Retirement age does not indicate a lack of income.
Population	The amount of people in a geographic area.	• Population does not provide a good indication of the number of users available to pay utility bills.
Property Tax Collection Rate	The amount of property taxes collected by a LGU.	• Does not provide an indication of how well systems collect water/sewer bills.
Unemployment rate	The number of unemployed civilians shown as a percentage that fit the following: (1) who were neither "at work" nor "with a job but not at work"; (2) were actively looking for work during the last 4 weeks, and (3) were available to start a job).	• Data are too volatile, as the data change from month to month. • Data are not considered by the Division to be accurate due to the collection methods (based upon unemployment assistance filed). Does not cover those who are in their teens and not working or those who have given up on finding work.

State Water Infrastructure Authority
Meeting Date – September 17, 2015
Agenda Item H – Asset Management Update

Division of Water Infrastructure Staff Report

Background

North Carolina General Statute G.S. 159G-71 contains the powers and the duties of the State Water Infrastructure Authority (Authority) which includes the following:

- Review application of management practices in wastewater, drinking water & stormwater and to determine best practices

In addition, the Authority recommended in its 2014 Annual Report that the General Assembly broaden the use of grant funds for proactive activities including providing funds for a utility to inventory and assess its water and/or sewer infrastructure; this provision is included in the currently proposed legislation.

At its July 2015 meeting, the Division staff presented information about some of the potential asset management grant deliverables and information from other states that are funding asset management type work. Based on the Authority's July discussion, staff has continued to develop the following information for the Authority's further consideration.

A. Asset Inventory and Assessment Goals

The primary goal of the new grants is to assist utilities in creating the start of an asset management program to help them meet the demand to do more with existing resources, to better use capital and operating budgets, and to move from reactive to proactive work strategies.

The secondary goal is to enable utilities to apply to the Division funding programs with capital improvement projects that meet the most critical needs of the system, as determined by a structured asset management approach.

B. Potential Process and Deliverables

1. Inventory • Vertical and horizontal assets with mapping (details to be determined)	5. Project Identification • Develop individual or groups of projects and associated costs including engineering, construction, and other
2. Criticality (or risk) Analysis • Which assets are most critical to meet the health and safety needs of the system • Use current knowledge of consequence of failure and likelihood of failure	6. Project Prioritization
3. Condition Assessment • Involvement of utility staff • Rank most critical using a scale of 1 to 5 for simplicity	7. Capital Improvement Plan • 10-year CIP
4. Cost Development • Capital • O&M • For continuing asset inventory & assessment	

C. Potential Application Components

The following items could be required as part of the application:

1. Narrative describing benefit of funding to local government
2. Identify the utility's internal asset management team that will be heavily engaged in the project
3. Description of inspections and maintenance activities conducted the previous year
4. Description/expenditures for capital water & sewer projects the last 5 years
5. Current water & sewer rates
6. Operating ratio

D. Potential Items for Priority Points

These items could be submitted for priority points:

1. Governmental Accounting Standards Board (GASB) 34 asset inventory
2. Expenditures for collection/distribution system maintenance activities and treatment works maintenance activities performed the previous year
3. Maintenance and capital improvement budget for the upcoming year
4. Existing inventory and map

Agenda Item I - Merger/Regionalization Feasibility Grant Update

Summary of EPA's "Restructuring and Consolidation of Small Drinking Water Systems" from October 2007

State	Efforts	Additional Info.	Agencies/Statutes
Connecticut	Small water sys (<1,000 people/<250 connect) must obtain Certificate of Public Convenience and Necessity (CPCN) from Dept. of Pub Util Control before any construction (does not apply to systems owned and operated for the purpose of providing water to an elderly housing project); DPUC determines if interconnection if feasible	DPUC, DPH, DEP can "determine appropriate actions for sys that do not possess economic viability" based on performance measures of the system including financial stability, physical condition and capacity, and managerial expertise; after hearing, DPUC orders acquisition by the most suitable publce or private entity	Dept of Env Protect, DPH, DPUC; GS 16-262n; GS 16-262o
Kansas	Cost-share	50/50 cost-share funding to study the feasibility of developing regional water supply systems (KDHE Capacity Devel Program)	Dept Health and Enviro; Kansas Water Office;KSA 12-2901, 82a-637, 19-3545; 65-163d; 82a-650
Kentucky	Statutory authority to approve or refuse plans for all new water sys based on their ability to demonstrate TMF capabilty of meeting the requirements of SDWA; must prove that the service area of the new system cannot be served by an existing system	Capacity development; PSC is authorized to initate and carry out feasibility studies and can order the merging of water districts/associations including establishing rates and charges; PSC provides an "expedited rate increase process" for systems w/ <500 connect or <$300,000 gross annual revenue; PSC can acquire a system	Div. of Water; Pub Service Commiss
New Hampshire	Small water systems (25-1,000 people and do not provide street hydrant fire protection) must submit concept letter, well siting report, business plan (Management and Financial capacity), design plans (technical capacity); DES has authority to investigate and require improvements when 10+ people report water quality or quantity concerns; DES performs analysis; PWS w/ gross annual revenues <$2M may be placed into receivership/required to take temporary action to assure continued service by PUC	PUC finds that system is "consistently failing to provide adequate and reasonable service"; Capacity Assurance Rules require water sys w/ significant outstanding deficiencies develop a business plan and implement the plan once approved by DES (usually results in interconnection, contracting operations, or selling system to private company); program provides 25% reimbursement of prelim engr, design, and construction of piping, pump stations and a portion of treament facilities	Dept Env Services, PUC; ENV-WS 372; RSA 485:4; Env-Ws 363; "Regulatory Barriers to Water Supply Regional Cooperation and Conservation in New Hampshire"
New Mexico	Drinking Water Bureau contracts out assessing system capacity and providing TMF assist; requires regionalization and capacity to be evaluated for new systems; ensures sufficient TMF capacity such as ownership accountability, staffing and organizing, revenue sufficiency, credit worthiness, and fiscal management	DWB's managerial and financial capacity assistance contractor; provides assist to approx. 3 regionalization gropus at any one time; factors such as willingness to proceed by the participating systems, and capacity improvements resulting from the regionalization; providing or participating in workshops on regionalization and coordinating with other state agencies; merger must be in public interest	Finance Auth, Env. Dept

Agenda Item I - Merger/Regionalization Feasibility Grant Update

Summary of EPA's "Restructuring and Consolidation of Small Drinking Water Systems" from October 2007

State	Efforts	Additional Info.	Agencies/Statutes
Pennsylvania	Certificate of Public Convenience from PUC requires 1) business plan, 2) full description of the proposed facilities, 3) map of proposed service area, 4) proposed initial tariff of rates, proposed rules, and conditions of service, and 5) proof of compliance with applicable design, construction and operations standards of DEP or the county health department; PUC provides "acquisition incentives" and facilitates the rate process	Nonviable - in violation of a PUC statute or reg, failed to comply with DEP order, and serve <3,300 customers; acquisition incentives include additional rate of return basis points, reasonable excess acquisition costs in the rate base of the acquiring entity and amortization of 10 years, and a phased-in rate recovery for improvement costs; PUC encourages Single Tariff pricing; PUC allows 1) short form rate filing procedures for water systems w/ <$250,000 in annual operating revenues, 2) small systems to use an "operating ratio methodology" as a rate base substitute for determinine rates, 3) establishment of an emergency fund for small systems, and 4) encourages mediations and settlements to avoid high cost of litigation	PUC, Dept Env Prot; Title 52 PC Chapter 69.701;
Virginia	small water sys per SCC has gross annual operating revenue <$1M; SCC can appoint a reciever upon petition of 2/3 of affected customers, water sys staff, or the BOH; inadequate service includes 1) failure to supply water service to majority of consumers for >=5 days during the preceding three months for reasons within the control of the water & sewer sys, 2) cert by DOH that the ssystem has not met and is unwilling to meet dept standards, 3) gross mismanagement, or 4) failure to comply with SCC order to provide adquate service; Health Commiss can petition court when (1 or more 1) waterworks can no longer be depended upon to furnish pure water, 2) inadequate capacity, 3) owner has failed to comply with an order, 4) owner has abandoned the system, 5) owner is subject to forfeiture, or 6) imminent danger to public health and welfare resulting form the operation of or source for the water supply	SCC may require a water system transfer to another water system whenever required to protect public health, welfare, or safety	State Corporation Commission (56-265.13:6.1), Board of Health; 56-249.1
Colorado	Tech assistance for consolidation, restructuring, shared staffing, rate structure, and budgeting	Will contact for more information	CO Dept. of Health & Enviro - Water Quality Control Division
Indiana	Hearing to determine convenience and necessity to allow new PWS (excluding municipalities)	2001, Dept. Env Manage may develop a program that will require or encouraage the consol of system incapable of maintaing adequate capacity; considering requiring PWS's that have successfully mitigated similar issue to provide tech assist and mentor problem systems; WSMP must include assessment of consol or interconnect w/ other systems including a cost and benefit comparison	Util Reg Commiss; Dept of Env Manage

Agenda Item I - Merger/Regionalization Feasibility Grant Update

Summary of EPA's "Restructuring and Consolidation of Small Drinking Water Systems" from October 2007

State	Efforts	Additional Info.	Agencies/Statutes
Rhode Island	"economy and efficiency dictate the desirability to combine small pws w/ other pws"; statute provides water suppliers the authority to petition an adjacent supplier for the purpose of merging; merging must be through an "economically fair method"	Annexing system may impose an annexation fee b/t 10 and 100% of pre-annexation rate; annexation fee must be terminated within 30 years	PUC; 46-30-2, 46-30-4
South Carolina	DHEC petitions the state admin law court to appoint a receiver "for a system whose owner is recalcitrant towards regulatory requirements	DWSRF program offers a 1% capacity development rate to fund system upgrades and improvements	PSC, Dept of Health and Env Control, Office of Regulatory Staff; Economic Council of States grant, Low Country Council of Governments
Washington	Pub Water Sys Coord Act requires systems to identify current and future service areas, and DOH helps prevent creation of new isolated systems and ensures systems in a specific geographic region adopt consistent minimum design standards so future merging efforts are more efficient	PWSCA amended in 1991 to include "Satellite management program" (SM Agencies); newly proposed systems outside a water system's existing or future service area must be owned or operated by an approved SMA; if no SMA is available, the new sys is obligated to recieve SMA service in the future if it has problems; loans from DWSRF; 2003, $4M allocated to Water Sys Acquisition and Rehab Program to allow municip water sys to acquire and rehab systems w/ water quality problems that pose a pub health risk; state petitions court to take temp control and direct sys to a reciever; if no reciever is available, the local county is the receiver of last resort; reciever operates generally for one year before transferring to new owner	DOH; Chapter 70.116 revised code of washington

Appendix B: Listing of Common Authority, Statute, and/or Regulation Elements

Information included in the table represents information provided by each state. For additional information, please contact your state agency.

Common Authority, Statute, and/or Regulation Elements																										
	AK	AR	AZ	CA	CT	ID	IN	KS	KY	LA	MI	MS	MO	NV	NH	NM	NJ	NY	OR	PA	RI	SC	TX	VA	WA	WV	WY
State Requires Acquired System to Give Consent for Mergers or Acquisitions									X		X								X	X	X						
State Requires Acquiring System to Give Consent to Accept Consolidation or Restructuring	X[i]								X		X				X[ii]				X	X	X						
Acquiring System Allowed to Impose a Surcharge, Additional Fee, Compensation, Etc.					X				X								X			X	X						
PSC or PUC Provides Expedited Rate Making Procedures for Consolidating Systems					X				X	X										X							
Acquiring System Assumes Liabilities or Obligations of Acquired System									X			X							X	X					X		
State Can Attach Assets, Appoint a Receiver, Order a Takeover or Merger					X				X	X		X	X	X	X		X		X[iii]	X		X	X[iv]	X	X		
Consolidating Systems Eligible for Additional Grants or Loans, or Receive Preferred Status for Financial Assistance Programs		X	X[v]			X		X								X	X	X		X		X		X	X	X	
State Can Order Improvements, Changes, or Additions to Consolidating Systems			X														X		X	X				X			
New Systems Must Prove Need for Service, Existing Systems Must Prove Need for Extensions					X	X	X		X		X				X					X			X		X[vi]		
New Systems Must Submit Regionalization or Consolidation Studies or Assessments				X			X									X				X			X				

i. When required by public convenience and necessity, the Alaska PUC can order a public system to allow another public system to use its facilities.

ii. The New Hampshire DES can order an existing system to allow a deficient system to interconnect, if after complaint and investigation, DES determines that a significant health or safety risk exists and that the extension of water service from an existing PWS is the most feasible and cost-effective alternative to alleviate the risk.

iii. The Oregon courts can appoint a special master to operate a water system under certain circumstances.

iv. The Texas TCEQ can ask the State Attorney General to appoint a temporary manager, and can place the system under TCEQ supervision.

v. The Arizona DEQ is authorized to allow systems to share monitoring and analytical costs.

vi. New water systems must either be owned or operated by a designated satellite system or show that a satellite management system is not available. The new system must also show that it has sufficient management and financial resources to provide safe water.

State Water Infrastructure Authority
Meeting Date – September 17, 2015
Agenda Item K – Troubled System Protocol

Division of Water Infrastructure Staff Report

Background

North Carolina General Statute G.S. 159G-71 contains the powers and the duties of the State Water Infrastructure Authority (Authority) which includes the following:

- To assess the need for a troubled system protocol

At its July 2015 meeting, the Division staff presented information about some of the potential characteristics of troubled systems, developed by speaking with subject matter experts with the Local Government Commission (LGC) and with other federal agencies. Three potential components – financial, organizational and technical – had been identified and were then discussed by the Authority.

Based on the Authority's July discussion, staff has continued to develop the following information for the Authority's further consideration.

Potential Troubled System Characteristics

Potential Characteristic	Potential Measurements (Criteria)
Financial	1. Population 2. Use selected parameters developed for the Affordability Criteria • System Parameter – Days of cash on hand • Local Government Unit Parameter – Median household income (MHI)
Organizational	1. Applicant is on the LGC's Unit Watch List for multiple years, especially if due to internal control issues 2. Applicant has not submitted required annual audit to LGC, especially for multiple years 3. Utility System Management • Billing Policies/Revenue Generation ○ Rate structure and how often is it reviewed and updated ○ Service connection/reconnection policy and fees ○ Metering policy (are meters used/what is metered) • Review the System Management points earned in the Priority Rating System – primarily points for Capital Improvement Plan and Asset Management Plan
Technical	Primarily number and types of violations

NORTH CAROLINA
STATE WATER INFRASTRUCTURE AUTHORITY

November 1, 2015 Annual Report to:

- **Senate Appropriations Committee on Natural and Economic Resources**
- **House of Representatives Appropriations Subcommittee on Natural and Economic Resources**
- **Fiscal Research Division of the Legislative Services Commission**

Note – yellow highlights indicate statements that will need to be changed depending on the status of the Budget Bill

Prepared by

The North Carolina State Water Infrastructure Authority

November 1, 2015

The State Water Infrastructure Authority is very appreciative that the North Carolina General Assembly incorporated most of the recommendations provided in its 2014 Annual Report into legislation during the 2015 session

As a result, the Authority is better able to carry out its assigned duties and to provide enhanced coordination of the use of the monetary resources entrusted to it by the General Assembly to improve public health and the environment for all North Carolinians

Pursuant to § 159G-72, the State Water Infrastructure Authority shall submit a report no later than November 1 of each year on its activity and findings, including any recommendations or legislative proposals, to the Senate Appropriations Committee on Natural and Economic Resources, the House of Representatives Appropriations Subcommittee on Natural and Economic Resources, and the Fiscal Research Division of the Legislative Services Commission.

On behalf of the Authority, please consider this as the formal submission of the 2015 State Water Infrastructure Authority Annual Report.

The Authority would be pleased to respond to questions or provide additional information as may be requested by the General Assembly.

The State Water Infrastructure Authority thanks the North Carolina General Assembly for its support throughout 2015 and looks forward to working to continue to streamline and unify the water infrastructure funding available to the residents of North Carolina.

The State Water Infrastructure Authority gratefully acknowledges the support provided by the staff of the NCDENR Division of Water Infrastructure in conducting the Authority's business and in preparing this report

NORTH CAROLINA
STATE WATER INFRASTRUCTURE AUTHORITY
November 1, 2015 Annual Report

The nine-member State Water Infrastructure Authority (Authority) was created by the North Carolina General Assembly in 2013 to assess and make recommendations about the state's water and wastewater infrastructure needs and the funding programs available to the state's local governments. Session Law 2013-360 established the Authority and also the Division of Water Infrastructure (Division) within the North Carolina Department of Environment and Natural Resources, thereby consolidating the major water-related infrastructure funding programs within one division and one department. A list of the current Authority members is provided in Appendix A.

The Authority's 2014 Annual Report contained a number of recommendations designed to enable the Authority to better carry out its assigned duties and to improve coordination of the monetary resources entrusted to it. The Authority is very appreciative of the General Assembly's consideration of the recommendations most of which were incorporated into the 2015 Budget Bill adopted in September 2015. The key benefits resulting from the new legislation include:

- Ensuring that grant funds are being awarded to the most economically distressed communities by considering the relative affordability of a project for that community compared to other communities in the state
- Stretching the use of limited grant funds by pairing grants with loans when financially feasible for a community
- Broadening the use of grant funds to encourage water and wastewater utilities to become more proactive in the management and financing of their systems
- Improving the Authority's ability to perform its duties and providing enhanced coordination of the use of the monetary resources entrusted to it by the General Assembly to improve public health and the environment for all North Carolinians

The Authority is very appreciative that the General Assembly incorporated into legislation most of the recommendations provided in its 2014 Annual Report

The purpose of this report is to provide the legislative bodies with an overview of the Authority's activities in 2015, to summarize concerns and issues discussed by the Authority regarding North Carolina's water infrastructure, and to provide recommendations to further study/address some of those issues.

State Water Infrastructure Authority Activities

The Authority has been working since January 2014 to meet the many objectives defined in North Carolina General Statute 159G-71. The Authority's twelve powers and duties (provided in Appendix B) as defined in the General Statute can be grouped into four primary areas:

1. Distribution of loan and grant funds
2. Define water infrastructure needs and funding, and develop a State Water Infrastructure Master Plan
3. Assess emerging practices in utility planning and funding
4. Assess need for "troubled systems" protocol

The focus areas are described below along with the Authority's activities in each area.

Focus Area 1 – Distribution of loan and grant funds

The first four of the Authority's duties focus on the distribution of loan and grant funds from the five funding programs administered by the Division:

1. Federal-state Clean Water State Revolving Fund (CWSRF loan program)
2. Federal-state Drinking Water State Revolving Fund (DWSRF loan program)
3. Federal Community Development Block Grant-Infrastructure (CDBG-I grant program)
4. State Wastewater Reserve program (grants and loans)
5. State Drinking Water Reserve program (grants and loans)

One of the Authority's most significant accomplishments in 2015 was a major modification of the priority criteria across all funding programs in order to unify the criteria while still maintaining the unique focus of each program. This action supports the following goals of the Authority and the Division:

- Better align the scoring systems of all the funding programs so that, eventually, an applicant could submit one application that could be considered for funding under any of the applicable programs
- Help make the application process less time-consuming and more straight-forward for applicants
- Enable the Division to potentially propose a tailored "funding package" that might include a combination of both loan and grant funds

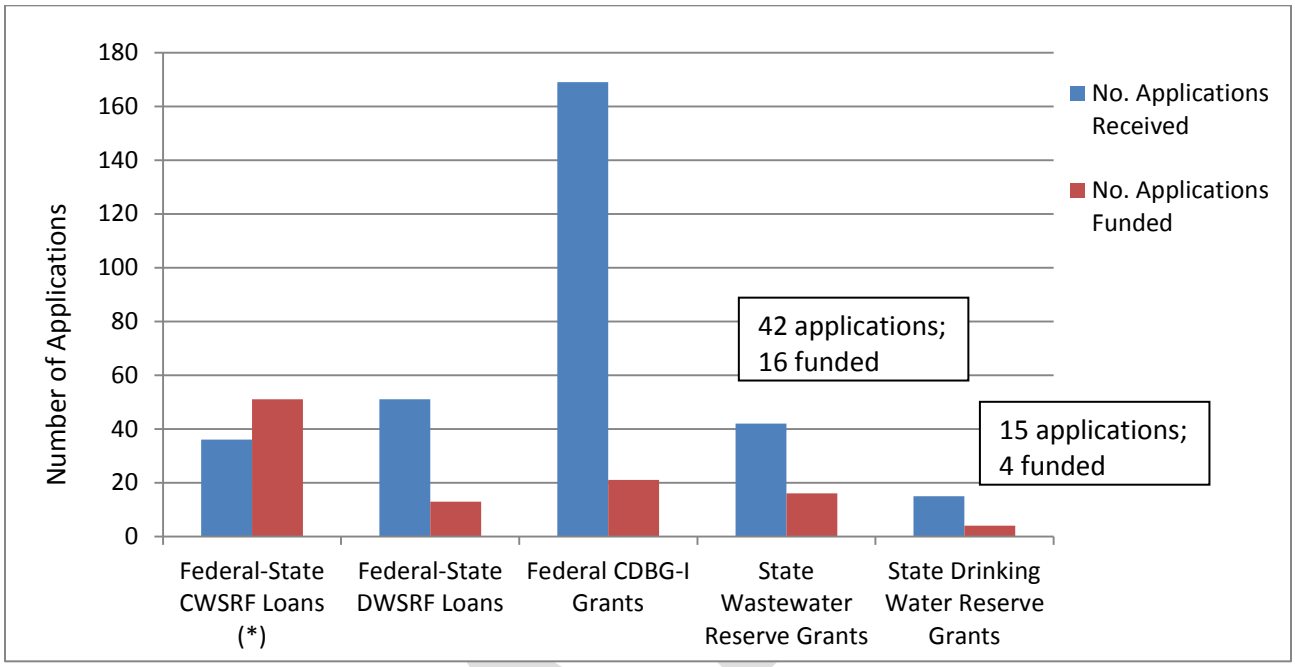
Accomplishments

- Major modification of priority criteria to unify criteria across the five funding programs while maintaining unique focus of each program
  - Supports progress toward a single funding application process
  - Supports integration of funding resources by pairing loan and grant funds
  - Furthers the Authority's ability to maximize the use of funding resources
  - Implements the 2015 Budget Bill legislation
- Awarded a total of $218 million in grant and loan funds
  - CWSRF and DWSRF loans – $174 million
  - State Reserve Program grant funds – $5 million
  - CDBG-I grant funds – $39 million

The alignment and changes made to the priority criteria support the Authority's ability to maximize the use of available funding resources, implements the 2015 Budget Bill, and will be reflected in the Authority's infrastructure master plan which is discussed below.

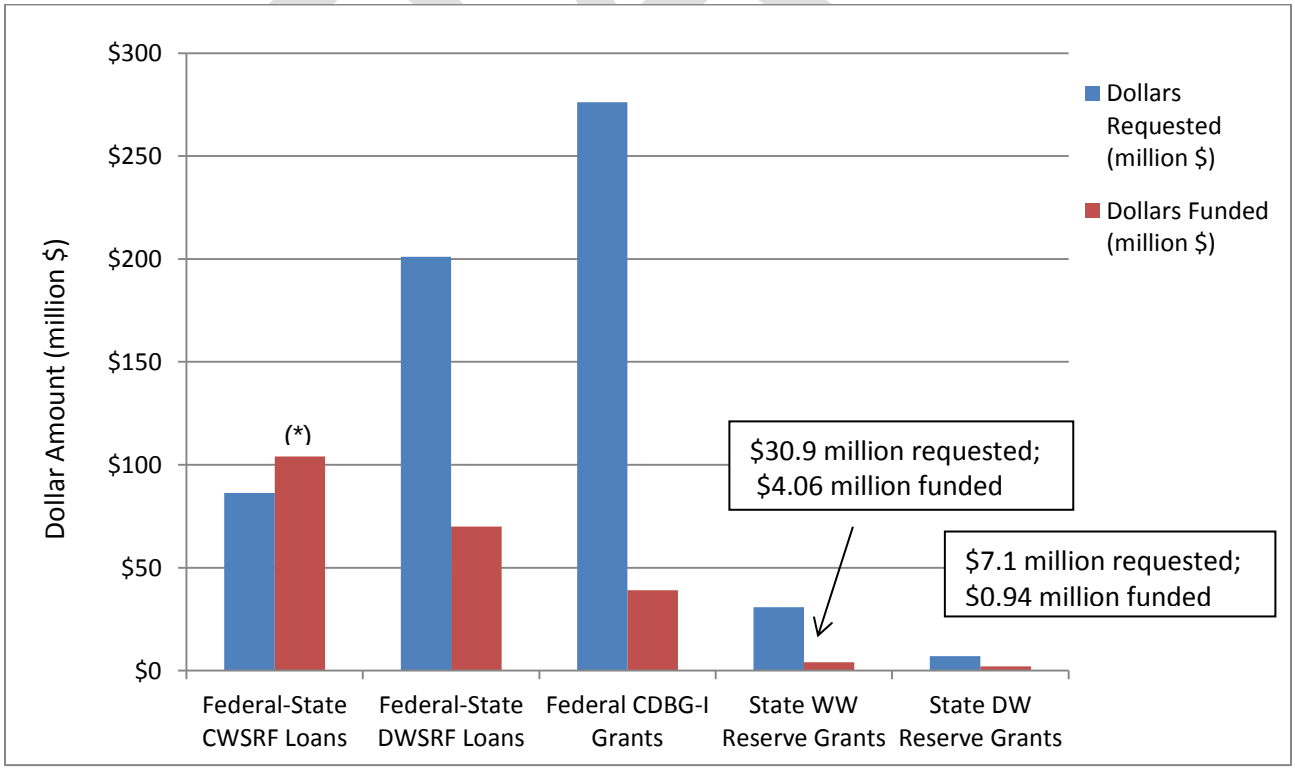
In 2015, the Authority awarded a total of $218 million in loan and grant funds for projects from the fall 2014 and spring 2015 application rounds; the requests received totaled $601.5 million. Figures 1 and 2 present the number of applications received and funded, and the dollar amounts requested and funded, respectively. Appendix C contains details about the requests and approved funding for each of the five programs.

Figure 1. Number of Applications Received and Funded – Fall 2014 and Spring 2015 Application Rounds
(Total number applications received: 313; total number applications funded: 105; see Appendix C for data)



(*) Applications for the State Wastewater Reserve High Unit Cost grants far exceeded the amount of funding available. The Authority approved offering CWSRF loan funds to those applicants to provide an alternate means of funding.

Figure 2. Amount Requested in Applications and Funded ($ million) – Fall 2014 and Spring 2015 Application Rounds
(Total amount requested: $601.5 million; total amount funded: $218 million; see Appendix C for data)



(*) Applications for the State Wastewater Reserve High Unit Cost grants far exceeded the amount of funding available. The Authority approved offering CWSRF loan funds to those applicants to provide an alternate means of funding.

Focus Area 2 – Define water infrastructure needs and funding; develop Master Plan

The next four duties encompass defining the statewide water and wastewater infrastructure needs, examining funding sources and their adequacy to meet the identified needs, and assessing the role of the State to develop and fund water infrastructure. The Authority is also developing a master plan to meet the State's water infrastructure needs.

Accomplishments

- Developing initial master plan for spring 2016 release
- Developing affordability criteria to maximize use of current funds

This focus area includes determining the best way to maximize the use of current funding resources and to ensure that funds are used in a coordinated manner. To address this issue, the Authority is developing affordability criteria which will determine the relative affordability of a project for a community compared to other communities in the state based on several factors. The goal of using affordability criteria is to help ensure that the limited grant funds are being awarded to the most economically distressed communities by pairing grants with loans when financially feasible for a community. The Authority is required to report to the Environmental Review Commission and the Fiscal Research Division regarding the criteria implementation within 30 days of its adoption.

Master Plan Vision

The State will best be able to meet its water infrastructure needs by ensuring utilities are, or are on a path to be, viable systems.

A viable system is one that functions as a business enterprise, establishes organizational excellence, and provides appropriate levels of infrastructure maintenance, operation, and reinvestment – including reserves for unexpected events – that allows the utility to provide reliable water services to customers now and in the future.

The Authority has adopted a vision for the master plan and is working with the Division to formulate the initial plan for release in the spring of 2016. Creating long-term viability is one of the key issues identified by the Authority and is discussed further below.

Focus Area 3 – Assess emerging practices in utility planning and funding

These objectives concentrate on investigating methods of utility planning, management and funding such as best management practices and alternative methods of infrastructure funding.

Accomplishments

- Creating paths toward viability:
  - Asset Inventory and Assessment grant framework
  - Merger/Regionalization Feasibility grant framework

Grants for asset inventory and assessments, as included in the statutory changes, provide an incentive to encourage utilities to take steps to become more proactive in the management and financing of their systems. These grants will help communities take steps to better understand their infrastructure needs by:

- Identifying system components and where they are located
- Determining the condition of critical components
- Establishing costs for replacement/repairs/upgrades (capital) and continuous operations and maintenance (O&M)
- Creating a prioritized list of projects to be completed
- Preparing a realistic Capital Improvement Plan (CIP) that includes critical projects

Once the needs, costs and priorities are known, the utility will be able to take the next important step by determining how it will fund the most critical projects; this may include infrastructure funding applications to the Division along with other potential actions such as rate structure analyses/ adjustments. This information will enable a utility to make informed business decisions about the best use of its enterprise funds. Together, the goal of all of these activities is to move a utility toward becoming a viable enterprise system and away from a potentially continuous cycle of relying upon grant funding to 'fix' problems as they are identified – often by catastrophic failure.

Grants for merger/regionalization feasibility analyses, as included in the statutory changes, provide funds for entities to investigate the feasibility of voluntary merger/regionalization options. This analysis will help utilities that may be non-compliant or non-viable or seeking to become a more competitive utility provider/improve their operations efficiency by defining a potential option of joining with another utility. Evaluating public-private partnerships or other alternative methods of infrastructure funding will be included in the analysis. The Authority recognizes that some entities may believe that they are "giving up their identity" or ceasing to exist as a unit of local government should they merge/regionalize, but this is not the case, and staff will work with potential applicants to help ensure they understand this issue.

Focus Area 4 – Assess need for "troubled systems" protocol

This objective focuses on the reasons that some utilities may struggle to become or remain viable and to determine the need for and types of activities to assist such systems. Division staff are working closely with the Local Government Commission (LGC) and the Authority to define some of the reasons that utilities may be considered troubled.

In general, a troubled system may lack sufficient financial or organizational capacity to function as a viable enterprise system. Some of the characteristics of such systems may include internal control issues, lack of audited financials, and low cash balances, as well as issues related to system size, water and wastewater system billing/revenue generation policies, utility rates, condition assessments, and affordability considerations.

While an overarching protocol that could be applied to any system would be ideal, the Authority recognizes that the potential to be troubled may result from a number of different circumstances that may be unique to each community and require approaches tailored to an individual community's needs.

Accomplishments

- Working with the Local Government Commission to define characteristics of troubled systems
- Developing a range of potential procedure/ practice improvements that may need to be implemented; can be tailored to each community

Division staff and the Authority are drafting a potential protocol and are considering the important role that the state may play in assisting such systems.

Issues Identified by the Authority

Through the Authority's work this year, a number of issues and concerns regarding water and wastewater infrastructure have been identified. These key issues will be further developed in the master plan and are discussed below:

1. Focus is Needed on Aging and Critical Infrastructure

Large segments and components of the nation's critical infrastructure systems are now 50 to 100 years old and their performance and condition are worsening. Renewing and restructuring these critical infrastructure systems to meet some of the 21st century's challenges is a task that is radically different from that of building new systems in undeveloped areas. Renewal efforts must take into account an extensive network of existing systems, urban development, ownership patterns, construction processes, management practices, financing mechanisms, and regulatory mandates. Approaching infrastructure renewal by continuing to use the same processes, practices, technologies, and materials that were developed in the last century will likely yield the same results: increasing instances of service disruptions, and higher operating and repair costs. There is an important opportunity to fundamentally reexamine the purposes and value of critical infrastructure systems and of the decision-making processes used for investing in them.[1] These national issues must also be addressed in North Carolina.

A reexamination of the purposes and value of critical infrastructure and of the decision-making processes used for investing in them may be needed

Aging Infrastructure

According to the North Carolina Section of the American Society of Civil Engineers, renewal and replacement of aging infrastructure is the biggest issue for North Carolina.[2]

However, the Authority recognizes that providing funds just to repair infrastructure without ensuring that the utility provider also takes steps to change its past practices so that it is prepared going forward to maintain, operate and provide for eventual renewal will likely result in the entity returning again and again for funding to fix repeated, predictable, on-going infrastructure failures.

Renewal and replacement of aging infrastructure is North Carolina's biggest issue

Critical Infrastructure

Critical infrastructure includes "Systems and assets so vital…that the incapacity or destruction of such systems would have a debilitating impact on…economic security…[and] public health or safety…"[3] Water and wastewater systems are considered critical infrastructure and local governments are the key players responsible for their critical assets, according to the Department of Homeland Security[4] (DHS). Appropriate management activities described by DHS include:

- Develop a consistent approach to identify, determine risks of, and prioritize investment for critical infrastructure;
- Identify, implement, and monitor a risk management approach;
- Ensure that funding priorities are addressed and that resources are allocated effectively; and
- Coordinate with partners to promote education, training, and awareness of critical infrastructure.

Risk is the potential for an unwanted outcome resulting from an event, as determined by its likelihood and associated consequences[5]

It is recognized that some utilities responsible for water and wastewater infrastructure systems may not fully understand their needs and be able to quantify risks, or be able to effectively communicate information to decision-makers about the risk and costs associated with critical infrastructure failure. Key information to communicate to local government leaders who make the final decisions about when, where and how to spend enterprise fund dollars must include both a clear description of the risks, and the cost to address the risk now along with the cost of deferring work into the future.

Key information that must be communicated includes a clear account of the risks, and the cost to address issues now along with the cost of deferring needed work

2. Long-Term Viability is Crucial

In its report "Guiding Principles for the Nation's Critical Infrastructure"[6] the American Society of Civil Engineers states that "The long-term viability of any critical infrastructure system – no matter how resilient and sustainable it is – will ultimately rely on the *human and organizational stewardship the infrastructure system receives*. Effective organizations can control program outcomes through technical oversight, coordination,…appropriate control and change management, and effective communication…Conversely, without sound leadership and management of critical infrastructure projects, the nation's safety, health, and welfare are at risk." *(emphasis added)*

"A major shift in thinking is needed within the critical infrastructure sector to make risk analysis, management and communication the standard basis on which projects are developed and implemented" [6]

It is possible that many of the state's utilities could become more viable if key decision-makers better understood their inherent responsibility for and critical role in protecting public safety, health and welfare, and began to operate their utility as a business. Key steps might include implementing asset management programs as well as realistically considering that a merger or regionalization might be in their customers' best interest.

The Authority is interested in utilizing the state's limited funding resources to fund projects that will move a system toward viability. As such, the Authority will work toward developing methods to identify the best solutions by which a utility may become viable, which may or may not involve construction of physical infrastructure.

3. Enterprise Funds Must Provide Appropriate Infrastructure Funding Levels

Local governments and public authorities are required to establish and maintain a fund for each utility or enterprise that it owns or operates. The term "enterprise" is generally accepted to mean self-supporting activities that are of a commercial nature and that provide services, goods, or facilities to the public for a charge. Water and wastewater enterprise funds are established by water service providers. However, further information may be needed from potential grant and loan applicants to demonstrate that the rates and fees being charged cover not only the entity's capital needs but also the long-term operation and maintenance costs including eventual renewal and replacement.

The level of investment in operating and maintaining critical infrastructure has not been adequate, as evidenced by the deteriorating condition of many infrastructure systems [4]

Next Steps

In the coming year, the Authority plans to explore the following issues as it develops the master plan and will provide recommendations to the General Assembly to help improve the state's infrastructure as well as the decision-making processes used for investing in them:

- Potential requirements for asset management programs to be in place in order for an entity to be eligible for grant funds
- Potential requirements for utility decision-makers to receive training focusing on their responsibility for public health and welfare, and the operation of their utility as a business enterprise
- Develop methods to identify the best solutions by which a utility may become viable, which may or may not involve construction of physical infrastructure
- Engagement of multiple stakeholders such as counties and Councils of Government (COGs) in solving the problems of non-viable water and wastewater utilities within and across their jurisdictions
- Potential minimum construction and inspection requirements for projects constructed with grant funds to ensure a high quality end-product

Providing funds to repair infrastructure without ensuring the utility takes steps toward becoming viable will likely result in the entity repeatedly returning for funding to fix predictable, on-going infrastructure failures

The recommendations developed by the Authority in the next year will enable the Authority to better carry out its assigned duties and to provide enhanced coordination of the use of the monetary resources entrusted to it by the General Assembly to improve public health and the environment for all North Carolinians.

APPENDIX A

State Water Infrastructure Authority Members

The State Water Infrastructure Authority was created within the North Carolina Department of Environment and Natural Resources by Session Law 2013-360. The current members of the Authority are listed in Table A.1.

Table A.1. Current State Water Infrastructure Authority Members

Cite § 159G-70.(b)	Position Requirements	Name	Title	Appointing Authority
(1)	Director of Division of Water Infrastructure[1] / Serves as Authority Chair	Kim Colson – Chair	Director, Division of Water Infrastructure	Ex-Officio
(2)	Secretary of Commerce[1] / Familiar with Water or other Infrastructure Improvements	Dr. Patricia Mitchell	Assistant Secretary, Rural Development Division; Dept. of Commerce	Ex-Officio
(3)	Director of Local Government Commission[1] (Office of the State Treasurer)	Robin Hammond	Assistant General Counsel, Local Government Commission	Ex-Officio
(4)	Professional Engineer in Private Sector Familiar with Wastewater Systems	JD Solomon	Vice President, CH2MHILL	Governor
(5)	Knowledgeable about Federal Funding for Wastewater and Water Systems	Vacant	—	Governor
(6)	Knowledgeable about Urban Wastewater or Water Systems	Leila Goodwin	Water Resources Engineer	Senate Pro Tempore
(7)	Knowledgeable about Rural Wastewater or Water Systems	Charles Vines	Mitchell County Manager	Senate Pro Tempore
(8)	County Commissioner or Resident of a Rural County Knowledgeable about Public Health Services	Cal Stiles	Cherokee County Commissioner	Speaker of the House
(9)	Familiar with Wastewater, Drinking Water and Stormwater Issues and State Funding Sources	Maria Hunnicutt	Manager, Broad River Water Authority	Speaker of the House

[1] Or designee

APPENDIX B

Powers and duties of the State Water Infrastructure Authority (NCGS 159G-71)

North Carolina General Statute 159G-71 lists the following as the Authority's powers and duties:

1. Review recommendations for grants and loans submitted to it by the Division of Water Infrastructure
   - Determine the rank of applications
   - Select the applications that are eligible to receive grants and loans
2. Establish priorities for making loans and grants, consistent with federal law
3. Review the criteria for making loans and grants and make recommendations, if any, for additional criteria or changes to the criteria
4. Develop guidelines for making loans and grants
5. Develop a master plan to meet the State's water infrastructure needs
6. Assess and make recommendations on the role of the State in the development and funding of wastewater, drinking water, and stormwater infrastructure
7. Analyze the adequacy of projected funding to meet projected needs over the next five years
8. Make recommendations on ways to maximize the use of current funding resources (federal, State, local) and ensure that funds are used in a coordinated manner
9. Review the application of management practices in wastewater, drinking water, and stormwater utilities and to determine the best practices
10. Assess the role of public-private partnerships in the future provision of utility service
11. Assess the application of the river basin approach to utility planning and management
12. Assess the need for a "troubled system" protocol

APPENDIX C

2014-2015 Loan and Grant Program Applications Received and Awarded Funding in 2015

Table C.1 provides a summary of the applications received by the Division in September 2014 and March 2015 and awarded funding by the Authority in December 2014 and May 2015 respectively. Given the amount of funding available in each program, it is apparent than only a small percentage of the total requests were able to be funded.

Table C.1. 2014-2015 Loan and Grant Program Applications Received and Awarded Funding in 2015

Funding Program and Application Round	Number Applications Received	Number Applications Funded	Dollar Amount Requested	Dollar Amount Funded
Federal-State CWSRF (Sept. 2014 and March 2015 Application Rounds)	36	51 (*)	$86.4 million	$104 (*) million
Federal-State DWSRF (Sept. 2014 Application Round)	51	13	$201 million	$70 million
Federal CDBG-I (Sept. 2014 and March 2015 Application Rounds)	169	21	$276.1 million	$39 million
State Wastewater Reserve (includes High Unit Cost grants and Technical Assistance grants) (March 2015 Application Round)	42	16	$30.9 million	$4 million
State Drinking Water Reserve (includes High Unit Cost grants and Technical Assistance grants) (March 2015 Application Round)	15	4	$7.1 million	$0.94 million
Totals	**313**	**105**	**$601.5 million**	**$218 million**

(*) Applications for the State Wastewater Reserve High Unit Cost grants far exceeded the amount of funding available. The Authority approved offering CWSRF loan funds to those applicants to provide an alternate means of funding.

APPENDIX D

Works Cited

1. National Academy of Sciences, National Research Council, Sustainable Critical Infrastructure Systems: A Framework for Meeting 21st Century Imperatives, 2009.
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