



Catherine B. Templeton, Director

*Promoting and protecting the health of the public and the environment*

September 23, 2014

The Honorable Nikki R. Haley  
Office of the Governor  
1205 Pendleton Street  
Columbia, SC 29201

Re: DHEC's Drinking Water Capacity Development Program Report to The Governor

Dear Governor Haley:

The federal Safe Drinking Water Act (SDWA), Section 1420(c)(3) stipulates that no later than two years after the date that South Carolina first adopted its capacity development strategy, then subsequently every three years afterwards, the Director of the South Carolina Department of Health and Environmental Control must submit to the Governor a report describing the effectiveness of DHEC's Capacity Development Strategy and our progress in improving the technical, managerial and financial capacity of the public water systems we regulate. The 2014 report, entitled *Report to The Governor on the Efficacy of South Carolina's Capacity Development Strategy*, is enclosed.

This report will also be available for the public's review on the DHEC Bureau of Water website at [www.scdhec.net/water](http://www.scdhec.net/water). Electronic copies will be presented to the U.S. Environmental Protection Agency's Region 4 Office in Atlanta, GA, and to the Association of State Drinking Water Administrators in Washington DC.

If you have any questions or need additional information, please let me know.

Sincerely,

Catherine B. Templeton

cc: Mr. Dale Froneberger, U.S. Environmental Protection Agency, Region 4, via e-mail

# **DRINKING WATER CAPACITY DEVELOPMENT**

*for technical, managerial & financial  
sustainability of public water systems*



## **Report to the Governor On the Efficacy of South Carolina's Drinking Water Capacity Development Strategy**

**September 2014**



**Report to The Governor  
On the Efficacy of  
South Carolina's Capacity Development Strategy  
September 2014**

**Executive Summary**

Strong economic development is predicated upon having adequate and easily available resources to support development activities. Therefore, suitable utilities are first and foremost among the resources that must be on site or nearby before development will occur. This is especially true in rural areas of the state.

Having a reliable and safe water supply for these locations, aside from protecting the health of the public, can be the difference between attracting new jobs or a loss of existing jobs and population, resulting in the economic wellbeing of the area possibly becoming compromised.

Over four million of South Carolina's residents are served by community, transient or non-transient non-community public water systems. 97% of our residents are provided safe drinking water by systems that are rated as satisfactory per our operation and maintenance requirements.

A State Revolving Fund (SRF) program change allows us to now offer principal forgiveness project financing to small municipal water systems. These systems normally do not meet SRF loan requirements due to sustainability issues, but with this change, they can now apply for a principal forgiveness loan assistance agreement to make needed infrastructure improvements. All loan conditions are the same as typical SRF loan agreements except there is no repayment of the loan after construction is completed and the constructed project is placed into operation.

Submitting this Report to The Governor On the Efficacy of South Carolina's Capacity Development Strategy is a requirement of the federal Safe Drinking Water Act. Failure to submit this report as required can result in a 20% penalty deduction from the next State Revolving Fund (SRF) Drinking Water capitalization grant.

This report is prepared every three (3) years by the agency having environmental primacy, (i.e. DHEC) and is designed to outline our efforts to improve the technical, managerial and financial capacities of regulated public water systems in South Carolina consistent with the 1999 Capacity Development Strategy.

## **What is capacity development?**

Capacity development was instituted after the 1996 amendments to the federal Safe Drinking Water Act (SDWA) to comply with stipulations that each state must design a capacity development strategy that will serve as a roadmap to lead public water systems to improved technical, managerial and financial wellbeing. In a nutshell, capacity development is a process to help water systems manage with the resources they have available, while at the same time striving to increase those technical, managerial and financial resources to optimum amounts.

The previous Report to The Governor was submitted in September 2011 and can be found on the DHEC webpage under Permits, Compliance and Monitoring. To read our current capacity development strategy, go to the DHEC website and see links at <http://www.scdhec.gov/environment/WaterQuality/DrinkingWater/CapacityDevelopmentStrategy/>.

Goals and objectives of the current strategy are summarized below.

### ***1. Minimize the proliferation of small water systems and ensure that new systems demonstrate they will have the capacity to be viable water systems***

Prior to DHEC's capacity development focus in drafting newer permitting standards, almost any applicant for a construction permit could be allowed to build a new system without any consideration given to viable alternatives, such as connecting to an existing nearby public system instead of constructing a new small system.

In the 1990s, a water stakeholders group hammered out the genesis of our current strategy requiring some research into and review of existing alternatives to issuing a construction permit for a new water system. Before a construction permit can be issued for a new public water system, DHEC makes a feasibility analysis to determine the appropriateness of issuing the permit or requiring the applicant to tie onto a nearby viable public water system.

Most consulting engineers today fully understand feasibility analyses are applicable to most permit applications and will advise their clients whether to proceed with connecting to an existing viable public water system over submitting an application for a construction permit to construct a new system. During fiscal year 2014 (from July 1, 2013 through June 30, 2014) DHEC received 23 applications for permits to construct either a community or non-transient non-community system. One of those applicants was informed it must connect to a nearby municipal system; the others were allowed to construct a new public system.

### ***2. Maintain a high compliance rate of bacteriological, chemical and radionuclide monitoring by public water systems***

In the late 1980's, amendments to the SDWA made the compliance requirements for drinking water systems much more stringent. Due to the complexity of those new regulations, DHEC acquired primary responsibility for the monitoring of the systems at that time. Having this fee-based program reduced the hardships smaller systems would have faced to comply with the program.

DHEC's water quality monitoring program continues to exhibit high compliance rates for statewide coverage since the requirements were strengthened. For the past several years, this compliance rate has continuously remained above 98% for all water systems.

**3. *Maintain an effective construction permitting program***

Design and construction standards required by the construction permitting program continue to help ensure newly built systems satisfy technical and feasibility guidelines. An application for a construction permit is reviewed, along with accompanying plans, specifications and any other required documentation, to ensure all permitting requirements have been met before any construction can occur.

To help ensure the health of the public is protected, modifications or extensions to existing public water systems must also comply with these construction standards. The review process for these projects is comparable to that for a new water system. The construction permitting program is funded by an application fee that ranges in cost from \$150 to \$2000 per project, depending upon its complexity and review time.

**4. *Maintain an effective sanitary survey program***

A sanitary survey is an inspection of a drinking water system that provides an assessment or rating, based upon a standardized set of review parameters, of each active water system in the state. Sanitary surveys are performed at intervals that are determined by a system's classification and previous rating.

DHEC central and regional office staff perform sanitary surveys and follow-up technical assistance if needed. This group is funded in part by a two-percent set-aside from the state revolving fund grant and can provide technical knowledge for water systems needing assistance.

**5. *Establish an operating permit program***

DHEC's operating permit program was instituted in 1998 after amendments to the State Primary Drinking Water Regulations took effect. One purpose of an operating permit is to prevent the transfer of water system ownership to an owner lacking the necessary technical, managerial or financial capability to properly operate and maintain a system. Currently we have 1434 active community, transient and non-transient non-community water systems.

**6. *Encourage and facilitate the consolidation and regionalization of public water systems***

Several smaller municipal systems are facing the issue where operations costs are continuing to increase but their customer bases are not growing enough to generate additional revenues to cover those costs. Sharing services, personnel and water system equipment through a regionalization approach is sometimes a viable solution to this problem. In 2005, a technical assistance contractor provided DHEC a list of 10 counties that may benefit from regionalization efforts; Hampton County was at the top of the list.

On June 1, 2013, one viable system and four non-viable systems merged in Hampton County to form the Lowcountry Regional Water System (LRWS). While the system is not yet interconnected, it is now operating with one management structure. County Focus Magazine, published by the SC Association of Counties, recently published an article, “Regionalization a Growing Option for Smaller Infrastructure Systems,” referencing the Hampton County project. The article, written by the attorney who oversaw Hampton County’s regionalization project, is attached to this report,

This regionalization approach was also presented in our 2008 and 2011 Report to The Governor. This is an indication of the amount of time necessary to get a new regionalized system “off the ground” and operational. It involves multiple steps including lengthy negotiations between the individual towns and systems to insure the plan is in their best interest; a committee to commission a business plan; and then the formal legal paperwork.

The SRF program offers additional priority ranking points for systems considering regionalization or consolidation during the vetting process in each year’s Intended Use Plan (IUP). The points can range from 10 additional points for two or more systems joining together to as many as 40 additional points when a viable system takes over a non-viable system with operational and maintenance issues that cause it to be out of compliance with the SPDWR, if the project will correct those deficiencies.

**7. *Encourage and facilitate the local planning process and coordination between state and local governments***

In the Hampton County regionalization project mentioned above, the Hampton County Administration was instrumental in discussions with the towns about the conditions of their water systems and demonstrating how a regionalization concept would work. DHEC, the Budget & Control Board and the Department of Commerce collaborated on funding to form the steering committee, prepare a business plan to bring the towns together, and obtain a consultant to manage the project.

To form the new LRWS, each town was required to deed its utility systems to the new entity at no cost. Convincing them their non-viable systems were a financial liability and potential public health threat was the first hurdle to overcome.

Referendums authorizing the towns to give up their systems were held after their respective Town Councils approved resolutions to support forming a regionalized system. With their Town Council on board in support of the project, each referendum passed. The final hurdle in forming the new system was finding funds for start-up costs. Hampton County had unused jobs training/creation funds available for this purpose.

This project started as an initiative at the state level but only succeeded because of local efforts of residents wanting to improve their living conditions. The LRWS consolidation provided us with knowledge and experience to help other counties facing the same issues. Of the remaining 9 counties on the list identified as potentially benefiting from a regionalization approach, Fairfield and Orangeburg Counties have made preliminary moves towards discussing the possibility of sharing services. DHEC has supported establishment

of a steering committee in Fairfield County; discussions in Orangeburg County have not yet reached that level.

DHEC's SRF management also participates in a 'funders' roundtable,' consulting with members from the Rural Infrastructure Authority, SC Department of Commerce, the SC Budget & Control Board's Office of Local Government, US Department of Commerce (Economic Development Administration) and the USDA Rural Development's infrastructure lending team to compare information on potential projects and find the best solution for small water systems with continual compliance problems.

**8. *Support public education initiatives for improving the technical, managerial and financial capacity of public water systems***

Operator certification licensing regulations took effect in 2001. The EPA initially awarded DHEC an operator certification training reimbursement grant to train water system operators on requirements necessary to pass the licensing test in order to comply with applicable certification requirements. 389 small water system operators participated in this training and 69 received certificates immediately after this course. The licensing requirements are still in effect but operators must now fund their own efforts to become certified since the grant has expired.

The SC Rural Water Association (SCRWA) offers water system board member training. DHEC staff has participated with these classes and more are scheduled during this fiscal year.

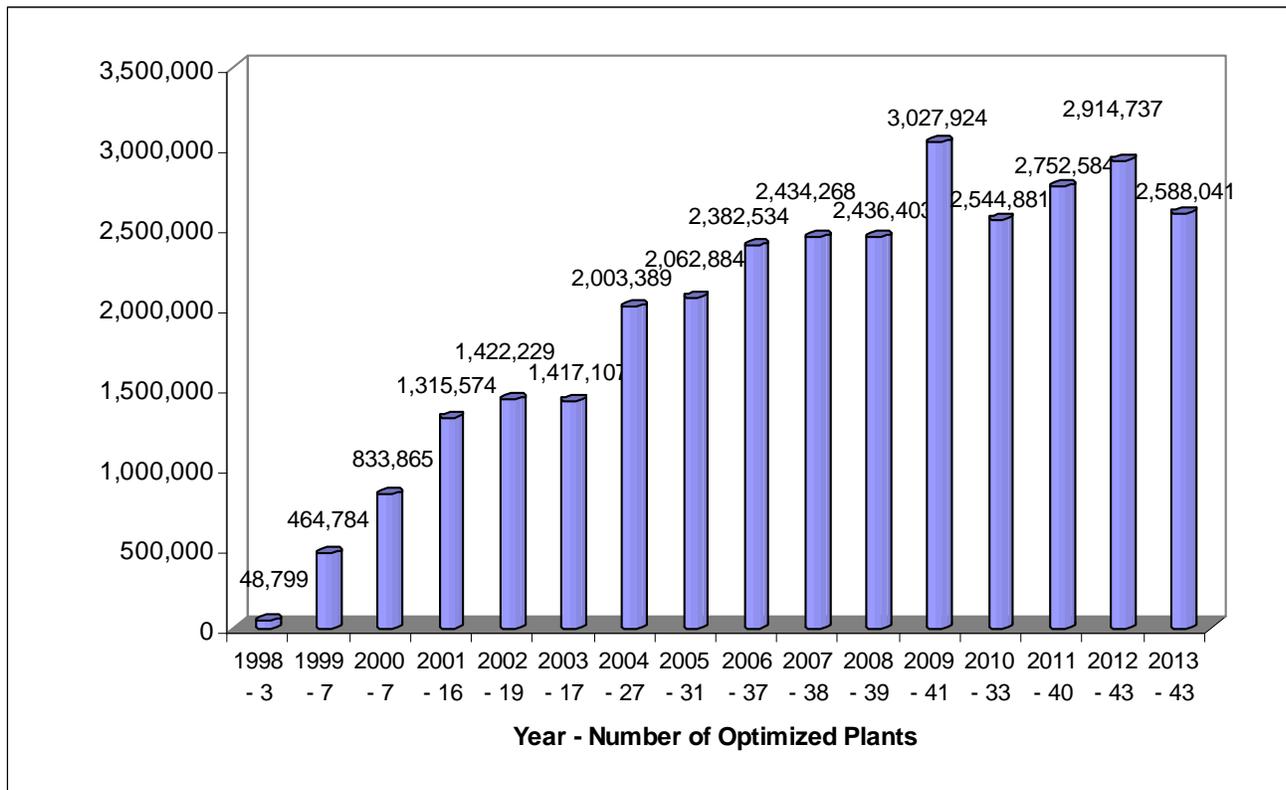
Historically, qualifying for SRF loan assistance was more onerous on small systems (those with service populations under 3,300) due to more stringent financial and operational requirements. To bring small systems into the program, the SRF section hired SCRWA to provide technical assistance to small system loan applicants so they will better qualify for needed funding to improve their systems. The most requested assistance has been for updated distribution system maps, financial and rate setting tips, and instruction in completing paperwork requirements.

DHEC's Area-Wide Optimization Program (AWOP) has been an ongoing initiative for 15 years. Its purpose is to increase public health protection by optimizing surface water filtration plant performance. Participation by surface water facilities (those whose water source is a lake or river) is voluntary, but treatment goals exceed the standards now stipulated by the State Primary Drinking Water Regulations (SPDWR).

The ranking criteria include compliance with state and federal drinking water regulations, sanitary survey results, and operational performance with respect to the optimization performance goals.

The number of water plants that met the microbial optimization goals increased during 2012. The number of citizens that receive water from an optimized plant was increased for microbial optimization.

**Area-Wide Optimization  
South Carolina Population Served By Optimized Plants**



The chart above shows the population served by optimized plants for each year. The population served by optimized plants (met settled & filtered goals) was 48,799 in 1998 and over 2.59 million in 2013. In 2013, approximately 3.06 million people in South Carolina (state population 4.5 million) were supplied with drinking water from surface water plants.

Approximately 84.55% of those people received drinking water from a plant optimized for microbial protection.

**Conclusion**

One recurring theme in this report is the need to increase South Carolina’s public water systems’ technical, managerial and financial capacities so these systems will become more sustainable, thereby allowing them to safely provide adequate drinking water to its citizens and remain in compliance with all state and federal drinking water regulations.

The State Revolving Fund must continue its role in providing financing, either in the form of low-interest loans or principal forgiveness assistance, to municipalities and other eligible participants to further ongoing improvements to our water infrastructure.

The next Report to The Governor will be due September 30, 2017.