



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

FEB 12 2019

Mr. Mike Marcus, Chief
Bureau of Water
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Dear Mr. Marcus:

As required by Title 40 of the Code of Federal Regulations §142.17, the U.S. Environmental Protection Agency Region 4 conducted an Annual Review of the Public Water System Supervision (PWSS) Program administered by the South Carolina Department of Health and Environmental Control (SC DHEC) for Fiscal Year 2017. The evaluation focused on core PWSS Program elements such as rule adoption and implementation, sanitary surveys, data management, lab certification, and enforcement. In addition, it considered other programs and issues that support implementation of the PWSS Program, including capacity development, operator certification, and state resources. For this effort, we relied on existing information already reported to the EPA by the State as well as information gathered through routine meetings and correspondence with representatives of SC DHEC's PWSS Program.

Overall, the EPA concluded that the SC DHEC continues to implement an effective PWSS Program. Please review the report and provide comments to the EPA within 30 days. If you have questions regarding any aspect of the report or the evaluation process, please contact me or have a member of your staff contact Ms. Janine Morris, of the Drinking Water Section at (404) 562-9480.

Sincerely,

A handwritten signature in blue ink, appearing to read "JEANNE M. GETTLE".

Jeanne M. Gettle, Director
Water Protection Division

Enclosure

Annual Review of the Public Water System Supervision Program
for the State of South Carolina

Fiscal Year 2017

October 1, 2016 – September 30, 2017

Summary of State Drinking Water Program

The U.S. Environmental Protection Agency Region 4 (EPA) conducted an end-of-year evaluation of the FY 2017 Public Water System Supervision (PWSS) program, administered by the South Carolina Department of Health and Environmental Control (SC DHEC). In FY 2017, SC DHEC regulated 1,408 active public water systems (PWSs) that collectively serve 3.9 million customers. These water systems are divided into 582 community water systems, 105 non-transient non-community water systems, and 721 transient water systems. Collectively, SC DHEC exceeded the EPA National Water Program Measures (as shown in *Table 1: EPA National Water Program Measures - South Carolina*). This information indicates that South Carolina continues to implement an effective drinking water program.

Table 1: EPA National Water Program Measures - South Carolina

ACS Code	EPA National Water Program Measures	State Results	FY17 EPA National Target	FY17 EPA Region 4 Target
2.1.1	Percent of the population served by community water systems that receive drinking water that meets all applicable health-based drinking water standards through approaches including effective treatment and source water protection.	98.7%	96.1%	96.1%
SP-1	Percent of community water systems that meet all applicable health-based standards through approaches that include effective treatment and source water protection.	98.1%	96.2%	96.2%
SP-2	Percent of "person months" (i.e. all persons served by community water systems times 12 months) during which community water systems provide drinking water that meets all applicable health-based drinking water standards.	99.5%	97.9%	97.9%

State Resources

SC DHEC currently implements the PWSS Program using a portion of the Performance Partnership Grant (PPG) awarded by the EPA. During FY 2017, expenditures were drawn primarily from the FY 2016 PPG.

Table 2: PPG Funding – South Carolina

FY 2016 EPA Total PPG Funding		\$15,007,869
FY 2016 EPA PWSS Share PPG		\$1,918,631

As of December 12, 2017, South Carolina expended \$1,918,631 (100 percent) of the FY 2016 PPG funds budgeted for their PWSS Program implementation.

In addition, during the State FY 2017, South Carolina utilized funding it requested and received during FY 2016 for approximately 16 percent of the Drinking Water State Revolving Fund (DWSRF) set-asides. South Carolina utilized the 2 percent Small System Technical Assistance set-aside. The State also utilized 10 percent of the Local Assistance set-aside (for source water protection and wellhead protection).

Table 3: Set Asides – South Carolina

FY2016 EPA Set Aside Funding			\$1,011,668
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As of December 15, 2017, SC DHEC expended \$189,856 (19 percent) of the awarded FY 2016 set-asides. In August 2017, the State was awarded its FY 2017 DWSRF grant. The grant includes the maximum funding under each of the available set-asides, totaling \$2,554,710.

During FY 2017, SC DHEC also billed water systems \$4,815,201 for monitoring fees and for support of services such as the State's plans review and permitting programs.

Status of Rule Adoption

South Carolina has adopted regulatory authority for all federal PWSS Program rules promulgated to date.

The EPA has formally approved primacy applications submitted by SC DHEC for all but the following three PWSS Program rules: (1) Ground Water Rule (GWR); (2) Lead and Copper Short-Term Revisions and Clarifications (LCR STR) and (3) Revised Total Coliform Rule (RTCR). Since the State has submitted a complete final primacy application to the EPA, South Carolina has interim primacy for these three rules.

On August 24, 2017, the EPA transmitted a second round of comments to SC DHEC on the State's RTCR primacy application. The comments request clarification of discussions presented by South Carolina in its responses to the EPA's first round of comments on the application. Remaining unresolved issues relate to a few of the special primacy requirements associated with the rule. The State's response to the latest round of the EPA comments is under development.

SC DHEC submitted its responses to the EPA comments on primacy revision applications for both the GWR and LCR STR in February 2015. The EPA's Drinking Water Program anticipates recommending these applications to the Regional Administrator for tentative approval along with RTCR, once the few remaining RTCR issues are resolved.

Sanitary Surveys

Engineers in the Drinking Water and Recreational Waters Compliance Section of SC DHEC's Bureau of Water office in Columbia conduct sanitary surveys and site visits for surface water systems in South Carolina, while staff in SC DHEC's eight regional offices are responsible for conducting sanitary surveys at all ground water and purchased water systems. Sanitary surveys are conducted annually for community water systems, every two years for non-transient non-community systems, and every three years for transient systems.

Among community water systems, SC DHEC is close to meeting the federal goal for completing sanitary surveys once every three or five years (depending on system performance history). As of July 10, 2017, sanitary surveys for 96.02 percent of community water systems were completed within their required schedule.

The sanitary survey form used by State inspectors for surface water systems has 39 technical questions and the ground water systems form has 51 questions. Questions marked with an asterisk (*) on the inspection form are significant and if the inspector provides an "Unsatisfactory" rating to the question, a referral to enforcement is processed to rapidly address the significant deficiency. Through 3rd Quarter

FY2017, no water systems in South Carolina are on record as having incurred GWR Treatment Technique (TT) violations for failure to address significant deficiencies identified during sanitary surveys.

SC DHEC participated in a 4-day sanitary survey "train-the-trainer" course hosted by the EPA in Atlanta, Georgia, in August 2016.

Enforcement/Enforcement Targeting Tool (ETT)

The EPA works closely with all eight states to address non-compliant systems and reduce the number of priority systems. On a quarterly basis, the EPA evaluates the Enforcement Targeting Tool (ETT) and provides reports to the states. If needed, the EPA holds meetings with the State to discuss new systems on the ETT, challenges with addressing the ETT and any overall PWS enforcement program implementation issues. Since the inception of the ETT process in January 2010, SC DHEC has maintained very low numbers of priority systems (6 or less since July 2011). During FY 2017, SC DHEC had 3 or less (0.2 percent or less) systems on the ETT list that were priority systems (as shown in *Table 4: SC DHEC FY 2017 Quarterly ETT Summary* below).

Table 4: SC DHEC FY2017 Quarterly ETT Summary

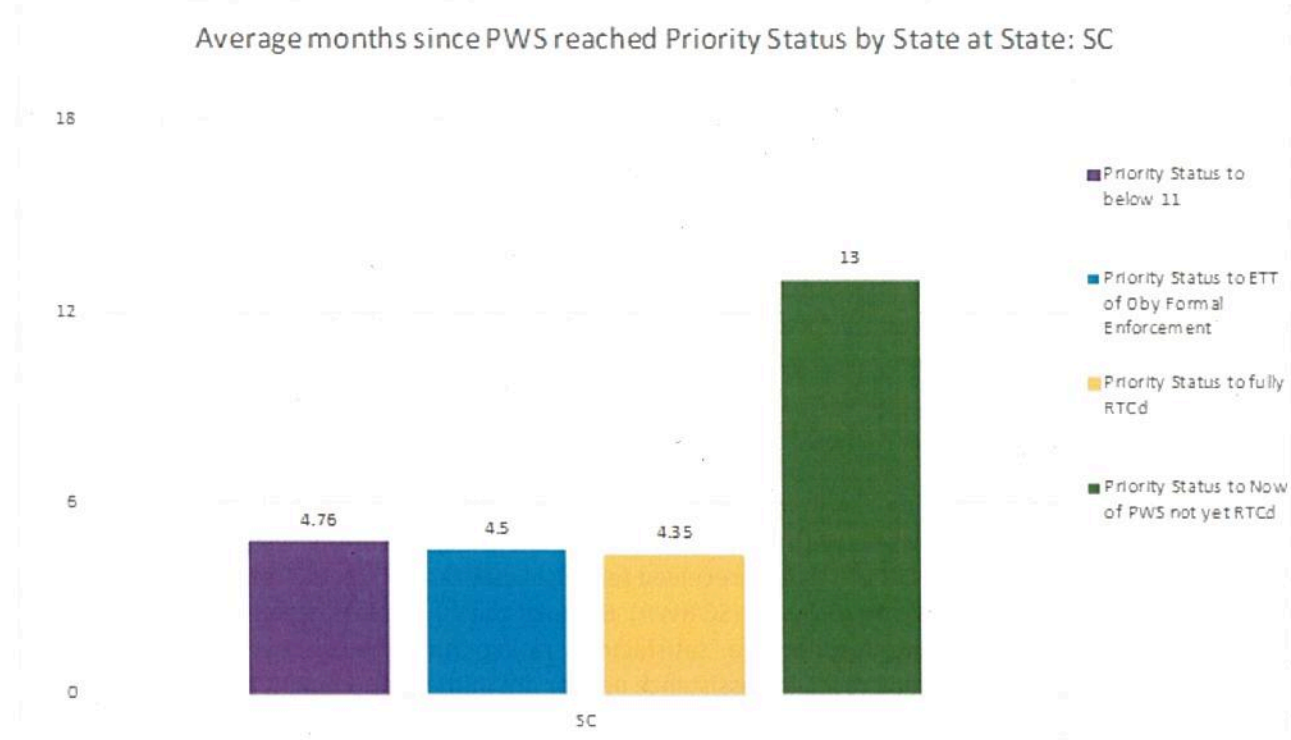
ETT List	Priority Systems (Scores of 11 or greater)	Additional Systems Added due to Formal Enf > 2 years old and not RTC	Systems added due to LCR TT Viols	PWS with ETT Scores 1-10	PWS Out of Compliance	PWS with Formal Enforcement	PWS with Informal Enforcement
October 2016	3	NA	NA	90	110	6	42
January 2017	2	0	0	66	86	1	12
April 2017	2	0	0	77	98	1	26
July 2017	2	2	0	81	97	1	16

SC DHEC has a process for addressing non-compliance and escalating its response when necessary. SC DHEC's Drinking Water Enforcement Section (DWES) has a written Standard Operating Procedure (SOP), titled "*Standard Operating Procedure: Drinking Water Enforcement Program Business Process*", which describes the roles of the DWES. The Bureau of Water drinking water programmatic staff refer SDWA violations to the DWES. DWES managers assign cases to an enforcement project manager, who fully evaluates the case and schedules an enforcement conference with the system to discuss the violation(s). Based upon the conference outcome and merits of the case, the enforcement project manager, technical and managerial staff collaborate to determine the appropriate level of enforcement.

The information (shown in *Figure 1: Average Months to Reach Current Status Since PWS Reached Priority Status Database: Oct 2012-Oct 2017 Data Freeze*) presents the average number of months for SC DHEC to address (formal enforcement) or resolve (Return to Compliance) ETT Priority Systems (ETT Scores

greater than 10). On average, SC DHEC either issued formal enforcement or obtained an ETT score below 11 within a timeframe of 4.5 months or 4.75 months respectively. It took SC DHEC 4.35 months to fully RTC a priority system. The *EPA Drinking Water Enforcement Response (December 8, 2009)* established 6-months as the standard for states to address or resolve systems that have an ETT score greater than 10. On a quarterly basis, the EPA and the State discuss the challenges of systems that have been on the ETT list for a prolonged (greater than 3 quarters) and possible Regional actions to return the system to compliance.

Figure 1: Average Months to Reach Current Status Since PWS Reached Priority Status
Database: Oct 2012-Oct 2017 Data Freeze



In January 2017, the EPA began evaluating not only the timeliness of addressing priority systems, but also the effectiveness of enforcement activities to RTC systems in non-compliance. The EPA evaluated systems with formal enforcement that remained out of compliance. On a quarterly basis, any system that had a formal enforcement action that was two years or older and the system remained in non-compliance was added to the ETT list regardless of the current ETT score. The EPA discussed these systems with South Carolina to determine if the current enforcement was effective in obtaining RTC. SC DHEC had two systems added over the FY 2017 timeframe, both systems have since been RTC. In January 2017, the EPA also evaluated the current Lead and Copper Rule (LCR) TT violations. SC DHEC did not have any systems with LCR TT violations.

The EPA compares each state's performance to the Annual Compliance System (ACS) SDWA02 commitment. The ACS SDWA02 commitment is defined as, "address with a formal enforcement action or RTC the number of priority systems equal to the number of PWSs that have a score of 11 or higher on the July 2016 ETT report". This commitment is incorporated into each state's annual PWSS grant workplan and is used as a tool to evaluate progress towards addressing priority systems. SC DHEC

successfully met the FY 2017 ACS SDWA02 commitment for South Carolina based on Safe Drinking Water Information System (SDWIS) federal data ((See *Table 5: Systems that are Addressed or Resolved* below).

Table 5: Systems that are Addressed or Resolved (for systems that scored ≥ 11 this Fiscal Year)
Database: Oct 2017 SDWIS/Fed Freeze (For most states, this includes data through June 30, 2017)

State	FY2017 ACS Commitment	Overall Systems Addressed in FY2017
SC	3	4

During FY 2017, the EPA nationally tracked small community water systems (population 3,300 or less) that have been ETT priority systems without being addressed for 3 quarters or more (as of the October 2017 ETT list). Each Region is required to report on this subset of systems to the EPA Headquarters on an annual basis. The EPA provided the FY2017 report on January 31, 2018. SC DHEC did not have any small community water systems that had been on the ETT priority list without being addressed for greater than 3 quarters.

DWSRF Program Integration: Capacity Development and Small System Support

South Carolina relies on its sanitary survey program as the primary means for identifying and prioritizing water systems in need of improving their technical, managerial, and financial capacity. For systems receiving an "unsatisfactory" rating on a sanitary survey, SC DHEC generally uses its technical assistance resources to work with the system to correct problems. Of the 702 sanitary surveys conducted by SC DHEC during State FY 2017, only 10 resulted in an unsatisfactory rating. Identified deficiencies included those related to a deteriorating distribution system, wellhead protection issues, general maintenance shortfalls, and missing paperwork. With the help of DWSRF financing, one of the systems merged with a more capable water system. Other systems received technical assistance directly from SC DHEC staff or the South Carolina Rural Water Association (SC RWA). Some of the 10 systems have had follow-up sanitary surveys conducted that resulted in a "satisfactory" rating; others have not yet returned to a "satisfactory" rating, but are still receiving assistance and/or are in the enforcement process.

A majority of community water systems in South Carolina (85 percent) are classified as small systems (service populations less than or equal to 10,000). Many of these systems benefit from assistance provided by SC DHEC and its partner organizations. Activities undertaken during FY 2017 in several of the assistance program areas are outlined below:

1. ***Monitoring Fee Program.*** During State FY2017, SC DHEC charged each of the State's 1,408 PWSs an annual fee to support monitoring and analytical services provided by SC DHEC for compliance with applicable drinking water regulations, as well as for support of SC DHEC's operator training and plans review/permitting programs. The monitoring fee is calculated using a formula derived in consideration of the number of sources used by the system, whether the source is groundwater and/or surface water, and total number of active taps in the system. The total billings among all (federal and state defined) water systems were \$4.8 million.
2. ***Area-Wide Optimization Program.*** SC DHEC's efforts to maximize public health protection by optimizing particulate removal at the 60 surface water treatment plants in the State and reducing disinfection byproduct formation among all water systems is supported by the State Program Management set-aside of the DWSRF grant. In calendar year 2016, about 81 percent of the 3 million people drinking water from a surface water plant in South Carolina received water from a

plant optimized for microbial protection. About 58 percent of the people receiving water from a surface water system drank water optimized for disinfection byproduct control.

3. *Office of Rural Water.* During FY2017, SC DHEC's Office of Rural Water collaborated with internal SC DHEC staff and external groups like SC RWA, Southeast Rural Community Assistance Project, and the South Carolina Rural Infrastructure Authority, to train water operators on regulations, engage communities about the benefits of water system partnerships, provide outreach to schools regarding water quality issues, and assist systems in maintaining or regaining compliance with the LCR.
4. *Outside Technical Assistance.* SC DHEC utilizes a contract with the SC RWA to provide outside assistance to small water systems. The contract is supported by the Technical Assistance to Small Systems set-aside of the DWSRF grant. During the year, SC RWA made 134 visits to water systems to provide assistance related to water loss, completed distribution system maps for 26 systems, and completed 14 visits to four different municipal systems for specialized training in rate setting, support in updating operations manuals, laboratory certification assistance, and for help in adhering to paperwork requirements. SC RWA also held 24 training classes during the year on a variety of regulatory compliance and utility operations/management topics.

DWSRF Program Integration: Operator Certification

In South Carolina, the Operator Certification program is administered by the Labor Licensing and Regulation (LLR) Environmental Certification Board (Board) and enforced by SC DHEC. The Environmental Certification Board members are licensed water, distribution, and wastewater operators, licensed well drillers, members of the public, a state regulatory agency representative, and a representative of an educational institution involved in operator training. Meetings are held monthly to discuss general business, hear reports, address disciplinary actions, and cover issues involving environmental certification programs.

The LLR Board is responsible for initial licensing and renewal processing for bottled water, well drillers, water distribution, water treatment, biological and physical/chemical wastewater. The Board also monitors compliance with disciplinary orders. Licensees are mailed reminder cards instead of renewal notices. Licensees can pay online or download a paper renewal form from the Board's website. Online renewal also allows for proxy (third party) payments by providing licensees with a link and allowing payments to be made on their behalf. However, the proxy is not able to view the actual renewal questions/answers, which protects the privacy of licensees.

The Board encourages licensees to utilize the secure online renewal system. Online renewals are fast, easy and secure. Currently, all license types are available for renewal online. LLR also offers licensees other online services. Licensees can check the status of their application, change their home and employer address, licensee lookup, file a complaint, submit a FOIA, view the Board meeting calendar, complete a customer survey, and apply for license and online verification. The Board has also taken steps to make the certification process more accessible by allowing operators to apply with a paper renewal and mail it in along with their payment and application.

Anyone applying for the bottled water license is required to take the bottled water exam. The bottled water exam has been administered since November 5, 2013. The Environmental Certification website has posted a notice alerting Bottled Water Operators of the exam requirements and refers them to the testing company, Applied Measurement Professionals (AMP), website for instructions. Suggested study references are also listed on the Board's website.

As of May 1, 2017, new examinations have been administered for Water Treatment, Water Distribution and Biological Wastewater Treatment. For all updated exams, Association of Boards of Certification (ABC) has revamped its Need-to-Know Criteria and Formula/Conversion Tables to better assist with examination preparations. The new Need-to-Know Criteria will be weighted, reflecting the various license levels.

Between July 1, 2015 and June 30, 2017, all operators had to obtain a total of 12 hours (clock hours) of continuing education or pass the State examination. The next Continuing Education (CE) cycle began on July 1, 2017, runs through June 30, 2019. As with previous cycles, every operator must obtain a total of 12 hours (clock hours) of continuing education or pass the next level examination. Operators should keep records of all courses attended. Continuing education can be obtained from schools, workshops, seminars, conferences, online training and/or in-house training sessions. For continuing education to be accepted by the Board, the following guidelines must be followed.

1. a. For Water/Wastewater Treatment Operators: Continuing education must be information that is relevant to water and/or wastewater treatment facilities.
1. b. For Bottled Water Operators: Continuing education must be information that is relevant to bottled water operators. Examples of relevant courses include: water treatment system operations, safety, operation and maintenance of equipment, math, first aid, water chlorination, and attendance at an International Bottled Water Association meeting or conference.
2. The instructor or presenter must be able to provide an agenda or outline of the training content.
3. Participants must be able to interact with the instructor or presenter through discussion, telephone, or e-mail.
4. Participants must be able to verify participation with appropriate documentation, i.e. certificate of completion containing appropriate information as outlined above and/or copy of sign-in sheet containing participant's signature.

After the renewal period, the Board conducts a random audit for compliance with the CE requirement. Persons selected in the audit are notified by the Board to submit proof of their respective CE hours.

Rule Implementation – Lead and Copper Rule

In 2016, the EPA closely reviewed the state implementation of the LCR. As part of this increased oversight, Headquarters asked the Regional Offices (ROs) to confirm that each state's protocols and procedures were consistent with the rule requirements. South Carolina indicated that their protocols and procedures are consistent with requirements of the LCR. The information provided below was focused largely on historical action level exceedance (ALE) during FY 2013 – FY 2015.

South Carolina's Historical Action Level Exceedance (2013 - 2015)

Table 6: South Carolina ALE Totals

South Carolina ALEs	<=500 (Pop.)	501-3,300 (Pop.)	3,301-10,000 (Pop.)	10,001- 100,000	Grand Total

				(Pop.)	
ALE in last three FY	18	4	1	1	24
Multiple ALEs	1	0	0	0	1
Current ALE	18	4	1	1	24
School with ALE	2	0	0	0	2
School with Current ALE	2	0	0	0	2

South Carolina had two schools with action level exceedances.

- SC DHEC staff met with staff at Edgemoor Headstart and have taken water quality parameter (WQP) samples. SC DHEC and South Carolina Rural Water Association staff are working with Edgemoor Headstart staff to determine the cause of the ALE. Edgemoor Headstart has provided bottled water to their students and staff since 2013. According to Edgemoor Headstart staff, all drinking water fountains have been disconnected from the system. They also plan to submit a grant application to their funding agency to replace the piping system in the building.
- Shield of Faith is no longer an active PWS.

Table 7: South Carolina Schools with ALEs

Water System Name	Population	System Status
Shield of Faith (4670957)	22	PWS inactivated in 2014
Edgemoor Headstart (1270103)	100	Back on standard monitoring. Public Education has been provided to the students and parents. WQPs have been submitted to DHEC. Jan - Jun 2016, sample results have been received. Samples exceeded the action level for lead and copper. SC DHEC and SC RWA continue to work with the system to determine the cause of the ALE and investigate potential solutions.

South Carolina has one water system with current and repeat ALEs serving populations <10K.

Table 8: South Carolina System with Multiple ALEs serving <10K

Water System Name	Population	System Status
Supermetal Holdings USA (4630003)	90	Back on standard monitoring. Public education has been provided and WQPs have been submitted to

		<p>DHEC. Jan - Jun 2016, sample results have been received and they exceeded the action level for lead and copper. DHEC and SC RWA continue to work with the system to determine the cause of the ALE and investigate potential solutions.</p>
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South Carolina does not have any PWSs with multiple ALEs serving populations >10K.

Best Practices Identified in South Carolina

SC DHEC calculates the 90th percentile as soon as the data is available as opposed to waiting for the end of the monitoring period. As a result, all subsequent time limits (e.g., submittal of Public Education) are based on this accelerated timeframe, which results in more timely notification and corrective actions, if necessary.

South Carolina has eliminated the 9-year monitoring schedule. All schools and daycare facilities subject to the LCR are on annual monitoring.

South Carolina enlisted the SC RWA to conduct a study of each PWS with an ALE in the last three years to determine the possible reason for the exceedance. The study will look at affordable treatment options that are available to reduce lead below the action level.

SC DHEC created an office to provide technical assistance to small systems with ALEs. Additionally, the State developed a program to train schools (K-12) that have PWSs on correct lead sample technique and appropriate sample location.

Transparency

South Carolina has already taken steps to increase their ability to quickly notify customers of ALEs. SC DHEC posts individual sample results on their website through Drinking Water Watch. SC DHEC has also posted 90th percentile lead values for all PWSs for the past five years on their website.

During regional lead and copper workshops (conducted in March and April 2017) and the South Carolina Environmental Conference, SC DHEC relayed the request by the EPA for PWSs to post lead service line locations and individual lead sample results on their respective websites.

Opportunities to Strengthen South Carolina's Implementation Program

South Carolina shared EPA's request with water systems to post piping material surveys on their respective websites.

PWSs of Concern Identified in South Carolina

In addition to the letters sent by EPA's Office of Water, the EPA Headquarters also coordinated with ROs to request LCR implementation information from the states and primacy agencies. Part of this request included identifying PWSs of concern and steps being taken to provide assistance.

Several large PWSs have informed SC DHEC that they routinely replace any lead component under their control (including goosenecks) whenever they are discovered.

Using historical SDWIS data, the EPA also identified seven water systems with multiple ALEs since 2006.

Table 9: South Carolina Systems with Multiple ALEs since 2006

Water System Name	Population	ALEs since 2006
Shiloh Water System (4320005)	645	2
Blessed Hope School (4670106)	231	5
Pinehurst Subdivision (0150003)	101	3
Supermetal Holdings USA (4630003)	90	2
AAA Ridge Point Subdivision (3250105)	85	3
Oyster Park (1070256)	40	3
Triple Acres Mobile Home Park (3260049)	38	3

Status of South Carolina's Historical Action Level Exceedance (2013 - 2015)

The original Historical ALE list for South Carolina contained twenty-four (24) PWSs (See *Table 6: South Carolina ALE Totals* above). Upon further investigation, it was discovered that two (2) systems had returned to compliance and one (1) system was deactivated. Therefore, the EPA has been working with the State to track implementation of the rule and compliance status for twenty-one (21) systems. The current compliance status is depicted in *Table 10: Status of South Carolina's Historical Action Level Exceedance (2013 - 2015)* below. It should be noted that SC DHEC continues to work with the school to identify the problem. In the meantime, the school has continued to use bottled water and test student's blood lead levels annually.

Table 10: Status of South Carolina's Historical Action Level Exceedance (2013 - 2015)

South Carolina ALEs	
RESOLVED	16
If Jan - Jun 2018 monitoring results <ALE, then RESOLVED	3
Installing OCCT Treatment	1
Schools with Lead and Copper ALE	1
Grand Total	21

Data Management and Reliability

SC DHEC uses SDWIS State v3.33 for managing PWSS Program information and FedRep v3.51 Schema Release 3.6 for reporting data to the EPA Headquarters. SC DHEC uses the most current version of FedRep, which ensures reporting on all drinking water rules. SC DHEC determines rule compliance using a combination of the SDWIS State Compliance Decision Support (CDS) and internal spreadsheets with

various queries maintained by different rule managers to confirm compliance. The bacteriological rule managers maintain spreadsheets and tracking sheets for bacteriological assessments. The chemical and radiological rule manager maintains a spreadsheet for tracking compliance sampling and spreadsheets for detections which are greater than trigger limits and/or maximum contaminant levels (MCLs) dependent upon the State Primary Drinking Water Regulation. LCR managers have various spreadsheets to track actions and requirements, as well as spreadsheets with SC DHEC contract laboratories for shipping sampling kits to the water systems. To help identify potential operational evaluation levels and locational running annual averages that are close to exceeding MCLs, the Stage 2 Disinfectants and Disinfection Byproducts (DBP) Rule manager maintains spreadsheets for tracking compliance sampling and various queries.

SC DHEC receives sample data from laboratories in several ways, but not through electronic reporting. The absence of electronic reporting results in SC DHEC rule managers manually entering sample results. Sample results are re-formatted into comma separated value (CSV) files, which is an acceptable format to transfer data through 'Lab to State'. The processed extendable markup language (XML) file goes through XML sampling into SDWIS.

The Compliance Monitoring Data Portal (CMDP) and the SDWIS Primacy Agency (SDWIS Prime) are in phases 1 and 2 of SDWIS modernization.

The latest version of CMDP allows water laboratories and public drinking water systems to electronically share drinking water data with their states and tribal agencies. This data automation reduces the hours previously spent manually entering data, identifying data-entry errors, and issuing data resubmittal requests. States and tribes have more time to focus on preventing and responding to public health issues in their communities. Once implemented nationwide, the CMDP will reduce state data entry and data management work by hundreds of thousands of hours every year. SC DHEC received a grant to implement CMDP and are in the beginning stages of moving to CMDP.

The SDWIS Prime application provides greater functionality than SDWIS. SDWIS Prime facilitates improved information exchange between primacy agencies, regulated entities, EPA ROs, and EPA Headquarters. SDWIS Prime will:

- Update the technology used by SDWIS, reducing system operations and maintenance cost;
- Use modern decision support technology to assess noncompliance with national primary drinking water regulations (including functions such as compliance decision audit trail reports /electronic data verification), and;
- Improve the user experience and facilitate more efficient business processes.

SC DHEC is planning to transition to SDWIS Prime over the next two years.

Laboratory Certification

SC State Primacy Laboratory Certification: On June 12, 2018, the EPA Science and Ecosystems Support Division (SESD) assessed SC DHEC laboratory's chemistry, microbiology and radiochemistry areas. The laboratory will maintain its **Certified** status through June 12, 2021. The certification status of each area of responsibility is listed in *Table 11: SC State Primacy Laboratory Certification Status*, below. The select few primary drinking water contaminants that are analyzed by contract laboratories are certified through reciprocity. The analysis of Decachlorobiphenyl by Method 508A is performed by the Florida Department of Health in Jacksonville, Florida. The annual proficiency testing (PT) performed by the State resulted in a failure in the area of Uranium 89 and 90 by Method 905.0. This area has been downgraded to provisionally certified until the appropriate corrective actions have been put in place.

State Certification Program: On June 12, 2018, the EPA SESD assessed SC DHEC. The State will maintain its **Effective** status through June 12, 2021. The State's certification program tracks PT results of the in-state and out-of-state contract laboratories that analyze drinking water samples for the State. The certification program requires the laboratories to perform acceptable PT samples annually. The certification officers also perform the required drinking water laboratory audits for contract laboratories maintaining their drinking water certification status. The officers perform the audits every three years, as required. The number of contract laboratories assessed is listed in *Table 12: SC Laboratory Certification Program*. The number of certification officers performing the audits and tracking PTs within the program is listed in *Table 13: Number of Certified Auditors*.

Table 11: SC State Primacy Laboratory Certification Status

Primacy Laboratory Name and Location	Laboratory Type	Certification Entity and Date of Most Recent On-site Audit			
		Chemistry	Microbiology	Radiochemistry	Cryptosporidium
South Carolina Department of Health and Environmental Control (SC DHEC)	State	EPA (Region 4) 06/12/18	EPA (Region 4) 06/12/18	EPA (Region 4) 02/14/17	*Approved Contract Laboratories
Aiken (SC DHEC)	Regional	NA	09/21/2017	NA	NA
Lancaster (SC DHEC)	Regional	NA	07/11/2017		
Beaufort (SC DHEC)	Regional	NA	04/13/2016		
Florence (SC DHEC)	Regional	NA	09/19/2017		
Myrtle Beach (SC DHEC)	Regional	NA	07/13/2017		
Charleston (SC DHEC)	Regional	NA	04/12/2016		
Greenville (SC DHEC)	Regional	NA	09/26/2017		

*Cryptosporidium samples are analyzed by contract laboratories, which are approved by the State through reciprocity. The approved contract laboratories identified by the State are Analytical Services, EMSL Analytical Inc., Environmental Associates, Environmental Science Corp, Eurofins Eaton – South Bend, and Scientific Methods.

Table 12: SC Laboratory Certification Program

Number of Laboratories Certified for Drinking Water Analyses In State and Out of State (*)			
Chemistry	Microbiology	Radiochemistry	Cryptosporidium
183(*12)	117(*12)	1(*3)	0(*6)

Table 13: Number of Certified Auditors

Area of Responsibility	Number of Auditors Certification Officers for the Areas of Responsibility
Chemistry	7
Microbiology	7
Radiochemistry	2
Cryptosporidium	1