



Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

April 7, 2016

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

Dear Governor Haley:

This letter is provided in response to your letter, dated March 18, 2016, concerning lead in drinking water in South Carolina. Ensuring that our citizens have safe drinking water that meets all standards is a top priority for the agency. I am pleased to provide the following overview of the South Carolina Department of Health and Environmental Control's (DHEC) role in monitoring and enforcing the regulation of lead in drinking water and our actions to address citizens' concerns.

DHEC administers and enforces drinking water quality standards for public water systems (PWSs) in South Carolina. PWSs are typically sampled every three years, but may be on a shorter schedule if lead has been detected over the United States Environmental Protection Agency's action level for lead (greater than 15 parts per billion). Typically, lead is not in the water source, but can be released from lead service lines or copper piping with lead solder in older homes, especially if the water is corrosive (*i.e.*, has a low pH value). All of our large PWSs (serving more than 50,000 customers) add corrosion control to help prevent this leaching of lead from pipes. A total of 185 PWSs (27%) use some form of corrosion control. Many PWSs do not need to add additional treatment because their water is not naturally corrosive.

Procedural safeguards and quality control measures allow DHEC to provide oversight of any significant change by a PWS that might contribute to elevated lead in drinking water. Any change in a PWS water source, such as what occurred in Flint, would have to be reviewed, evaluated and approved first by DHEC. Also, any changes in treatment would have to be permitted to ensure that the changes to the treatment process do not adversely affect lead levels. DHEC contracts with a certified laboratory to conduct analyses under the federal Lead and Copper Rule and sample results are sent directly to the Department. DHEC determines when sampling is required and ensures bottles are supplied by the laboratory to the PWS.

DHEC currently monitors 695 PWSs for lead and copper in accordance with the federal Lead and Copper Rule. I can report that 667 of these PWSs (96%) have had no exceedance of the lead action level in the past five years. These water systems are typically the larger and medium sized PWSs

that serve larger populations. Lead in drinking water has been detected in 28 PWSs (4%) over the past five years, of which 24 are small, rural systems serving less than 3,300 customers, and four are medium, rural systems serving between 3,301 and 50,000 customers. Some are mobile home parks that have their own water system. DHEC's goal is zero lead in drinking water, regardless of system size.

You specifically asked for a listing of PWSs with elevated levels of lead in their drinking water and DHEC's recommendations to eliminate this risk. A list of the 28 PWSs that have had an exceedance of the lead action level at some point between 2011 and 2015 is attached. When a PWS has a lead action level exceedance, the PWS is required to implement specified actions, such as collecting additional samples and, most importantly, informing their customers of the lead exceedance and steps the customers can take to reduce risk. Allowing the water to run from the faucet for 30 seconds before using to drink or cook is the easiest and most effective strategy to reduce their risk.

DHEC has implemented the following actions to address lead in drinking water:

- As a combined public health and environmental protection agency, we have access to reported blood lead levels. Our health and environmental staff worked together to conduct an in-depth analysis to compare reported elevated blood lead levels to the areas (census tracts) located near the 28 PWSs which had samples above the action level in the past five years. Based on our analysis, we concluded that there is no correlation between reported elevated blood levels and these water systems.
- In cooperation with the S.C. Rural Water Association, we are conducting a study of each of the 28 PWSs with a lead action level exceedance in the past five years to determine, if possible, the reason for the exceedance. The natural water quality and corrosive nature of the source water will be evaluated, along with the potential presence of lead lines or lead solder in copper piping. Sampling procedures also will be evaluated. Under the rule, individual homeowners often are responsible for taking the sample, which may introduce the opportunity for sampling error and results that are not representative of actual water quality. One of the goals of the study is to determine whether affordable treatment options are available for use to reduce lead below the action level.
- We have created an Office of Rural Water, which is dedicated to studying the water and wastewater-related challenges facing rural communities, providing these communities with technical support, and identifying resources to address these issues.
- We have gone beyond the requirements of the federal Lead and Copper Rule to eliminate nine-year monitoring schedules allowed under the rule and limit those to three years. All

schools and daycares that are subject to the rule are now on annual monitoring. DHEC also is conducting additional sampling and providing special technical assistance at the schools with lead exceedances.

- We are determining compliance immediately upon receipt of laboratory results – rather than waiting until the end of the monitoring period (as provided in the federal rule) – again going above and beyond minimum rule requirements to help inform drinking water customers of any exceedance that may affect them in a timely manner.
- Lead and Copper Rule workshops are being held across the state to educate PWSs about the rule requirements, available technical assistance, and how to best communicate the monitoring results to their customers to reduce risk.
- Although large PWSs are not experiencing exceedances of lead action levels, we are working with their professional member organizations to encourage these water systems to be transparent with their data and take steps necessary to address any concerns their customers may have.
- Through coordination of our public health and environmental areas, we will continue to evaluate any potential correlation between lead drinking water levels and blood lead levels.
- Our website contains more information on lead exposure in homes and ways for residents to prevent this exposure (*e.g.*, lead in paint, etc.).

We appreciate your inquiry into lead in drinking water and the Department's efforts to protect and promote the health of the public and environment of South Carolina. Please let me know if you have any further questions.

Sincerely,

A handwritten signature in black ink that reads "Catherine E. Heigel". The script is cursive and fluid, with the first letters of the first and last names being capitalized and prominent.

Catherine E. Heigel

Enclosure

Public water systems that have had lead exceedances at some point between 2011 and 2015:

Small systems:

3250024 AAA Hilton Sound – Population 50 (small)
3250105 AAA Ridge Point S/D – Population 85 (small)
3810004 Town of Bowman – Population 1,298 (small)
4660009 Cedar Valley MHP – Population 290 (small)
1450007 Clarendon Co W&SA – Population 240 (small)
4630061 CM Steel Inc. – Population 94 (small)
0170104 Cold Springs School – Population 41 (small)
3250047 CWS Cedarwood – Population 307 (small)
4650008 CWS Foxwood – Population 520 (small)
1550002 Fishing Creek POA – Population 102 (small)
4060032 Lakewood MHP – Population 147 (small)
4060012 Lower Richland MHP – Population 31 (small)
4670106 Blessed Hope School – Population 231 (small)
1070256 Oyster Park – Population 40 (small)
4060021 Percival Estates MHP – Population 18 (small)
3260157 Pine Ridge MHP – Population 100 (small)
0150003 Pinehurst S/D – Population 101 (small)
4060052 Piney Lane MHP – Population 24 (small)
4630003 Supermetal Holdings USA – Population 90 (small)
3260049 Triple Acres MHP – Population 38 (small)
1270103 Edgemoor Headstart – Population 100 (small)
3810005 Town of Branchville – Population 1,293 (small)
3260183 Sand Mountain MHP – Population 40 (small)
4320005 Shiloh Water System – Population 645 (small)

Medium systems:

4650006 CWS River Hills S/D – Population 8,566 (medium)
4650005 City of Tega Cay #2 – Population 3,850 (medium)
0310001 Town of Allendale – Population 4,070 (medium)
1820008 DCWS Ashley Phosphate- Population 18,956 (medium)