

City of Florence will perform Water Quality Maintenance Flushing "Burn Out" beginning the week of December 29, 2014

Background: The City of Florence is dedicated to providing the best quality water we can. Every month, we can be seen flushing fire hydrants to ensure the water we serve is safe and fresh. Water Distribution staff is tasked with the duty to ensure that water in all points of the system is acceptable to our customers.

There are times that the water is discolored to a yellow, orange or even brownish color. This is caused by cast iron or steel water mains and private plumbing and at times manganese. Manganese is naturally present in water sources but can increase in years of heavy rains on the watershed. Manganese is not harmful at the levels found but can be a nuisance by discoloring the water. Over time, manganese will attach itself to the pipes and release when there are extreme changes in the velocity or pressure similar to when there is a main break or during annual Fire Department testing of the hydrants.

Nitrification can also occur in water systems that use chloramines for their residual disinfectant. Nitrification is a microbial process that converts ammonia and similar nitrogen compounds into nitrite (NO₂⁻) and then nitrate (NO₃⁻). The key to stopping nitrification is to starve the nitrifying bacteria of nitrogen.

Remedy: Normally the water is treated with a disinfectant called "chloramine" which is a long-lasting disinfectant that ensures the safety of the water. The "burn out" is a change in the treatment process from chloramines to free chlorine. City of Florence will perform a free chlorine shock and extensive directional flushing of the system. This should help remove iron, manganese and other constituents in the mains, key in stopping nitrification, and will improve water quality with **no associated health risks**. Free chlorine is the disinfectant of choice when performing a system wide maintenance flush. It will help us cleanse the lines, stop nitrification and ensure that the water continues to be safe to drink.

Nuisance Problems: During these efforts to improve water quality as a whole, there will be times of lower water pressure, odors and taste that are abnormal. Particles are possible in the water. The particles should be rust particles from the iron mains with manganese attached. Each water system will attempt to flush the particles, color and odor from the mains with directional flushing. There is a possibility that some of the color and odor will get into your lines. City of Florence is dedicated to making sure the water is safe to drink and will be monitoring the disinfectant levels continually during the work. If you get an odor or taste in your water, it does not mean it is unsafe to drink. Odors will be caused by the free chlorine disinfectant reacting in the lines to cleanse the system. Nuisance issues will go away as the work is completed.

Good News: After the completion of the work, the water quality will be substantially better than before. Our work will help the mains retain their disinfectant residual longer and will reduce monthly flushing. In turn, this flushing program will save money and help keep operational cost down while providing the customers a better quality product. Please be patient with us during our efforts to serve you better. If you have questions please contact the City of Florence at the number provided below.

254-793-2490 x 2 Monday - Friday 8am - 5:00 pm

Doc Blackman, Public Works Director