

# IMPORTANT INFORMATION ABOUT CHESTER DRINKING WATER

*This is an important notice. Please translate it for anyone who does not understand English.*

Our water system recently violated drinking water standards. Although this situation does not require that you take immediate action, as our customers, you have a right to know what happened, what you should do, and what we did to correct this situation.

To provide proper treatment of our surface water source, Chester is required to provide a combination of filtration and disinfection to reliably achieve at least 3-log removal and/or inactivation of *Giardia* and 4-log removal and/or inactivation of viruses. Filtration provides removal and disinfection provides inactivation of microorganisms and reduces turbidity.

In order to ensure proper disinfection of surface water, Chester is required to: (1) ensure surface water is in contact with a minimum concentration of chlorine or a similar disinfectant for a minimum amount of time (this is referred to as “inactivation”); and (2) ensure the treated water entering the distribution system has a minimum chlorine residual of 0.2 milligrams per liter (mg/L) and (3) ensure that filtered water turbidity is not too high. We routinely monitor your water for chlorine residuals and turbidity to ensure adequate chlorine inactivation.

## What should I do?

- **You do not need to boil your water or take other corrective actions.** However, if you have specific health concerns, consult your medical provider.
- People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA’s Safe Drinking Water Hotline at 1 (800) 426-4791.

## What happened?

On September 20, 2022, October 27, 28, 30 and 31, 2022 the entire month of November 2022, the Chester water treatment process did not meet the minimum required chlorine inactivation ratios. Although chlorine quickly kills most bacteria, it is less effective against organisms such as viruses and parasites. Calculations for appropriate inactivation ratios incorporate the pH (acidity) and temperature of the water, the chlorine residual at the peak hourly flow and the time/storage of the water during treatment. The calculations were initially done incorrectly for September, October, and November. These were reviewed and corrected using available data. The recorded residual was too low, given the pH and the temperature of the water for effective inactivation at the treatment plant. There were identified problems with equipment, but we cannot assume the chlorine levels met standards.

We also failed to ensure that the chlorine entering the distribution system met the minimum residual of 0.2 mg/L during the following days: September 18-30, 2022, and each day during October and November 2022. The requirement is that the minimum concentration cannot be below 0.2 mg/L for more than four hours. These days, the lowest recorded chlorine residual was below 0.2 mg/L, and we have no record of its correction within the four hours. This requirement is in place to ensure that there is always sufficient chlorine to kill microorganisms that may be present in the distribution system.

We use filters to provide treatment and to reduce the turbidity (cloudiness) in the finished water. October 22 and 23, 2022, our finished water turbidity was over the drinking water standard of 1 NTU. (NTU, or nephelometric turbidity unit, is the unit used to measure the presence of suspended particles in water). The standard is set because turbidity can interfere with disinfection and provide a medium for microbial growth. Water samples for October showed that more than 5 percent of turbidity measurements were over the 1 NTU limit. The turbidity levels are usually relatively low. However, this event is a concern. Normal turbidity levels are below 1 NTU.

*Continued on page 2*

During October and November 2022, Chester also failed to sample its raw water for bacteria which is a drinking water requirement. It is important to the treatment process to monitor the fluctuations of concentrations of pathogens in our source water. For all the above failures to meet standards, we did not notify MassDEP as we are required to do.

The Commissioners and MassDEP reviewed these operation requirements for surface water treatment with our new operator onsite on December 2, 2022. Also, during the site visit with MassDEP personnel, we confirmed some equipment failures and the need for maintenance and upgrades of equipment used for chlorine feed, for analyzing/measuring the chlorine residuals and for the computerized records and calculations we use every day. Analyzer equipment was not accurately recording chlorine residuals. In addition, the alarms were not working. Some equipment repairs or replacements will be needed to ensure safe operations. Immediately following the site visit, Chester ensured that measurements of critical chemicals such as chlorine, were taken every 4 hours, a requirement of MassDEP until the equipment was repaired or replaced.

### **What was done?**

MassDEP reviewed the measurement practices and chlorine residual levels with personnel overseeing day-to-day operations at the Chester Water Treatment Plant. We will repair or replace equipment as needed and will maintain a sufficient chlorine level as needed to ensure sufficient disinfection inactivation. We will ensure the requirements of the surface water treatment standards are met. If there are equipment failures again, we will respond to take manual measurements and to promptly repair or replace faulty equipment for critical chemicals and operations.

We did have a fire and did not maintain the operating sand filters as needed to keep the filtered water turbidity meeting standards for October 22 and 23, 2022. We recognize the frequency for maintaining the filters and will respond to unexpected impacts such as significant fires.

### **What does this mean?**

This situation does not require that you take immediate action. If it did, you would have been notified immediately.

- *Inadequately treated water may contain disease-causing organisms.*
- *Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Elevated turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms.*
- *These disease-causing organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms, however, are not caused only by organisms in drinking water, but also by other factors. If you experience any of these symptoms and they persist, you may want to seek medical advice.*

For more information, please contact Chester Water Commissioner, Lyle Snide, at (413) 262-1541.

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

This notice is being sent to you by: Chester Water Department PWS ID#: 1059000  
Date distributed December 20, 2022

***End of Public Notice***