

Have you experienced “cloudy” water recently?



City of Saint Louis
WATER DIVISION

From time to time, the Water Division receives inquiries from customers experiencing “cloudy” or “milky” water. This phenomenon normally occurs during the winter months in St. Louis and is not related to the quality or safety of the tap water. Here’s our explanation of what you may experience.

The City of St. Louis utilizes surface (river) water for our drinking water source. For this reason, the temperature of the water entering the purification process varies seasonally, from highs near 90°F in late summer to 33°F in the cold of winter. Dependent on temperature, water absorbs oxygen, or air, from the atmosphere; the lower the temperature, the more oxygen will dissolve in the water. At very low temperatures, the water approaches oxygen saturation levels. If water temperature does not change, the air remains dissolved in the water. But if the temperature rises (even a few degrees,) the water begins to lose its ability to retain the dissolved air. Water travels from our treatment plants to your residence or business through underground mains and as it does so, it picks up warmth from the surrounding soil. When it enters your building, it may reside in the building’s plumbing pipes and warm more before you use it. Due to an increase in temperature, the water wants to release the dissolved air, but since it is under pressure in your plumbing pipes, the air remains in solution – until you open your faucet. Much like opening a carbonated beverage bottle, when you release the water to atmospheric pressure by opening the tap, the dissolved air quickly comes out of solution in the form of millions of tiny bubbles, making the water appear cloudy or milky. If you observe the phenomena in a glass, notice how the cloudiness rises to the surface and the water clears. Cloudy water is a physical response to a change in the temperature and pressure of the water, and is not an indication of water quality problems or contamination. It is perfectly safe for all intended uses, including drinking. Occurrence is more frequent in the morning, when water has been allowed to warm overnight in basement pipes. The Water Division always recommends running the tap for several seconds to bring in colder, more refreshing water. As colder water enters the building from the service main, the phenomenon goes away.

Hopefully, this explanation is sufficient to dispel concerns you may have if experiencing this seasonal phenomenon. If you would like additional information on this or any other subject related to your drinking water, please contact the Water Division Laboratories at 314-592-8221 for assistance. Thank you.