

Fact Sheet on City Water Treatment Project and Work to Address Discoloration Issues

The City is acutely aware of and addressing discoloration in the water coming from the faucets of some customers in Edwardsville. The discoloration is a result of elevated iron levels in the water. It is safe to drink and conforms to all U.S. and Illinois Environmental Protection Agency standards. However, we recognize that the discoloration is unsightly, and are aggressively working to correct the issue through a rehabilitation of the filter media that normally would remove the excess iron from the water supply.

We expect the discoloration issues to diminish over the next few weeks as we replace the filter media tank by tank (five in total) and return each rehabbed filter to service. The entire rehabilitation process is expected to be completed by the end of February.

City officials apologize for the situation and appreciate your patience as we diligently work to correct it. Should anyone experience continued discoloration, please contact the Public Works Department at 618-692-7535 or publicworks@cityofedwardsville.com so we can investigate and monitor the situation. We also are available to answer questions, address concerns and dispel misconceptions about the situation.

Please continue reading to find answers to some frequently asked questions:

▶ IS IRON A HEALTH HAZARD IN MY WATER?

Iron is NOT a health hazard. Iron is a naturally occurring element; in fact, tap water in the U.S. accounts for about 5% of most individuals' daily intake of iron, according to the Illinois Department of Health. As a component of water, it's considered a secondary or aesthetic concern and as such is not regulated by the U.S. EPA. The Illinois EPA (IEPA) does regulate it, setting an upper limit of 1.0 mg/L. Historical iron levels in Edwardsville's municipal water supply have been recorded far below that limit, at 0.035 mg/L. Recently, those levels have averaged 0.088 mg/L, but have been recorded as high as 0.3 mg/L. Discoloration occurs at iron levels of 0.30 mg/L. (We'd also like to be clear that the current situation is caused by excess iron. It's NOT lead. Keep reading for more details on lead testing.)

▶ WHAT IS FILTER MEDIA AND HOW DOES IT WORK?

Media filtration is a method of removing particles (iron, manganese, other types of sediment) from water by passing it through a series of layers that capture the solids. Just like in many cities, in Edwardsville those media filter layers are sand, aggregate and anthracite. The media filter is layered inside five 17,000-gallon pressure filters and the water passes through it. (The City also has five 1,000-gallon pressure filters, but the majority of the City's supply goes through the larger filters.)

▶ SHOULD THIS CORRECT THE DISCOLORATION?

Yes. Media filtration is actually just one part of a multi-layered treatment process that is overseen by Veolia Water, our current water treatment plant operators. But the filter media must be replaced over time to do its job effectively.

▶ HOW LONG WILL THE REPLACEMENT PROJECT TAKE?

The physical replacement project began in November and is expected to wrap up by the end of February. It's a laborious process to empty, clean and then replace the large quantity of filter media in those massive 17,000-gallon tanks, which are each 10 feet in diameter and 28 feet long. Further, it must be carried out mostly by hand due to the confined quarters where the five filters are located. It's a painstaking and important undertaking with a hefty price tag: \$915,394.



Above: The exterior of a pressure filter is shown. At left: A layer of filter media is shown in the interior of the pressure filter.

▶ **COULD THIS WORK HAVE BEEN DONE SOONER?**

The City received an evaluation of one of the filters from Veolia in early 2022 that indicated the filter media were in good condition. Because the evaluation only considered one of the filters, the City requested a full evaluation that revealed three filters were in need of rehabilitation. The City then began planning for the project, bringing on Engineering consultant Crawford, Murphy & Tilly in February 2023 at a cost of \$21,550 to prepare a detailed plan and specifications in advance of project bidding. In July 2023, the contract to do the rehab work on the five large filters was awarded to Kamadulski Excavating and Grading. Financial documentation and paperwork, required testing, procurement and special order manufacturing led up to the physical start date in November.

▶ **HOW CLOSELY IS THE WATER SUPPLY MONITORED?**

The City's water supply is sampled and tested DAILY for quality control. Further, the IEPA mandated sampling is handled by an independent lab. At the end of each calendar year, the IEPA publishes the test results. The annual report is published on the City's website and can be found here: www.cityofedwardsville.com/WaterReport

The City has a track record of aggressive and successful corrosion control treatment for its water supply system. In fact, we recently completed lead and copper testing throughout Edwardsville. Because of our historically solid record, for more than 25 years, Edwardsville has been on the IEPA's reduced monitoring schedule for lead and copper.



The inside of one of the pressure filters at the City's Water Treatment Plant is shown with the filter media removed.

▶ **WHAT IS 'FLUSHING' AND WHY DO I HEAR SO MUCH ABOUT IT?**

The City utilizes a yearly hydrant flushing program, typically carried out between late spring and early fall. It serves some very important purposes:

- From a public safety standpoint, forcing a high-pressure flow of water through our hydrants ensures they are working properly and can meet the increased demands in the event of a fire.
- In terms of water system operations, this type of flushing can help remove normally occurring deposits and particles from the pipes. Because it is dislodging and disturbing these deposits, however, it can lead to short-term discoloration. If this happens, we encourage residents to let a cold water tap run for a few minutes until the water runs clear.

In addition to the yearly flushing program, spot flushing also is utilized in the City in areas where we receive reports of discoloration. For instance, occasionally, we see discoloration due to construction activities or after periods of unexpected, very high usage (such as a fire emergency).

▶ **MORE INFORMATION:**

- If you notice discoloration in your water that does not clear up after running the cold tap for a few minutes, please contact our Public Works Department so we can investigate. Email publicworks@cityofedwardsville.com or call 618-692-7535.
- Please visit the City's website to view the latest water quality report from the Illinois Environmental Protection Agency: www.cityofedwardsville.com/WaterReport
- To learn more facts about the presence of iron in drinking water, visit the Illinois Department of Public Health: <https://dph.illinois.gov/topics-services/environmental-health-protection/private-water/fact-sheets/iron-drinking-water.html>

