



Discolored Drinking Water Event

Office of Water Quality — Drinking Water Branch

317-232-8603 • 800-451-6027

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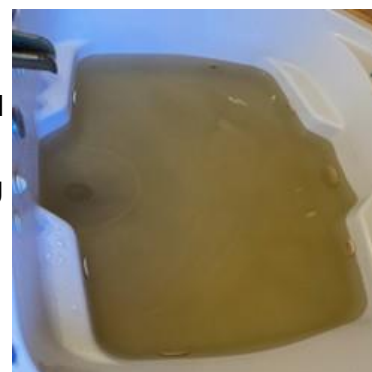
100 N. Senate Ave., Indianapolis, IN 46204

What is a “Discolored Water” Event?

The term “Discolored Water Event” describes a temporary event in which the water from your home faucets is something other than clear. In most cases discolored water is due to mineral deposits that have accumulated in system piping which have stirred up and now give the water a color. A discolored water event can be something localized that happens when the flow of water suddenly changes in your home’s plumbing or service area, causing natural sediments inside the water pipes to mix again with the water and enter your home’s plumbing. This can happen due to a fire or other impacts that cause pressure variations. Excessive natural iron or manganese deposits can settle in the piping and, over time, be disturbed, causing discolored water. Incorrect chemical dosages can also lead to discolored water. Discolored water can be red, brown, yellow, greenish, or even pink! Discolored water is an issue that needs to be investigated.

What to do in case of a Discolored Water Event?

If you are a customer of a water utility, first call your water utility to let them know that you are experiencing discolored water and find out if you are part of an area-wide issue. Your water utility should be able to assist you with your next steps and may come to your neighborhood to flush fire hydrants or lines to clean out the distribution system piping. You should then flush out your home’s piping, including the hot water tank, to purge any discolored water that has entered the home. Homes on their own well water source should consult a plumber to troubleshoot options in dealing with mineral accumulation and deposits within the home’s plumbing system.



What to do if the Discolored Water Event is long lasting?

If, after consulting with your drinking water utility service provider and discoloration persists, you may be part of a more widespread issue that IDEM needs to investigate. You may contact the [IDEM Field Inspector](#) for your county to let them know you are experiencing a persistent discolored water issue.

Is Discolored Water Safe?

While it is not advisable to drink the discolored water, it may not necessarily indicate that the water supply is unsafe. Your water utility is responsible for meeting many mandatory requirements established in the National Primary Drinking Water Regulations. Many required samples are collected at the drinking water treatment plant and others in the distribution system piping. There are also National Secondary Drinking Water Regulations ([NSDWR](#)) that are non-mandatory water quality standards that not enforceable; however, they establish guidelines to assist water utilities in managing drinking water for aesthetic considerations such as taste, color, and odor. Often, unpleasant taste, color, or odor is not considered a risk to human health. IDEM understands that a discolored water event is inconvenient, may cause plumbing problems and monetary loss and thus works with utilities to help them understand and resolve the problem that is causing the event.

To help you understand the safety of your water, your water utility’s sample results for a variety of

contaminants can be viewed at the [Drinking Water Viewer](#). You may search for your water utility's water quality results by name or by county. Here you can see all the sample results collected at the drinking water treatment plant and the distribution system. Samples are collected under typical conditions and will not reflect the water quality you may be experiencing at the time of the discolored water event. For further information please contact DWBMGR@idem.IN.gov or 317-234-7430. You may also reach IDEM's Drinking Water Branch at 100 North Senate Avenue, MC-66-34; Indianapolis, IN 46204.

Iron and Manganese in Indiana.

It is likely that if you are experiencing discolored water events in your service area, groundwater and its naturally occurring elements may be to blame. Iron and manganese, both found naturally in groundwater, will appear clear until they come into contact with air or another oxidant such as chlorine, a common disinfectant used in municipal water systems. As mentioned above, iron and manganese are part of the National Secondary Drinking Water Regulations list. Depending on water conditions they may drop out of solution to form particles and settle on the bottom of water pipes. Over time, this accumulation may cause discolored water events when disturbed.

Iron is a naturally occurring element, and the secondary standard in drinking water is 300 micrograms per liter ($\mu\text{g/L}$). One microgram is equivalent to one part per billion. Water with iron levels above 300 $\mu\text{g/L}$ will become reddish-orange and deepen in color as the concentration rises. While there is no enforceable requirement on this concentration, water systems are advised that iron levels over 300 $\mu\text{g/L}$ will cause water to be discolored and may generate complaints.

Manganese is another naturally occurring element that is abundant in Indiana groundwater. The secondary standard for manganese is 50 $\mu\text{g/L}$. At this concentration the water may appear cloudy, milky colored, and form black particles which, in extreme cases, will turn the water black when disturbed but will settle out quickly. It can contribute to mineral deposits in pipes, cause difficulty with lathering, and darken or stain clothing during washing. Detergents do not remove these stains. Bleach and alkaline builders (such as sodium and carbonate) may even intensify the stains. The Environmental Protection Agency (EPA) has set a lifetime health advisory for manganese value at 300 $\mu\text{g/L}$ and the secondary standard at 50 $\mu\text{g/L}$. These are non-enforceable standards that are in place to guide water systems to minimize problems with taste, color, and odor.



References:

- [NSDWR Summary and table of contaminants report](#)
- [EPA Groundwater and Drinking Water website](#)
- [Drinking Water Health Advisory for Manganese, January 2004](#)