



April 23, 2024

Dear Water Customer,

The water system was flushed as planned on April 15-16, 2024, but chemical treatment did not begin. The chemical application will begin May 6th and we will flush the water system again May 6th and May 7th from 8 a.m. until 3 p.m. each day. Discoloration during the flush should be minimal because the water system was just flushed, but if you do see discolored water during these days, you should stop using your water for a couple hours and then check the water at an outside hose spigot to see if the water has cleared. We also recommend you avoid doing laundry during these two days.

WRC will begin to feed phosphate and chlorine into the water supply during this rescheduled flush. Phosphate and chlorine are safe additives to drinking water. Chlorine is a disinfectant and is used to protect public health. Phosphate is used to keep the water clear by sequestering iron in the water. For additional information about the water system and treatment, please visit our website at <https://www.oakgov.com/government/water-resources-commissioner/drinking-water/community-info/oakland-township>.

Some residents may see an increase in discolored water when we start applying phosphate. This is caused by a reaction between the chemical and any iron accumulation in the water system or your home's piping. We remove iron sediment during our flushing program and will consider scheduling another flush later in the summer based on customer feedback. You will be notified if any additional system flushing is scheduled. For additional flushing information, please see our website at www.oakgov.com/FlushSchedule.

If you have questions about your water system, please contact us at wrcwater@oakgov.com or 248-452-9158.

Thank you,

Kathryn DiCea
Environmental Planner Senior



March 28, 2024

Dear Water Customer,

The Oakland County Water Resources Commissioner's Office (WRC) has scheduled spring water system flushing during the nights of April 15 and April 16, 2024. WRC's maintenance team will begin flushing on April 15 at 7pm and finish the first night by 7am on April 16. The second night of flushing will be on April 16 beginning at 7pm and finish by 7am on April 17.

We recommend you avoid using your water during the flushing period. After we complete the flushing, your water may be temporarily discolored due to the naturally occurring iron in the water. We suggest flushing your own water service piping to address this discoloration. Simply let the water run from a faucet before water enters your home, such as an outside hose bibb if possible.

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Kathryn DiCea
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Oakland Township Water Treatment Information Session

March 28, 2024

Top Recommendations

Below is a summary of the major takeaways regarding iron in drinking water. We hope that after this presentation you have a better understanding of your water system and the various steps that you can take for handling iron that you may find present in your water system. For any additional questions or comments, contact the Oakland County Water Resources Commissioner's Office at (248)-452-9158 or wrcwater@oakgov.com.

1. Do not use any water the night when hydrant flushing is scheduled in your subdivision and limit water use on other nights during system flushing. Turn off automatic sprinklers and water softener backwash cycles.
2. Flush your pipes when you have discolored water or low pressure. First, test a spigot that does not get filtered or softened water. If the water is discolored or you have low pressure, the water service line to your home may need to be flushed. If water is clear at the spigot with full pressure, you should continue to flush inside your home starting from the basement sink and working your way up to the second story. Your water softener may need to be manually regenerated. If none of this helps improve your water pressure or discoloration, please call 248-858-1110 to schedule a low-pressure flush. If you have low pressure, make sure to check that your whole house filter is not clogged.
3. Add a sediment filter to remove the rust debris from the water main.
4. Periodically use a water softener cleaner OR iron-removing salt. This will prevent rust buildup in your softener.
5. Periodically flush your water heater. This will prevent rust buildup in the heater.
6. Do NOT use bleach for laundry or cleaning! To remove rust stains that have already occurred, use oxalic acid or a commercial rust remover.
7. Consider using sprinkler system additives for rust prevention, direct sprinklers away from surfaces that may stain, and only run your sprinklers outside of the hours of 5 a.m. to 9 a.m. and 5 p.m. to 9 p.m.



Oakland Township Water Treatment Information

March 28, 2024

Frequently Asked Questions

Below is a review of some of the major water chemistry and water treatment questions. For any additional questions or comments, contact the Oakland County Water Resources Commissioner's Office at (248)-452-9158 or wrcwater@oakgov.com.

Is it safe to drink water with iron?

Absolutely! Your body needs iron and lots of other minerals to be healthy.

What is polyphosphate? What is Orthophosphate?

Polyphosphate is a water treatment chemical that combines with dissolved minerals such as iron, manganese, and calcium to trap or "sequester" them in their dissolved form. This prevents scale and rust in your water. Orthophosphate is a water treatment chemical that is used to inhibit corrosion and scale by coating the insides of pipes and fixtures.

My plumber said my oxidizing iron filter doesn't work because of phosphate (polyphosphate/orthophosphate). Is that true?

It is partially true. An iron filter will still remove all the iron from the municipal system that was already oxidized by chlorine before it reached your home. However, an oxidizing iron filter cannot remove iron that is sequestered with polyphosphate. The good news is polyphosphate will prevent much of the remaining sequestered iron from turning into rust. Unfortunately, some iron may still oxidize once it is inside your home.

Is there an iron filter that can remove polyphosphate-sequestered iron?

A traditional oxidizing iron filter will not remove iron that is sequestered with polyphosphate. Reverse osmosis water systems can remove polyphosphate-sequestered iron.

I live in a chlorinated water system; what type of iron filter is recommended?

A sediment filter is recommended to remove rust particles in the water. An *oxidizing* iron filter is not necessary if your water system contains chlorine. If your house already has an oxidizing iron filter installed, there is no reason to replace it - it is functioning as a sediment filter, and you can continue to use it.

Is it safe to drink hard water?

Absolutely! Water "hardness" is mainly a measure of how much calcium and magnesium is in the water. You need calcium and magnesium to help your body function properly.

Is it safe to drink soft water?

For most people, yes, it is safe. However, drinking large quantities of water softened with sodium chloride (i.e. salt) is not advised for people on low-sodium diets. Additionally, people who need more calcium and magnesium in their diets would benefit more from drinking *hard* water. Check with your doctor if you have specific concerns.

My plumber said polyphosphate damaged my water softener. Is that true?

It is unlikely. Softener resins will not be affected by phosphate which is why they are sometimes paired together in residential water treatment systems. In areas of the US and Europe with very high hardness, home water treatment systems sometimes include a preliminary phosphate treatment followed by ion-exchange water softening. This is done to reduce the amount of sodium that the homeowner consumes in their drinking water and because it slows deterioration on copper pipe.

How does Phosphate Work with Water Softeners?

The sodium-coated resin is a bed of negatively charged beads (anions) that attract the positive ions (cations) like soluble calcium, magnesium, and iron. During regeneration, the brine backwash then removes those unwanted positive ions and recoats the resin with sodium. Polyphosphate creates complex molecules with soluble calcium, magnesium, and iron which does not have the positive charge that is attracted to the water softener resin. The softener resin will then attract any remaining soluble calcium, magnesium, and iron that is not tied up with the phosphate.

Polyphosphate is added to our water so why do we still have so much rust?

Polyphosphate will trap a lot of the soluble iron, but not all of it. Without polyphosphate, the rust problem would be much worse.

Can we just add more polyphosphate to trap all the soluble iron?

No, unfortunately. Adding more polyphosphate can actually reduce the effectiveness overall. An iron treatment system would be needed at the water source to improve municipal iron removal. Aggressive treatments to combat an issue may end up eating away at plumbing and cause more discoloration.

Why does my water look dirty after the water mains were flushed?

It is possible that unbeknownst to you, your automatic lawn sprinklers or your water softener were using water while the mains were being flushed. The primary method to deal with this is to flush the house plumbing – turn on the bathtub faucets full blast until it runs clear; start with the cold water, then do the hot. After that, turn on the sinks until they run clear, run the exterior hose bibs until they are clear, and flush all the toilets (may need a few flushes). When running the sinks, remove the faucet aerators and clean them.

My softener has to backwash more often now than when it was new. Why?

This is a symptom of iron fouling the softener resin or it could just be the age of the resin. A water softener cleaner may improve operation, or the resin may need to be replaced.

Can chlorine damage my water softener?

Water softener resin will last up to 15 years on unchlorinated water; but may only last 10 years with chlorinated water.

What recommendation do you have for water softener resin?

If your water softener no longer efficiently removes hardness from your water, if your softener is causing significant pressure loss, or you are finding small fragments of resin in your fixtures, you may need new resin. Water softener manufacturers design their systems based on the characteristics of a certain resin; therefore, always consult your softener manufacturer before purchasing a replacement resin or your softener may not function correctly after replacement.

Will polyphosphate-sequestered iron be removed if I use one or multiple sediment filters, for instance a 20-micron filter followed by a 5-micron filter?

No, most sediment filters will only remove insoluble iron (also known as rust, iron oxide, or ferric iron). Iron that is sequestered with polyphosphate is trapped in its soluble form and will pass through most sediment filters.

What iron removal method would have been used had the Township chosen to install a municipal iron removal system?

Oxidation followed by filtration is commonly used on systems with iron concentrations. Specific technologies and processes would have been investigated had that project reached the design phase.

Who do I call to have the water service line flushed from house to curb?

Contact our customer service unit at **248-858-1110** to schedule a low-pressure flush. A low-pressure flush consists of removing the meter in your home, attaching a hose to release the water outside while opening and closing valves to flush particles from your service line – the piping from the water main to your home. There is no charge for this service, but an adult must be home when we arrive because we need access to the meter.