

HOW TO FLUSH YOUR WATER HEATER TANK

Sediment, bacteria, minerals and metals can build up in your water heater tank. This can impact household water quality and water pressure. Depending on your water heater tank, flushing the tank is recommended annually to maintain performance. To protect the life of your water heater, we recommend following the manufacturer's instructions for flushing. It is important to keep in mind that 30 to 75 gallons of hot water will be lost during the flushing process.

To flush the tank:

1. Take note of the position of your gas control valve (Item 1 in Figure 1) so that it may be reset to the same position when the task is completed.
2. **Set your gas control valve to the pilot or off position.** (This is important: If the burner control is left on while the tank is empty and/or being emptied and the flame comes on, the heat will ruin the tank.) You may want to use up the hot water either with a load of clothes or some other means like a shower or dishes before you continue.
3. Shut off the cold water valve leading to the tank (Item 2 in Figure 1).
4. Open a hot water faucet anywhere in the home (this will let air into the tank while it is draining).
5. Attach a short garden hose to the hot water tank drain spigot and run it to a floor drain (Item 4 in Figure 1).
6. Open up the hot water tank drain spigot (Item 4 in Figure 1) and empty the tank. This may take several minutes.
7. When the tank is drained, leave the drain spigot open, turn on the cold water valve (Item 2 in Figure 1) in 15-second bursts and wait for it to drain after each burst. Three bursts should do the job.

To fill the tank:

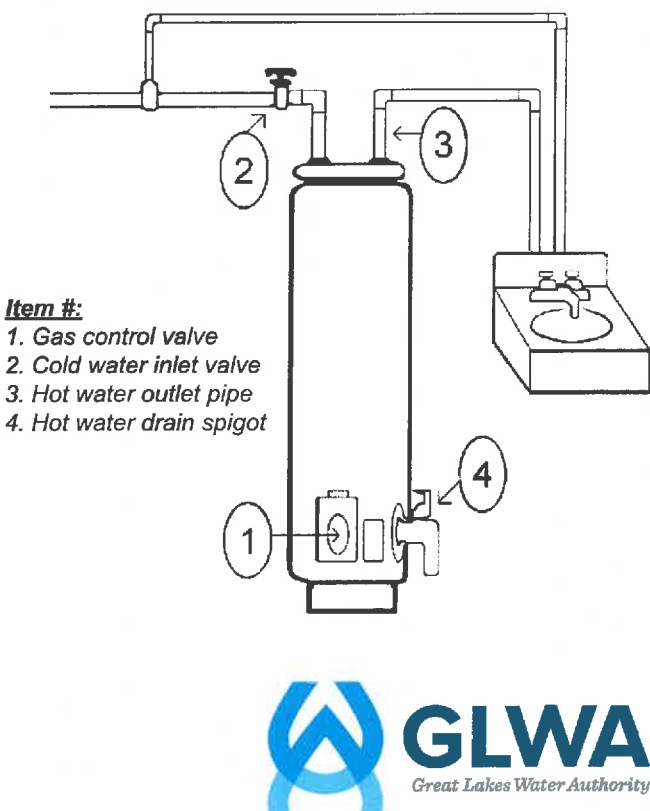
8. Close the hot water tank drain spigot (Item 4 in Figure 1) and remove the hose.
9. Leave the hot water faucet open (from step 4 above).
10. Turn on the cold water valve (Item 2 in Figure 1) leading to the hot water tank until water comes out of the hot water faucet (from step 4 above) in a steady stream.

11. Shut off the hot water faucet (from step 4 above).
12. The gas control valve (Item 1 in Figure 1) can be turned back to its usual setting as noted in step 1 and follow the hot water tank's manufacturer's instructions for lighting the gas pilot if the tank does not have an automatic pilot.

This process must be completed in this order (burner off, hot water faucet open, etc.) or damage can result from heat, vacuum, pressure or water damage to the tank, faucets, pipes and/or finished floor.

After a period of time, you may find some deterioration of the washer in the hot water tank's spigot and it may need to be replaced if the hot water tank's spigot drips after closing. Plumbers often will cap the spigot with a garden hose cap found at hardware stores to prevent dripping.

Figure 1: Standard Water Heater Tank





Oakland Township Iron Removal Information Session

Wednesday, August 22, 2018

Top Recommendations

Below is a summary of the major takeaways from today's workshop! 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 Connie Sims with the Oakland County Water Resources Commissioner's Office at (248)-858-1441.

1. Do not use any water when hydrant flushing is occurring, 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 feed pipe to your home likely needs to be flushed. If water is clear at the spigot with full pressure, there is likely a problem with your water softener, filter, or water heater.
3. If you are on a chlorinated system, add a sediment filter to remove the rust debris from the water mains.
If you are on an unchlorinated system, add an iron filter.
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, water during off-peak times.



Oakland Township Iron Removal Information Session

Wednesday, August 22nd, 2018

Frequently Asked Questions

Below is a review of some of the major water chemistry and water treatment questions that were explained in this workshop today. For any additional questions or comments, contact Connie Sims with the Oakland County Water Resources Commissioner's Office at (248)-858-1441.

What is polyphosphate? What is Orthophosphate?

Polyphosphate is a water treatment chemical that combines with dissolved minerals such as iron, manganese, 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 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 in 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 and well-maintained activated carbon filters can remove polyphosphate-sequestered iron.

My water doesn't have polyphosphate or chlorine in it, which oxidizing iron filter should I buy?

Iron concentrations in Oakland Township are generally less than 1.5 mg/l and therefore any oxidizing filter will work to remove iron. Before buying, consider how much water is needed for a backwash cycle – self oxidizing filters do not need an extra chemical additive, but are generally heavier and require much more water to be wasted during a backwash cycle.

Is it safe to drink water with iron?

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

Is it safe to drink hard water?

Absolutely! Water "hardness" is mainly a measure of how much calcium and magnesium is in the water.

Is it safe to drink soft water?

For most people, yes. However, drinking water softened with sodium chloride is not advised for people on low-sodium diets. In this case, a water softener that uses potassium chloride would be preferred. Check with your doctor if you have specific concerns.

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.

Why does my water look dirty after the water mains were flushed? I wasn't home, so no one was using water.

It is possible that unbeknownst to you, your automatic lawn sprinklers or your water softener were using water while the mains were being flushed.

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.

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

It is unlikely. Polyphosphate can be used in tandem with water softeners without interference. Most likely, your water softener was damaged by rust and age.

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.