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Excellence in Training and Technical Assistance

The Importance of Routine Maintenance

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How often do you perform routine maintenance on your water system? What would you do if you found out that you have coliform bacteria in your system because you didn't properly maintain your cartridge filters? How would you explain to your co-workers or customers that the reason you don't have any water is because you didn't call the well driller when you first started noticing signs that something was wrong with pump? These problems are preventable! If you're not currently performing routine maintenance, there's no better time to start than now!

Well

Let's start with the well. It's a good idea to set up a maintenance agreement with your well driller to inspect your well (or wells) on a routine basis. Your well may be working fine without any problems but it is still a good idea to have it looked at once a year. Some of the items the well driller may check include:

- Well cap
- Well vent
- Pump
- Electrical conduit and electrical wires
- Static and pumping levels
- Distribution pressure



After the well has been checked and put back together, the well should be disinfected. It is a good idea to disinfect your entire water system after any work has been performed on the system since contamination of the water supply can easily occur during routine maintenance.

Pressure/Storage Tanks



How often do you check the pressure gauge on your pressure tank? Do you even have a pressure gauge? Does it work?! You should have a **functioning** pressure gauge and you should be checking it to make sure that you're maintaining adequate system pressure. You also want to check the water level in your tanks. If you have a bladder style tank, you don't want to have water in the top portion of the tank above the bladder! If you do, there is either a tear or hole in the bladder and you will need to replace the tank.

If you have a hydropneumatic (air-over-water) tank, you want to have approximately 2/3 water and 1/3 air in the tank. Check the sight glass on the tank for the water level (you may need to clean it once in a while). You may need to add air periodically to the tank via an air compressor. You also want to have the interior of these tanks cleaned periodically to remove any sediment that has settled on the bottom of the tank. As the sediment accumulates in the tank, you lose storage volume in the tank.

Remember that entering the inside of these large hydropneumatic tanks is a safety hazard as it is considered a confined space. After the inside of the tank has been cleaned it is a good idea to disinfect the storage tank before putting it back into service.



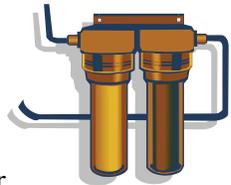
It is a good idea to reduce the amount of moisture in the storage tank room. A dehumidifier is a great way to reduce the moisture in the storage tank room. This will help reduce the amount of external corrosion to hydropneumatic tanks, electrical controls and piping. Also, keep the storage room heated to prevent freezing. Never operate the tanks above the pressure rating on the tank (see manufacturer's plate). The air-relief valve should be checked frequently for proper operation.

Water Treatment

If you have a water softener, it's a good idea to set up a maintenance agreement with the company that installed the softener to inspect the softener on a regular basis. They will make sure it is functioning properly. It is a good idea to clean and disinfect the brine tank because the tank may have a bacterial slime growth growing inside. You definitely don't want bacteria in your drinking water! You can disinfect the softener yourself by adding about ½ cup of bleach to the brine tank and then regenerate the softener. You also want to make sure that you are keeping salt in the brine tank and that you keep the cover on the tank to prevent contaminants from getting into the tank. Remember to always store the softener salt up off the floor to prevent contamination of the salt during storage! **Please remember that the backwash line must discharge to a waste receptacle through a fixed air gap.**

If you have any treatment units such as an anion exchange unit or a reverse osmosis unit, I would also recommend setting up a maintenance agreement with the company that installed the unit. You want to make sure that the unit is functioning properly and removing the contaminants adequately. If these or any other treatment units aren't properly maintained, you may contaminate your water supply.

In-line water filters often get ignored because it is very easy to forget them! It isn't so hard to forget them when the filter housing is clear because you can see the filter and the "gunk" the filter has removed from the water. But, if the filter housing is colored, it is very easy to forget that there is a filter inside. If the filters aren't properly maintained, contaminants may accumulate and may cause contamination of the water supply. (These filters provide a great place for bacteria to grow!) Follow the manufacturer's recommendations for how often to change the filters. Also, make sure when you change the filter you wash your hands before you start. You don't want to contaminate the clean filter or the filter housing with your dirty hands. It is a good idea to clean out the filter housing with some bleach and flush it out with some clean water. Then take the new filter out of the wrapping and place it inside the filter housing. Never set the clean filter on anything (shelf, counter-top, on top of the brine tank) because you could contaminate the filter. Hopefully this will eliminate any contaminants from getting on the filter and thus contaminating your water supply.



Distribution

It is recommended to exercise all valves and fire hydrants on a routine basis to ensure that they will work when needed. Also, you should flush the distribution system on a routine basis to flush out any sediment that may have accumulated in the system, especially at dead ends.

Record Keeping

I would recommend keeping a maintenance log of all work performed on your water system. You can use any type of notebook to keep track of maintenance. Document the work you performed on the system, date, time, any vendors that you contacted, and any other notes you feel would be valuable in the future (i.e. water had a musty odor right before the sediment filter was replaced).



These are just a few of the routine maintenance items that I run into at small water systems. All systems are different but the importance of routine maintenance is the same for everyone. A little TLC on your water system will go a long way! So, make sure you take care of your water system before it's too late!!



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