Water Softeners and Your Septic System

By:

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Can a water softener hurt your septic system? Probably not. As water flows through layers of rock underground, it picks up loose particles and dissolved minerals including calcium and magnesium. Water with substantial amounts of these minerals is referred to as "hard water." Water softeners use salt as an ion exchanger to remove the calcium and magnesium from the water thereby making it "softer". Part of this process involves periodically flushing or backwashing the softener to remove the accumulated minerals. Since many homeowners rely on private septic systems, there is concern that the brine discharge may harm the bacteria responsible for breaking down the wastewater and the extra amount of water could flood out the leaching system.

Scientists are studying this issue but most think the brine is sufficiently diluted with other plumbing wastes that it does not adversely affect the septic system. Some studies have found that the increased sodium in the softened water was actually helpful to the bacterial organisms in the septic tank and did not hurt the soil's ability to absorb water in a normal leaching field. The volume of softener backwash during regeneration was easily within the limits of what the septic tank could handle.   While a water conditioner can discharge between 50 – 100 gallons of water at one time, this is no more than what is normally discharged from a washing machine. Assessing the size of the soil absorption area is critical before adding a water softener. Problems such as ponding or surfacing sewage or complete failure can occur when the soil absorption area is too small and the soil is overwhelmed by the waste loads. Consulting a

professional such as All Clear Septic and Wastewater Systems to help evaluate the condition of the septic system before connecting a water softener is always recommended. Problems have also occurred when a water softener has malfunctioned sending hundreds of gallons of water to the septic system ultimately ruining it. But this can also be said of any plumbing fixture that is not maintained. Can the water softener discharge damage my septic system? It can if it is not maintained or if your septic system is too small.

Here are some tips.

-. Reducing Water Softener Effects on the Septic System

- Don't use a water softener if it is not necessary. Test your water for hardness.

- Install a water softener whose backwash/regeneration cycle is based on need, not on a timer. A water softener operated by a time clock regenerates the mineral tank on a regular schedule, regardless of how much water has been used. A softening unit that is regulated by a flow detection meter measures the amount of water that has been used and regenerates the water softener accordingly.

- Practice water conservation so the water softener does not have to work as often.

- Be sure the water softener backwash frequency and salt dose are set properly for the hardness of your water and water volume usage.

- Adjust the backwash frequency and salt dose to the lowest level absolutely necessary.

- Watch for malfunctioning equipment: if you hear water running continuously in your drain you should track down the source to a leaky toilet tank, faucet, or malfunctioning

water softener, etc. -Use salt alternatives: potassium chloride may be an acceptable alternative to normal salt or sodium chloride for problem areas.

- Use a separate drywell or floor drain to receive water softener backwash.

- Make sure the discharge line is properly air-gapped to prevent cross contamination.

If connecting the softener discharge to the septic system, contact All Clear Septic and Wastewater Services to determine if the soil absorption area is large enough to handle the additional wastewater. All Clear can answer any questions you may have on a water softener system and the pros and cons of installation to help you make an informed decision. Call us now at 508-763-4431 to schedule your service.