

# SPRAY IRRIGATION QUICK-TIPS GUIDE

## I have a Spray Irrigation System; what does that mean?

Spray Irrigation systems are a special type of Home Sewage Treatment System (HSTS) designed to fully treat your wastewater and then spray the treated water onto the surface of the ground for absorption into the soil. It is therefore critical that your system completely treats your wastewater before it is released. Due to the higher risk of human exposure to pathogenic bacteria and water contamination, your system has been specially designed and lab tested to reach a state-wide treatment standard. In order to achieve this higher level of treatment, however, your system contains more mechanical components than a conventional system (eg. a septic tank to leach lines). Because of its complexity, your system requires annual sampling, more frequent maintenance, and cautious use by the homeowner. If, in any given year, your sample results do not conform to the state-set standard, it could be due to several factors including both mechanical issues and/or overloading of the system. See reverse for possible causes of non-compliant sample results and advice on maintenance and simple lifestyle changes that could improve the functioning of your system.

## GRAB SAMPLES



Geauga Public Health requires that your system be sampled once a year to determine if it is compliant with the effluent quality standards set forth in the state's special device approval. This sample is called a grab sample since it is simply "grabbed" from the system, instead of taken several times over a longer period of time (composite sample). While the grab sample can provide some limited information about how the system was functioning at the specific time and date that it was taken, it cannot provide a broader context for how the system is operating over time, nor can it diagnose what exactly is causing any potential issues. Your annual sample results do not necessarily represent typical functioning of your system, but they can be an indication that a component could be malfunctioning or that you might be overloading the system.

## SPRAY IRRIGATION QUICK-TIPS CHART

Test Performed:	Must be:	Tests for:	Common Causes of Failure:	Common Corrections:
<b>Total Suspended Solids (TSS)</b>	≤ 18 mg/L	Solids suspended in the discharging effluent; the tank should be retaining the vast majority of solids.	<ul style="list-style-type: none"> <li>• Excessive accumulation of solids in tank is allowing overflow to discharge</li> <li>• Surface water contaminants are entering system</li> <li>• Hydraulic Overloading is pushing wastewater through system too quickly for proper solids settling</li> </ul>	<ul style="list-style-type: none"> <li>• Pump your tank</li> <li>• Minimize use of garbage disposal/don't flush coffee grounds</li> <li>• Install/Repair Risers/Lids to prevent water infiltration</li> <li>• Disconnect gutters &amp; storm crocks from system</li> </ul>
<b>Carbonaceous Biochemical Oxygen Demand (CBOD<sub>5</sub>)</b>	≤ 15 mg/L	Amount of oxygen consumed by bacteria in a 5 day period – the best overall indicator of short-term environmental impact. High level indicates poor aeration during treatment.	<ul style="list-style-type: none"> <li>• Aeration component is not working properly or is partially clogged causing insufficient air output into wastewater</li> <li>• Mechanism for re-aeration prior to spray release is not working</li> </ul>	<ul style="list-style-type: none"> <li>• Fix/clean aeration and/or re-aeration component(s)</li> <li>• Minimize use of laundry detergent or fabric softeners high in lanolin, which cause slime clogs in aeration tubes</li> </ul>
<b>Fecal Coliform Bacteria (Measured in Colony Forming Units, or CFU)</b>	<p><u>Restricted Access:</u> ≤ 200 CFU/100 mL</p> <p><u>Unrestricted Access:</u> ≤ 20 CFU/100 mL</p>	Family of bacteria that indicate the contamination of water with sewage; includes E. coli bacteria, which, at high concentrations, can make people sick. ***Most important test for your direct health.	<ul style="list-style-type: none"> <li>• Disinfection Component (either UV bulb or chemical dispenser) is ineffective</li> <li>• Hydraulic Overloading</li> </ul>	<ul style="list-style-type: none"> <li>• Clean, Repair, or Replace UV bulb</li> <li>• Add Approved Disinfection Chemicals</li> <li>• Spread out water usage</li> </ul>



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