GEAUGA PUBLIC HEALTH

Promoting and Protecting Community Health

12611 Ravenwood Dr., #300, Chardon, OH 44024-1071
440.279.1900 www.gphohio.org

Homeowner Acknowledgment Form: SPRAY IRRIGATION

The owner of the property must read, sign, and agree to the following requirements for the Operation and Maintenance of their Household Sewage Treatment System (HSTS). Failure to initial each section and sign this agreement does not excuse homeowner(s) from meeting the applicable requirements and regulations as specified in **Ohio Administrative Code (OAC) 3701-29 Sewage Treatment System Rules** and any supplemental rules required by Geauga Public Health.

Initials	Regulations, requirements, and special device information
	1. I understand that spray irrigation systems have special device approvals from the Ohio Department of Health (ODH). Special device approval is an interim approval which allows the ODH and local health departments to evaluate the performance of this device and compile data. There is a possibility that this device will not be adopted in the rule and/or that the current standards will not be modified. As the homeowner I will be responsible for ensuring my system stays compliant with any future rulings.
	2. I have been made aware that there have been freezing issues associated with spray irrigation systems in Geauga County and surrounding counties. There is a potential for freezing at the spray head and ice formation on the ground and on vegetation within the spray area.
	3. I have reviewed and discussed the location of the spray head and spray area with my designer/installer. I understand the area selected meets the siting requirements outlined in the Director's Journal for special device approval for Spray Irrigation. a. The site is free from natural drainage features and/or depressions b. The site slope allows for even dispersal of the effluent c. The site meets all isolation distance as required d. Provisions have been provided to protect the dispersal area from spray drift e. Provisions have been provided to address surface water diversion from the spray area f. The site is free of and will remain free of woody vegetation that may impact effluent dispersal within the 5' and 10' defined radius g. The entire spray area is free of and will remain free of relic windthrows and heavy vegetation that will impede even dispersal of the effluent
	4. I shall maintain an Operations and Maintenance service contract for the life of the system. If I do not maintain a service contract Geauga Public Health will inspect my HSTS and I will be responsible for all associated fees.
	5. I agree to send a copy of my annual service contract and all service reports to Geauga Public Health.
	6. I understand that samples may be required to be collected from the treated effluent of my system and analyzed for fecal coliform, carbonaceous biochemical oxygen demand, and total suspended solids. If the sample does not meet effluent water quality standards I will be responsible for all repairs, maintenance, and the cost of the additional sampling as required by GPH.

I, _____ the property owner of _____ address located in Geauga County, am aware that a spray irrigation system has received special device approval. I have been informed and understand that there other approved HSTS option available to me. I have discussed these options with the designer, installer and/or Geauga Public Health and have agreed to install a spray irrigation HSTS on my property. I have read, understand and agree to items 1 through 6 of this form.

Property Owner Signature: Date:

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Spray Irrigation

Basic Design

Spray irrigation is an efficient way to nourish plants and apply reclaimed wastewater to the land; however, in order to protect public health and reduce odors, the wastewater must be treated to a very high level before being used in this type of system. Treatment is achieved through the use of septic tanks through mechanical filtration, pretreatment, and disinfection systems. After treatment, filtration, and disinfection, the effluent is sent under pressure through the mains and lines of the spray distribution system at pre-set times and rates. Vegetation and soil microorganisms metabolize most nutrients and organic compounds in the wastewater during percolation through the first several inches of soil. The cleaned water is then absorbed by deep-rooted vegetation, or it passes through the soil to the ground water. The irrigated area must be vegetated and landscaped to minimize runoff and erosion. When properly designed and installed, most spray systems provide uniform distribution to plants and eliminate discharge to streams. Spray irrigation is sometimes permitted as an alternative wastewater disposal method for sites previously considered unsuitable for onsite systems such as difficult sites with slowly permeable soils, with seasonal perched water or shallow ground water or bedrock, or complex topographies.

Advantages

Because irrigation systems are designed to deliver wastewater slowly at rates beneficial to vegetation, and because the wastewater is applied either to the ground surface or at shallow depths, irrigation may be permitted on certain sites with high bedrock, perched seasonal water tables or shallow groundwater, or slowly permeable soils. Irrigation systems also can be designed to accommodate sites with complex terrains. Spray irrigation saves on potable water because the wastewater is used for irrigation. Above-ground spray system components are easier to inspect, control, and service than subsurface drip irrigation components.

Disadvantages

Cost is higher than those of conventional systems. Temperature factors in Ohio may preclude the use of spray irrigation during certain times of the year. The wastewater may need to be stored in holding tanks during the coldest period of the year, because plant growth is limited and the nitrogen in effluent discharged during this time will be mineralized and unavailable for plant uptake. Sites near surface water or shallow groundwater often are restricted, especially when these are used as drinking water sources. Depending on the level of treatment, spray systems generate aerosols, which can pose a threat to public health. Runoff and aerosolized partially treated wastewater can contain pathogens, viruses, bacteria, and other contaminants that can come in contact with humans, pets, other animals, and can impact other properties or waterways. Therefore, regulations may require large separation distances or buffer zones that make spray systems inappropriate for small lots. A minimum setback of as much as 50 feet must be maintained from neighboring residences, water sources, and food sources used for human consumption

Operation & Maintenance

Recommended – Monthly: walk over spray area and examine for ponding of effluent, bad odors, damage to spray heads, surfacing liquids, vegetation problems, surface soil collapse. Quarterly: Conducted by a qualified operator - proper spray sequence, proper pump function, proper liquid levels. Biannually: erosion, storage unit capacity. Annually: effluent sampling by a certified laboratory, test water supplied to spray irrigation area for fecal coliform bacteria, Total Suspended Solids, and carbonaceous biochemical oxygen demand. A management contract with an approved operator or operations firm is also suggested. O&M estimated at $300-$400 annually but may be less depending on the type of pretreatment used

https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/residential-sewage-treatment-systems/INFORMATION-FOR-HOMEOWNERS