



GEAUGA PUBLIC HEALTH

Promoting and Protecting Community Health

470 Center St., Building 8, Chardon, OH 44024-1071
440.279.1900 www.gphohio.org

Thomas Quade,
Health
Commissioner

Homeowner Acknowledgment Form: Pretreatment Requirements

The Household Sewage Treatment System (HSTS) installed on your property requires a pretreatment component prior to the effluent being discharged into a soils absorption system. The pretreatment component installed is sometimes referred to as an Advanced Treatment Unit (ATU). The pretreatment system or ATU will consist of an aeration component and possibly some type of disinfection system (U.V Light). An ATU is used when the wastewater requires a higher degree of treatment due to limiting conditions that are present in the soil. These limiting conditions may include a highwater table, poor infiltration, or some type of restrictive layer. The ATU is an essential component of the HSTS on your property, and the ATU will require routine maintenance and service. The property owner is responsible for ensuring proper operations and maintenance of your HSTS.

Geauga Public Health has established an acknowledgement form which defines the specific requirements for the HSTS installed on your property. The owner of the property must read, initial each requirement, sign, and agree to the following requirements for the Operation and Maintenance of their 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 for an NPDES system
	1. I understand that all HSTS residing in Geauga County require a signed Operations and Maintenance Permit, and that I am responsible for the maintenance of my HSTS at the frequency specified in this permit.
	2. I understand that if I do not demonstrate that I have completed the requirements of my O&M permit, or return the renewal notice and fee at the end of a permit cycle the Geauga Public Health (GPH) will inspect my HSTS and I will be responsible for any associated inspection fee.
	3. I understand that the HSTS system on my property utilizes a pretreatment component or ATU that treats wastewater to a higher degree. I understand that GPH requires that an annual service contract with an authorized service provider is maintained in effect for the lifetime of the system. In addition, I agree to operate and maintain the HSTS following all of the said HSTS manufacturer's requirements for daily operation.
	4. I agree to follow all requirements defined in the Operations permit issued by GPH for the HSTS on my property. To maintain compliance, I must meet the following: <ul style="list-style-type: none"> a. Maintain an annual service contract with an authorized service provider for the life of the HSTS. b. Submit a copy of the service contract or have the service provider submit a copy of the service contract to GPH annually. c. Have routine preventative maintenance visits by an authorized service provider at least semi-annually. d. Coordinate annual or repeat sampling of the HSTS for carbonaceous biochemical oxygen demand, total suspended solids, ammonia, dissolved oxygen, and <i>E. coli</i>. Submit the sample results to GPH. e. Take corrective measure when sample results are not in compliance with the limits. f. Routine pumping of the trash trap and aeration system as needed.
	5. Upon property transfer, the information required for operation and maintenance, service, and all other applicable information pertaining to my HSTS must be disclosed to subsequent homeowners.

I, _____ the property owner of _____ address located in Geauga County, am aware that I have a HSTS which requires and NPDES permit. I have been informed and understand that this type of HSTS has additional requirements mandated by the Ohio EPA. I have discussed these requirements with the designer, installer and/or Geauga Public Health and I agree to maintain my system as defined by my NPDES permit and rules outlined in OAC3710-29. I have read, understand and agree to items 1 through 5 of this form.

Property Owner Signature: _____

Date: _____



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Pretreatment to Soil Absorption

Basic Design

This system design includes a mechanical pretreatment device that reduces the suspended solids, organic material and bacteria in the effluent. Pretreatment devices consist of a multi-chamber tank that is divided into two or more sections to provide for settling of solids and effluent treatment. These devices use different biological processes to treat sewage including continuous flow, suspended growth aerobic systems (most common), fixed media processing and optional recirculation, and sequencing batch reactors. Aerobic conditions are required for treatment, subsequently most systems add oxygen to the treatment process. These systems can substantially reduce the total suspended solids (TSS), organic matter (BOD), fecal coliform (and other pathogenic bacteria). Some systems use recirculation of effluent to reduce ammonia and nitrogen in the effluent. The treated effluent is discharged to a soil absorption trench. Due to the high level of pretreatment, the size of the soil absorption trench can be reduced by 25 to 30%, thus reducing system costs. The significant reduction of fecal coliform can also allow for less thickness of soil necessary for treatment, and one or two foot soil depth credits (reduction of soil thickness needed by 1-2 feet) can be used to help overcome site limitations such as bedrock or seasonal high water table.

Advantages

A variety of pretreatment units are available across the state with varying costs, performance levels and operation and maintenance requirements. Pretreatment devices help overcome site limitations like high seasonal water table by providing higher levels of treatment to allow for less useable soil thickness on the lot. They also help to provide treatment when the system is located near or could impact sensitive water environments. These devices also allow for a smaller area for the soil absorption trenches, thus reducing costs associated with the soil absorption component.

Disadvantages

Pretreatment units are mechanical devices that require regular maintenance by a qualified service provider. Components will have to be replaced over time. A service contract must be maintained to ensure that the system receives proper care and maintenance.

Operation & Maintenance

Suggested annual inspection and maintenance of mechanical components. This can include inspecting air pump filters (cleaning or replacing as necessary) cleaning diffusers and aspirators, performing sludge level readings, verification of float settings, cleaning/maintenance of disinfection unit(s), checking air pressure of aerator, and flushing of distribution pipe to remove bio-slimes/build-up at a cost of \$100-\$200 annually. Regular pumping of the tank (every 2-5 years) at a cost of \$100-\$200 annually

