

## Medina County Operation and Maintenance Program

The Medina County Health Department Household Sewage Treatment System (HSTS) Operation and Maintenance (O&M) Program began on January 1, 2007, with the implementation of the Ohio EPA's National Pollutant Discharge Elimination System (NPDES) permit program. This permit is required for new discharging HSTS. Code changes, by the Ohio Department of Health, also dictated that all newly installed sewage systems be enrolled in a local health department (LHD) O&M program. Several code changes have taken place since 2007, the most recent on January 1, 2015, and Operation and Maintenance programs continue to be required of each LHD in the State of Ohio per Chapter 3701-29 of the Ohio Administrative Code. In addition to the requirement for new systems to enroll into the O&M program, each LHD is to develop a plan to have all existing systems covered by an O&M permit.

As part of the Medina County Health Department's Operation and Maintenance Program, each sewage system installed, altered, or involved in several other instances such as nuisances, variances, etc., after January 1, 2007, is issued a five (5) year **Operation and Maintenance Permit** for the sewage system after the appropriate fee submittal. These permits require that the sewage system be enrolled in an Operation and Maintenance contract with a registered Medina County Service Provider and be serviced twice a year. The Medina County Health Department must track all service conducted on these sewage systems, including sampling results for some types of sewage systems, as registered Service Providers send in the required maintenance receipts to the Medina County Health Department. In addition to tracking service and sampling results, fees for the five-year O&M permit are also used to make reports to state agencies on sewage system related issues such as failure rates, issues with certain types of systems, protecting vital watersheds found in Medina County, and investigating sewage systems that may be failed or non-functional.

## Types of Sewage Systems and Required Maintenance

Operation and maintenance requirements vary for different types of household sewage treatment systems (HSTS). The following types of sewage systems are found throughout Medina County and require specific maintenance as listed for each sewage system type. All HSTS should be serviced 2 times per year.



### **Type 1            Septic Tank to Shallow Leach Lines**

Typically, a 1,500 to 2,000 - gallon septic tank that may reach the leach lines either by gravity or by a lift pump to a series of buried leach lines that are buried shallow, usually 2 feet below grade or less. The sewage system must be enrolled in an Operation and Maintenance contract, with a Medina County Sewage System Service Provider, for the life of the system.

#### **Required Service**

1. Clean effluent filter in septic tank
2. Check sludge level in trash trap of tank
3. Alternate and rest leach lines
4. Check area around system for surfacing effluent, surface water encroachment, vegetation, etc.

### **Type 2            Aeration Unit to Shallow Leach line**

Usual installation is an aerobic treatment unit (ATU) discharged by pump or gravity to a series of buried leach lines that are usually 2 feet below grade or less. The sewage system must be enrolled in an Operation and Maintenance contract, with a Medina County Sewage System Service Provider, for the life of the system.

#### **Required Service**

1. Comply with all manufacturers recommended requirements for service for the aeration unit
2. Check sludge level in trash trap of tank
3. Alternate and rest leach lines
4. Review of leach field area for surface water encroachment, vegetation, surfacing effluent, etc.



### Type 3 Septic Tank to 18" – 30" Deep Leach Lines

Usually a 1,500 to 2,000 - gallon septic tank discharged by pump, or gravity, to a series of leach lines that can be buried up to 30 inches below grade. The sewage system must be enrolled in an Operation and Maintenance contract, with a Medina County Sewage System Service Provider, for the life of the system.

#### Required Service

1. Clean effluent filter in septic tank
2. Check sludge level in trash trap of tank
3. Alternate and rest leach lines
4. Review of leach field area for standing water, vegetation, surfacing effluent discharge, etc.

### Type 4 Aeration Unit to 18" – 30" Deep Leach Lines

Usual installation is an aerobic treatment unit (ATU) discharged by pump, or gravity, to a series of leach lines that can be buried up to 30 inches below grade. The sewage system must be enrolled in an Operation and Maintenance contract, with a Medina County Sewage System Service Provider, for the life of the system.

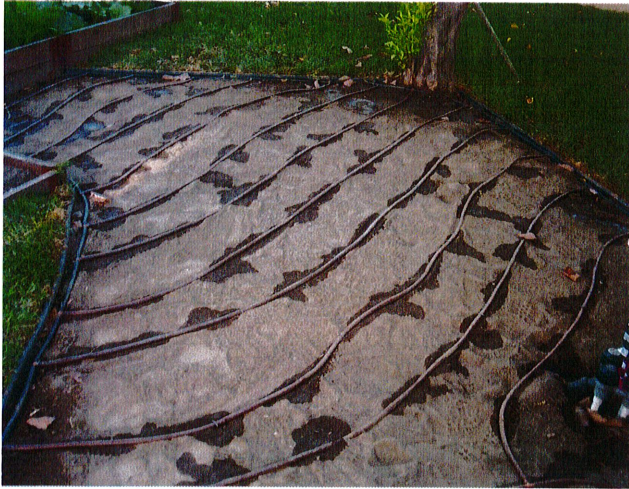
#### Required Service

1. Comply with all manufacturers recommended requirements for service for the aeration unit (if applicable)
2. Check sludge level in trash trap of tank
3. Alternate and rest leach lines
4. Review of leach field area for standing water, vegetation, surfacing effluent discharge, etc.









## Type 7 Septic Tank to Drip Distribution

Typical installation is a 1,500 to 2,000 – gallon septic tank discharged by a lift pump that is timed dosed and controlled by a central processing unit (CPU) to a series of drip tubing usually in two or more zones on the property. The sewage system must be enrolled in an Operation and Maintenance contract, with a Medina County Sewage System Service Provider, for the life of the system.

### Required Service

1. Clean effluent filter in septic tank
2. Check sludge level in trash trap of tank
3. Review and document event counters, time meters, flow meters, and alarm conditions when present
4. Review of drip field area for standing water, vegetation, effluent discharge, etc.

## Type 8 Pre-Treatment (aeration) to Drip Distribution

Typical installation is an aerobic treatment unit (ATU) discharged by a lift pump that is timed dosed and controlled by a central processing unit (CPU) to a series of drip tubing usually in two or more zones on the property. The sewage system must be enrolled in an Operation and Maintenance contract, with a Medina County Sewage System Service Provider, for the life of the system.

### Required Service

1. Comply with all manufacturers recommended requirements for service for the aeration unit
2. Check sludge level in trash trap of tank
3. Review and document event counters, time meters, flow meters, and alarm conditions when present.
4. Review of drip field area for standing water, vegetation, effluent discharge, etc.



## Type 9

## NPDES Aeration Unit with Discharge

This system is comprised of an aerobic treatment unit, with UV disinfection and a dosing pump that discharges treated effluent to a road ditch, stream, or other body of water. A National Pollutant Discharge Elimination System (NPDES) permit is needed from the Ohio EPA to install, own, or operate this type of system. The NPDES permit has stipulations such as yearly sampling of the effluent and having the sewage system enrolled in an Operation and Maintenance contract with a Medina County Sewage System Service Provider for the life of the system.

### **Required Service**

1. Evaluate and sample final effluent quality yearly to determine if standards are met
2. Comply with all manufacturer requirements for NPDES systems
3. Comply with all EPA permit requirements, including a service agreement with a registered Service Provider
4. Check fail safe systems where applicable
5. Verify remote telemetry if applicable
6. Check sludge level in trash trap of tank



## Type 10

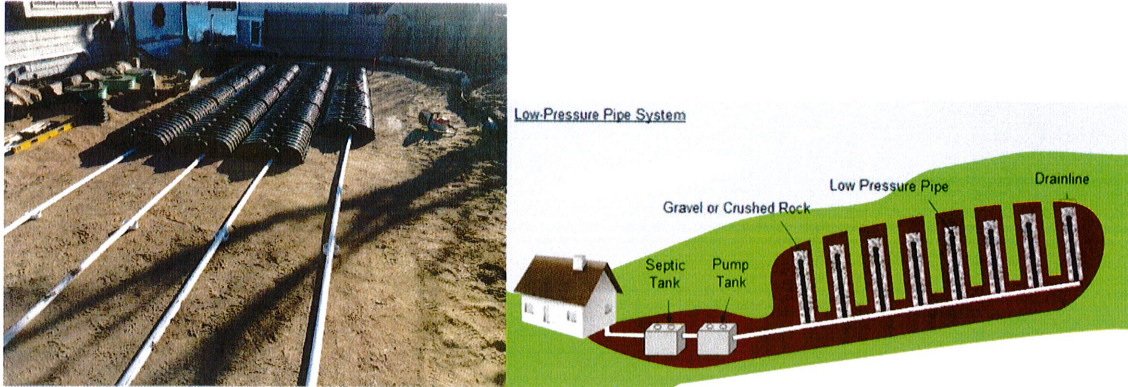
## Alterations to Sewage Systems installed prior to 2007 (ETA Trench, Sub-Surface Sand Filters, etc.)

Sewage systems in this category were installed prior to 2007 and are enrolled in the Operation & Maintenance Program for a variety of reasons (Alterations to the system, chronic nuisance complaint, etc.) and may have an aerobic treatment unit (ATU) discharged to an Evapo-Transpiration Mound, a sub-surface sand filter, or some other type of sand or gravel filter (up-flow filter is one example). Once enrolled in the O&M Program, the sewage system must be enrolled in an Operation and Maintenance contract, with a Medina County Sewage System Service Provider, for the life of the system.

### Required Service

1. Comply with all manufacturers recommended requirements for service for the aeration unit (if applicable)
2. Clean effluent filter in septic tank (if applicable)
3. Check sludge level in trash trap of tank
4. Review and document event counters, time meters, flow meters, and alarm conditions when present
5. Make sure all pumps and motors are operational





## Type 11 Septic Tank to Low Pressure Pipe

Usual system configuration is a 1,500 to 2,000 – gallon septic tank discharged by a lift pump to a series of buried leach lines that are usually less than 2 feet below grade. The leach lines are fed through a series of 1 ½", perforated, Schedule 40 pvc distribution pipes that are located the full length of each line for even distribution of effluent throughout the leach field. The sewage system must be enrolled in an Operation and Maintenance contract, with a Medina County Sewage System Service Provider, for the life of the system.

### Required Maintenance

1. Clean effluent filter in septic tank (if applicable)
2. Check sludge level in trash trap of tank
3. Review and document event counters, time meters, flow meters, and alarm conditions when present.
4. Flush lines yearly
5. Review of leach field area for surface water encroachment, vegetation, surfacing effluent discharge, etc.

## Type 12 Pre-Treatment (aeration unit) to Low Pressure Pipe

Usual system configuration is an aerobic treatment unit (ATU) discharged by a lift pump to a series of buried leach lines that are usually less than 2 feet below grade. The leach lines are fed through a series of 1 ½", perforated, Schedule 40 pvc distribution pipes that are located the full length of each line for even distribution of effluent throughout the leach field. The sewage system must be enrolled in an Operation and Maintenance contract, with a Medina County Sewage System Service Provider, for the life of the system.

### Required Maintenance

1. Comply with all manufacturers recommended requirements for service for the aeration unit (if applicable)
2. Check sludge level in trash trap of tank
3. Review and document event counters, time meters, flow meters, and alarm conditions when present
4. Flush lines yearly
5. Review of leach field area for surface water encroachment, vegetation, surfacing effluent discharge, etc.



## Type 13

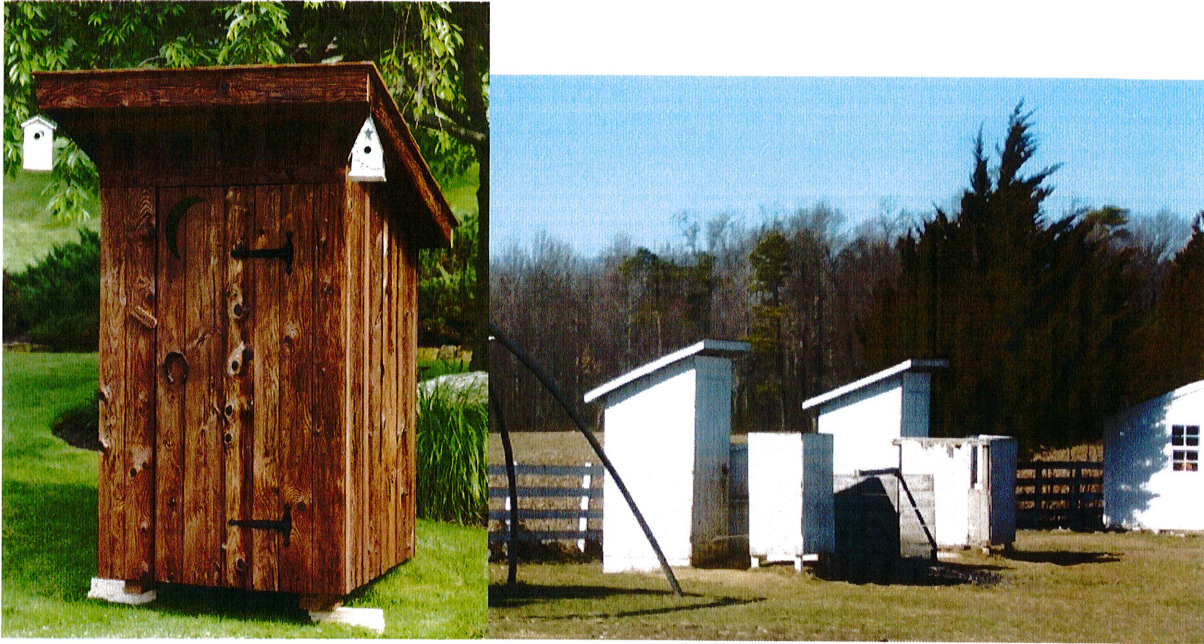
## Spray Irrigation System

This sewage system utilizes an aerobic treatment unit (ATU), with UV disinfection, that is discharged by a timed dose pump to spray heads located on the property. Anywhere from 1 to 4 spray heads may be used depending on the number of bedrooms and the overall design of the sewage system. Effluent, once treated and disinfected, is held in the dosing chamber until 4 a.m. the following morning, where the pump may run from 20 to 40 minutes, depending on the previous day's usage. There are strict isolation distances from property lines, buildings, gardens, ponds and streams, and other features on the property, that must be adhered to for this system to be installed on a property. The sewage system must be enrolled in an Operation and Maintenance contract, with a Medina County Sewage System Service Provider, for the life of the system.

### **Required Maintenance**

1. Comply with all manufacturers recommended requirements for service for the aeration unit
2. Check sludge level in trash trap of tank
3. Inspect spray area and examine for ponding of effluent, bad odors, damage to spray heads, surfacing liquids
4. Inspect for proper spray sequence, proper pump function, proper liquid levels, and check timer settings





Type 14

Privy

Privies are mainly installed on properties owned by the Amish, although they may be installed wherever running water for a traditional bathroom is missing (cabin, hunting camp, etc.). The typical privy will have a 500 gallon (minimum) holding tank under the privy itself and there may be 2 more privy's on the same property (usually Amish schools). All contents of the privy must be pumped out by a registered Medina County Septic Tank Pumper and properly disposed of at a sewage treatment facility.

**Required Maintenance**

1. Check level of solids and liquids in tank
2. Pump privy as needed





## Type 15

## Sand Lined System

The typical type of system installed under this category would be a septic, or aerobic treatment unit (ATU), discharged to a below ground sand bed where there is a pvc liner which lines the sand bed creating a barrier between the surrounding soil and the sand bed itself. These systems are typically time dosed and a series of 1½" Schedule 40 pvc perforated pipes distribute effluent over top of the sand bed. Effluent is cleaned as it passes through the sand bed and eventually is discharged to a series of buried shallow leach lines. This category also includes peat module systems, which are more typical in Medina County, which utilize the same principle except that effluent is time dosed over top of ground peat material located in plastic modules. Once the effluent has passed through the peat, thereby treating the effluent, the effluent discharges out the bottom of the peat module into the surrounding soil. These sewage systems must be enrolled in an Operation and Maintenance contract, with a Medina County Sewage System Service Provider, for the life of the system.

### Required Maintenance

1. Comply with all manufacturers recommended requirements for service for the aeration unit (if applicable)
2. Clean effluent filter in septic tank (if applicable)
3. Check sludge level in trash trap of tank
4. Inspect pumps and controls
5. Check vegetative cover and any evidence of seepage in distribution area
6. For Peat systems, modules should be opened to inspect peat for signs of plugging or if replacement of the peat material is necessary

## GENERAL MAINTENANCE ITEMS

### DO'S

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- Know your sewage type and how it works
- Have a copy of the design plan for your sewage system. Copies of this plan can be obtained from the Medina County Health Department
- Keep track of maintenance schedule to make sure the registered Service Provider is servicing the system on time and at least twice yearly
- Have a registered Pumper remove the solids from the tank every 3 to 5 years

### Don'ts – What Not To Flush

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- Diapers
- Baby, hand or cleaning wipes (even those that state “flushable” or “septic safe”)
- Cat litter
- Cigarette butts and ashes
- Plastic or cellophane wrappers
- Chewing gum
- Coffey grounds or egg shells
- Feminine hygiene products
- Napkins, tissues, and paper towels
- Cotton swabs or cotton balls
- Dental floss
- Latex items (condoms, rubber gloves, etc.)
- Adhesive bandages
- Laundry lint
- Hair