

Connection Fees and Equipment Costs

Town center residents will pay a connection fee based on the year in which they apply to connect to the sewer system. The first yearly (365 day) period begins on the date of the attached Harvard Sewer Commission cover letter to you announcing the commencement of operation of the sewer system. Following connection years begin on successive anniversaries of the date of commencement of operation. The first yearly period begins January 9, 2013.

Connection fees are as follows:

- Connection in the first year of operation: \$1000
- Connection in the second year: \$2000
- Connection in the third year and thereafter: \$3000

The fees associated with connection are:

1. Inspection and electrical inspections total approximately \$ 160;
2. Sewer Commission's inspection fee of \$100. This fee is waived for residents connecting in the first connection year.

All of these fees are payable only once.

If your connection work needs to be redone it must be re-inspected at additional cost.

The last fixed cost you will encounter in the connection process is the cost of your Grinder Pump Unit. The Harvard Sewer Commission has received pricing and warranties for three different sizes of ONE Brand pumps to match the various needs of residents connecting to the system.

They are:

1. An Indoor Pump 90 gal. capacity \$2946 + freight + sales tax
2. An Outdoor, single 70 gal. capacity \$3666 + freight + sales tax
3. An Outdoor, double 150 gal. capacity \$7550 + freight + sales tax

Fittings, extended cords and other connection parts, if necessary, will be a part of the connection cost you pay to your contractors.

Residents will choose the correct pump for their needs following consultation with the contractors generating their installation. Please remember the unit with the largest storage capacity is not necessarily the one best suited for your situation. This size is usually best suited to condominiums, apartment buildings, commercial applications and individual homes with rental space. If any unit has too much storage capacity for the number of occupants, the contents may

not flush frequently enough. Waste products which accumulate can begin to release foul gases as a by-product of their decomposition. These gases can eventually generate enough pressure to escape the pump's seals and release predictably offensive odors.

After residents have chosen their pump they must purchase them from the town's chosen supplier who will also serve as the primary service agent.

This distributor is:

F.R. Mahoney & Associates, Inc.

273 Weymouth Street

Rockland, Mass. 02370

781-982-9300

F.R. Mahoney will accept credit cards over the phone and personal checks. Contact them through their main number, 781-982-9300, and dial Extension 31 to speak with Ellen McColgan, a sales representative familiar with Harvard's Grinder Pump Unit contract.

A shipment of pumps will be stored at the Department of Public Works. The Department will release a pump to your contractor following notification of completed payment.

Warranties for these pumps are three years from the date of installation for the outdoor pumps and 5 years for the indoor pump. This warranty includes pumps installed as replacements at any time. Pricing is guaranteed for the first two years following the commencement of operation of the sewer system with a maximum increase of 3% for the third year. Thereafter, the Grinder Pumps Units are sold at the distributor's current market price.

The cost of the physical connection to the system will be different for each property. This cost will vary based on the distance from your house to your stub, the subsurface conditions on your property and the amount of work necessary to align your house's plumbing for proper connection. Electrical and indoor plumbing work will also be a factor in the cost. Only your drainlayer/contractor can provide you with these variable costs. We urge you to seek competing bids to minimize this cost.

Connecting Your Property to the Sewer System

The first step for any property owner is the selection of a licensed drainlayer from the list of drainlayers approved and licensed by the Town of Harvard. This list is available at the Harvard Town Hall. If you would like for someone you know to perform this work, ask them to apply at the Harvard Town Hall for a Drainlayers License. However, there is no guarantee they will be approved for a license.

When you have chosen an approved drainlayer you may request that he also provide the licensed electrician and licensed plumber or, if you prefer, you may choose these licensed, independent contractors yourself.

A next step is to pay your connection fee and inspection fees at the Town Hall.

Before you can begin the physical connection you will need to complete the Application for a Sewer Access Permit. We have enclosed an application in this information packet. If you misplace it you can download a copy from the town website at www.harvard.ma.us or obtain one at the Harvard Town Hall.

Be certain to provide all the information, particularly all contact information, requested on the form. Mail your completed application to The Harvard Sewer Commission c/o Julie Doucet, Harvard Town Hall, 13 Ayer Rd., Harvard, Mass., 01451 or you may deliver it in person.

When you have received your approved Sewer Access Permit you may begin the construction for your connection. The Sewer Access Permit is valid for construction for 150 days. Information on expired Permits and the consequences and other information about the Permit is available in the Harvard Sewer Commission's Rules and Regulations. A copy of the Rules and Regulations is enclosed.

For your town sewer system to work properly and to protect the service capacity of the system it is vital that all sewer plumbing structures in your house which are currently open to external and uncontrolled flows of water be sealed permanently. Even though you may have owned your home for a very long time, Harvard's old and individualized plumbing systems can have drains and piping which you may know nothing about. If you have old drain openings or have piping which you do not understand, ask your plumber to investigate. Even ordinary things such as the drains of sump pumps are suspect. This will help your plumber seal off what cannot be connected to the sewer system. Your connection will be tested thoroughly for integrity by the Harvard Sewer Commission's inspector. If the inspector finds an access problem he will require the problem be fixed. We urge you to read the Harvard Sewer Commission's Rules and Regulations, Section 4.3.5. A violation of this portion of the Rules and Regulations is a serious matter, not just for the system itself but for the homeowner, the plumber and the drainlayer.

When the work is complete the Harvard Sewer Commission's inspector will inspect, test and approve the work then convey his approval to the Harvard Sewer Commission.

A final step in the connection process is the deactivation of your current private septic system. Board of Health regulations require that your old system be punctured, collapsed or filled with material, usually sand, that renders it inoperative. Your drainlayer will coordinate the final pumping and deactivation of this old system for you. You do not have to remove any portion of your old septic system in order to complete your sewer connection. If you have plans to remove any of the structural components of your old system, this will be a separate undertaking on your part. You may have anyone you wish perform this deconstruction and removal.

Congratulations. You are now connected.

The Grinder Pump Unit and Its Operation

Central to your connection to the sewer system is a Grinder Pump Unit manufactured by E/ONE. This Grinder Pump Unit, regardless of model, contains a storage basin, a grinder and pump combination, activation controls and a high water alarm. This unit makes it possible to move sewage from properties at elevations lower than our wastewater treatment facility without the need for pumping stations throughout the town. Without this unit town properties could not connect.

Your contractor will help you choose the most advantageous location for your unit bearing in mind future maintenance, proximity to the connection stub, the arrangement of your current house plumbing and thus the lowest installation cost.

There are two models of pump available. One can be installed inside your house. This must be used in an area that never reaches freezing temperatures. It cannot be made to work outdoors.

If your contractor installs an outdoor unit for you, most of its overall height will be underground and the contents protected from freezing. Only a short flange, or lip from 2" to 5" tall will rise above the ground. This will encircle a heavy iron lid that is approximately 26" in diameter. You may paint the portion that is above ground, disguise it with a flower bed or place rock or stone around the outer edge. It is important to protect it from damage by such things as winter plowing or contact with large lawnmowers. Damage to the casing might require a very expensive replacement of the entire unit. Please do not cover it with anything that will hinder a Harvard Sewer Commission inspection, your maintenance or replacement of the pump.

Your household plumbing will deliver all of your waste to the storage basin of this unit. The grinder pump will then grind and pump all of your household waste in the storage basin and send it to the main sewer line.

These pumps are highly reliable. They are used throughout the country on systems such as ours with great success. Maintenance required for these is limited. Typical pump maintenance may be necessary the first time in roughly eight years. Pumps will commonly last for 15 to 25 years or even more. When the time comes to replace the grinder pump it is only this actual operating portion that needs replacement. The Harvard Sewer Commission will keep two of these pumps in stock for easy replacement at any time of the day or week.

These units have very tight seals which prohibit external flows from entering the unit and also prevent the escape of sewage and its variously scented odors. The presence of detectable odor should occur rarely, if at all. If strong or prolonged, the odor may indicate a blockage, broken seal or tank or a problem with an activation switch. Anything but a very brief and slight unpleasantness should prompt you to call the Department of Public Works. Waste products which sit and decompose for an extended period may generate pressure in the tank and thus force a detectable odor to escape. If you plan to leave your house unoccupied for any length of time, be

courteous to your neighbors and take advantage of this handy tip: fill your bathtub with water. Just before departing pull the plug and the volume released will be enough to trip the activation switch on the pump and this will empty your tank. Don't make your neighbors miss you too much!

These units are in constant operation. In spite of this the operational costs are surprisingly low. A pump typically has the power consumption of a 40 watt bulb or from \$15-20 annually.

Your outside electrical connection is equipped with a red light to warn of high water level. Be quick to react to this warning or, if you experience ANY problem with your system please call the Harvard Department of Public Works at 978-456-4130 at any time of the day or night.

There are simple things you can do to protect you Grinder Pump Unit and its working life span. The pump is made to process things that you would normally only put down a kitchen sink or a toilet, not things that just might fit down a toilet or a basement work sink drain. Do not attempt to dispose of anything except human waste, toilet papers and soft food waste.

The Grinder Pump Unit supplier for our system states specifically that you should never permit any items on the following list to enter your household plumbing at the proven risk of damaging your grinder pump. These products can also cause damage and blockage in the system beyond the location of your grinder pump. **DAMAGE CAUSED BY THESE PRODUCTS WILL VOID THE WARRANTY ON YOUR GRINDER PUMP.**

These specific products are:

- Paint
- Sheetrock dust
- Sand
- Goldfish stone
- Diapers
- Plastics
- Sanitary napkins and tampons
- Wire of any composition
- Cloth, including disposable products such as surface wipes
- Glass
- Metal objects

- Plastics
- Kitty Litter
- Bones
- Petroleum products
- Kitchen grease
- Egg shells and seafood shells
- Even products advertised as “disposable” or “flushable”

The interruption of service that causes the most concern and requires the greatest attention is the loss of power in the town center and consequently to your Grinder Pump Unit. If your power is interrupted the alarm and the pump in your Grinder Pump Unit will cease to operate and the dispatch of your wastewater to the main sewer line will halt. Different models of the Grinder Pump Unit will hold waste water for varying periods of use. Consult your operating manual for your exact capacity. In this period of power interruption, prudence and simple math demand that you cease operation of your dishwasher and your washing machine. Until you know the likely duration of the power outage, be judicious in your use of water for any purpose.

The most effective response for homeowners is the use of a generator to restore power. Whether it is your generator or some secondary source, it is the best and probably the only answer. For this reason the Harvard Sewer Commission requires that your licensed electrician provide an external connection plug for the safe use of a generator.

The Use and Care of the Sewer System

The Harvard Wastewater Treatment Facility can be home to nearly fifty kinds of hungry bacteria at one time. These billions of bacteria constitute a large biological machine which is constantly converting our waste products into safe byproducts, clean water and harmless gasses. In return for this service the bacteria need only a few provisions. These include waste material, oxygen, water and a safe, warm environment to live in.

Our waste provides the necessary material and water for this biomass to work. The oxygen is constantly resupplied by recirculation blowers at the wastewater treatment facility and the heat is a by-product of the conversion of the wastewater material. If we do not interfere with any of these components, life is good for all creatures great and tiny.

Your grinder pump is the first line of protection in this system. By converting your waste into very tiny particles it allows the bacteria to complete the conversion of all the waste material. Larger, incompletely ground pieces might not be fully converted before the discharge is dispersed in the leaching field. This can result in polluted effluent and a public health risk. To help your grinder pump maintain its efficiency please avoid inserting any of the material listed in the section on Grinder Pump Units into your toilet or sink. This material may foul or even break components of your pump. This can mean greater costs to you and risk to the system as a whole.

Our system is an aerobic one. This means the decomposition and conversion of waste take place in an environment rich in oxygen. Anything which removes the oxygen from the system can destroy the colony of bacteria and result in the system expelling unprocessed wastewater. Even immediate replacement of the bacterial community takes time to be effective and the waste in the system must be handled at extra cost.

Products which are oxidants destroy the oxygen balance. Chemicals like bleach and hydrogen peroxide are oxidants. Both are common household products. Yet, they have such a low concentration of oxidants that they lose their force in your washing machine or sink and will never threaten the system. Pouring large quantities of such products into the system without a deliberate use in mind can rob the system of oxygen. If in doubt about what you are about to pour down the drain, read your labels and compare them with the List of Prohibited Materials in the Sewer Commission's Rules and Regulations which accompanies this information. You may also contact the Sewer Commission if you are unsure.

Another danger to the system is any poison or biological toxin which will kill the bacteria. Common household poisons can fit this description and you should dispose of them separately. Even accumulations of expired antibiotics can have a minor impact. Again, read all labels and always err on the side of caution.

For this biological machine to function without disruption we must all take an active role in protecting it. The consequences of carelessness or neglect can take a heavy toll on equipment, property and daily comfort. Your pocketbook can suffer as well. Please act with care.