

**Grinder Pump Study Committee (GPSC)**  
**Minutes of Meeting Held on Wednesday, July 29, 2015**

**Committee Members In attendance:**

Tom Gilroy, Chairman	Dan Burke, Vice Chairman
Curtis Barton	David Foley
Peggy Dunn	Ed Safran
Bob Chevalier	
Joyce Cote, Recording Clerk	

Meeting was Chaired and called to order by Tom Gilroy at 7:00 p.m. -- Reminded all that the meeting is taped and broadcast live and rebroadcast at a later date. Also asked that anyone who had an audio or video recording device to identify themselves. NONE

**Dan Burke: Motion to accept July 1, 2015 Minutes. Curtis Barton 2<sup>nd</sup>. All in favor.**

**Tom Gilroy:** Noted that given the many members of the audience, there may be a concern that the GPSC may be attempting to change the Town Meeting vote regarding maintenance of Grinder Pumps. He emphasized that this is not the purpose of the GPSC. The intent is that all parties understand their roles within the current By-law. Also noted that the Committee can only make a recommendation to the Board of Selectmen who may in turn seek advice from Town Counsel. The Board of Selectmen will then determine if they endorse the Committee's recommendation and include it as an article on the Fall Town Meeting Warrant.

It is the Sewer Division's responsibility to rewrite the Sewer Use Regulations (SUR) to include a section on Grinder Pump maintenance.

The GPSC reviewed the Proposed Modifications to By-law 132-3 (modified version attached).

**Dan Burke: Motion to keep the word "preferred" in paragraph 1. Ed Safran: 2<sup>nd</sup>. All in favor except Curtis Barton (opposed).**

**Curtis Barton: Motion to accept paragraph "B" wording as modified. Dan Burke 2<sup>nd</sup>. All in favor.**

Discussion on paragraph "C": Dave Foley objects to eliminating the word "maintenance" based on a document titled "Grinder Pump Information Sheet" which he claims was distributed to Grinder Pump owners by the Sewer Commission. This document states that Grinder Pumps may need to be pumped every 7 to 9 years to eliminate any accumulated solids in the holding tank (See page 3 on the attached).

**Curtis Barton: Motion to keep the word "maintained" in paragraph "C". Peggy Dunn 2<sup>nd</sup>. All in favor.**

**Paul Cohen recommended eliminating reference to the Sewer Use Regulations.**

**Tom Gilroy: Motion to agree with the language used (as noted on attached) for paragraph "C". Peggy Dunn 2<sup>nd</sup>. All in favor.**

A lot of discussion regarding whether or not the Town should cover repair costs associated with improper installation.

**Tom Gilroy: Intent of the GPSC's original recommendation was to move forward from the date of the Town Meeting vote.**

**Ed Safran: Motion to keep paragraphs D and E (not the proposed modification) as is currently written within By-law 132-3. Peggy Dunn 2<sup>nd</sup>. All in favor.**

**Tom Gilroy: Final proposed modifications to be distributed with the Minutes for GPSC members to review.**

Sewer Use Regulations to include Grinder Pump maintenance will not be ready for Fall Town Meeting.

**Citizen Comments:**

Unidentified Grinder Pump Owner: When do we schedule the pumping of fat from our pumps?

**Tom Gilroy:** This is not currently part of the Maintenance contract. Perhaps may be required with next contract.

Unidentified Grinder Pump Owner: Are the inspection reports available? It was not a requirement to provide an inspection report, however, a summary of what was done during the inspection can be obtained from the Sewer Division.

Next meeting to take place on Wednesday, August 12<sup>th</sup> at 7:00 p.m. unless conflicts with Planning Board. **Later determined that this will conflict with the Planning Board.**

**Next meeting to take place on Wednesday, August 19<sup>th</sup> at 7:00 p.m.**

**Curtis Barton motion to adjourn; Peggy Dunn 2<sup>nd</sup>. All in favor. Meeting adjourned at 8:18 p.m.**

# Proposed Modifications To By Law 132-3 rev. DPW 07/25/1504/15

## 132-3 Grinder Pumps.

A. The ~~preferred~~ <sup>prohibited</sup> ~~required~~ method of discharge of sewage from an individual building or group of buildings to the Town's sewer system is gravity flow. Grinder pumps shall be **approved** only after alternatives for gravity service connections have been thoroughly considered and, in the opinion of the Town of Chelmsford Department of Public Works, such alternatives cannot reasonably discharge sewage to the Town's sewer system by gravity flow. Grinder pumps shall only be used in accordance with regulations established by the Town of Chelmsford Department of Public Works.

B. **Licensed Drain Layers** shall submit required documentation and apply for a **sewer connection** permit and install the grinder system **per the Sewer Use Regulations**. ~~The owner~~ **and** shall be responsible for all of the costs related to the connection to the Town's sewer system.

*HAZOP*  
*WATER*  
C. **Grinder pumps remain the private property of the homeowner**. Both Existing and new **single or 2 family DPW approved** Residential Grinder pumps and the associated appurtenances **installed** controls shall be ~~maintained~~ <sup>maintained</sup> ~~serviced and replaced and repaired or replaced or replaced~~ by the Town of Chelmsford, ~~per the Sewer Use Regulations~~, as integral components of the Town's wastewater collection system respecting that while a pump is inoperable the homeowner is without sanitary facilities. The Town of Chelmsford, ~~per the Sewer Use Regulations per the Sewer Use Regulation~~ shall not be responsible for the ~~maintenance~~ <sup>repair</sup> of grinder pumps **or systems** serving commercial properties or residential properties comprised of three or more units.  
*main tenance \**

**Delete all of previous part D and replace with**

~~D. The Town of Chelmsford will not be responsible for any costs related to improper installation, improper operation, or failures classified as misuse or abuse as outlined in the Sewer Use Regulations. The property owner shall be responsible to pay directly or reimburse the town for any and all costs associated with such requests for emergency repair service.~~

**Add new part E.**

~~E. The Town of Chelmsford shall not recover betterment or installation discounts previously given nor be held liable for damages from failures caused by incomplete or deficient installations done prior to the adoption of this By Law. (April 30, 2014).~~



## ***GRINDER PUMP INFORMATION SHEET***

### **BACKGROUND INFORMATION**

The use of low-pressure sewers has become very widespread in the last 25 years and has resulted in the provision of sewer service in many areas where gravity sewers would have been either physically impossible or considerably more expensive in terms of both resources and environmental damage.

The grinder pump is the key component of the low-pressure sewer. Although their use is becoming more common, people remain skeptical about grinder pumps. Below are answers to the most commonly asked questions about grinder pumps.

### **WHAT IS A GRINDER PUMP AND HOW DOES IT WORK?**

A grinder pump is a semi-positive displacement pump that receives waste from a home and pumps it into a low-pressure sewer line. As its name suggests, the grinder pump grinds up any solids so that they can be pumped also. Waste enters the unit through a 4-inch PVC house connection and is pumped out through a 1 1/2 -inch PVC pressure line. The grinder pump also has a 60-gallon holding tank which stores the waste. As a volume of new waste enters the tank, the same volume of stored waste is pumped out. This prevents the waste from going septic.

### **WHY DO I NEED A GRINDER PUMP?**

Grinder pumps are used to provide sewer service to areas that cannot be serviced by a gravity sewer. Most often this is due to topographic elevation issues, but could also be for economic or environmental reasons.

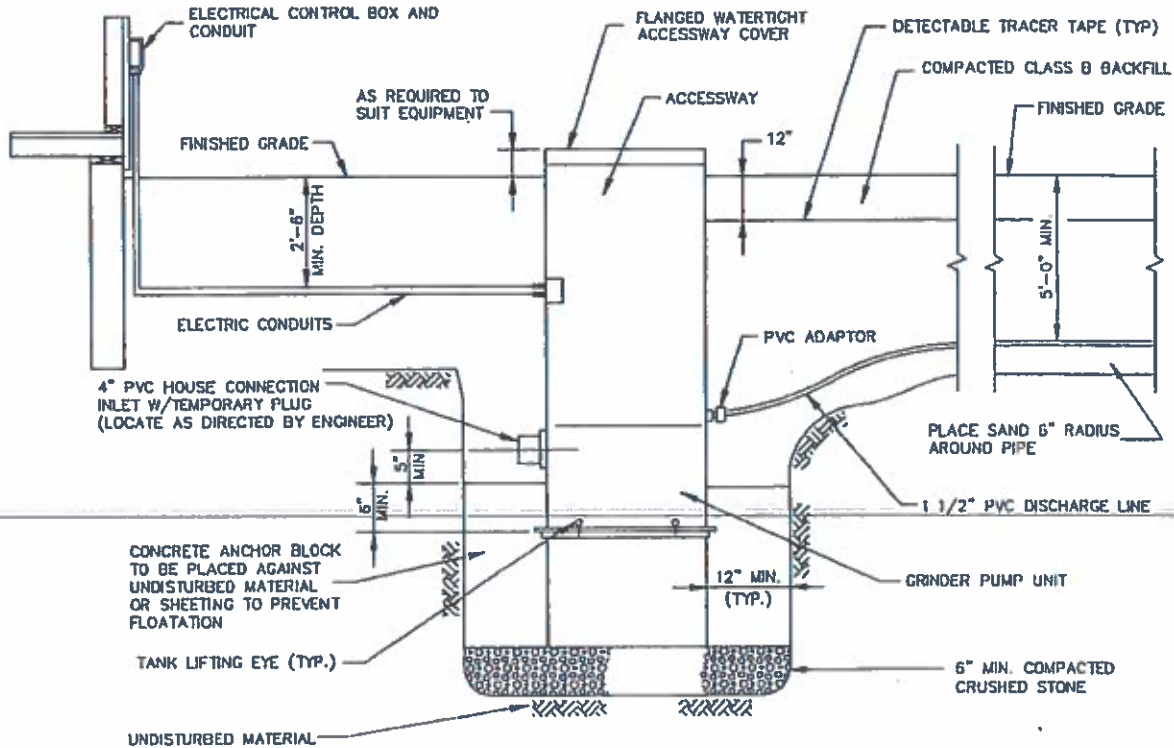
With a gravity sewer, the waste flows by gravity in a pipe from a higher elevation to a lower elevation. This requires that the topography of the land provide for enough change in elevation in the pipe and enough ground cover to allow the waste to flow downhill. The same principle holds for a gravity house connection. The waste pipe exiting a house must be of a slightly higher elevation than the sewer main in the street so that the waste leaving the house will flow downhill toward the main.

Low-pressure sewers are used when it is not possible or practical to carry waste by gravity. Low-pressure sewers are effective in low-lying areas because they pump the waste from the lower areas into a gravity line or a pump station. Likewise, a pressure house connection uses the grinder pump to pump waste from the house into a low-pressure sewer line or sometimes directly into a gravity line. Houses at the bottom of a hill at the end of a dead-end street are good candidates for a grinder pump, as are houses set below the road at the bottom of a slope.

### **WHAT NEEDS TO BE DONE TO INSTALL A GRINDER PUMP?**

The contractor must make two main excavations to install a pressure house connection; the excavation for the grinder pump itself and the excavation for the 1 1/2-inch pressure building connection. The grinder pump excavation is approximately 6 feet deep by 6 feet wide. The pressure sewer excavation is about 4 feet wide, with varying depth. These are typical dimensions, but are subject to change for each unique situation. It is recommended that the

pressure sewer connection route be as direct as possible and avoid trees, gardens, rocks and other landscaping. In areas with shallow ledge, blasting may be necessary to excavate. Below is a cross-section of a grinder pump installed in the ground.



**TYPICAL GRINDER PUMP INSTALLATION**  
N.T.S.

**WHAT WILL THE INSTALLED GRINDER PUMP LOOK LIKE?**

The installed grinder pump has a lid that extends approximately 4 inches above the ground surface and a control box that is mounted on the outside of the house. The lid must be exposed to provide easy access to the pump unit. The control box has a mounted light that serves as a visual alarm during any pump malfunction and must be visible to the homeowner.

**DO I NEED TO DO ANYTHING TO PREPARE FOR THE GRINDER PUMP?**

A homeowner must do three things for proper installation of the grinder pump:

1. Fill out the enclosed Sewer Connection form and indicate the location you would like the grinder pump to go and where the service for your house connection should be left in the street. This ensures that when the contractor installs the main sewer by your house that he will leave a service connection in a location that allows you to easily connect into the new sewer based on your existing plumbing.
2. Make sure that you have at least 100 amps of electric capabilities with a 20-amp isolator. The 20 amps are required to run the pump and control box. If the electrical run from the

control panel on your house to the grinder pump is more than 100 feet, the line must be on a 300-amp service. You may need to consult an electrician for this work.

3. At the time of the actual installation of the grinder pump unit, you will be required to have your septic tank pumped and filled. As stated in the attached grinder pump policy, you must provide the Town of Chelmsford with a certificate verifying that this has been done. This is required on all gravity and low-pressure services in the Town of Chelmsford.

#### **WHAT MAINTENANCE IS REQUIRED WITH A GRINDER PUMP?**

The owner is responsible for any maintenance of the grinder pump. Wear and tear on a grinder pump varies depending upon several things including the number of people in a household and the frequency that the facilities in a household are used. A grinder pump typically needs to be pumped every 7 to 9 years to eliminate any accumulated solids in the holding tank.

#### **WHAT HAPPENS DURING A POWER OUTAGE?**

The grinder pump has 24-hour holding capacity within its holding tank. (Based on a 4-person household.) You will be able to use your facilities during this time. However, like any power outage situation, most household activities are not being conducted in a normal manner, no hot water is available for showers, there is no clothes washer use, dishwasher use, etc. This decreases the use of sewer facilities. A generator can operate the grinder pump providing it has sufficient electric capacity.

#### **HOW MUCH WILL THE GRINDER PUMP COST ME?**

Prior to the grinder pump hookup, you may need an electrician to come and install the necessary 20-amp service, depending upon the existing wiring in your home. As previously mentioned, you will also need to have your septic system pumped. Operation costs will vary depending on the frequency of use of the grinder pump. A typical single family home will use 250 gallons of water per day. The grinder pump for this home will consume about 200 kwh of electricity per year. At \$0.011 kwh x 200 kwh = \$22.00 of electricity per year to operate the grinder pump.

#### **HOW WILL I KNOW WHEN TO HAVE MY GRINDER PUMP INSTALLED?**

The first construction you will see on your street is the installation of the mainline sewer (gravity or low-pressure). The crew not only installs the sewer main, but also leaves your house connection tee off the main in the street at the location indicated by you on the sewer connection form. After the mainline sewer has been completed for your street, the crew will return and install a pressure service line off of the main line up your property line, where they will also install a valve box. The sewers will then be tested for leaks. If the lines pass the leakage test, you will receive a notice from the Town of Chelmsford stating that you have one year to have your grinder pump installed and to connect into the mainline sewer.

