

# OVERVIEW OF INSPECTION STAGE 4/ SYSTEM INSTALLATION

# 17



## OBJECTIVES

The purpose of this chapter is to:

- Understand the purpose of the inspection stage.
- Recognize the correct soil conditions to install a system.
- Learn how to prepare a site.
- Become familiar with what types of materials must be used to construct a system to comply with the regulations.

## Overview of Inspection Stage

There are two parts to the inspection stage:

- 1) Installation
- 2) Final inspection

### **Purpose of the final inspection:**

Walk through the onlot sewage system and check to see if the system was installed according to the permit and the regulations. The final inspection will be reviewed in more detail in chapter 18.

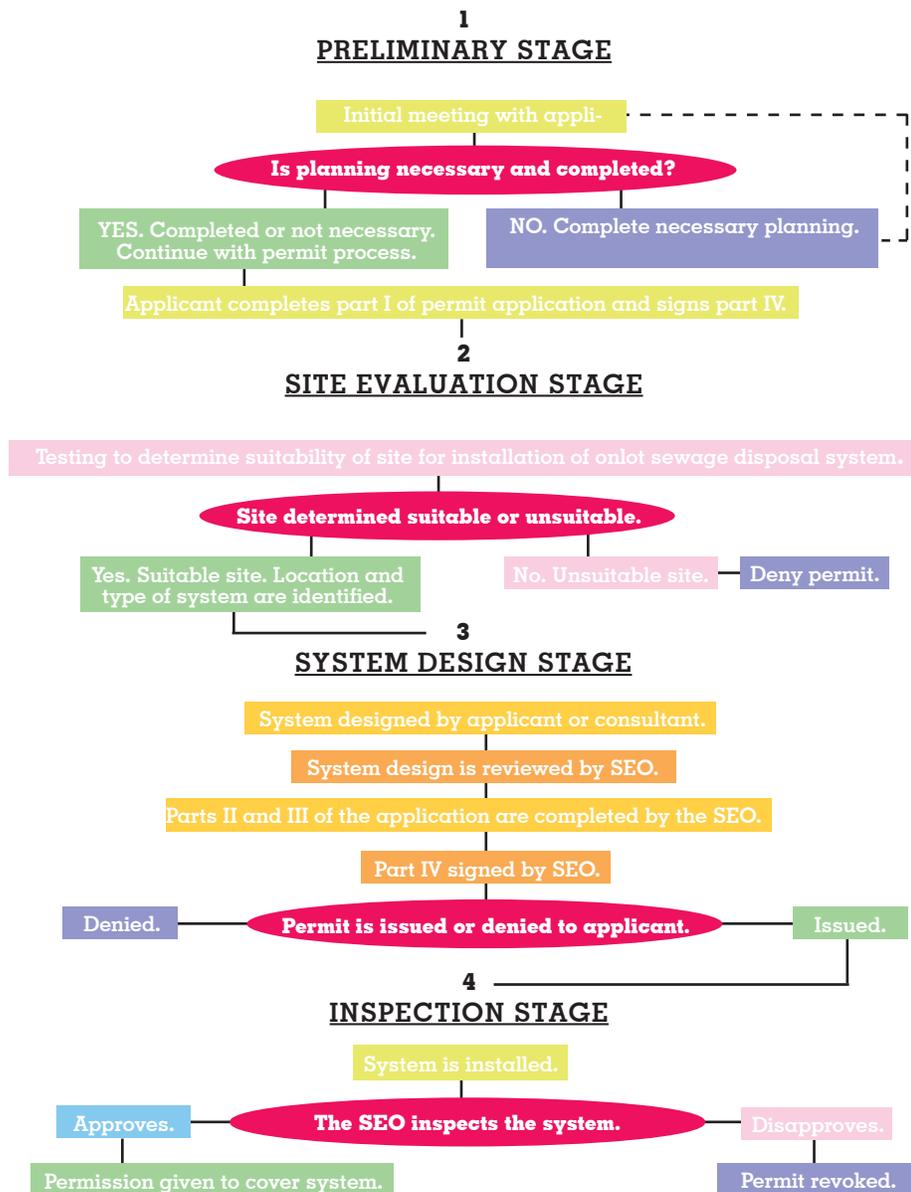


NOTES



## NOTES

# PERMIT PROCESS



## System is Installed

An SEO is not normally on site during every step of the installation process. Therefore it is important to make sure the installer knows the proper soil conditions for installation and the materials to use when installing the system.



NOTES

### CONSTRUCTION

#### MOISTURE CONTENT FOR CONSTRUCTION CONDITIONS



Section 73.51(c)



Does it matter how moist or dry your soil is?

#### FIELD TEST

- 1) Squeeze a handful of soil in one hand.
- 2) Open your hand.
- 3) Bounce the sample once lightly in your hand or tap the soil lightly with your finger.
  - a) If the sample of soil crumbles or breaks up immediately when bounced or tapped, the soil moisture should be acceptable.
  - b) If the sample sticks together, construction should be postponed.

## **SITE PREPARATION**

During the installation process, all measures should be taken to minimize compaction of the soil. If the soil is compacted, it will not absorb the effluent at the rate the percolation tests indicated.

### **IN-GROUND SYSTEM**

- The soil will be removed to the depth of the system.

### **ELEVATED SYSTEM**



Section 73.55(b)(1-3)

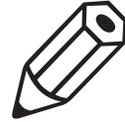
- Cut all vegetation flush with grade.
- Remove loose excess debris, such as leaves.
- Do not remove roots. Cut all vegetation including trees flush with grade and leave the roots.
- The absorption area and out to the berm must be chisel plowed. A similar implement attached to lightweight equipment can be used. The plow should run along the contours to a maximum of 6 inches deep. This process is to break up the surface layer of the soil to help the effluent drain from the sand into the soil easily. You are not turning the soil; you are just scratching the surface.
- Rotary tilling is prohibited.
- After plowing, under no circumstances may equipment travel on the plowed soil surface.



NOTES

## **MATERIALS**

Materials must be specified in the design information submitted by the designer. The SEO's job is to verify at the site that the correct materials are being used.



NOTES

### **SAND - ELEVATED SYSTEM**



Sections 73.55(c) & 73.54(b)(2)

- The size and grading must meet bituminous concrete sand type B #1 or #3 requirements from the PennDOT-certified stockpile.
- The sand supplier must provide a certification in writing to the SEO.
- The sand specifications are for all conventional systems that require sand, except IRSIS, which is not discussed in the academy.

### **AGGREGATE - IN-GROUND/ELEVATED SYSTEM**



Section 73.51(α)

- The size and grade of the aggregate must meet AASHTO No. 57 requirements from a PennDOT-certified stockpile and must be of Type B quality requirements.



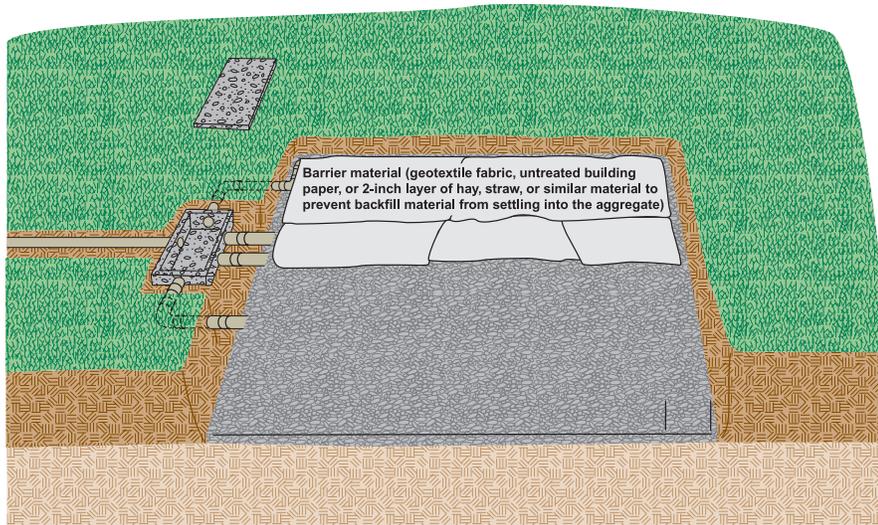
## BARRIER BETWEEN AGGREGATE AND TOPSOIL

Sections 73.52(b)(13) & 73.53

A layer of material must be placed between the aggregate and the soil cover to prevent the backfill from falling into the aggregate.



NOTES



What are three acceptable barrier materials?

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_



### KEY POINTS

- All measures must be taken to avoid compaction before and during the installation process. If the site is destroyed by heavy equipment driving over the absorption area, another site must be found.
- All the materials must meet the requirements of the regulations and be specified in the design of the system.