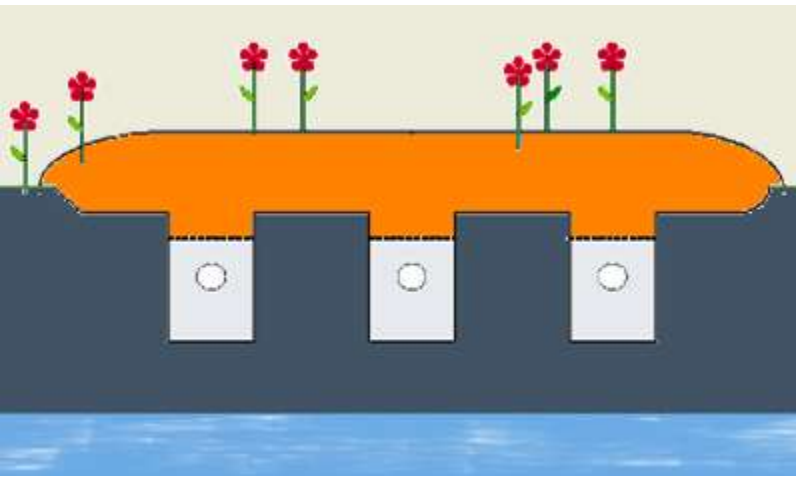


CAPPING FILL DRAINFIELD GUIDE

Overview



A capping fill drainfield is similar to a standard drainfield; however, the soil is manipulated to maintain adequate separation to the ground surface while allowing sufficient distance from:

- an impermeable layer;
- rapidly draining layer (sand or gravel); or
- water table.

Separation is made by installing shallow trenches in the native soil and then adding fill to the top of the drainfield to form a cap.

Special Considerations

Construction of capping fill drainfields may only occur between June 1st and October 1st unless authorized by a County Environmental Health Specialist.

Do not install a capping fill drainfield when the approved area is wet or frozen.

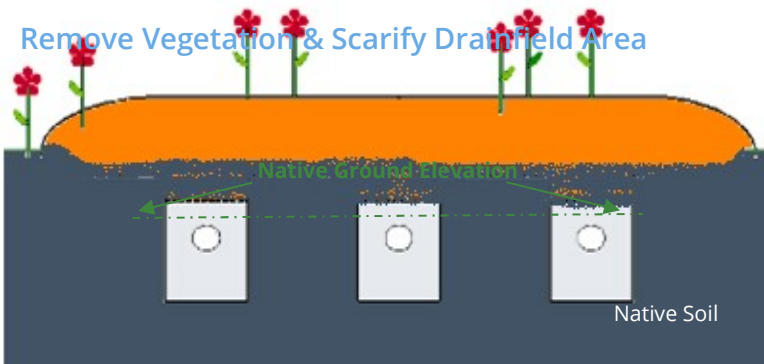
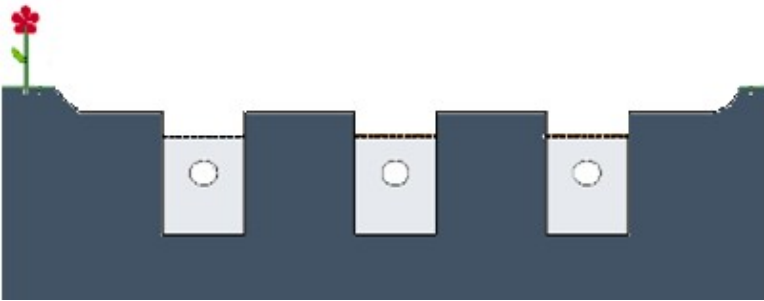
The Environmental Health Specialist will determine whether or not the upper (18) inches of the native soil profile is too moist for construction. If the soil is manipulated when wet it can damage the soil structure, which is very important to the successful operation of the drainfield.

Cap material may be sourced from the site or brought in from another location. It must be clean soil of the same textural class (i.e. sandy loam) or one textural class finer than is native to the site. All vegetation must be removed and all rocks larger than a softball shall be screened out of the cap material. Arrange to have the cap material inspected by a County Environmental Health Specialist, preferably at the Initial Capping

Installation

1. Scarify and remove all vegetation from the drainfield area, including a (10) foot perimeter around drainfield.
2. Install the drainfield trenches shallow in the native soil using a transit or laser level to ensure the trenches are level. The trench bottom should be at least (24) inches wide. The trench depth is determined during the site evaluation process, is specific to each site, and is indicated in the installation permit. The maximum trench depth is measured from the native ground elevation to the bottom of the trench and it is very important to not exceed it.
3. Install at least (6) inches of gravel at the base of the drainfield trenches. The gravel should be (¾- 2 ½) inch river rock or crushed rock that has been sorted and *washed*. It may be installed after the pipe is laid if the pipe rests on (6) inch blocks or 2x4's.

Fill inspection.



Installation Continued. . .

4. Install the perforated pipe with the stripe and holes facing down on top of the gravel.
5. Each drainline lateral must be covered with at least (2) inches of gravel.
6. Each trench must be covered with filter fabric or untreated building paper before backfilling.

DEQ keeps an updated list of approved drainfield products that may be used instead of pipe and rock. The list of approved products and their installation guides can be found here:

<http://www.oregon.gov/deq/Residential/Pages/Onsite-Products.aspx>

Please note that wire mesh with ½"-1" openings should be placed below a grateless half pipes like Infiltrator.

7. Cover the entire drainfield with a minimum of (10-16) inches of fill material depending on the site and indicated on the permit. Fill may be excavated from the site or brought onto the property after being inspected (typically at the Initial Capping Fill inspection). The cap must extend at least (10) feet beyond the edge of the trench and sloped to drain away from the drainfield. Cap material must be clean soil of the same textural class (i.e. sandy loam) or one textural class finer than the native soil.
8. Install a vegetative cover on the drainfield to enhance treatment and prevent erosion.

This handout is designed to explain the basic workings of the capping fill septic system and the basic layout. For construction and material standards for all septic system types refer to Oregon Administrative Rules (OAR) 340, Division 71 and 73, available on-line at: <http://www.oregon.gov/deq/Residential/Pages/Onsite-Rules.aspx>

Inspections

Install the Pipes & Drainlines to Permit Specifications

A capping fill system installation typically requires at least two inspections, although different components of the inspections may be scheduled separately if needed. A complete As-Built & Materials List (Final Inspection Request and Notice) form must be submitted in-person at the Deschutes County Community Development Offices or emailed (onsite@deschutes.org) to the Environmental Soils Division prior to scheduling an Initial Capping Fill inspection (#7010).

Note: Oregon's ePermitting System and App is only available to licensed contractors.

1. Schedule an Initial Capping Fill inspection (#7010) prior to installing the drainfield cap. It will include:
 - Septic Tank Inspection (#7100)
 - Tank Water Tightness Test (#7270)
 - Pressure or Effluent Line Inspection (#7350)
 - Scarification (#7010)
 - Drainfield Inspection (#7450)
2. Schedule a Secondary Capping Fill inspection (#7830) after the drainfield cap is installed.



Minimum Separation Distances (OAR 340-071-0220)

Items Requiring Setback	From Subsurface Absorption Area Including Replacement Area	From Septic Tank and Other Treatment Units, Effluent Sewer and Distribution Units
1. Groundwater Supplies and Wells.	*100'	50'
2. Springs: <ul style="list-style-type: none"> Upgradient. Downgradient. 	50' 100'	50' 50'
**3. Surface Public Waters: <ul style="list-style-type: none"> Year round. Seasonal. 	100' 50'	50' 50'
4. Intermittent Streams: <ul style="list-style-type: none"> Piped (watertight not less than 20' from any part of the onsite system). Unpiped. 	20' 50'	20' 50'
5. Groundwater Interceptors: <ul style="list-style-type: none"> On a slope of 3% or less. On a slope greater than 3%: <ul style="list-style-type: none"> Upgradient. Downgradient 	20' 10' 50'	10' 5' 10'
6. Irrigation Canals: <ul style="list-style-type: none"> Lined (watertight canal). Unlined: <ul style="list-style-type: none"> Upgradient. Downgradient 	25' 25' 50'	25' 25' 50'
7. Manmade Cuts Down Gradient in Excess of 30 Inches (top of downslope cut): <ul style="list-style-type: none"> Which Intersect Layers that Limit Effective Soil Depth Within 48 Inches of Surface. Which Do Not Intersect Layers that Limit Effective Soil Depth. 	50' 25'	25' 10'
8. Downgradient Escarpments: <ul style="list-style-type: none"> Which Intersect Layers that Limit Effective Soil Depth. Which Do Not Intersect Layers that Limit Effective Soil Depth. 	50' 25'	10' 10'
9. Property Lines.	10'	5'
10. Water Lines.	10'	10'
11. Foundation Lines of any Building, Including GaraQes and Out Buildings.	10'	5'
12. Underground Utilities.	10'	—
* 50-foot setback for wells constructed with special standards granted by WRD.		
**This does not prevent stream crossings of pressure effluent sewers.		