STATE OF COLORADO

John W. Hickenlooper, Governor
Larry Wolk, MD, MSPH
Executive Director and Chief Medical Officer

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
Located in Glendale, Colorado

www.colorado.gov/cdphe

Colorado Department
of Public Health
and Environment

July 2014

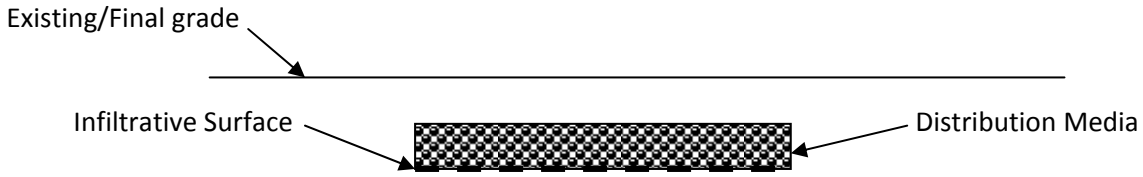
Clarification Regarding the term "Infiltrative Surface" within Regulation 43

The term, "Infiltrative Surface" is defined in Regulation 43 as follows:

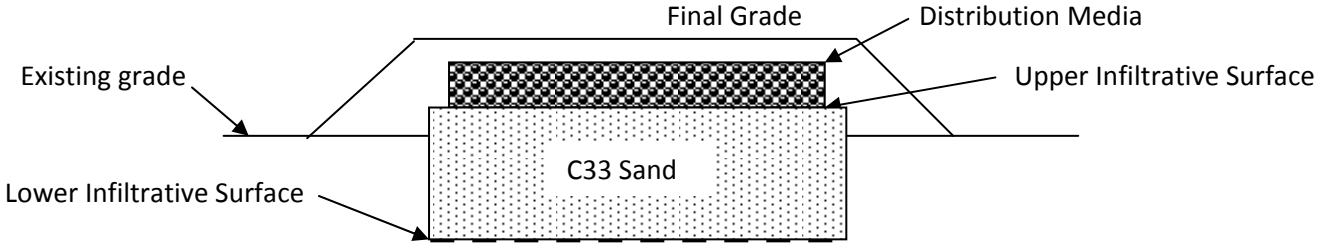
"Infiltrative surface" means designated interface where effluent moves from distribution media or a distribution device into soil.

This document is provided in order to clarify the definition and the intent within Regulation 43.

"Infiltrative surface" is found in several sections of Regulation 43. In most cases, it refers to the interface of where effluent moves from a distribution media (i.e., rock and pipe, chambers, etc.) into existing native soil. Shown below:



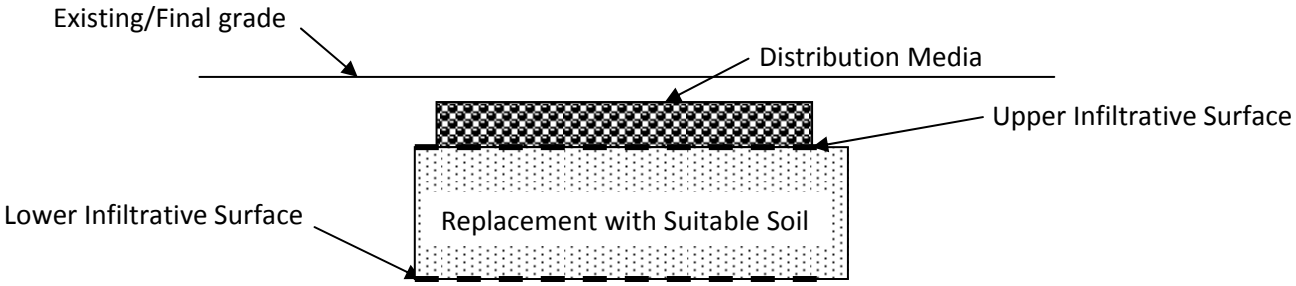
However in a few instances, such as in the definition of "mound", and within section 43.11(C), which refers to "mounded sand filters", these items reference two separate interfaces. The top surface of the treatment media (C33 sand) is one "infiltrative surface" and the surface of the native soil below the treatment media is the other "infiltrative surface". Refer to the mound system drawing below:



Mounded Sand Filter

Note that in the drawing of the mounded sand filter, the upper ”infiltrative surface” is where the effluent will move from the distribution media (in this case, rock and pipe) into the treatment media (C33 sand). The lower “infiltrative surface” is where the treated effluent will move into the native soil.

However, it is important to note that there are other types of systems that can have an upper and lower “infiltrative surface” that can be either above or below existing grade. The drawing below shows how an “over-excavated”, or “soil replacement” system would also fall into the “below grade” category.



Soil Replacement System

It should also be noted that section 43.5(D)(4)(c) of Regulation 43 states in part that a percolation test hole be terminated a minimum of 6 inches and a maximum of 18 inches below the proposed “infiltrative surface”. While section 43.5(D)(5) states, in part, that the minimum depth of the soil profile test pit excavation must be four feet below the proposed depth of the “infiltrative surface”. These sections obviously refer to the site evaluation of existing native soils within the location of the proposed soil treatment area.

Summary: The overall intent is to ensure that we define the interface of where effluent moves from distribution or treatment media into existing, filled, or replacement soil. Each “infiltrative surface” is to be sized based on the LTAR of the receiving material, and the treatment level of the wastewater being applied to the “infiltrative surface”. As you come across this term within the various sections of Regulation 43 or your local regulation, let the context of each section guide you in determining if you are referring to an upper or lower “infiltrative surface”.

For additional information contact:

Chuck Cousino, REHS

OWTS Coordinator

Water Quality Control Division

Colorado Department of Public Health and Environment

4300 Cherry Creek Drive South • Denver, Colorado 80246-1530

303-692-2366 • Email: chuck.cousino@state.co.us