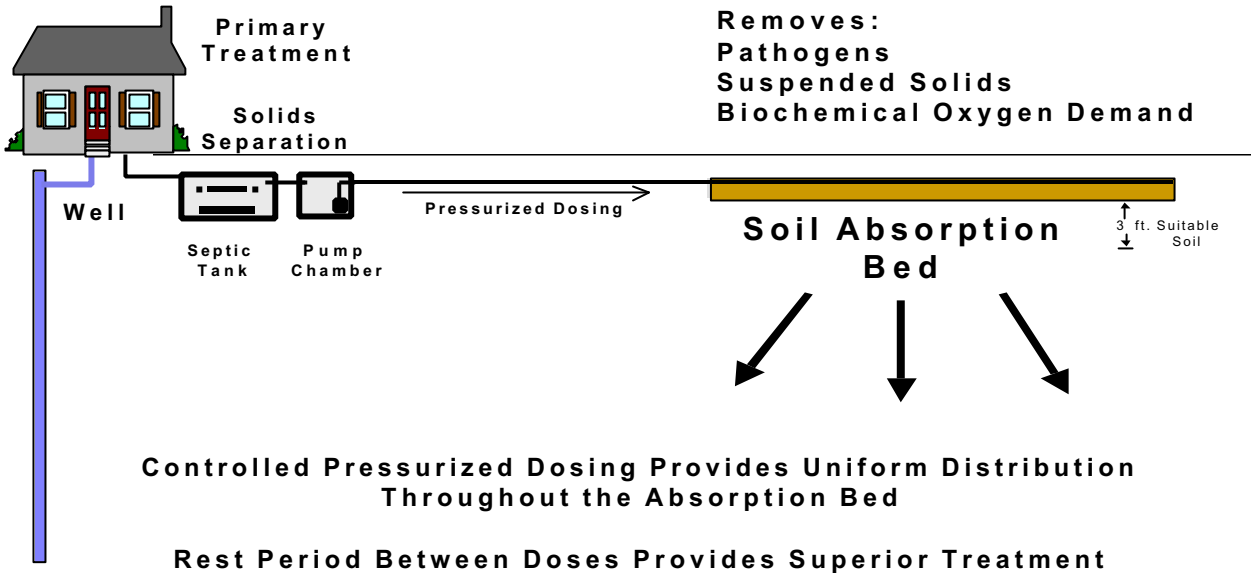
In-ground Pressure Distribution System



Secondary Treatment in Soil Absorption Bed

Removes:
Pathogens
Suspended Solids
Biochemical Oxygen Demand

An in-ground pressure distribution system consists of a septic tank, pump chamber, and a sub-surface soil absorption bed. Including space for the drain tile, gravel trench and overlying fill, the minimum native soil requirements range from 49 to 53 inches depending on the diameter of the distribution pipes. Like a conventional system, 36 inches of suitable native soil above bedrock or groundwater is required for the absorption bed.

The treatment mechanisms of in-ground pressure distribution systems are very similar to those of conventional systems, that is, 36 inches of native soil constitute a fixed porous medium on which aerobic bacteria provide secondary treatment of wastewater. The principle difference is the addition of a pump chamber that delivers septic tank effluent to the soil absorption bed in controlled timed doses. Delivering septic tank effluent in controlled pressurized doses ensures that the wastewater is equally distributed across the soil absorption bed, thus reducing the potential for the localized clogging that often occurs in conventional gravity dosed systems. Research has also shown that discharging effluent in controlled, properly timed doses gives the absorption bed a drying period between doses that can result in enhanced treatment with regard to pathogen and nutrient removal.

Septic tanks require periodic pumping of accumulated solids, as well as inspection to determine that the tank remains watertight. Solids must also be removed from the pump chamber periodically to insure proper functioning of the pump mechanism.

The components of these systems are not different than those of conventional and mound systems, which have a long history in Wisconsin. They are used under the current code. Their advantage is the potential of less clogging of the soil absorption bed. In Wisconsin, permits for in-ground pressure distribution systems constitute a very small number of the new systems and replacements--less than one-half of one percent.