**74:53:01:31.  Determining required absorption system area.** The minimum area of absorption beds or trenches in a water-carriage dispersal system which utilizes an absorption system shall be expressed in terms of square feet, that is, the length times the width of the beds or trenches. The total absorption area (A) in square feet required for absorption beds or trenches is equal to the number derived by multiplying the gallons per day of wastewater flow (Q) for which the system is designed by the square root of the rate of percolation, as determined pursuant to § 74:53:01:30, expressed in minutes per inch (t) and dividing this product by five, as shown in the following formula:

A = Q

5

In no case may the gallons per day of wastewater flow (Q) used in this formula be less than 750 or more than 7,500. For systems receiving wastewater flows of less than 750 gallons per day, Table 5 in  74:53:01:32 shall be used based on 120 gallons per day per bedroom. This formula gives the required bottom area when 6 inches or more but less than 12 inches of fill material are placed below the distribution pipe for trenches and beds. The required bottom area may be reduced by the following percentages for trenches only: 20 percent for 12 inches or more but less than 18 inches of fill material below the distribution pipe; 34 percent for 18 inches or more but less than 24 inches of fill material below the distribution pipe; and 40 percent for 24 inches or more of fill material below the distribution pipe.

**Source:** 12 SDR 2, effective July 18, 1985; 13 SDR 129, 13 SDR 141, effective July 1, 1987; transferred from § 74:03:01:68, July 1, 1996.

**General Authority:** SDCL 34A-2-93.

**Law Implemented:** SDCL 34A-2-20.