

NMED Exhibit 24 - Diagram of setbacks between multiple conventional septic systems on a single lot.

The circles below represent the area required for each liquid waste system, based on the design flow, which is based on the number of bedrooms. The circles must not overlap. The radius of any circle is used with any adjoining circles to determine the minimum distance between the liquid waste systems. For example, a three bedroom house has a design flow of 375 gallons per day. The area required for a conventional system, based on a maximum flow of 500 gallons per day per acre (20.7.3.301.C NMAC) is $\frac{3}{4}$ acre, calculated by $375/500 = 0.75$. One acre is 43,560 square feet, so $\frac{3}{4}$ acre is $0.75 \times 43,560 = 32,670$ square feet. The radius of a circle of this size is calculated using the formula $A = \pi r^2$, rearranged as $r = \sqrt{A/\pi}$, or radius = $\sqrt{32,670/3.1416} = 102$ feet. The distance required between two liquid waste systems serving three bedroom homes is $102 + 102 = 204$ feet, measured at the closest point. In the diagram below, the three circles on the left have radii of 102 feet. The distance between any two systems, no matter what the design flows, whether the same or different, can be determined in this manner. In this example, the total design flow is $2 \times 375 = 750$ gallons, plus $3 \times 440 = 1320$ gallons for a total of 2070 gallons. Under current policy and regulations, these systems could not be installed as conventional systems on a single lot, but as shown they could be installed under the proposed rule, provided the lot size met the 500 gpd per acre minimum for conventional systems, in this case 4.1 acres.

