

Appendix B - Equations

Shallow Concentrated Flow

The equation on page 100 of Appendix B can be modified for areas in Kansas west of U.S. Highway 281 due to the flat topography. For slopes less than 1 percent in that area, the equation used to compute velocity for shallow concentrated flow can be as follows:

$$\text{Velocity } (V) = 8.5 \sqrt{s}$$

Where: s = slope of hydraulic grade line (land slope, feet/feet)

This equation is not to be used where the channel slope or flow area is less than 1 percent with contributing watershed slopes of a higher percentage.