

Section 685.23 Measurement of Flow in Open Ditches.

Exact measurement of flow in open ditch or canal flow can be measured by the methods outlined in Chapter 9, Section 15, of the NEH.

Section 685.24 Siphon Tubes.

Siphon tubes are used to distribute water from a head ditch to furrows, corrugations, or borders. They are generally made of aluminum or plastic and normally preformed to fit a half cross-section of the ditch. Normal diameters range from 1/2 to 6 inches. Various lengths are available, but normally the smaller tubes are 5 or 7.5 feet long and larger tubes 8 to 10 feet long.

The discharge of a siphon tube depends on (1) the inside diameter of the tube, (2) the length of the tube, (3) inside roughness, (4) number and degree of bends and (5) the head under which the tube is operating. When the outlet end is submerged, the operating head is the difference in elevation between the water surfaces at the entrance and outlet ends of the tube. When the tube is flowing free, the operating head is the difference in elevation between the water surface at the entrance and the center of the outlet end of the tube.

The following table can be used to estimate the flow from standard aluminum or plastic siphon tubes.