

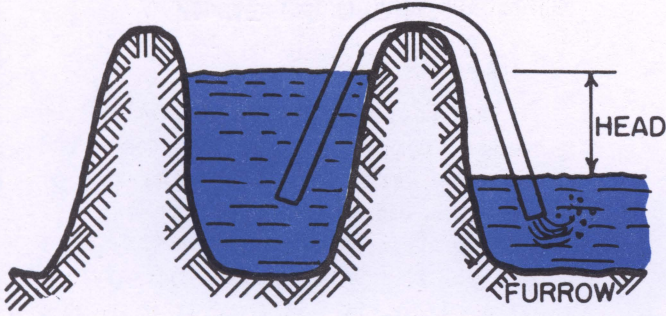
IRRIGATION

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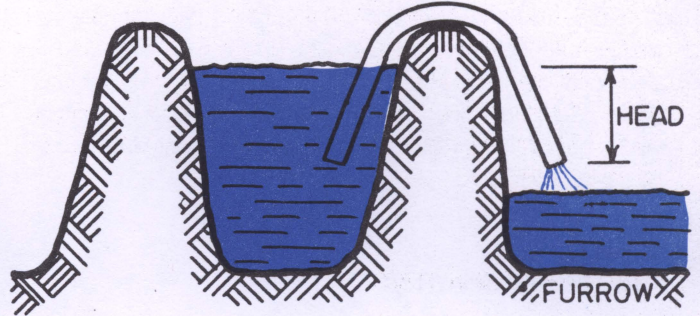
FACTS

Irrigation Siphon Tubes

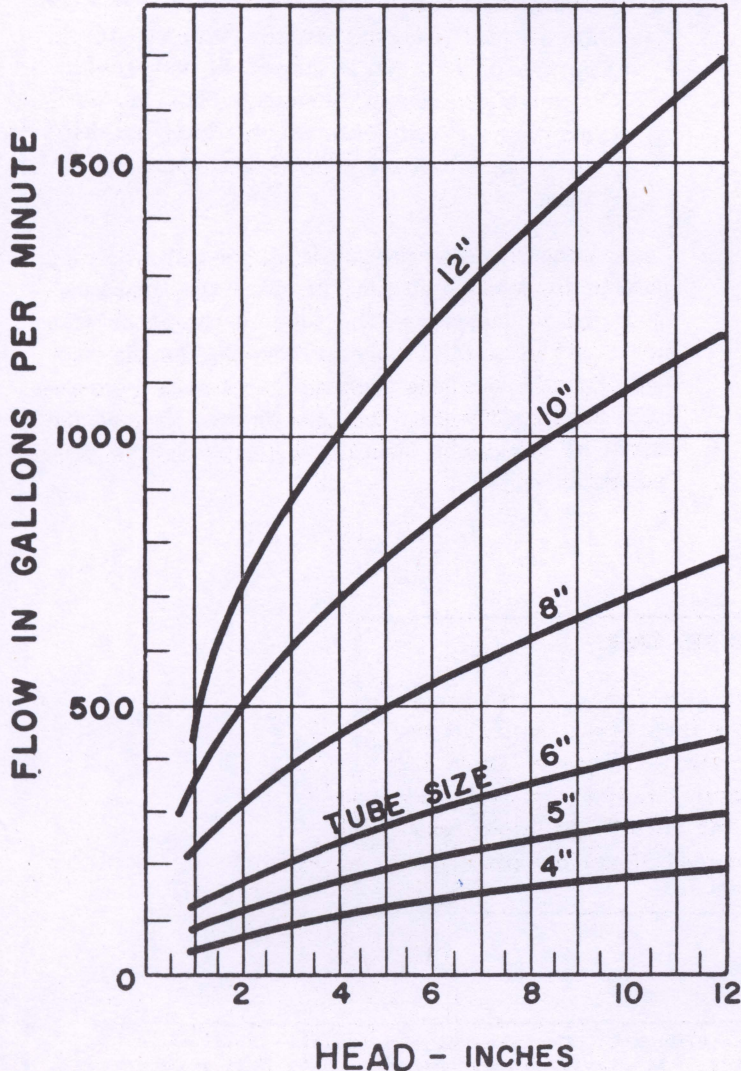
SUBMERGED DISCHARGE



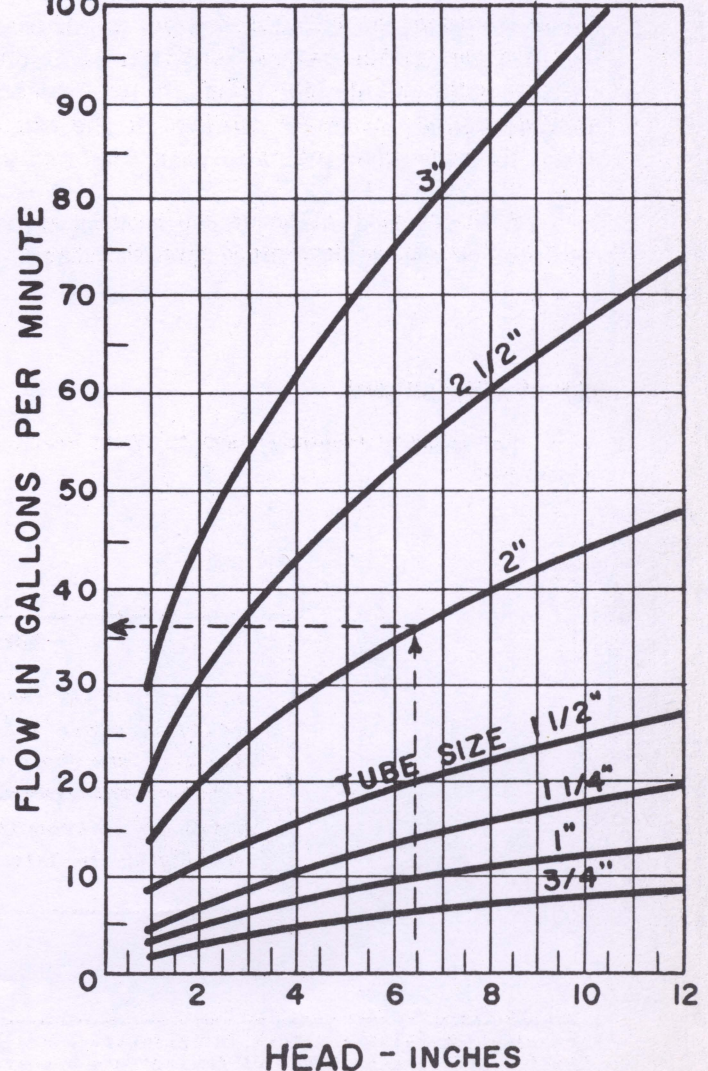
FREE DISCHARGE



FLOW THROUGH LARGE SIPHONS



FLOW THROUGH SMALL SIPHONS



Irrigation Siphon Tubes

Siphon tubes are used to divert water from a supply ditch - over the ditch bank - to the land. They permit easy control of water and eliminate cutting the ditch bank, thus reducing labor and ditch maintenance.

Siphon tubes are made of rubber, aluminum and plastic. Tube diameters vary from 1/2 inch to 10 inches and larger. The lengths of siphon tubes are governed primarily by the type and size of ditch. Small diameter tubes vary from 4 to 6 feet in length while large sizes may be obtained in lengths up to 10 or 12 feet.

FLOW FROM SIPHON TUBES

The rate of flow through a siphon tube depends on the tube diameter and the pressure head. The head is the vertical distance from the water surface in the supply ditch to the water surface on the outlet side, as shown in the diagram on the reverse side. If the outlet is not submerged, the head is the vertical distance from the water surface in the supply ditch to the center of the siphon tube outlet.

With the tube diameter and head known, the rate of flow can be determined from the charts.

HOW TO START SIPHONS

Two methods commonly used to start small siphons are:

1. General

Grasp tube in one hand about 4 inches from the end. Plunge the other end into the water until all of the tube below the hand is submerged. Place other hand over the dry end and quickly pull the tube over the ditch bank.

2. Pumping

Grasp tube in one hand about 2 to 3 inches from the end. Place other end of tube in water, leaving 24 inches or more above water surface. Place other hand over dry end of tube so that air-tight seal is not obtained. Quickly push the tube into the water about 6 inches, then seal the end of the tube with the hand and quickly pull the tube upward about 6 inches. Release the air-tight seal with the hand and push back down. Then seal the end of the tube and pull up again. As this is repeated, water will rise in the tube. When the tube is completely filled with water, drop quickly into position and water will continue to flow.

Large siphons are started either with a suction pump or by manual methods. To start the tube manually, place one end of the tube in the water with air-tight plug or a rubber sleeve on the dry end. Quickly pull the tube over the ditch bank by means of a handle affixed to the tube or with a rope. The force of the water usually will remove the plug automatically.

HOW TO USE CHART

To determine the rate of flow from a 2-inch siphon operating under a 6 1/2 inch head, begin on the bottom of the chart for small siphons at the 6 1/2 inch line. Move upward until the line for the 2-inch siphon is intersected. At this point, move horizontally to the left and read 37 gallons per minute flow.