

**Section 8 of 22 (8r - Guide to determine the approximate cfs/gpm of available Irrigation Canal Water)**

**EXAMPLE:** a 15" diameter Headgate with 2.35 ft. of head will produce 9.0 cfs (Cubic Feet per Second).  
 9.0 cfs x 448.88 = 4,040 gpm. **Note:** cfs x 448.88 = gallons per minute (gpm); One gallon = 3.785 liters

**Diameter of Irrigation Headgate (inches)**

<b>10"</b>		<b>12"</b>		<b>15"</b>		<b>18"</b>		<b>20"</b>	
<b>cfs</b>	<b>Head (ft.) on TURN- OUT</b>								
4.23	2.6	6.0	2.5	9.0	2.35	12.9	2.25	15.6	2.2
3.9	2.2	5.5	2.1	8.2	1.95	11.7	1.85	14.1	1.8
3.52	1.8	4.9	1.7	7.2	1.55	10.4	1.45	12.4	1.4
3.4	1.4	4.3	1.3	6.2	1.15	8.9	1.05	10.5	1.0
2.63	1.0	3.6	0.9	5.1	0.75	6.9	0.65	8.1	0.6
2.03	0.6	2.7	0.5	3.5	0.35	4.3	0.25	4.7	0.2

**NOTE:** The Head (ft) is measured from the upstream water surface to the center of the Orifice INLET. The above values are based on a free discharging orifice connected to a culvert pipe that is 20 feet in length.

These cfs values were calculated using the USDA-NRCS Orifice Flow PROGRAM.

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