# Handy Water Measurement Information

**One Cubic Foot Per Second (C.F.S.)**
This is the rate of discharge of water one foot wide and one foot deep, flowing at the rate of one foot per second. It is equal to:
= 50 Miner's inches - Idaho, Utah, Nevada
= 40 Miner's inches - Montana, Oregon
= 448.8 gallons per minute
= 1 acre foot in 12 hours 6 minutes
= 1.9835 acre feet in 24 hours

**One Gallon Per Minute:**
= 0.00223 (Approx. 1/450) c.f. per second
= 0.0891 (Approx. 1/11) Miner's inches - Montana
= 0.1114 (Approx. 1/9) Miner's inches - Idaho
= 1 acre foot in 226.3 days
= 1 acre inch in 452.6 hours

**One Miners' Inch:**
= 0.025 (1/40) cubic feet per second - Montana
= 0.020 (1/50) cubic feet per second - Idaho
= 11.22 (Approx. 11 ¼) gallons per minute - Montana
= 8.976 (Approx. 9) gallons per minute - Idaho

**One Acre Foot** is the amount of water required to cover one acre one foot deep
= 325,851 gallons
= 43,560 cubic feet
= 12 acre inches
= 1 second foot flowing 12 hours 6 minutes

**One Acre Foot Per 24 Hours Equals:**
= 0.504 cubic foot per second (C.F.S.)
= 226.3 gallons per minute
= 20.17 Miner's inches - Montana
= 25.21 Miner's inches - Idaho

**The following formulas may be used to compute the depth of water applied to a field:**

Cu. Ft. Per sec. X hours / No. of acres = acre inches per acre, or average depth in inches

Gal. Per min. X hours / 450 X No. of acres = acre inches per acre, or average depth in inches

Montana Miner's inches X hours / acres = acre inches per acre, or average depth in inches

Idaho Miner's inches X hours / 50 X acres = acre inches per acre, or average depth in inches