3.6 cms = cubic meters per second ... to ... LPM = liters per minute?

cms \* ?

you may know some relationships and take a long route

Get a "feel" for Units and Magnitudes
How many minutes do you manage each day?

How many seconds each day?

How many gallons are in a cubic foot?

How much does a cubic foot of water weigh?

If you stand on the foot bridge over Clear Creek today,
how many cubic feet of water pass under you each second?
"google": streamflow Clear Creek Golden CO
http://waterdata.usgs.gov/co/nwis/dv/?site\_no=06719505&PARAmeter\_cd=00060
How many gallons is that in a minute?



## Large Volumes of Water are better understood in alternate units Such as Acre-Feet

Work with someone nearby - Take 5 min to convert

5000 AFY = Acre feet per year > to > GPM Gallons per minute

Conversion books / Dictionary / Web Search

AFY \* ? .... One source of information:

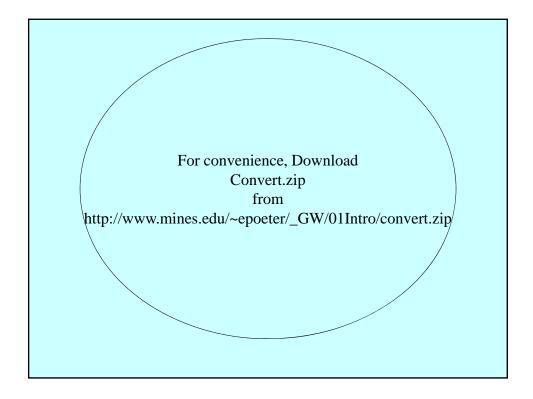
http://www.unc.edu/~rowlett/units/dictA.html

## acre (ac or A)

a unit of area used for measuring real estate in English-speaking countries. "Acre" is an Old English word meaning a field. The acre was originally defined as the area that could be plowed in a day by a yoke of oxen. It was in use in England at least as early as the eighth century, and by the end of the ninth century it was generally understood to be the area of a field one furlong (40 rods or 10 chains) long by 4 rods (or 1 chain) wide. Thus an acre is 10 square chains, 160 square rods, 43 560 square feet or 4840 square yards. There are exactly 640 acres in a square mile. In metric countries the unit corresponding to the acre is the hectare, which is 10,000 square meters (the area of a square 100 meters on each side). One acre is equal to 0.404 687 3 hectare. Among traditional European land area units, the acre is typical in being defined as a day's work but unusual in not being visualized as the area of a square. Similar units include the French journal, north German and Dutch morgen, south German and Swiss juchart, Austrian joch, and Czech jitro.

## acre foot (ac ft or af)

a unit of volume used to measure the capacity of reservoirs. One acre foot is a volume one foot deep covering an area of one acre. Thus an acre foot contains 43 560 cubic feet or about 1233.482 cubic meters (0.123 348 hectare meter). The symbol af is widely used in reservoir management in the U.S., often in combinations such as kaf (1000 acre feet) or maf (million acre feet; this symbol should be Maf).



## **ESTIMATE:**

Flow from your kitchen faucet
Flow from your garden hose
Flow from a gasoline pump at a gas station
Flow in Clear Creek Today