

## WATER CONVERSION TABLE

GPM = Gallons per minute	CFS = Cubic feet per second	AF = Acre-feet
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1 Cubic foot of water equals.....	7.48	Gallons
1 AF of water equals .....		1 foot of water on 1 acre
.....	325,851	Gallons
.....	43,560	Cubic feet
1 CFS equals.....	448.8	GPM
.....	1.98	AF per day
.....	40	Miner's inches
1 GPM equals.....	1,440	Gallons per 24 hour day
.....	1.61	AF per year
1 Surface Acre equals.....	Size of area in square feet ÷ 43,560	

<b>QUICK CONVERSIONS</b>	
MI X 11.22 = GPM	CFS X 40 = MI
MI ÷ 40 = CFS	CFS X 448.8 = GPM
MI X .0495 = AF/DAY	CFS X 1.98 = AF/DAY
GPM ÷ 11.22 = MI	AF/DAY ÷ 1.98 = CFS
GPM ÷ 448.8 = CFS	AF/DAY X 226.67 = GPM
GPM ÷ 226.67 = AF/DAY	AF/DAY ÷ .0495 = MI

<b>GENERAL WATER REQUIREMENTS</b>		
<b>DOMESTIC USE</b>		
1 family - up to 5 people . . . 1 AF/YR	1 acre shelter belt . . . 2.50 AF/season	
1 acre lawn & garden . . . . 2.50 AF/season	Shop use. . . 1 AF/YR	
<b>STOCKWATER USE</b>		
An animal unit (AU) is a measurement of livestock numbers. A cow and calf pair is one animal unit. Weaned animals are counted as one unit each.		
Number of AU's X .017 = AF/YEAR		
Number of AU's X .017 ÷ 365 X Days = AF/Period of Use		
1 Bison 1 Horse 1 Dairy Cow 1 Beef Cow 1 Elk 2 Emus	1.5 AU 1.5 AU 1.5 AU 1 AU 1 AU 1 AU	2 Ostrich 3 Llamas 3 Pigs 5 Deer 5 Sheep 1 AU 1 AU 1 AU 1 AU 1 AU
		50 Geese 50 Ducks 100 Turkeys 100 Rabbits 125 Prairie Dogs 300 Chickens 1 AU 1 AU 1 AU 1 AU 1 AU
<b>OTHER USES</b>		
Crop spraying . . . . . Gallons/acre X acres ÷ 325851 = AF/YR		

## PLANNING GUIDE FOR WATER USE

<u>TYPE OF USE</u>	<u>GALLONS/DAY</u>	<u>TYPE OF USE</u>	<u>GALLONS/DAY</u>
Airports: (per passenger)	3-5	Livestock continued:	
Apartments: multiple-family (per resident)	60	6 Goat	15
Bathhouses: (per bather)	10	3 Hogs	15
Camps:		Horse	22.5
Construction, semipermanent (per worker)	50	3 Llamas	15
Day with no meals served (per camper)	15	5 Sheep	15
Luxury (per camper)	100-150	Motels:	
Resorts, day and night with limited plumbing (per camper)	50	With bath, toilet, & kitchen (per bed space)	50
Tourist with central bath and toilet facilities (per person)	35	With bed and toilet (per bed space)	40
Cottages: with seasonal occupancy (per resident)	50	Parks:	
Courts: tourist with individual bath units (per person)	50	Overnight with flush toilets (per camper)	25
Clubs:		Trailers with individual bath units, no sewer connection (per trailer)	25
Country (per resident member)	100	Trailers with individual baths connected to sewer (per person)	50
Country (per nonresident member present)	25	Picnic facilities:	
Dwellings:		With bathhouses, showers, and flush toilets (per picnicker)	20
Boardinghouses (per boarder) Additional kitchen requirements for nonresident boarders	50 10	With toilet facilities only (per picnicker)	10
Luxury (per person)	100-150	Restaurants:	
Multiple-family apartments (per resident)	40	With toilet facilities (per patron)	7-10
Rooming houses (per resident)	60	Without toilet facilities (per patron)	3
Single family (per resident)	75	With bars and cocktail lounge ( <u>additional</u> quantity per patron)	2
Estates (per resident)	100-150	Schools:	
Factories: (per person per shift)	15-35	Boarding (per pupil)	75-100
Highway Rest Areas: (per person)	5	Day with cafeteria, gymnasium & showers (per pupil)	25
Hotels:		Day with cafeteria but no gymnasium or showers (per pupil)	20
Private baths (two persons per room)	60	Day without cafeteria, gymnasium or showers (per pupil)	15
Without private baths (two persons per room)	50	Service Stations: (per vehicle)	10
Institutions:		Stores: (per toilet room)	400
Non-hospital (per person)	75-125	Swimming Pools: (per swimmer)	10
Hospitals (per bed)	250-400	Theaters:	
Churches (per person @ 104 days per year)	20	Drive-in (per car space)	5
Laundries: self-service (gallons per washing per customer)	50	Movie (per auditorium seat)	5
Livestock:		Workers:	
Cattle	15	Construction (per person per shift)	50
Dairy Cows (drinking and servicing)	22.5	Day (school or offices) per person per shift)	15
300 Chickens	15		
100 Turkeys	15		