How Much Water Does the Typical Household Need?

- State of Colorado estimate: about ½ acre-foot water per year per household
- About 75 gallons per person per day for indoor water use (200 gpd/household)
- Outdoor water use accounts for about 55 percent of the total water pumped
- A minimum well yield of 4 to 10 gallons per minute is recommended for a household.
Average Household Water Use

- Toilet: 27%
- Clothes Washing: 22%
- Shower and Bath: 17%
- Faucet: 17%
- Leaks: 14%
- Other: 3%

Source: Colorado State University Extension
Household Water Consumed

• In-house evaporative losses are relatively small, perhaps about 2 percent

• Losses during treatment probably are more variable and site specific: a typical amount might be about 5 percent

• Overall, total domestic consumption might be from about 5 to 10 percent of indoor diversions (.01 to .03 acre-feet/year).
Irrigation Requirement

• For a turf or pasture grass near Billings

• The Crop evapotranspiration requirement is approximately 20 inches per season

• At 65 percent irrigation efficiency, about 2.5 acre-feet per acre watered would need to be applied during the season.

• The peak evapotranspiration rate would be about 8 gallons per minute per acre.
5/32 sprinkler nozzle
at 45 psi
sprays about 4.5 gpm
For Exempt Wells
(35 gallons per minute / 10 acre-feet per year)

• Limiting factor to irrigation probably would be the annual volume, not the rate

• It might be possible to irrigate about 4 acres of turf, pasture grass, or grass hay with an exempt well

• This might produce enough forage annually to feed about 3 horses
Hypothetical Maximum
Family Exempt Well Use

1 acre

4 acres
Livestock Water Requirements

- Cattle: 10-15 gallons per day
- Calves: 2 gallons per day
- Dairy Cows: 25 gallons per day
- Horses: 10 gallons per day
- Sheep: 2 gallons per day
- 1 acre-foot of water would supply the annual needs of about 60 head of cattle at 15 gallons per animal per day
A Look at Exempt Wells in Other Nearby States

- **Colorado**: 15 gpm for household use; up to 1 acre of irrigation for large acreages
- **Idaho**: 18 gpm; up to ½ acre of irrigation
- **North Dakota**: 11,000 gallons per day (7.6 gpm); 12.5 acre-feet per year; up to 1 acre of irrigation
- **Wyoming**: 25 gpm; up to 1 acre of irrigation