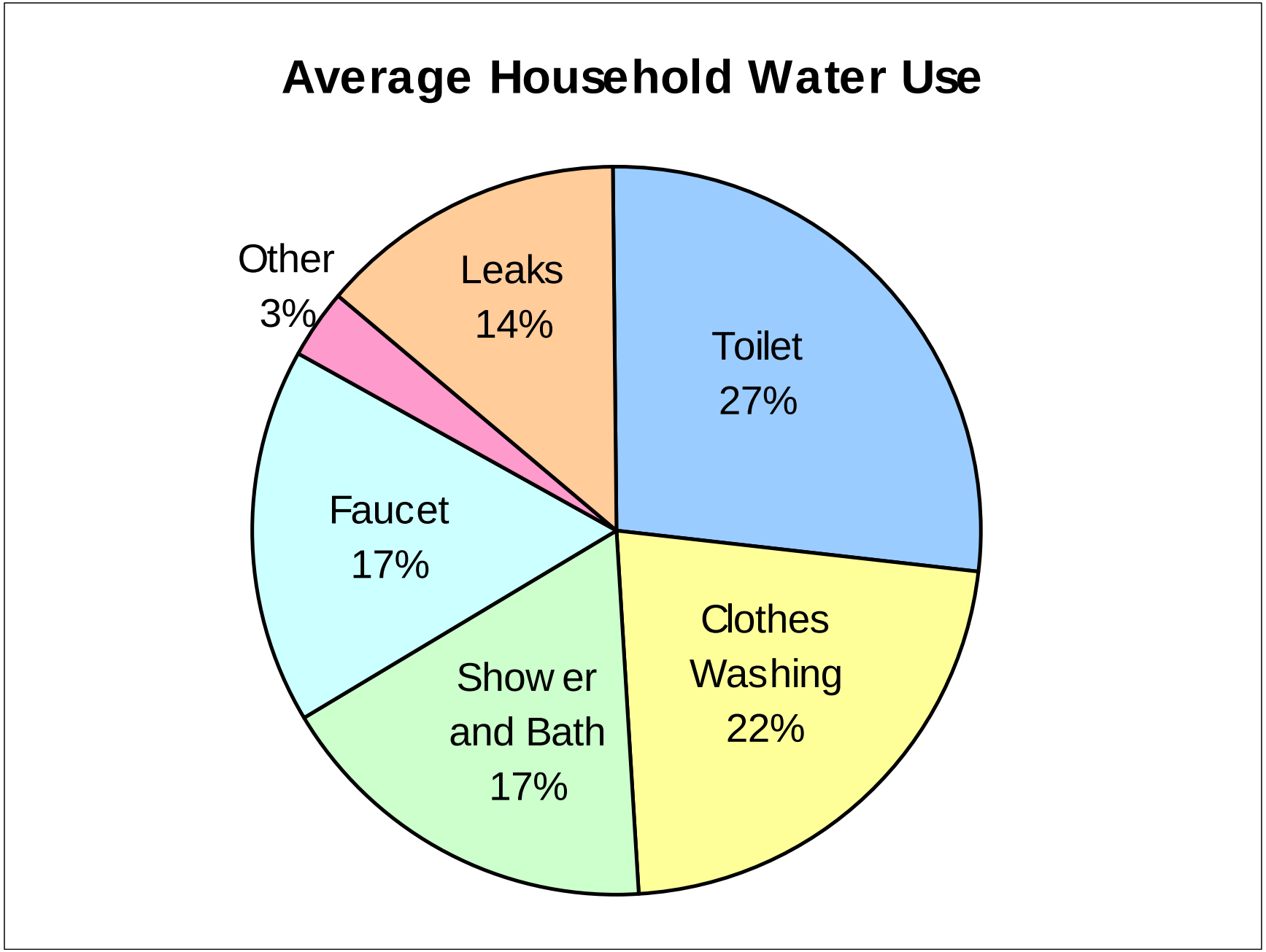
How Much Water Does the Typical Household Need?

- 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.



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.

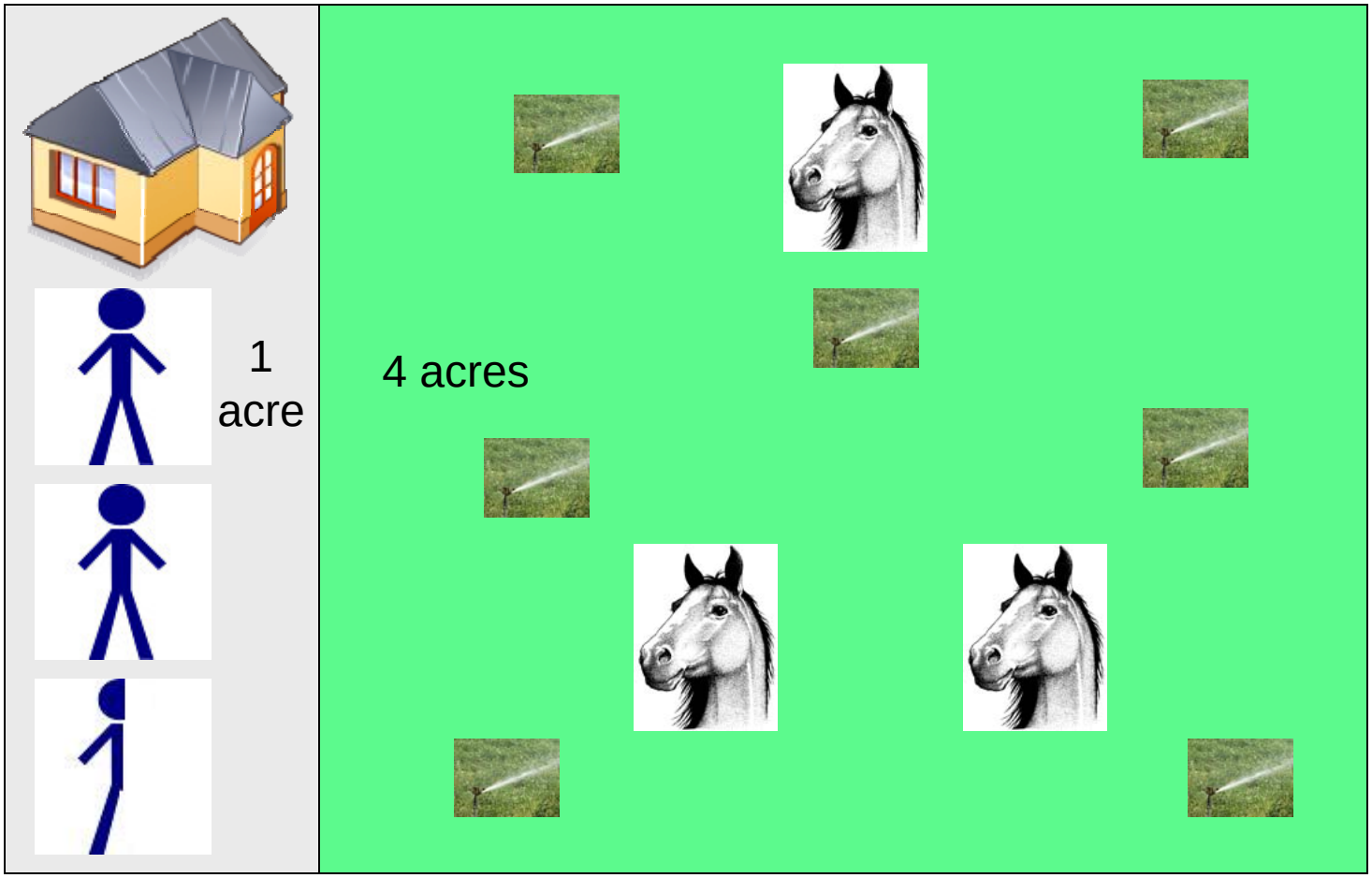
5/32 sprinkler nozzle
at 45 psi
sprays about 4.5 gpm

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



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