



Estimating Water Use For the Farm and Home

This fact sheet lists average water use values for farms and homes in Pennsylvania. Your actual water use may vary significantly from these averages. These numbers should only be used for general planning purposes or for estimating your total water use. Accurate measurement of water use requires installation of water meters near points of water consumption and use.

Estimating Farm Water Use

Below are estimates for typical water uses on farms including animal supply, farm operations and irrigation. If your estimated water use exceeds 10,000 gallons per day, you should register your water use with the Pennsylvania Department of Environmental Protection under Act 220 (Water Resources Planning Act) and Chapter 110 Regulations. Consult the PA DEP web site (www.dep.state.pa.us) and select the water topic "Act 220" for more details on water use registration.

Typical Farm Animal Water Use (gallons per animal per day)

Milking cows	30
Dry cow, beef cattle, or steers	12
Calves	
1-month-old	1.5
2-month-old	2.0
3-month-old	2.5
4-month-old	3.5
5 to 14 months old	4.5
Heifers	
15 to 18 months old	7.0
18 months and older	9.0
Swine	1.5
Horses or ponies	12
Sheep or goats	2
Chickens (per 100 head)	9
Turkeys (per 100 head)	15

Milkhouse and Parlor Water Use

Bulk tanks	60 gallons per wash
Pipelines	100 gallons per wash
Pail milkers	35 gallons per wash
Miscellaneous equipment	30 gallons per day
Back flush	1 gallon per cow milked per milking
Cow preparation	2 gallons per cow
Milkhouse floor	20 gallons per day
Parlor floor (hose down)	50 gallons per wash
Parlor floor and cow platform	500 gallons per wash
Parlor and holding area floor with flushing	
Holding area only	10 gallons per cow
Parlor only	20 gallons per cow
Parlor and holding area	30 gallons per cow
Automatic flushing	1,500 gallons per wash

Irrigation Water Use

The amount of water used for irrigation is seasonal and varies depending on natural water availability from precipitation. These estimates can be used to approximate daily water use for the two major types of irrigation.

Sprinkler	4,000 gallons per acre per day
Drip	1,000 gallons per acre per day

Home Water Use

In general, we use 50 to 100 gallons per person per day in our homes (200 to 400 gallons per day for a family of four). If you wish to make more specific calculations, the values listed below reveal the amount of water typically used by individual appliances and activities.

Clothes washer (top-loading)	40 gallons per load
Clothes washer (front-loading)	27 gallons per load
Dishwasher (standard)	7 gallons per load
Dishwasher (water miser-efficient)	4.5 gallons per load
Garbage disposal	4 gallons per day
Kitchen faucet	3 gallons per minute of use
Bathroom faucet	2 gallons per minute of use
Low-flow faucets	1.5 gallons per minute of use
Shower or tub	5 gallons per minute of use
Low flow showerhead	2.5 gallons per minute of use
Toilet (low-flush)	1.6 gallons per flush
Toilet (standard)	5 gallons per flush
Outside hose (½-inch)	5 gallons per minute of use
Water softener regeneration	50 gallons per cycle

Sources of Information

- 1) *Water Quality and Intake for Dairy Cattle*. 1995. Dairy and Animal Science Fact Sheet DAS 95-8, Penn State Cooperative Extension.
- 2) *Private Water Systems Handbook*. 1992. Midwest Plan Service. MWPS-14.
- 3) *Household Water Conservation*. 2008. Penn State Cooperative Extension Publication UH164.
- 3) *Handbook of Water Use and Conservation*. 2001. WaterPlow Press. Amherst, MA.
- 4) *Consumptive Water Use Restrictions in the Delaware River Basin*. 2002. Agricultural and Biological Engineering Fact Sheet F-199, Penn State Cooperative Extension.
- 6) *Guideline for Milking Center Wastewater*. 1998. Natural Resource, Agriculture, and Engineering Service. NRAES-115.

Additional Resources

For further information on water supply visit our web page at <http://water.cas.psu.edu>

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