

4715.3600 TOTAL DAILY WATER REQUIREMENTS.

Subpart 1. **Basic needs.** The calculation of total daily requirements for water may be based on the unit quantities shown in subparts 2 and 3. The total daily water requirement does not constitute the peak or simultaneous water requirement of the supply and shall not be used in sizing water distribution systems. The total of the daily water requirement shall be used only to determine whether the source of the water supply is sufficient to provide the water requirements of people, animals, irrigation, and other water using facilities served. The rate of flow and pressures at which the total daily water requirements shall be delivered shall be determined as prescribed hereinafter.

Subp. 2. **Design criteria for daily water requirements based on building occupancy.**

Type of occupancy	Minimum quantity of water per person per day in gallons (or as indicated)
Small dwellings and cottages with seasonal occupancy	50
Single family dwellings	75
Multiple family dwellings (apartments)	60
Rooming houses	40
Boarding houses	50
Additional kitchen usage for nonresident boarders	10
Hotels without private baths	50
Hotels with private baths (2 persons per room)	60
Restaurants (toilet and kitchen usage per patron)	7 to 10
Restaurants (kitchen usage per meal served)	2-1/2 to 3
Additional for bars and cocktail lounges	2
Tourist camps or trailer parks with central bathhouse	35
Tourist camps or mobile home parks with individual bath units	50
Resort camps (night and day) with limited plumbing	50
Luxury camps	100 to 150
Work or construction camps (semipermanent)	50
Camp (with complete plumbing)	45 (Ind.w.s.)

Camp (with flush toilets—no showers)	25 (Ind.w.s.)
Day camps (no meals served)	15
Day schools, without cafeterias, gymnasiums, or showers	15
Day schools with cafeterias, but no gymnasiums or showers	20
Day schools with cafeterias, gymnasiums and showers	25
Boarding schools	75 to 100
Day workers at schools and offices (per shift)	15
Hospitals (per bed)	150 to 250
Institutions other than hospitals (per bed)	75 to 125
Factories (gallons per person per shift, exclusive of industrial wastes)	15 to 35
Picnic parks (toilet usage only) (gallons per picnicker)	5
Picnic parks with bathhouses, showers, and flush toilets	10
Swimming pools and bathhouses	10
Luxury residences and estates	100 to 150
Country clubs (per resident member)	100
Country clubs (per nonresident member)	25
Motels (per bed space)	40
Motels with bath, toilet, and kitchen range	50
Drive-in theaters (per car space)	5
Movie theaters (per auditorium seat)	5
Airports (per passenger)	3 to 5
Self-service laundries (gallons per wash, i.e., per customer)	50
Stores (per toilet room)	400
Service stations (per vehicle serviced)	10

Subp. 3. Daily water requirements for common farm animals.

Animal	Minimum daily water requirements in gallons
Horse, mule, or steer	12
Dairy cow (drinking only)	15
Dairy cow (drinking and dairy servicing)	35

Sheep	2
Hog	4
Chickens (100)	4
Turkeys (100)	7

Subp. 4. **Calculating total daily requirement.** Total daily water requirements should be calculated by multiplying the unit daily requirement by the total number of persons in the occupancy involved. See subpart 6. To this figure must be added any special use quantity, such as lawn watering, industrial requirement, etc.

Subp. 5. **Special requirements.** The total daily amount of any special requirement shall be added to the figure as obtained under subpart 4. Part 4715.1770, subpart 2 gives special use quantities for some conditions. While the quantity of special use water shall be computed on the rates given in part 4715.1770, subpart 2, the total amount shall be figured for appropriate periods and conditions of use. See subpart 7.

Subp. 6. **Example 1.** Example: assume there is a hospital outside the limits of a community. The hospital has 300 beds. In addition, the hospital supplies its own dairy products and has a farm with 40 head of cattle. In subpart 2, the daily water requirement per hospital bed is taken as 250 gallons per bed. From subpart 3, the water requirement per head of cattle is taken as 35 gallons per animal. Therefore the total daily water requirement is 300×250 plus 40×35 or 76,400 gallons.

Subp. 7. **Example 2.** Example: it is assumed that at the hospital cited in subpart 6 there is a lawn sprinkling system operating from 12 sill cocks three hours each day. From part 4715.1770, subpart 2 it is seen that each sill cock requires 300 gallons per hour. Therefore, the total special use water will equal $12 \times 300 \times 3$ or 10,800 gallons. This amount is added to that obtained in subpart 6. The total quantity required is, therefore, 76,400 plus 10,800 or 87,200 gallons per day.

Statutory Authority: *MS s 326.37 to 326.45; 326B.43 to 326B.49*

History: *L 2007 c 140 art 6 s 15; art 13 s 4*

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