

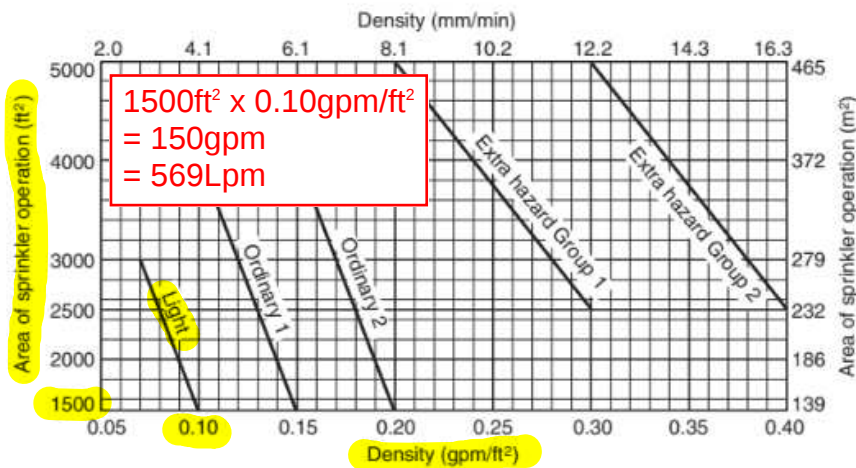


FIGURE 11.2.3.1.1 Density/Area Curves.

- (2) The room that creates the greatest demand in accordance with the room design method of 11.2.3.3
- (3) Special design areas in accordance with 11.2.3.4

11.2.3.1.2 The minimum water supply shall be available for the minimum duration specified in Table 11.2.3.1.2.

11.2.3.1.3 The lower duration values in Table 11.2.3.1.2 shall be permitted where the sprinkler system waterflow alarm device(s) and supervisory device(s) are electrically supervised and such supervision is monitored at an approved, constantly attended location.

11.2.3.1.4 Restrictions. When either the density/area method or room design method is used, the following shall apply:

- (1)*For areas of sprinkler operation less than 1500 ft² (139 m²) used for light and ordinary hazard occupancies, the density for 1500 ft² (139 m²) shall be used.
- (2) For areas of sprinkler operation less than 2500 ft² (232 m²) for extra hazard occupancies, the density for 2500 ft² (232 m²) shall be used.
- (3)*Unless the requirements of 11.2.3.1.4(4) are met for buildings having unsprinklered combustible concealed spaces, as described in 8.15.1.2 and 8.15.6, the minimum area of sprinkler operation for that portion of the build-

Table 11.2.3.1.2 Hose Stream Allowance and Water Supply Duration Requirements for Hydraulically Calculated Systems

Occupancy	Inside Hose		Total Combined Inside and Outside Hose		Duration (minutes)
	gpm	L/min	gpm	L/min	
Light hazard	0, 50, or 100	0, 189, or 379	100	379	30
Ordinary hazard	0, 50, or 100	0, 189, or 379	250	946	60–90
Extra hazard	0, 50, or 100	0, 189, or 379	500	1893	90–120

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Sprinkler Water Supply Requirements

Sprinklers: 569L/min

Hose Stream: 379L/min

Total = 948L/min

ing shall be 3000 ft² (279 m²). The design area of 3000 ft² (279 m²) shall be applied only to the sprinkler system or portions of the sprinkler system that are adjacent to the qualifying combustible concealed space. The term *adjacent* shall apply to any sprinkler system protecting a space above, below, or next to the qualifying concealed space except where a barrier with a fire resistance rating at least equivalent to the water supply duration completely separates the concealed space from the sprinklered area.

- (4) The following unsprinklered concealed spaces shall not require a minimum area of sprinkler operation of 3000 ft² (279 m²):
 - (a) Noncombustible and limited-combustible concealed spaces with minimal combustible loading having no access. The space shall be considered a concealed space even with small openings such as those used as return air for a plenum.
 - (b) Noncombustible and limited-combustible concealed spaces with limited access and not permitting occupancy or storage of combustibles. The space shall be considered a concealed space even with small openings such as those used as return air for a plenum.
 - (c) Combustible concealed spaces filled entirely with noncombustible insulation.
 - (d)*Light or ordinary hazard occupancies where noncombustible or limited-combustible ceilings are directly attached to the bottom of solid wood joists or solid limited-combustible construction or noncombustible construction so as to create enclosed joist spaces 160 ft³ (4.5 m³) or less in volume, including space below insulation that is laid directly on top or within the ceiling joists in an otherwise sprinklered concealed space.
 - (e) Concealed spaces where rigid materials are used and the exposed surfaces have a flame spread index of 25 or less and the materials have been demonstrated to not propagate fire more than 10.5 ft (3.2 m) when tested in accordance with ASTM E 84, *Standard Test Method of Surface Burning Characteristics of Building Materials*, or ANSI/UL 723, *Standard for Test for Surface Burning Characteristics of Building Materials*, extended for an additional 20 minutes in the form in which they are installed in the space.