



# FRESNO COUNTY FIRE

PROTECTION DISTRICT

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## Fire Flow Requirements Standard

### Scope

This standard documents the requirements for fire flow within the Fresno County Fire Protection District (FCFPD). This includes areas that have a water purveyor who can provide a fire protection water supply, or to any proposed development in rural areas without a water purveyor.

### Purpose

The purpose of this standard is to place in a logical and standardized format the requirements for determination of the required quantity of water necessary for firefighting and to supply fire sprinklers for development occurring in the jurisdiction of the Fresno County Fire Protection District.

### Definitions

**Water Purveyor:** A public utility, mutual water company, governmental body, or other entity owning or operating a water system regulated by a State or County government agency.

**Fire Flow:** The flow rate of a water supply, measured at 20 pounds per square inch (psi) (138kPa) residual pressure, that is available for firefighting. (*CFC appendix B*) The firefighting water supply may be available by wet a draft or from a pressurized hydrant system as required.

**Residential Development:** One-and two-family dwellings, personal storage buildings given a “U” occupancy classification/Accessory to R-3.

**Commercial Development:** For purposes of this standard, commercial development includes multi-family and all other occupancies such as retail, service, industrial, agricultural or institutional development.

**Agricultural Development:** For the purposes of this standard a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products. This structure shall neither be a place of human habitation or a place of employment where agricultural products are processed, treated or packaged, nor shall it be a place used by the public.

## General Requirements

- As of January 1, 2011 California State Law requires all new one and two-family dwellings, and manufactured homes built or moved into California to have a working fire sprinkler system. There are no alternatives or exceptions to this law. It's important to recognize this law is not retroactive.
- Fire flow requirements for buildings or portions of buildings and facilities shall be determined by the adopted 2013 California Fire Code or NFPA 1142 (as amended).
- Fire hydrants shall be installed per the 2013 California Fire Code.
- Wet draft systems may be permitted in rural areas for occupancies that have a fire flow requirement of 1000 gpm's or less in areas without a water purveyor and requires one hydrant with a travel distance no greater than 450 feet along an approved access road. (NFPA 1142 as amended). *See FCFPD standard #1*
- Systems having two or more hydrants shall be pressurized to meet the required fire flow and any fire sprinkler demand at not less than 20psi residual pressure at the most remote location.
- Wet draft hydrants or direct tank connections shall be installed per FCFPD wet draft hydrant requirements. *See FCFPD standard #2A, 2B and 2C*

### 1. Residential Development

- The minimum required fire flow shall be 1,000 gallons per minute for subdivisions.
- All required fire flows including fire sprinkler demand plus domestic demand shall be available within the water system at a minimum of 20 pounds per square inch residual pressure or the minimum pressure required for fire sprinkler operation.
- For areas with a water purveyor a flow test certificate will be required by a licensed C-16 Fire Protection Contractor.
- Sprinkler systems will be designed by a licensed C-16 Fire Protection Contractor or a Registered Fire Protection Engineer and installed by a licensed C-16 Fire Protection Contractor.
- Development in the State Responsibility areas of the FCFPD must comply with Fresno County Ordinance 15.60.
- For detached accessory buildings refer to *FCFPD Policy # 2016-01*

### 2. Commercial Development

- New Construction occupancies less than 5,000 square feet and not required to be protected by an Automatic Fire Sprinkler system in the 2013 California Fire Code, NFPA 13, 13R, or 13D standards shall not be required to be protected by an Automatic Fire Sprinkler system when using the *NFPA 1142 Rural Supply Variance*.
- All required fire flows including fire sprinkler demand plus domestic demand shall be available within the water system at a minimum of 20 pounds per square inch residual pressure or the minimum pressure required for fire sprinkler operation.
- For areas with a water purveyor a flow test certificate will be required.
- Special high fire hazard occupancies may require larger flow rates and will be addressed on a case-by-case basis.

### 3. Agricultural Development

- For Agricultural Processing/Storage Buildings. *See FCFPD Policy # 2014-01*
- For Agricultural Exempt Locations. *See FCFPD Policy #2015-01*