

STORED WATER FIRE PROTECTION SYSTEMS SERVING ONE-FAMILY AND TWO-FAMILY DWELLINGS Development Standard #3

Fire District stored water requirements for residential units outside of a water purveyor's district include a stored water fire protection system in compliance with this and other Fire District Development Standards. For projects served by a water purveyor, stored water will not be allowed unless approved by the Fire Chief.

I. STORAGE

- A. For non-sprinklered buildings, the tank shall have a capacity of 2500 gals plus 1 gal per sq. ft. of building floor area (minimum of 2,500 gals) in addition to the domestic storage requirement. This amount shall be reserved for fire protection purposes exclusively. The domestic supply outlet from the tank must be located above the minimum capacity required by the fire department. (See Example, Page 4)
- B. For sprinklered buildings, the tank shall have a capacity of 5,000 gals plus 1 gal per square foot of building floor area (minimum of 5,000 gals) in addition to the domestic storage requirement. This amount shall be reserved for fire protection purposes exclusively. The domestic supply outlet from the tank must be located above the minimum capacity required by the fire department. (See Example, Page 4)
- C. Tanks shall be set on a three (3) inch compacted crushed stone or granular base, or on a concrete foundation. (NFPA Standard 22)
- D. The tank shall be maintained full at all times by an automatic refilling device.
- E. When the fire service connection outlet is directly on the tank, the tank outlet and the approved control valve shall have a minimum inside diameter of 4 inches. The fire service connection outlet shall have National Standard Threads and be protected by a threaded metal cap.
- F. The outlet on the tank shall be located on the side of the tank, at the base, and shall face the road/driveway. The outlet shall be accessed by a fire department approved all weather road located within 10 ft of the outlet and situated in such a manner that fire apparatus will be able to connect to the outlet without blocking the roadway.

- G. When a standpipe or other fire service connection outlet is remote from the tank, an approved shutoff valve, locked in the open position, must be provided on the tank. (See Example, Page 4)
- H. An underground cistern may also be used for a stored water fire protection system (SWFPS). An approved fire service connection and water main shall be installed and the base of the cistern shall be higher than the fire service connection outlet.
- I. For projects located in a designated High Fire Hazard Area, all above ground piping, including all pipes at the water tank as well as at the hydrant location(s), shall consist of galvanized metal.

II. DISCHARGE OUTLETS

- A. The hydrant shall have a minimum of one 4 in. and one 2 ½ in. discharge outlet. For a SWFPS providing less than 5,000 gals, other outlet configurations are acceptable subject to fire department approval. (See Example, Page 4)
- B. All SWFPS piping shall be no less than 4 inches inside diameter. (See Example, Page 4)
- C. The hydrant valve shall be mounted on a supported 4 in. galvanized riser.
- D. The hydrant shall be located no closer than 50 ft and no further than 150 ft from the structure being protected along the approach path. (See Example, Page 4)
- E. The hydrant valve shall be a minimum of 18 in. and a maximum of 36 in. above grade and shall in no case be higher than the tank base. (See Example, Page 4)
- F. The hydrant and riser shall be painted yellow.
- G. The hydrant shall have National Standard Threads, a pentagonal operating nut and metal caps to protect threads.
- H. The hydrant shall be accessed by a Fire District approved all weather road located within 10 ft of the standpipe and situated in such a manner that fire apparatus will be able to connect to the standpipe outlet without blocking the roadway. (See Example, Page 4)

I. The water main shall be a minimum of 4 in. inside diameter.
(See Example, Page 4)

J. A SWFPS for multiple residential parcels may have cumulative water storage in a central location with mains and fire service connections to each parcel.

K. Plans for any SWFPS shall be submitted to the fire district for approval prior to project construction.