



San Joaquin County Fire Chief's Association Above Ground Stationary Static Water Supply System

The San Joaquin County Fire Chiefs' Association has adopted the following guide for providing a stationary static water supply utilizing above ground tanks.

General:

1. Plans, specifications, size and location of static water supply systems shall be approved by the Authority Having Jurisdiction (AHJ) prior to installation in accordance with this standard.
2. The owner and/or occupant shall be responsible for maintaining and service the static water supply system and to assure that unobstructed access to the tank and draft connections are maintained at all times.
3. Barriers shall be required when tanks and/or draft connections are located in an area exposed to vehicular traffic. When required, barriers shall comply with the following:
 - a. Barriers shall be constructed of full-length steel pipe not less than 4" in diameter and concrete filled.
 - b. Spacing between barriers shall not exceed 4 feet.
 - c. Barriers shall be set in a concrete footing at least 15" in diameter and a minimum of 36" in depth.
 - d. Barriers shall extend at least 3 feet above grade and be located at least 5 feet away from a tank and at least 3 feet from draft connections.
4. Building permits may be required. For more information contact the San Joaquin County Community Development Department, Fire Prevention Division at (209) 468-3380, or the Building Division at 209-468-2098.

Tanks:

1. Tanks shall comply with NFPA 22 or be approved by the AHJ as an alternate means of protection in compliance with Section 1.11.2.4 of the current version of the California Fire Code and Section 1.4 of NFPA 22.
2. Tank capacity and installation shall provide the amount of usable water specified in NFPA 1142.
3. An automatic fill device shall be installed to ensure the required capacity of the tank will never drop more than 5 percent. Fill pipes shall be 1½" in diameter for tanks up to 10,000 gallons and 2" for tanks 10,001 gallons and above.
4. A water level gauge or sight tube shall be installed to allow visual inspection of water level in the tank. If a sight tube is installed, it shall be constructed of clear plastic tubing and have a shut-off valve at the lowest point for the purpose of maintenance or replacement. A closed circuit, high-water and low-water level electronic alarm shall be permitted in place of the gauge and sight tube where acceptable to the AHJ.
5. The tank shall be equipped with a venting system to eliminate the possibility of collapse. The vent shall be at least 6" diameter or the same size as the discharge outlet on the tank, whichever is larger. The vent shall be protected to keep foreign matter and debris from entering the tank.
6. When more than one tank is required, the manifold connecting the tanks shall be a minimum of 6" in diameter. The connection between tanks shall be made at the lowest possible location on the tanks and shall allow all usable water in all of the tanks to be used without re-attachment. Tanks cannot be connected in series.
7. Each single tank and each tank connected to a manifold shall have a lockable butterfly valve at the discharge outlet from the tank to the manifold or have a monitored valve communicating with a central station alarm.

8. Foundation systems shall comply with Chapter 16 of the current version of the California Building Code or have an alternate design acceptable to the AHJ.
9. The discharge outlet of every suction tank shall be equipped with an anti-vortex plate assembly in compliance with NFPA 22, Section 14.2.13.

Draft Connections:

1. The discharge outlet from the tank shall be at least 6" diameter with a lockable butterfly valve. Any piping from the tank to a remote draft connection shall be a minimum of 6" diameter.
2. Draft connections at the tank shall be equipped with a 6" lockable butterfly valve connected to the type of outlet specified by each individual fire district.
3. Installations which use a dry hydrant over 75 feet from the tank or out of line of sight shall have a lockable butterfly valve at the tank and at the draft connection. Draft connections may not exceed a distance of 150 feet from the tank without engineered hydraulic calculations.
4. The centerline of the outlet of the draft connection shall be placed from 24" to 36" above grade (grade of fire apparatus using draft connection).

