



## California State Fire Marshal CODE INTERPRETATION

Date Issued	December 16, 2014	Interpretation	14-013
Topic	High Rise Water Supply		
Code Section(s)	2013 CBC §403.3.2 and 903.3.5.2		
Requested by	Everett Engineering Mark Schmid, Engineering Manager		
Date Received	September 2, 2014		

### Questions:

**1. May a single on-site water supply tank adequately sized for private fire protection satisfy simultaneously the provisions for an approved primary water supply and automatic secondary on-site water supply per California Building Code (CBC) Section 403.3 and 903.3.5.2 in a Group B or R2 high-rise building using any allowed construction type?**

**Answer: NO.** The 2013 California Building Code §403.3 clearly requires that the primary water supply for high-rise buildings be from a “public” water supply. The CBC/CFC assumes that a high rise building will be located in a developed area served by "public" services; that is virtually "unlimited" in duration. This code section does not recognize other types of water sources for the primary water supply. Other water supplies may be taken under consideration on a case-by-case basis by the local authority having jurisdiction in accordance with the alternate means and methods of construction provisions contained in CFC or CBC Section 1.11.2.4.

**2. If the answer to #1 above is yes, is the single water tank which provides both primary and secondary on-site water supply for private fire protection required to be constructed as a break tank as defined in 2013 edition of NFPA 22?**

**Answer: NOT APPLICABLE,** see Question 1.

**3. 2013 CBC Section 403.3.2 states in part that: “Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate”. Does Section 403.3.2 require pumps supplied by a tank, not water mains in the street, to have two or more connections (“Each connection”) to the tank?**

**Answer: NOT APPLICABLE,** see Question 1.

**4. Not considering the exceptions, 2013 CBC Section 403.3.2 states in part that: “Required fire pumps shall be supplied by connections to no fewer than two water mains located in different streets.” Water supplies for fire protection may consist of sources other than connections to water mains located in streets. This may include, but is not limited to: tanks, elevated tanks, rivers, lakes, reservoirs, penstocks and other fixed water source systems. Does Section 403.3.2 apply to all fire protection water supply sources to required fire pumps?**

**Answer: NOT APPLICABLE**, see Question 1.

**5. 2013 CBC Section 403.3.2 states in part that: “Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate.” 2013 edition NFPA 20-4.14.1.1 defines the suction pipe and fitting components: “as all pipe, valves and fittings from the pump suction flange to the connection to the public or private water service main, storage tank, or reservoir, and so forth, that feeds water to the pump”. For application of CBC Section 403.3.2, is “supply piping” as stated in CBC 403.3.2 equivalent to “suction pipe” as defined in the NFPA 20 when a fire pump is required?**

**Answer: YES.** The definition from NFPA 20-4.14.1.1 would meet the definition from CBC §403.3.2.

**6. Does 2013 CBC §403.3.2 apply to a suction tank fill line as defined in NFPA 22?**

**Answer: YES.**

**7. Does 2013 CBC Section 403.3.2 apply to a break tank fill line as defined in NFPA 22?**

**Answer: YES.**