



City of Carmel-by-the-Sea
Building Safety Division
Standard Operating Guidance (SOG)

18-08 Private Pool and Spa Safety Features

Background

Pools and spas are common and popular outdoor recreation features in California. Unfortunately, they have also proven to be a safety risk to children. Between 2010 and 2014, 160 children drowned and another 740 were hospitalized in pool/spa related drowning incidents in California. To help reduce these incidents, the State has adopted regulations for swimming pool and spa enclosures and safety devices. This SOG is intended to provide guidance on meeting the requirements for pool and spa safety.

Citations

Title 15, Carmel Municipal Code
2019 CA Building Code, Sec. 3109
CA Health and Safety Code (HSC), Sec. 115920 - 115929

Definitions:

Approved Safety Pool Cover means a manual or power operated safety pool cover complying with all of the performance standards of the American Society for Testing and Materials (ASTM) Standard F1346-91.

Enclosure means a fence, wall or other barrier that isolates a swimming pool from access to the home or from adjacent properties.

Exit Alarms means devices that make audible, continuous alarm sounds when any door or window that permits access from the residence to the pool area that is without any intervening enclosure is opened or is left ajar. Exit alarms may be battery operated or may be connected to the electrical wiring of the building. Exit alarms may not be allowed to be made inoperable with a switch or lock-out device.

Hot Tub/Spa means a large tub of hot water over 24' deep in which bathers soak and usually socialize with or without a whirlpool device. For the purposes of this SOG, the terms are used interchangeably.

Swimming Pool or pool means any structure intended for swimming or recreational bathing that contains water over 24" deep. This includes in-ground, above-ground and on-ground pools; hot tubs; spas and non-portable wading pools.

Swimming pool (Private) means any constructed pool, permanent or portable, that is intended for non-commercial use as a swimming pool by not more than three owner families and their guests.

Swimming pool (Public) means a swimming pool operated for the use of the general public with or without charge, or for the use of the members and guests of a private club. Public swimming pool does not include a swimming pool located on the grounds of a private single-family home.

Contractors Responsibility:

Any person entering into an agreement to build a swimming pool/spa shall give the consumer notice of the requirements for swimming pool enclosures and safety devices.

Exception: Hot tubs or spas with locking safety covers that comply with the American Society for Testing and Materials Emergency Performance Specification (ASTM E513-89).

Required Safety Features:

In accordance with HSC Section 115922, when a building permit is issued for the construction of a new swimming pool or spa or the remodeling of an existing swimming pool or spa at a private single-family home, the respective swimming pool or spa **shall be equipped with at least two** of the following seven drowning prevention safety features (See figure 1):

1. An enclosure that meets the requirements of Section 115923 and isolates the swimming pool or spa from the private single-family home.
2. Removable mesh fencing that meets American Society for Testing and Materials (ASTM) Specification F2286 in conjunction with a gate that is self-closing and self-latching and can accommodate a key lockable device.
3. An approved safety pool cover.
4. Exit alarms on the private single-family home's doors that provide direct access to the swimming pool or spa. The exit alarm may cause either an alarm noise or repeated verbal warning that the door to the pool is open.
5. A self-closing, self-latching device with a release mechanism placed no lower than 54 inches above the floor on the private single-family home's doors providing direct access to the swimming pool or spa.
6. An alarm that, when placed in a swimming pool or spa, will sound upon detection of accidental or unauthorized entrance into the water. The alarm shall meet and be independently certified to the ASTM Standard F2208 "Standard Safety Specification for Residential Pool Alarms which includes surface motion, pressure, sonar, laser, and infrared type alarms. A swimming protection alarm feature designed for individual use, including an alarm attached to a child that sounds when the child exceeds a certain distance or becomes submerged in water is not a qualifying drowning prevention safety feature.
7. Other means of protection, if the degree of protection afforded is equal to or greater than that afforded by any of the features set forth above and has been independently verified by an approved testing laboratory as meeting standards for those features established by the ASTM or the American Society of Mechanical Engineers (ASME).

Exception: In accordance with HSC 115925, the requirements above do not apply to any of the following:

1. *Public swimming pools*
2. *Hot tubs or spas with locking safety covers that comply with ASTM F1346*
3. *An apartment complex or any residential setting other than a single-family home*

Enclosures:

Enclosures shall have all of the following characteristics:

1. Any access gates through the enclosure open away from the swimming pool, and are self-closing with a self-latching device placed no lower than 60 inches above the ground.
2. A minimum height of 60 inches.
3. A maximum vertical clearance from the ground to the bottom of the enclosure of 2 inches.
4. Gaps or voids, if any, do not allow passage of a sphere equal to or greater than four inches in diameter.
5. An outside surface free of protrusions, cavities, or other physical characteristics that would serve as handholds or footholds that could enable a child below the age of 5 years to climb over.

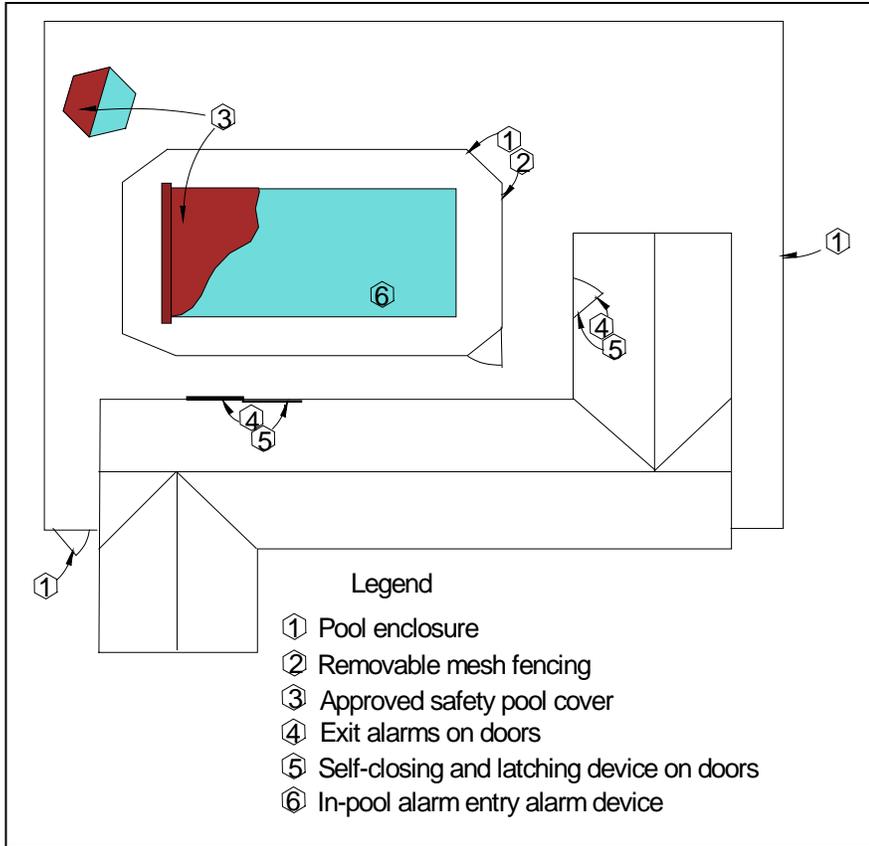


Figure 1. Required Safety Features – Must include 2 of these features, except for spas with approved automatic or manual locking safety covers

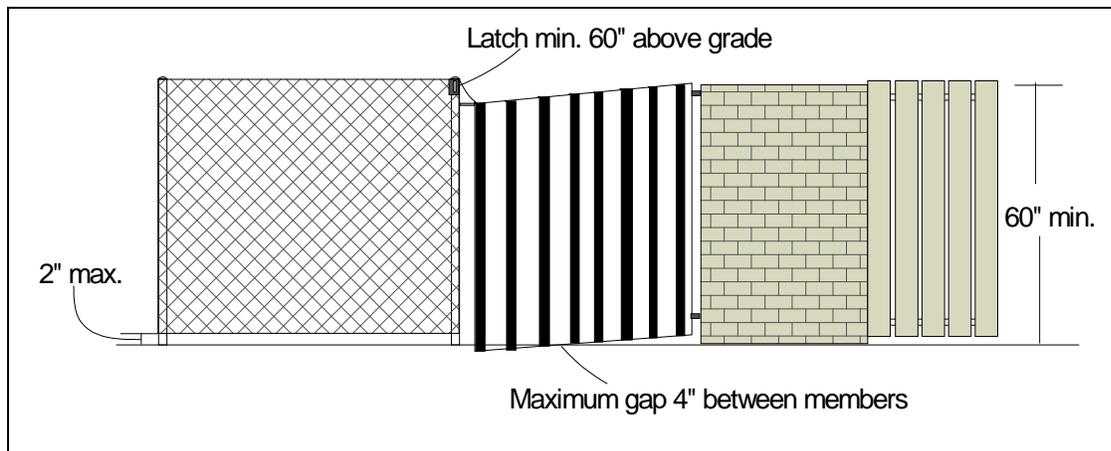
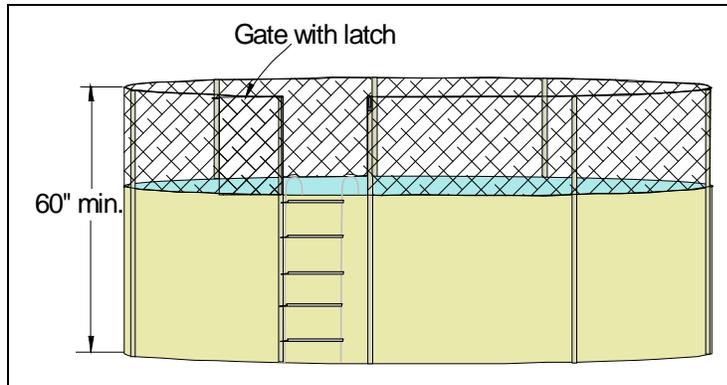


Figure 2. Enclosure specifications for various material type



Additional Safety Features:

Whenever a building permit is issued for the construction of a new swimming pool or spa, the pool or spa shall meet *all* of the following requirements:

1. The suction outlets of the pool or spa shall be equipped to provide circulation throughout the pool or spa as prescribed below.
2. The swimming pool or spa shall either have at least two circulation suction outlets per pump that shall be hydraulically balanced and symmetrically plumbed through one or more "T" fittings, and that are separated by a distance of at least three feet in any dimension between the suction outlets, or be designed to use alternatives to suction outlets, including but not limited to, skimmers or perimeter overflow systems to conduct water to the recirculation pump.
3. The circulation system shall have the capacity to provide a complete turnover of pool water, as specified in Table 1 (CBC Section 3124B).
4. Suction outlets shall be covered with anti-entrapment grates as specified in ANSI/APSP-16 or successor standards designated by the federal Consumer Product Safety Commission, which cannot be removed except with the use of tools. Slots or opening in the grates or similar protective devices shall be of a shape, area, and arrangement that would prevent entrapment and would not pose any suction hazard to bathers.
5. Any backup safety system that an owner of a new swimming pool or spa may choose to install in addition to the requirements set forth above shall meet the standards as published in the document "Guidelines for Entrapment Hazards: Making Pools and Spas Safer" (Publication #363, March, 2005, U.S. Consumer Product Safety Commission)

Whenever a building permit is issued for the remodel or modification of an existing swimming pool, toddler pool, or spa, the permit shall require that the suction outlet(s) of the existing pool or spa to be upgraded so as to be equipped with anti-entrapment grates, as specified in ANSI/APSP-16 as described in number 4 above.