Swimming Pool Inspection Information

Shasta County
Department of Resource Management
Building Division
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(2010 CCR – Permit applications on or after January 1, 2011)
This handout is not intended to cover all circumstances, conditions or regulations just some common questions or conditions.

Inspection Requirements

Gunite Pools	One-piece fiberglass pools
1. Pre-Gunite Inspection 2. Pre-Deck Inspection including Equipotential bonding grid 3. Pre-Plaster Inspection. During this inspection the pool barrier must be in place. 4. Final Inspection	1. Set inspection. During this inspection the pool barrier must be in place. 2. Equipotential bonding grid/Pre-Deck. 3. Final Inspection

Suction outlets and Anti-entrapment. The swimming pool or spa shall have at least two circulation drains per pump that are hydraulically balanced, symmetrically plumbed through one or more "T" fittings, and that are separated by a distance of at least three feet in any dimension. Suction outlets that are less than 12 inches across shall be covered with listed anti-entrapment grates.

Location of Pool Equipment: Fossil fuel pool heating vents are required to be a minimum of 4' from a property line. Venting systems for heaters shall terminate not less than 4' below or 4' horizontally from, nor less than 1' above a door, window, or gravity-air inlet into building.

Energy Efficiency Requirements:
Pumps must be listed with CEC with a timer. If the pump is over 1-hp it must be multi speed. All piping elbows must be the sweep type not hard 90's.

Heated Pools require compliance a CF-6R-MECH-03 Installation certificate at final inspection. www.energy.ca.gov/title24/2008standards/residential_manual.html, pool cover installed for heated outdoor pools or spas and at least a 36" pipe between the filter and heater is installed to allow for the future addition of solar heating equipment.

Safety Glazing: Glazing in walls and fences, used as the barrier for indoor and outdoor swimming pools and spas, shall be tempered glass when the bottom edge of the glazing is less than 60 inches above the pool or spa decking and within 5 feet of the water's edge.

Electric Code General Information: applies to outdoor pools, spas, and hot tubs.
1. Wet-niche fixtures
A. An approved fixture is to be roughed 18" below water at final. Shell and fixture listed together
B. Conduit to the fixture housing must be approved brass, bronze, or UL labeled non-metallic conduit and cannot contain conductors for anything except the light fixture.
C. Where listed non-metallic conduit is used between the fixture and the junction box, a # 8 insulated copper conductor shall be installed in the conduit, and its termination in the forming shell of the light shall be encapsulated with a listed potting compound.

D. The pool light junction box listed for swimming pools and located a minimum of 8" above the water, 4" above the deck and 4' from the edge of the water. If the junction box is located in the finished walkway around the pool, it must be protected.
E. Length of Cords for Luminaries During inspection have the cord connected and the light on the deck in an area it can be serviced to ensure proper cord length.

Underground wiring, except needed pool wiring, not permitted within 5' of the pool.

Grounding: The following equipment (in addition to the #8 bond) is required to be grounded with an insulated copper grounding conductor sized per Table 250-95 but not smaller than #12 and installed in the conduit with the circuit conductors: pool lighting fixtures, all electrical equipment associated with the recalculating system, junction boxes, transformer enclosures, GFCI's, panel boards, and any other electrical equipment within 5’ of the pool. The feeder between a sub-panel and the service equipment shall have an insulated equipment grounding conductor not smaller than #12 copper installed with the feeder conductors in conduit. In a single dwelling unit the wiring to the service equipment may be in an approved cable assembly within the dwelling unit only.

GFCI protection: All receptacles supplying pumps must be GFCI. Receptacles are not permitted to be located less than 6' from the pool edge. One GFCI receptacle is required between 6' and 20' of the pool or outdoor spa.

Spas and hot tubs Listed package units may be connected with a cord no longer than 15' and be GFCI protected.

Overhead conductors are not permitted above the area within 10' horizontally of the pool, above diving structures, stands, towers, or platforms. EXCEPTION: If the lines are UTILITY owned, operated, and maintained the following clearances are required for insulated supply or service cables: 22.5' in any direction to water or walkway and 14.5' in any direction to diving boards, stands, or towers.

Lights for Outdoor Pools: Lights and fans are permitted 12’ above the pool. Existing rigidly attached GFCI protected lighting fixtures and lighting outlets are permitted within 5’ of the pool edge when located not less than 5’ above the water. GFCI protected lighting fixtures are permitted between 5’ and 10’ of the water’s edge and are permitted to be below 5’ above the water surface. Rigidly-attached lighting fixtures (non- GFCI protected) are permitted when located more than 5’ from the water’s edge and not less than 5’ above the water’s surface. Switches must be a minimum of 5’ from the pool.

Disconnecting means for a pool, spa, or hot tub must be accessible, within sight of, and not less than 5' horizontally from the inside edge of the pool, spa, or hot tub. 6’ if a receptacle

Electrically-Operated Pool Covers: The electric motors, controllers, and wiring shall be located at least 5’ from the inside wall of the pool Electric motors installed below grade level shall be of the totally enclosed type and GFCI protected.

Equipotential Bonding Grid: CEC 680.26

The CEC requires bonding all of the following metallic parts in a permanently installed swimming pool with a minimum #8 AWG solid copper conductor:

- Concrete reinforcing steel and all metallic structural components.
- Underwater lighting including all metallic parts such as housings and mounting brackets.
- Metal fittings for pipes, drains and water inlets.
- Electrical equipment associated with the pool including pumps and re-circulating equipment, heaters, and blowers and automatic covers.
- Metallic tubing and conduit, metallic-sheathed cable, metal piping and all fixed metal parts.
- Any metal component with 5' horizontally and 12' vertically of the pool must be bonded.

All of the bonded parts in or around the swimming pool must be attached to the equipotential bonding grid **AND INSPECTED prior to covering**.

The grid can consist of one of the following:

- Copper Grid constructed with a minimum of #8 AWG bare solid copper conductors with 12" x 12" spacing extending 3' beyond the edge of the pool. CEC 680.26(C) (3) bonded together at each point of crossing with exothermic welding, listed pressure connectors, listed clamps or other listed means.

  OR

- #8 solid copper bonding conductor following the contour of the pool, spaced 18" to 24" from the inside edge of the pool and secured within or under the perimeter surface 4" to 6" below the subgrade.

Permanent pools made of non-conductive materials such as fiberglass, vinyl lined or other non-conductive materials do not require an equipotential grid that covers the full contour of the bottom and sides of the pool. However, an equipotential grid is still required around the perimeter of the pool.

Above ground pools with a double insulated pumps and no available grounding lugs will not require the bonding grid.