

## **SUMMARY OF CHANGES IN THE NEW POOL CODE as pertains to Plan Review**

### **Title 24, California Code of Regulations**

*(Note: The changes listed below are not all inclusive; refer to new pool code directly for complete details)*

**1. DEFINITIONS (Sec. 3102B):**

**RIM FLOW GUTTER** *defined* (Sec. 3102B) – overflow system same elevation as deck.

**SKIMMER EQUALIZER** *defined* (Sec. 3102B) – submerge suction outlet connected to skimmer, not a main drain.

**SPECIAL PURPOSE POOL** *defined* (Sec. 3102B) – a pool exclusively for a specific purpose, such as instruction, diving, competition or medical treatment.

**SPRAY GROUND** *defined* (Sec. 3102B) – no standing water in splash zone and consists of a surge basin with a recirculation system from which is directed with water features. See Sec. 3106B for Spray Ground Requirements.

**TEMPERED WATER** *defined* (Sec. 3102B) - 100-110°F.

**WADING POOL** *defined* (Sec. 3102B) - allows side wall depths to be more than 12” up to 18” max.

**WATER FEATURE** *defined* (Sec. 3102B) – means interactive device or structure through which water is directed to pool user (spray ground and/or waterpark), i.e. water cannon, dumping bucket, water jet, etc.

**2. PLAN REVIEW (Sec. 3103B.1):**

**Sec. 3103B.4** - The approved plans shall be **valid for two years from the date of approval.**

**3. POOL CONSTRUCTION (Sec. 3108B):**

**Sec. 3108B.3 FINISH COLORS** - Contrasting color at edge of **all** pool steps now required (e.g. trim tile).

**4. POOL GEOMETRY (Sec. 3109B):**

**Sec. 3109B.1** - A pool shall conform to the appropriate criteria in **Figures 31B-1 through 31B-7.**

*Exception: A special purpose pool may be exempted from the construction standards that are not applicable to the proposed use.*

**Sec. 3109B.3 – Bottom slope break**, there shall be a uniform water depth along the entire base of the stairs. Rope anchors are no longer required at 4 ½ ft. water depth.

5. **PERMANENT MARKINGS** (Sec. 3110B):

**Sec. 3110B.1** –No markings, **designs or lettering** shall be permitted on the pool shell except for slip resistant lane markings, depth marking lines and safety markings. *Note: this means that **no decorative designs of any type are permitted.***

**Sec. 3110B.3 – Depth marking line.** At 4 ½ feet depth marking line shall be 4” min. to 6” max.

(New in code) **Sec. 3110B.4.2 – Position (of depth markers- DM).**

1. DM shall be located on coping or deck above water line DMs, but no more than 3 feet from pool water. *Note- this means that **all pools/spas** are required to have deck depth markers regardless of pool/spa width.*
2. For skimmer pools DMs shall be submerged approx. 50%.
3. For gutter pools that are not rim flow, DMs may be positioned at face of the cantilevered coping, the back wall above the gutter or immediately below the water line.
4. For rim flow gutter pools DMs shall be immediately located below the water line.

**Sec. 3110B.4.4 – Size of markers.** Numerals a min. of **4 inches** in height. DMs must be mark in FT and IN.

**Sec. 3110B.5 – No diving markers.** For pool water depth **6 ft. and shallower no diving markers with the universal symbol of no diving are required directly adjacent to the deck DMs.**

6. **STEPS, RECESSED STEPS, LADDERS, AND STAIRS** Title 24 (Sec. 3111B) :

**Sec. 3111B.1 - Construction.** One means of entry and exit shall be provided in the shallowest portion of a pool if the vertical distance from the bottom of the pool to the deck is over **one foot** (*was two feet*). **Ramps** are now included as acceptable means of entry and exit. See illustrated diagrams in Figures 31B-6 and 31B-7.

**Sec. 3111B.3 – Stairs.** Stairs are now required at the shallowest portion of the pool. See Figure 31B-7.

**Sec. 3111B.4 – Recessed steps and step risers.** Ladder treads and recessed steps shall have a min. tread of 5 in. & a width of 14 in.

7. **DIVING BOARDS AND PLATFORMS** (Sec. 31113B):

**Sec. 3113B.2 – Rails and steps.** Diving boards or platform greater than **18 inches** above the deck shall be provided with a ladder or stairs.

**Sec. 3113B.3 – Dimensions.** Dimensions and clearance for use of diving boards or platform shall conform to Figures 31B-1 and 31B-2. Platforms and diving boards shall conform to the USA Diving Rules and Codes.

**8. POOL DECKS** (Sec. 3114B):

**Sec. 3114B.3 – Deck slope.** The pool deck surface shall have slope of no less than 1% (1/8 inch per foot) but no more than 2% (¼ inch per foot) away from the pool to a deck drainage system. Deck shall be constructed and finished to prevent standing water.

**Sec. 3114B.4 – Deck covering.** Deck covering or other materials that are not equivalent to concrete in strength, durability and slip resistance and are not able to withstand repeated brushing, scrubbing or cleaning procedures shall not be installed or used within **4 feet of the pool**.

**9. HOSE BIBBS** (Sec. 3118B)- Required HB shall be protected by non-removable backflow preventer, a non-removable hose bibb vacuum breaker, or by atmospheric vacuum breaker installed not less than **6 inches** above the highest point of usage located on the discharge side of the last valve. Hose bibb shall be provided in the equipment area.

**10. POOL ENCLOSURE** (Sec. 3119B.1) :

2. The pool enclosure shall be constructed over a hard and permanent material equivalent to concrete. (*Fence can no longer be over dirt or grass.*)

3. The area **5 feet** outside of the pool enclosure (clear span) shall be a common area open to the public. (*The pool enclosure fences can no longer be shared with a private backyard fence.*)

**Sec. 3119B.2 – Gates.**

1. Hand activated door or opening hardware shall be located no lower than 42 inches and **no higher than 44 inches** above the deck or walkway.

**Sec. 3118B.3 – Retroactivity.** Pool enclosures built **before July 1, 1994** shall not have a fence enclosure less than 4 feet in height. Pool enclosures built **on or after July 1, 1994** must have at least a 5 foot high fence/enclosure.

**11. REQUIRED SIGNS** (Sec. 3120B) :

**Sec. 3120B.1 – General.** All signs shall have clearly legible letters or numbers not less than **4 inches high**, *unless otherwise required in this section*:

**Sec. 3120B.3. – No Diving sign.** **“NO DIVING”** sign required at pools with a maximum water depth of 6 feet or less. [ Ref. **3110B.5 No diving markers.** For pool water depths **6 feet (1830 mm)** and shallower no diving markers with the universal symbol of no

diving, which is a red circle with a slash through it superimposed over the image of a diver, shall be installed on the deck directly adjacent to the depth markers required by Section 3110B.4.1.]

**Sec. 3120B.4 – No Lifeguard sign.** The “**WARNING: NO LIFEGUARD ON DUTY**” sign shall also state in 1 inch min. high letters, “**Children under the Age of 14 Shall Not Use Pool without a Parent or Adult Guardian In Attendance.**”

**Sec. 3120B.5 – Artificial respiration and CPR sign.** An illustrated diagram with text at least ¼ inch high of artificial respiration and CPR procedures shall be posted.

**Sec. 3120B.6 – Emergency sign.** The emergency telephone number 911, the number of the nearest emergency services and the name and street address of the pool facility shall be posted.

**Sec. 3120B.7 – Warning sign for a spa.** Spa “**CAUTION**” sign must be in letters at least 1 inch high.

**Sec. 3120B.8 – “EMERGENCY SHUT OFF SWITCH”** sign for spa must be in letters at least 1 inch high.

**Sec. 3120B.10 –Keep closed.** A “**KEEP CLOSED**” sign shall be posted on exterior side of exterior gates and doors leading into pool area. *(This is a newly required sign.)*

**Sec. 3120B.11 – Diarrhea.** A sign in letters at least 1 inch high and in a language or diagram that is clearly stated shall be posted at the entrance area of a public pool which states that persons having current active diarrhea or who have had active diarrhea within the previous 14 days shall not be allowed to enter the pool water. *(This is a newly required sign.)*

**Sec. 3120B.14 Spray Ground Sign.** “**CAUTION: WATER IS RECIRCULATED. DO NOT DRINK.**”

**Sec. 3120B.17 Direction of flow:**

**Sec. 3120B.17.1** Label all recirculation system pipes with directional arrows in the equipment area.

**Sec. 3120B.17.2** More than one pool on site, the recirculation equipment shall be marked as to which pool the system serves.

**Sec. 3120B.17.3** Valves and plumbing lines shall be labeled clearly with the source or destination descriptions.

**12. INDOOR POOL VENTILATION** *(Sec. 3121B)* – Indoor pools, dressing room and toilet rooms shall be ventilated according to the requirements in Chapter 4 of the California Mechanical Code.

**13. POOL EQUIPMENT ENCLOSURE (Sec. 3122B)** – For pools constructed on or after January 1, 2013, pool equipment shall be enclosed as follows:

1. All equipment installed for recirculation, filtration, and disinfection of pool water shall be installed so that access is limited to persons authorized by the pool owner or operator;
2. Pool equipment shall be mounted on concrete or equivalent or easily cleanable and nonabsorbent floor material;
3. Floors shall be sloped a min. of **¼ inch per foot to a drain**.

**14. RECIRCULATION AND TREATMENT SYSTEM COMPONENTS:**

**Sec. 3123B.1 System description** – Each pool shall be provided with a separate recirculation, filtration, and disinfection system. *Note: For new construction, two spa pools are no longer permitted to share a circulation system.*

**Sec. 3123B.2 Equipment** – All pumps, filters, chemical feeders, skimmers, and supplemental equipment shall comply with **NSF/ANSI 50-2010 standards**.

**15. TURNOVER TIME (Sec. 3124B):**

1. ½ hr. or less for spa.
2. ½ hr. or less for spray ground.
3. ½ hr. or less for wading pool.
4. 2 hrs. or less for medical pool.
5. 6 hrs. or less for pool.

**16. RECIRCULATION PIPING SYSTEM AND COMPONENTS (Sec. 3125B):**

**Sec. 3125B.1 Line sizes** – Flow velocity requirements in piping

- a) Suction lines (e.g. MD, SK) or copper piping: **6 ft./sec max.**
- b) Return lines: **8 ft./sec max.**

**Sec. 3125B.1.1 Materials** – All pipe, tube, and fittings shall comply with the applicable standards for potable water system materials in Chapter 6 of the California Plumbing Code.

**Sec. 3125B.2 Gauges** – Pump vacuum gauges are now required (*e.g. on suction side of recirculation pump*).

**17. RECIRCULATION PUMP CAPACITY (Sec.3126B):**

**Sec. 3126B.1** Pool recirculation pumps shall have the following *total dynamic head capacities* –

- a) *Pressure D.E. filters:* 60 ft.
- b) *Vacuum D.E. filters:* 20 in. vacuum on suction side & 40 ft. total dynamic hd.
- c) *Rapid sand filters:* 45 ft.
- d) *High rate (HR) sand filters:* 60 ft.
- e) **Cartridge filters:** **60 ft. (new)**

**18. WATER SUPPLY INLETS (Sec. 3127B):**

**Sec. 3127B.2 General** – All pools must have a permanently installed fill line connected to an approved potable water source. **Note: Pools less than 1500 gallons are no longer exempt from having a fill line.**

**19. RAPID SAND PRESSURE FILTERS (Sec. 3129B):**

**Sec. 3129B.1 Flow rates** – Filtration rate 3 gpm per square ft. max. The backwash rate shall be **not less than 15 gpm per square foot.** (was not less than 12 gpm per sq.ft).

**Sec. 3129B.2.1** – The filter sand shall have an effective particle size of **0.40 and 0.55 mm** and a uniformity coefficient of not more than 1.75.

**20. DIATOMACEOUS EARTH FILTERS (Sec. 3130B):**

**Sec. 3130B.1 Flow rates** – 2 gpm per square foot max. *Note: This means that continuous feeding of D.E. filter aid with filter flow rate up to 2 ½ gpm/sq. ft. is no longer required for pools over 2,000 sq. ft. that use D.E. filter. Although, continuous feeding of D.E. filter aid is not prohibited, the flow rate must not exceed 2 gpm/sq. ft.*

**21. HIGH RATE SAND FILTERS (Sec. 3131B):**

**Sec. 3131B. 1 Flow rates** – Max. & min. flow rates for backwash and filtration shall be as per **NSF/ANSI 50-2010.**

**Sec. 3131B.2** – The filter media shall have an effective particle size between **0.40 and 0.55 mm** and uniformity coefficient not exceeding **1.75.**

**22. CARTRIDGE FILTERS (Sec. 3132B):**

**Sec. 3132B.1** – The filtration rate shall not exceed **0.375 gpm per square foot** of filter area.

**Sec. 3132B.2** – An approved wash down area equipped with potable water shall be provided in the pool equipment area with permanently installed drainage piping discharging indirectly thru an approved air gap to an approved sewage system.

**Sec. 3132B.3** – An additional set of cartridge filter elements shall be available on site.

**23. CHEMICAL FEEDERS (Sec. 3133B):**

**Sec. 3133B.1** – General design requirements.

1. Maintain & repair according to mfg. specs.
2. Shall have adjustable output rate device to permit repeated adjustments w/o loss or output rate accuracy and shall be adjusted by an automatic chemical monitoring and control system.
3. **NSF/ANSI 50-2010**

**24. DISINFECTANT FEEDERS (Sec. 3134B): NSF/ANSI 50-2010**

**Sec. 3134B.1** – Minimum capacity. Min. feed rate of 3 lbs. of **100 percent available chlorine** per day per 10,000 gallons of pool water capacity.

**Sec. 3134B.2** – A visible means of determining that rate of flow through the device shall be provided for each disinfectant feeder.

**25. GAS CHLORINATION EQUIPMENT ROOM** (*Sec. 3135B*): *Shall comply w/ the California Fire Code.*

**Sec. 3135B.1 Location** – Gas chlorination equipment room **shall not be located in any habitable building, above the first floor or below ground level.**

**Sec. 3135B.3 Ventilation** – Mechanical exhaust ventilation systems shall comply with the **California Mechanical Code.**

**Sec. 3135B.4 Alarm** – An approved audible and visible chlorine detection alarm is required (*see code for more details*).

**Sec. 3135B.5 Illumination** – Lighting of at least 50 foot-candles 30 inches above floor required.

**Sec. 3135B.8 Storage** – The gas chlorine room shall not be used for the storage of items not related to the use of gas chlorine equipment.

**26. POOL SKIMMING SYSTEMS** (*Sec. 3136B*):

**Sec. 3136B.1 Surface Skimmers** –

1. No change- skimmer shall be recessed into pool wall.
2. No change – skimmer shall be individually adjustable for the rate flow.
3. If used, **a skimmer equalizer suction outlet** located on the pool wall shall be connected to at least **two** suction grate assemblies that meet the **ASME/ANSI A112.19.8** performance standard and located at least 3 feet apart in any dimension between the drains.
4. No changes – skimmer weir 4” range.
5. No changes – airlock protective device, no leakage over 3 gpm.
6. Skimmer basket accessible thru opening in deck.
7. Minimum one skimmer per 500 square feet or less of pool water surface area or an **adequate number of skimmers to meet 100% of pump flow at the mfg. max. flow rating**, whichever is greater.
8. No changes – skimmer location.
9. **NSF/ANSI 50-2010 STANDARDS.**

**Sec. 3136B.2 Perimeter Overflow Systems** – **required if pool ≥ 5,000 square feet surface area.** System shall be design by engineer or architect who has experience working on public pools and shall comply with the following provisions:

1. **Location.** (*No changes*)
2. **Channel detail.** (*No changes*)
3. **Channel lip.** (*No changes*)

4. **Channel covering.** Covered overflow channels shall be permitted provided the openings do not exceed ½ inch in the smaller dimension.
5. **Channel outlets.** Channel outlet spacing and channel bottom slope shall be hydraulically designed by an engineer or architect as defined by this Chapter who has experience working on public pools.
6. **Channel outlet covers.** Overflow channel outlet covers shall be accessible for cleaning and maintenance. Openings of the channel outlet covers shall not pass ½ inch sphere in the smaller dimension.
7. **Channel drain piping.** *(No changes)*
8. **Surge storage capacity.** *(No changes)*
9. **Water level control.** *(No changes)*

**27. POOL FITTINGS (Sec. 3137B):**

**Sec. 3137B.1 Outlets** – Each pool shall be provided with a main drain typically located at the bottom of a pool that conducts water to the pump. Suction outlets shall comply with all of the following provisions:

1. Each pump shall be connected to at least two suction outlets that are **hydraulically balanced**, and symmetrically plumbed through “T” fittings, and shall be separated by **at least 3 feet in any dimensions** between the suction outlets.
2. All suction outlets shall be equipped with suction fittings that meet the **ASME/ANSI A112.19.8** performance standard.
3. The velocity of the suction piping installed between the suction outlets shall not exceed **3 feet per second** *(when 100% of the pumps flow is flowing through one suction outlet).*

*Examples:*

**SKIMMERS** - *if the proposed pool pump has a flow rate of 200 gpm and 4 skimmers are provided, each SK will handle 50 gpm with 100% of the flow thru the skimmers, and therefore the branch lines from the center “T” of the skimmer equalizer line suction outlets must be **3” pipe min.***

**MAIN DRAINS** – *pool flow rate at 200 gpm, the split main drain branch lines from center “T” must be **6” pipe min.***

4. Hydrostatic Relief Devices. In areas with a high ground water table, or **as required by local plumbing codes**, a hydrostatic relief device shall be installed. **When used in conjunction with a safety vacuum release system, the hydrostatic relief device must meet the mfg.’s installation requirement for SVRS.** *(e.g., No check valve on hydrostatic relief pipe, can install a plug on top of the pipe that is immediately removed when the pool is drained).*

**Sec. 3137B.2 Inlet Fittings** – requirement for number of inlets is unchanged **except that spas must now have at least two inlets.**

**Sec. 3137B.2.4 Floor Inlets** – pools that are greater than 40 feet in width or **3,000 square feet in surface area** shall have floor-mounted return lines. All floor inlets shall be located to provide uniform circulation and shall be installed so as to be **flush** with the surface of the pool bottom.

**28. SPA POOL REQUIREMENTS (Sec. 3138B):** *No changes in this section.*



**29. SOLAR HEATING INSTALLTIONS (Sec. 3139B):**

**Sec. 3139B.1 Solar heating systems shall comply with the following:**

1. Solar heating system suction outlets shall comply with Section 3137B; and
2. Solar heating system suction outlets shall be located **no closer than 5 feet** to any pool inlet fitting.
3. The installation of a solar heating system on a new or existing pool shall not interfere with the required turnover rate as specified in **Section 3124B** nor exceed the pipe flow velocities as specified in Section 3125B.1.

**30. CLEANING SYSTEMS (Sec. 3140B):**

A vacuum cleaning system is required. A cleaning system using potable water shall be provided with an **approved backflow protection device**. No cleaning system shall operate in the pool when the pool is open or available for use. **Built-in vacuum suction lines shall not be installed in the pool.**

**31. WASTE WATER DISPOSAL (Sec. 3141B):**

**Sec. 3141B.1 General Requirements.** Material cleaned from filters and backwash water from any recirculation system shall be disposed in a manner that is acceptable to the local wastewater agency and will not create a nuisance. **Backwash water shall not be return to a pool. Pipes carrying wastewater from pools including pool drainage and backwash from filters shall be installed as an indirect waste per California Plumbing Code. Where a pump is used to discharge waste pool water to the drainage system, the pump discharge shall be installed as an indirect waste.**

**3141B.2 D.E. Filters.** The backwash from a D.E. filter shall discharge into a separation tank. The wastewater from the separation tank shall discharge indirectly into a sanitary sewer or other approved wastewater disposal system.

**3141B.3 Piping.** Sumps and drain piping shall have sufficient capacity to receive backwash wastewater without overflow of the sump. **The sump shall not permit to enter the surge basin or the pool in the event of a sewage backup.** (e.g., a 4" diameter cast iron drain pipe sloped at 1/4" per ft. will drain by gravity approx. 109.6 GPM. Example of Sump calc: **2'x2'x2' sump = 8 cu. ft., 8 cu. ft. x7.48 = 60 gallons.** The required size of sewer drain pipe and/or sump is dependent on the backwash rate of flow.)

**3141B.5 Prohibited Connection.** There shall be no direct connection between the pool, its recirculation system or **overflow drain** to any sanitary sewer, storm drain or drainage system. (An overflow drain is not required. An overflow drain is a drain pipe usually installed high on the pool wall that drains excess water out of the pool during periods of overly high water levels, such as during the rainy season.)

Note: **Refer to the new pool code for revised diagrams.**