

# CHAPTER 31B [DPH]

## PUBLIC SWIMMING POOLS

### Division I—GENERAL

#### SECTION 3101B SCOPE

The provisions of this chapter shall apply to the construction, installation, alteration, addition, relocation, replacement or use of any public swimming pool, to its appurtenant auxiliary areas and facilities and to its mechanical equipment and related piping.

#### Notes:

1. Examples of public pools include those located in the following: commercial building, hotel, motel, resort, automobile and trailer park, automobile court, mobile home park, campground, apartment house, condominium, townhouse, homeowner association, club, community building, public or private school, gymnasium and health establishments.
2. See the California Energy Code, Part 6, for additional swimming pool standards.

#### SECTION 3102B DEFINITIONS

For the purpose of this chapter, the following terms shall have the meanings indicated:

**AUXILIARY AREA** is a public dressing, locker, shower or toilet area or building space intended to be used by bathers.

**BACKWASH** is the process of thoroughly cleansing the filter media and/or elements and the contents of the filter vessel.

**BATHER** is a person using a pool and adjoining deck areas for the purpose of water sports such as diving, swimming, wading or related activities.

**CLEAN POOL WATER** is a pool water that is free of dirt, oils, scum, algae, floating materials or other visible organic and inorganic materials that would sully the water.

**CLEAR POOL WATER** is pool water that is free from cloudiness and is transparent.

**CORROSION RESISTANT** is capable of maintaining original surface characteristics under the prolonged influence of the use environment.

**DECK** is an area surrounding a pool which is specifically constructed or installed for use by bathers.

**DRAIN** is a fitting or fixture, usually at or near the bottom of a pool, through which water leaves the pool normally to the recirculation pump.

**EFFECTIVE PARTICLE SIZE** is the theoretical size of sieve that will pass 10 percent by weight of sand.

**ENFORCING AGENCY** means the health officer or director of environmental health or their designated registered sanitarian representative.

**EQUIPMENT AREA** is an area used for pool recirculation and purification equipment and related piping appurtenances.

**INLET** is a fitting or fixture through which circulation water enters the pool.

**LADDER** is a series of vertically separate treads or rungs either connected by vertical rail members or independently fastened to an adjacent vertical pool wall.

**MEDICAL POOL** is a special-purpose pool used by a state-recognized medical institution engaged in the healing arts under the direct supervision of licensed medical personnel for treatment of the infirm.

**OVERFLOW SYSTEM** is the system which includes perimeter-type overflow gutters, surface skimmers, surge or collector tanks, other surface water collective system components and their interconnecting piping.

**POOL** is a constructed or prefabricated artificial basin, chamber or tank intended to be used primarily by bathers, and not for cleaning of the body or for individual therapeutic use.

**POOL VOLUME** is the amount of water expressed in gallons (liters), that a pool holds when filled.

**PRIVATE POOL** is any constructed pool, permanent or portable, which is intended for noncommercial use as a swimming pool by not more than three owner families and their guests.

Note: A single-family residence is a Group R, Division 3 occupancy.

**PUBLIC POOL** is a pool other than a private pool.

**RECESSED STEPS** is a riser/tread or series of risers/treads extending down into the deck with the bottom riser or tread terminating at the pool wall (thus creating a "stairwell").

**RECESSED TREADS** are a series of vertically spaced cavities in the pool wall creating tread areas for step holes.

**RECIRCULATION SYSTEM** is the interconnected system traversed by the recirculated water from the pool until it is returned to the pool, i.e., from the pool through the collector or surge tank, recirculation pump, filters, chemical treatment and heater (if provided), and returned to the pool.

**SHALLOW POOL** is a pool that has a maximum depth of less than 6 feet (1829 mm).

**SLIP RESISTANT** is a rough finish that is not abrasive to the bare foot.

**STAIRS** are series of two or more steps.

**STEP** is a riser and tread.

**STEPS, RECESSED STEPS, LADDERS AND RECESSED TREADS** are those means of entry and exit to and from the pool which may be used in conjunction with each other.

**TREATMENT OF WATER** is the process of conditioning and disinfection of pool water by means of a combination of filtration and the addition of chemicals to the water.

**TURNOVER TIME** is the period of time, in hours, required to circulate a volume of water equal to the pool capacity.

**UNIFORMITY COEFFICIENT** is the ratio of theoretical size of a sieve that will pass 60 percent of the sand to the theoretical size of sieve that will pass 10 percent.

**WATERLINE** shall be defined in one of the following:

1. **Skimmer system.** The waterline shall be the midpoint of the operating range of the skimmers.
2. **Overflow system.** The waterline shall be the top edge of the overflow rim.

### SECTION 3103B SPECIAL POOL CLASSIFICATIONS

**3103B.1 Spa pool.** A spa pool is a pool, not used under medical supervision, that incorporates a water jet system, an aeration system or a combination of the two systems, and which may also utilize artificially heated water. The surface water area of a spa pool shall not exceed 250 square feet (23 m<sup>2</sup>), and the water depth shall not exceed 4 feet (1219 mm).

*Note: See also Section 3119B.1.2.*

**3103B.2 Special-purpose pool.** A special-purpose pool is a pool intended to be used exclusively for a single purpose, such as wading, instruction, diving, competition or for medical treatment where a licensed professional in the healing arts is in attendance.

**3103B.3 Temporary training pool.** A temporary training pool is a pool intended to be used for instruction in swimming, having a maximum water depth of 36 inches (914 mm), and so constructed as to be readily disassembled for storage or for transporting to and reassembly to its original integrity at a different location. A temporary training pool shall be limited to a maximum use of three months at any one geographical location during any 12-month period.

**3103B.4 Wading pool.** A wading pool is a pool intended to be used for wading by small children and having a maximum depth of 18 inches (457 mm) at the deepest point and a maximum depth of 12 inches (305 mm) at side walls.

### SECTION 3104B ACCESSIBILITY TO THE PHYSICALLY HANDICAPPED PERSON

Swimming pools and their appurtenances shall be in compliance with the requirements of the state architect for access to public accommodations by physically handicapped persons.

*Note: See Chapter 11A.*

### SECTION 3105B ALTERNATE EQUIPMENT, MATERIALS AND METHODS OF CONSTRUCTION

**3105B.1** The enforcing agency may approve an alternate equipment, material or method of construction, provided it finds that the proposed design is satisfactory and complies with the provisions of this chapter, that the equipment, material, method or work offered is, for the purpose intended, at least equivalent to that prescribed in suitability, strength, effectiveness, fire resistance, durability, safety and sanitation, or that the methods of installation proposed conform to other acceptable nationally recognized standards, and providing the alternate has been approved and its use authorized by the enforcing agency.

**3105B.2** The enforcing agency shall require that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding its use.

**3105B.3** Whenever there is insufficient evidence of compliance with the provisions of this chapter, the enforcing agency may require tests as proof of compliance to be made at no expense to the enforcing agency. Tests shall be made in accordance with approved standards, but in the absence of such standards, the enforcing agency shall specify the test procedure.

### POOL STRUCTURE

#### SECTION 3106B POOL CONSTRUCTION

**3106B.1 Shell structural integrity.** The pool shall be designed and durably built of reinforced concrete, or material equivalent in strength, water tight, and able to withstand anticipated stresses under both full and empty conditions, taking into consideration climatic effect, geological conditions, integration of the pool with other structures and similar factors.

**3106B.2 Finish.** The finished pool shell shall be lined with a smooth waterproof interior finish that will withstand repeated brushing, scrubbing and cleaning procedures. The interior pool finish shall completely line the pool to the tile lines, coping or cantilevered deck.

**3106B.3 Finish color.** The finish color shall be white except for:

1. Lane and other required pool markings described in Section 3109B;
2. Handholds;
3. Copings;
4. The top surface edges of benches; and
5. The edge of spa steps.

**Exception:** A spa pool shall be permitted to be finished in a light (pastel) color other than white when approved by the enforcing agency.

**3106B.4 Projections and recessed areas.** The surfaces of the pool shall not have any projections or recessed areas except for

handholds, recessed treads, steps, ladders, stairs, pool inlets and outlets, skimmers and perimeter overflow systems.

**Exception:** Benches shall be permitted in a spa pool, providing that the water depth over the bench does not exceed 24 inches (610 mm).

### SECTION 3107B ADDITIONAL REQUIREMENTS FOR A TEMPORARY TRAINING POOL

**3107B.1** A temporary training pool shall comply with this section in addition to the provisions contained in Section 3106B.

**3107B.1.1 Installation site.** A temporary training pool shall be installed on a paved level surface extending at least 10 feet (3048 mm) beyond all pool walls.

**3107B.1.2 Cover.** The temporary training pool shall be provided with a solid cover. The cover shall be installed during periods when the pool is not open for use and shall be secured to the pool in a manner to prevent unauthorized removal.

**3107B.1.3 Design.** The pool cover shall be designed to support a uniform live load of 40 pounds per square foot (1.9 kN/m<sup>2</sup>). The structural design of the pool cover shall be approved by a California-registered professional engineer.

### SECTION 3108B POOL GEOMETRY

**3108B.1 Dimensions and slopes.** The dimensions and slopes of a pool shall conform to the appropriate Figure 31B-1 through 31B-3.

**Exception:** A special-purpose pool shall be permitted a depth greater than 3 1/2 feet (1067 mm) at the shallowest end.

**3108B.2 Drainable.** The pool shall be completely drainable through a main drain which shall be located at the deepest point in the pool.

**3108B.3 Dimensional tolerance.** A construction tolerance shall be permitted on all dimensions in Figures 31B-1, 31B-2 and 31B-3, not to exceed 2 inches (51 mm) except that the tolerance of the water level of a pool with a nonadjustable overflow system shall not exceed 1/8 inch (3.2 mm).

**3108B.4 Slope break from shallow to deep water.** When a pool has a change in bottom slope from shallow to deep water, flush-mounted devices for fastening a safety rope and buoys across the pool shall be installed where the water depth is 4 1/2 feet (1372 mm).

### SECTION 3109B PERMANENT MARKINGS

**3109B.1 Lane markings.** Slip-resistant lane lines or other markings at the bottom of the pool shall not exceed 12 inches (305 mm) in width.

**3109B.2 Depth marking line.** There shall be installed a straight line of slip-resistant tile, 4 inches (102 mm) wide, of

contrasting color across the bottom of the pool where the water depth is 4 1/2 feet (1372 mm).

**Exception:** Pools having a maximum depth of 5 feet (1524 mm) or less shall not be required to have a depth marking line.

**3109B.3 Decorative designs.** Designs on the bottom or walls of the pool which are shaped in a form that might reasonably be mistaken for, or give the illusion of being, a human form shall be prohibited.

**3109B.4 Water depth markers.**

**3109B.4.1 General.** The water depth shall be clearly marked at the following locations:

1. Maximum depth;
2. Minimum depth;
3. Each end;
4. At the break in the bottom slope between the shallow and deep portions of the pool (see also Section 3108B.4); and
5. On the perimeter of the pool at distances not to exceed 25 feet (7620 mm)

**Exception:** A spa or wading pool shall have a minimum of two depth markers indicating the maximum depth.

**3109B.4.2 Location.** Depth markers shall be located on the vertical pool walls at each end and side of the pool at or above the water level. If a pool exceeds 20 feet (6096 mm) in width, additional markers shall be located on the edge of the deck next to the pool.

**Exception:** If depth markers cannot be located on the vertical pool walls above the waterline because of the pool design, the depth markers shall be located so as to be clearly visible to bathers in the pool.

**3109B.4.3 Tolerance.** Depth markers shall be positioned to indicate the water depth accurate to the nearest 6 inches (152 mm).

**3109B.4.4 Size of markers.** Depth markers shall:

1. Have numerals a minimum of 3 inches (76 mm) in height and of a color contrasting with the background.
2. Be made of a durable material that is resistant to weathering; and
3. Be slip resistant when they are located on the pool deck.

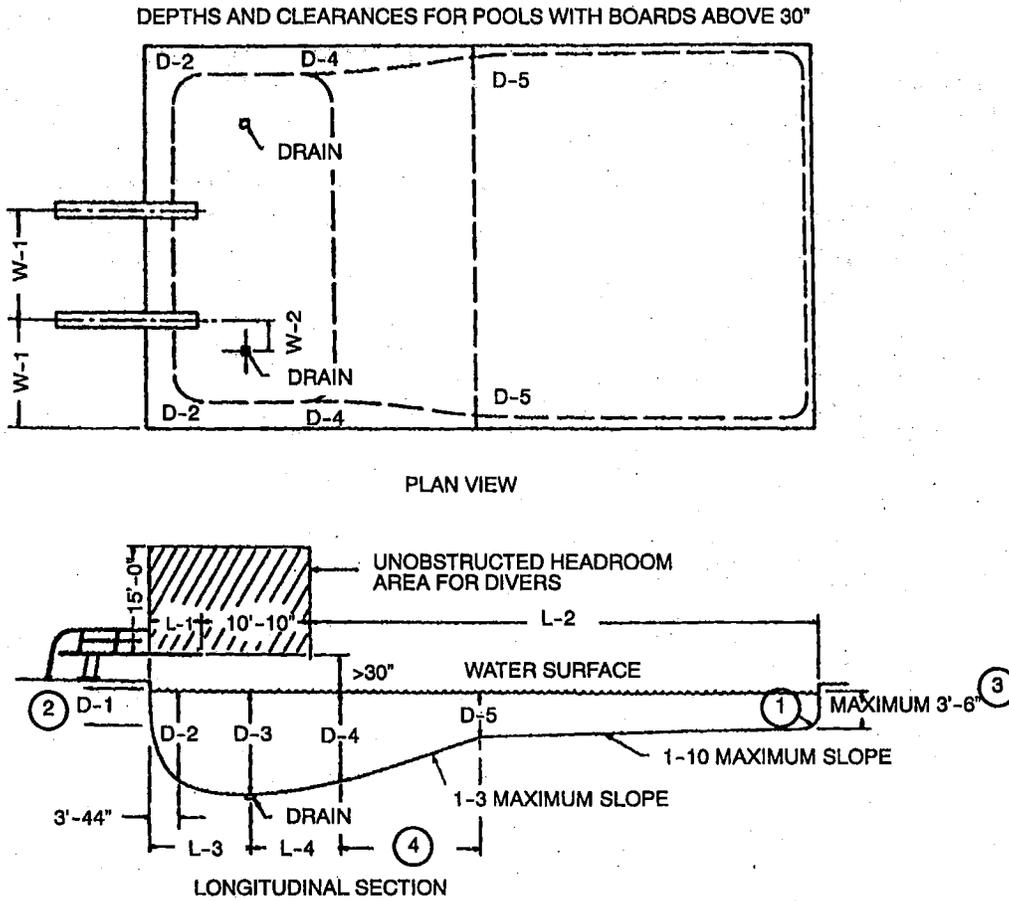


FIGURE 1

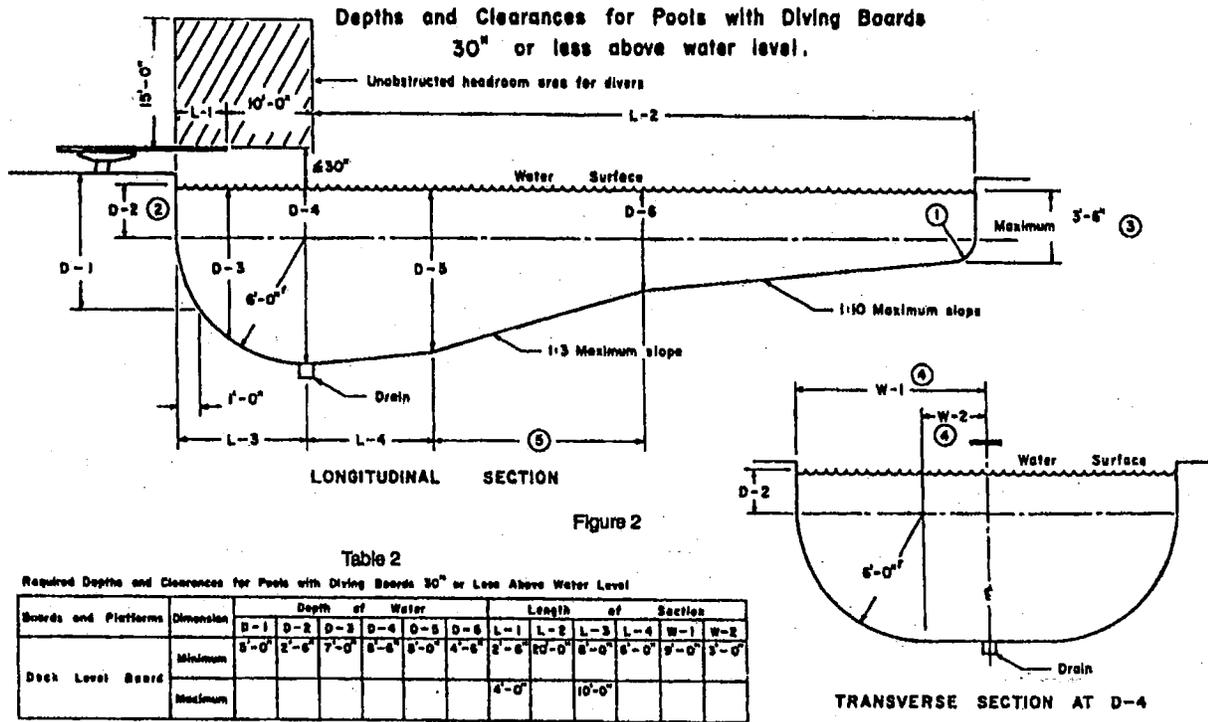
**TABLE 1  
MINIMUM REQUIRED DEPTHS AND CLEARANCES  
FOR 1-METER AND 3-METER BOARDS**

Boards and Platforms	Dimension	Depth of Water					Length of Section					
		D-1	D-2	D-3	D-4	D-5	L-1	L-2	L-3	L-4	W-1	W-2
1-Meter Board	Minimum	4'-0"	5'-4"	5'-0"	5'-6"	4'-6"	5'-0"	20'-0"	11'-4"	10'-0"	10'-0"	5'-0"
3-Meter Board	Minimum	4'-0"	10'-0"	11'-6"	10'-6"	4'-6"	5'-0"	30'-0"	11'-4"	14'-0"	15'-0"	5'-0"

Notes for Figure 1 and Table 1.

1. Maximum radius at shallow end shall be 1' 0".
2. Springline (D-1) shall extend to the break in slope between the shallow area and the diving bowl.
3. See exception to Section 3108B.
4. Dimension based on maximum slope and other minimum or maximum dimensions.

FIGURE 31B-1—DEPTH AND CLEARANCE FOR POOLS WITH BOARDS ABOVE 30 INCHES (762 mm)



Notes for Figure 2 and Table 2.

1. Maximum radius at shallow end shall be 1' 0".
2. Springline (D-1) shall extend to the break in slope between the shallow area and the diving bowl.
3. See exception to Section 3108B.
4. Dimension W-1 and W-2 shall apply from wall at deep end to D-6.
5. Dimension based on maximum slope and other minimum or maximum dimensions.

**FIGURE 31B-2—DEPTH AND CLEARANCES FOR POOLS WITH DIVING BOARDS**

Depths and Clearances for Pools without Diving Boards

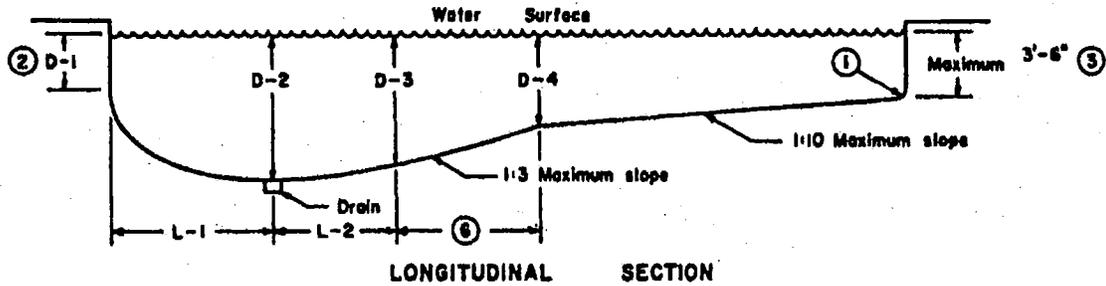


Figure 3

Table 3  
Required Depths and Clearances for Pools without Diving Boards

Boards and Platforms	Dimension	Depth of Water				Length of Section	
		D-1	D-2	D-3	D-4	L-1	L-2
None	Minimum	2'-6"	6'-0"	5'-6"	4'-6"	3'-6"	3'-0"

Notes for Figure 3 and Table 3.

1. Maximum radius at shallow end shall be 1' 0".
2. Springline (D-1) shall extend to the break in slope between the shallow area and the diving bowl.
3. See exception to Section 3108B.
4. Width of pool at Section D-2 shall be at least 15'-0".

FIGURE 31B-3—DEPTH AND CLEARANCES FOR POOLS WITHOUT DIVING BOARDS

**SECTION 3110B**  
**STEPS, RECESSED STEPS, LADDERS AND**  
**RECESSED STAIRS (TREADS)**

**3110B.1 Construction.** A means of entry and exit to and from the pool shall consist of steps, recessed steps, ladders or stairs, or a combination of them. 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 2 feet (610 mm). A second means of entry and exit shall be provided in the deep portion of a pool having a depth greater than 4 1/2 feet (1372 mm). Where the width of the pool exceeds 30 feet (9144 mm), such means of entry and exit shall be provided at each side, not more than 100 feet (30 480 mm) apart.

**3110B.2 Ladders.** Ladders with a handhold shall be corrosion resistant and shall be equipped with slip-resistant tread surfaces. Ladders shall be rigidly installed and shall provide a clearance of not less than 3 inches (76 mm) or more than 5 inches (127 mm) between any part of the ladder and the pool wall.

**3110B.3 Stairs.** Each step of a stair shall have the same dimensions with a tread not less than 12 inches (305 mm) wide, except that if the top step is curved convexly, the top step tread shall

not be less than 18 inches (457 mm) wide as measured at the point of maximum curvature. Risers shall be uniform and shall not exceed 12 inches (305 mm) in height. A safety railing shall be provided, extending from the deck to not less than a point above the top of the lowest step and with the upper railing surface not less than 28 inches (711 mm) above the deck.

**3110B.4 Steps and step holes.** Steps and step holes shall have a minimum tread of 5 inches (127 mm), width of 14 inches (356 mm) and shall be designed to be readily cleaned.

**3110B.5 Hand railings.** Hand railings shall be provided at the top of both sides and shall extend over the coping or edge of the deck for each ladder and step hole.

**3110B.6 Steps for a spa pool.** Each step of a spa pool shall have a tread width not less than 12 inches (305 mm). Risers shall not exceed 9 inches (229 mm) in height when one handrail is provided, or 12 inches (305 mm) in height when two handrails are provided. A handrail shall be installed over the steps, with the leading railing edge extending up to a point not less than 12 inches (305 mm) from the plane of the bottom riser. The steps shall be located where the deck is at least 4 feet (1219 mm) wide.

### SECTION 3111B HANDHOLDS

**3111B.1 General.** Every pool shall be provided with handholds (perimeter overflow system, bull-nosed coping or cantilevered decking) around the entire perimeter installed not greater than 9 inches (229 mm) above the waterline.

**Exception:** Handholds are not required for wading pools.

**3111B.2** For special-use pools used for instruction or competitive swimming, a handhold at water level similar to the rim of a perimeter overflow system is required.

**3111B.3** Where perimeter overflow systems are not provided, a bull-nosed coping or cantilevered decking or reinforced concrete, or material equivalent in strength and durability, with rounded, slip-resistant edges shall be provided. The overhang for either bull-nosed coping or cantilevered decking shall not exceed 2 inches (51 mm) or be less than 1 inch (25 mm) and shall not exceed 2 1/2 inches (64 mm) in thickness.

**Exception:** The enforcing agency may accept handholds other than those specified for spa pools.

### SECTION 3112B DIVING BOARDS

**3112B.1 General.** Diving boards and their supports, platforms and steps shall be substantially constructed and shall be of sufficient structural strength to carry the maximum anticipated load. Steps shall be of corrosion-resistant material, easily cleanable and of slip-resistant design.

**3112B.2 Railings.** Handrails shall be provided at all steps and ladders leading to diving boards more than 1 meter above the water, except those steps or ladders set 15 degrees or less from the vertical. Guardrails extending to a point on the platform directly above the water's edge shall be provided on both sides of all platforms and diving boards which are over 1 meter high. Guardrails shall be 36 inches (914 mm) above the platform or diving board.

### SECTION 3113B POOL DECKS

**3113B.1 General.** A minimum continuous and unobstructed 4-foot wide (1219 mm) slip-resistant, nonabrasive deck area of concrete or like material shall be provided flush with the top of the pool shell wall extending completely around the pool, and the deck area shall further extend 4 feet (1219 mm) on both sides and rear of any diving board or slide and their appurtenances. The deck width shall be measured from the poolside edge of the coping lip.

**Exceptions:**

1. A deck at least 4 feet (1219 mm) in width shall extend around 50 percent or more of the perimeter of a spa pool. For spa pools that have their walls extending above the ground or floor level, the deck area requirement shall apply at the ground or floor level unless otherwise specified by the enforcing agency.

2. The deck width separating a spa pool from an adjacent pool shall not be less than 6 feet (1829 mm) wide.
3. The deck may be omitted from around a temporary training pool.
4. [DSA-AC] Any mechanism provided to assist persons with disabilities in gaining entry into the pool and in exiting from the pool shall comply with Chapter 11B, Section 1104B.4.3, Participation Areas.

**3113B.2 Deck drainage.** The pool deck surface shall be sloped a minimum of 1/4 inch (6.4 mm) per foot to deck drains or other approved surface water disposal areas. The pool deck surface shall not drain into the pool, its perimeter overflow channel, into an adjoining spa or other pool or be connected to the reticulation system.

**Note:** A deck drain system of one 4-inch (102 mm) drain inlet per 400 square feet (37 m<sup>2</sup>) of tributary deck area, with drains spaced 25 feet (7620 mm) apart, usually provides adequate surface water disposal.

**3113B.3 Coping.** Pool coping shall be slip resistant.

**3113B.4 Coverings.** Artificial covering shall be permitted on the deck area when approved by the enforcing agency.

**Note:** Deck slopes to provide proper drainage may vary with the texture of the surface. It is recommended that the minimum slope be created if artificial covering or exposed aggregate concrete surface is contemplated.

**3113B.5 Handrails** shall be provided around the perimeter of any raised deck of a temporary training pool.

**3113B.6 Unpaved areas.** Landscape plants, flower beds or similar unpaved areas shall not be located within 4 feet (1219 mm) of a spa pool.

### SECTION 3114B POOL LIGHTING

**3114B.1 General.** Where pool lighting is provided, it shall be such that lifeguards or other persons may observe, without interference from direct and reflected glare from the lighting sources, every part of the underwater area and swimming pool surface, all diving boards or other pool appurtenances.

**Notes:** See (Part 3) Article 680 for electrical installation requirements.

**3114B.2 Nighttime use.** Pools used at night shall be equipped with underwater lighting fixtures that will provide complete illumination to all underwater areas of the pool with no blind spots. Illumination shall enable a lifeguard or other persons to determine whether:

1. A bather is lying on the bottom of the pool, and
2. The pool water conforms to the definition of "Clear pool water."

**Exception:** Pools provided with a system of overhead lighting fixtures, where it can be demonstrated to the enforcing agency that the system is equivalent to the underwater fixture system.

**3114B.3 Deck area lighting.** Where the pool is to be used at night, pool deck areas shall be provided with lighting so that persons walking on the deck can identify hazards. Lighting fixtures shall be aimed toward the deck area and away from the pool surface insofar as practical.

## ANCILLARY AREAS AND FACILITIES

### SECTION 3115B BATHHOUSE DRESSING, SHOWER AND TOILET FACILITIES

**3115B.1 Shower and dressing facilities shall be provided for users of a pool.**

**Exceptions:**

1. Shower and dressing facilities may not be required when bathers have access to such facilities in adjacent living quarters.
2. Public toilet facilities may be omitted when bathers have access to toilet facilities either in living quarters located not more than 300 feet (91 440 mm) in travel distance from the pool, or in an adjacent building such as a recreational facility, clubhouse or cabana.

**3115B.2 Number of sanitary facilities.** For the purpose of this subsection, one bather shall be considered for every 15 square feet (1.39 m<sup>2</sup>) of pool water surface area.

**3115B.2.1 Showers.** One shower shall be provided for every 50 bathers.

**3115B.2.2 Toilets.** Separate toilet facilities shall be provided for each sex. One toilet shall be provided for every 60 women, and one toilet plus one urinal for every 75 men.

**3115B.2.3 Lavatories.** One lavatory shall be provided for every 80 bathers.

**3115B.3 Construction.**

**3115B.3.1 Floors.** Floors shall have a hard, nonabsorbent surface such as portland cement concrete, ceramic tile or other approved material, which extends upward onto the wall at least 5 inches (127 mm) with a coved base. Floors which may be walked on by a wet bather shall be slip resistant. Floors shall be sloped not less than 1/4 inch (6.4 mm) per foot to floor drains or other approved surface water disposal areas. Carpeting and other similar artificial floor covering shall not be permitted on shower and toilet room floors.

**Note:** Rough rotary, raised rubber or wood float finish of concrete usually provides a slip-resistant finish.

**3115B.3.2 Interior wall surfaces.** The materials used in the walls, except for structural elements, shall be of a type of which is not adversely affected by moisture.

**3115B.3.3 Privacy.** All doors and windows shall be arranged to prevent viewing of the interior from any portion of the building used by the opposite sex and from view from the outdoors. View screens shall be permitted for this purpose.

**3115B.4 Water supply.**

**3115B.4.1 Showers and lavatories shall be provided with hot and cold water faucets.**

**3115B.4.2 Tempered water shall be permitted in lieu of individual hot- and cold-water faucets.**

**3115B.4.3 A means to limit the hot water to 110°F (61°C) maximum shall be provided to prevent scalding. This temperature limit control shall not be adjustable by the bather.**

### SECTION 3116B DRINKING FOUNTAINS

One guarded jet drinking fountain shall be provided for the first 250 bathers and an additional fountain shall be provided for each additional 200 bathers or fraction thereof. The number of bathers shall be determined according to Section 3115B.2.

**Exception:** Drinking fountains shall not be required when drinking water is available at adjacent living quarters, or in an adjacent building such as a bathhouse, cabana, clubhouse or recreational facility.

### SECTION 3117B HOSE BIBBS

Hose bibbs shall be provided for each pool and located so that all portions of the pool deck area may be reached with a 75-foot (22 860 mm) length of hose attached to the hose bibb. Hose bibbs shall be located so that they do not constitute a safety hazard and shall be protected against backflow.

### SECTION 3118B ENCLOSURE OF POOL AREA

**3118B.1 Enclosure.** The pool shall be enclosed by one or a combination of the following: a fence, portion of a building, wall or other approved durable enclosure. Doors, openable windows or gates of living quarters or associated private premises shall not be permitted as part of the pool enclosure. The enclosure, doors and gates shall meet all of the following specifications:

1. The enclosure shall have a minimum effective perpendicular height of 5 feet (1524 mm) as measured from the outside as depicted in Figures 31B-4 and 31B-5.
2. Openings, holes or gaps in the enclosure, doors and/or gates shall not allow the passage of a 4-inch (102 mm) diameter sphere. The bottom of the enclosure shall be within 2 inches (51 mm) of the finished grade.
3. The enclosure shall be designed and constructed so that it cannot be readily climbed by small children. Horizontal and diagonal member designs, which might serve as a ladder for small children, are prohibited. Horizontal members shall be spaced at least 48 inches (1219 mm) apart. Planters or other structures shall not be permitted to encroach upon the clear span area as depicted in Figure 31B-5. Chain link may be used, provided that openings are not greater than 1 3/4 inches (44 mm) measured horizontally.

**3118B.2 Gates.** Gates and doors opening into the pool enclosure shall also meet the following specifications:

1. Gates and doors shall be equipped with self-closing and self-latching devices. The self-latching device shall be designed to keep the gate or door securely closed. Gates and doors shall open outward away from the pool except where otherwise prohibited by law. Hand-activated door- or gate-opening hardware shall be located at least 3½ feet (1067 mm) above the deck or walkway.
2. Except as otherwise provided herein, gates and doors shall be capable of being locked during times when the pool is closed. Exit doors which comply with Chapter 10 shall be considered as meeting these requirements.

*Exception:* Doors leading from areas of hotels and motels, as defined in Business and Professions Code Section 25503.16(b), which are open to the general public, e.g., restaurants, lobbies, bars, meeting rooms and retail shops, need not be self-latching.

3. The pool enclosure shall have at least one means of egress without a key for emergency purposes. Unless all gates or doors are so equipped, those gates and/or doors which will allow egress without a key shall be clearly and conspicuously labeled in letters at least 4 inches (102 mm) high "EMERGENCY EXIT."
4. The enclosure shall be designed and constructed so that all persons will be required to pass through common pool enclosure gates or doors in order to gain access to the pool area. All gates and doors exiting the pool area shall open into a public area or walkway accessible by all patrons of the pool.

**3118B.3 Retroactivity.** Sections 3118B.1 and 3118B.2 shall apply only to a public swimming pool constructed on or after July 1, 1994.

**3118B.4 Enclosure of pools constructed prior to July 1, 1994.** When the physical characteristics of a site preclude providing a 4-foot (1219 mm) deck around the perimeter of an existing pool, the enforcing agency may allow the installation of an enclosure which reduces the pool deck to less than 4 feet (1219 mm) in width.

### SECTION 3119B SIGNS

**3119B.1 Occupant load sign.** A sign with clearly legible letters not less than 4 inches (102 mm) high shall be posted in a conspicuous place near the main entrance to a pool which shall indicate the number of occupants permitted for each pool.

**3119B.1.1 Spa pool.** The occupant capacity of a spa pool shall be based on one bather for every 10 square feet (0.929 m<sup>2</sup>) of pool water surface area.

**3119B.1.2 Other pools.** The occupant capacity of all other pools shall be based on one bather for every 20 square feet (1.858 m<sup>2</sup>) of pool water surface area.

*Exception:* Occupant capacity requirements do not apply to wading pools.

**3119B.2 Signs for shallow pool.** Signs with clearly legible letters not less than 4 inches (102 mm) high shall be posted in a conspicuous place and shall state: **NO DIVING ALLOWED.**

**3119B.3 Warning sign for pool using gas chlorine.** Pools at which gas chlorine is used for disinfection shall have a conspicuously posted sign on the exterior side of the entry door to the chlorine room, or on the adjacent wall area. In addition to displaying the appropriate hazard identification symbol for gas chlorine, the sign shall state with clearly legible letters not less than 4 inches (102 mm) high the following: **DANGER: GASEOUS OXIDIZER—CHLORINE.**

**3119B.4 Warning sign for pool without pool lighting.** Where pool lighting fixtures which comply with Section 3114B are not provided, a sign with clearly legible letters not less than 4 inches (102 mm) high shall be posted in a prominent place near each entrance to the pool area. This sign shall state: **NO USE OF POOL ALLOWED AFTER DARK.**

**3119B.5 Warning sign for a spa pool.** A precaution sign with clearly legible letters shall be posted in a prominent place near the entrance to a spa pool which shall contain the following language:

#### CAUTION

1. Elderly persons, pregnant women, infants and those with health conditions requiring medical care should consult with a physician before entering a spa.
2. Unsupervised use by children under the age of 14 is prohibited.
3. Hot-water immersion while under the influence of alcohol, narcotics, drugs or medicines may lead to serious consequences and is not recommended.
4. Do not use alone.
5. Long exposure may result in nausea, dizziness or fainting.

**3119B.6 Approved signs.** Approved signs shall be maintained in a legible manner.

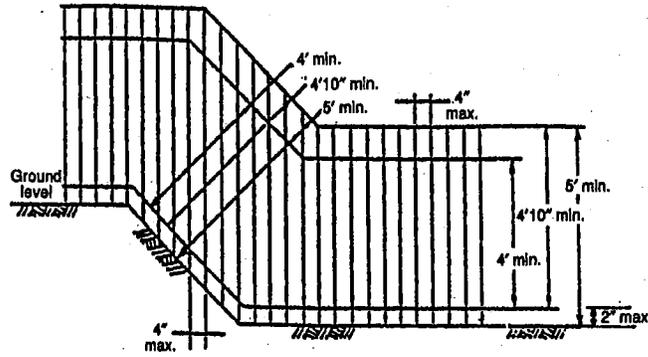


FIGURE 31B-4—PERPENDICULAR FENCING DIMENSIONS ON SLOPING GROUND

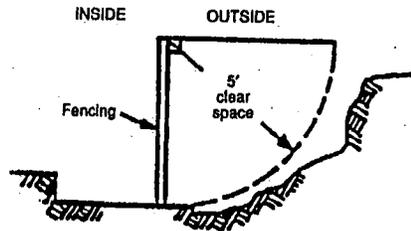


FIGURE 31B-5—EFFECTIVE FENCING HEIGHT

### SECTION 3120B INDOOR POOL VENTILATION

A pool located indoors shall be ventilated according to acceptable engineering principles.

*Note:* See Section 1202.2 for ventilation requirements for dressing and toilet rooms.

### SECTION 3121B FOUNDATIONS FOR POOL EQUIPMENT

Pool equipment shall be mounted on a portland cement concrete or other easily cleanable nonabsorbent floor material. Floors shall be sloped a minimum of  $1/4$  inch (6.4 mm) per foot to drains or other drainage disposal methods approved by the local enforcing agency.

### SECTION 3122B GAS CHLORINATION EQUIPMENT ROOM

Compressed chlorine gas storage containers and associated chlorinating equipment, when installed indoors, shall be in a separate room of not less than 1-hour fire-resistive construction and shall comply with all of the following sections.

**3122B.1 Location.** The room shall not be located in a basement or below ground.

**3122B.2 Entry.** The entry door to the room shall open to the exterior of the building or structure and shall not open directly toward the pool or pool deck.

**3122B.3 Ventilation.** A mechanically operated exhaust ventilation system shall be provided sufficient to produce 60 air changes per hour. The exhaust ventilation shall be taken at a point at or near the floor level. The system shall be vented to the outside air, and at the point of discharge shall be at least 10 feet (3048 mm) from any openable windows, an adjacent building, and above the adjoining grade level. Fresh-air intakes directly communicating with the outdoors shall be located within 6 inches (152 mm) of the ceiling.

### RECIRCULATION AND TREATMENT SYSTEM COMPONENTS

#### SECTION 3123B GENERAL REQUIREMENTS

**3123B.1 System description.** Each pool shall be provided with a separate recirculation and treatment system designed for continuous recirculation, filtration and disinfection of the pool water. The system shall consist of pumps, filters, chemical feeders, skimmers or perimeter overflow systems, and all valves, pipes, connections, fittings and appurtenances.

*Exception:* Pools using fresh water equivalent in flow to the requirements of Section 3124B.

**Notes:**

1. Fresh makeup pool water shall conform to the physical and bacteriological standards of Califor-

nia Code of Regulations, Title 22, Chapter 20, Section 65531.

2. Two spa pools shall be permitted to share one recirculation and treatment system, providing the flow and chlorination feed rate to each spa pool is individually metered and adjustable.

**3123B.2 Installation.** All recirculation and treatment system components shall be installed according to this code and in accordance with the equipment manufacturer's written instructions.

**3123B.3 Accessibility.** All filters, valves, pumps, strainers and equipment requiring adjustment shall be readily accessible for repair and replacement.

*Note:* Readily accessible means capable of being reached quickly for operation, renewal or inspections, without requiring those to whom ready access is requisite to climb over or remove obstacles or to resort to portable ladders, chairs, etc.

#### SECTION 3124B TURNOVER TIME

The recirculation and purification system shall have sufficient capacity to provide a complete turnover of pool water in:

1. One-half hour or less for a spa pool.
2. One hour or less for a wading pool.
3. Two hours or less for a temporary training pool.
4. Six hours or less for all other types of public pools.

#### SECTION 3125B RECIRCULATION PIPING SYSTEM AND COMPONENTS

**3125B.1 Line sizes.** Piping systems, including all parts and fittings other than inlet devices or venturi throats, shall be sized so that the flow velocity shall not exceed 10 feet per second (3.048 m/s) excepting that the flow velocity shall not exceed 8 feet per second (2.438 m/s) in any copper piping or in any pump suction piping.

**3125B.2 Gages for filters.** A gage shall be provided on each filter influent and effluent line. Each gage shall have a scale range approximately  $1\frac{1}{4}$  times the maximum anticipated working pressure and shall be accurate within 2 percent of scale. A vacuum gage shall be provided for suction-type filters.

**3125B.3 Flow meter.** The recirculation system shall be provided with a flow meter, accurate within 10 percent of actual flow.

**3125B.4 Strainers.** A hair-and-lint strainer shall be provided on the suction side of the recirculation pump.

*Exception:* A pump used with a vacuum filter where the filter elements are not removed for cleaning.

**3125B.5 Backwash piping.** Piping, including necessary valves conforming to Section 3125B.1, shall be provided for each filter vessel or element which is of a type of requiring periodic backwashing.

**3125B.6 Valves.** Valves shall be accessible for operation and repair and shall not be located under any required deck area surrounding a pool. Valves, or other approved means of control, shall be installed on all recirculation, backwashing and drain system lines which require shutoff isolation, adjustment or control of the rate of flow. Each valve shall be identified with appropriate markings affixed directly to or near the valve.

**SECTION 3126B  
RECIRCULATION PUMP CAPACITY**

**3126B.1 Pumps** shall have design capacity at the following heads:

1. **Pressure diatomaceous earth.** At least 60 feet (18 288 mm).
2. **Vacuum diatomaceous earth.** Twenty inches (508 mm) vacuum on the suction side and 40 feet (12 192 mm) total head.
3. **Rapid sand.** At least 45 feet (13 716 mm).
4. **High-rate sand.** At least 60 feet (18 288 mm).

**3126B.2 Pumps with other hydraulic (flow-head) characteristics** shall be permitted which comply with the flow capacity in Section 3124B.

**SECTION 3127B  
WATER SUPPLY INLETS**

**3127B.1 General.** The pool shall be supplied with water by means of a permanently installed pipeline from a public water supply system holding a permit from the Department of Health Services or from another approved source.

**Exception:** The enforcing agency may exempt spa pools, temporary pools and pools less than 1,500 gallons (5678 L) capacity from having to use permanently installed fill lines.

**3127B.2 Backflow protection.** There shall not be a direct connection between any domestic water supply system and the pool or its piping system unless protected against backflow in an approved manner.

**3127B.3 Air-gap separation for pool fill inlets.** Water supply inlets to a pool shall be installed not less than 1 inch (25 mm) or less than two pipe diameters above the overflow rim of the pool. Over-the-rim spouts shall be installed under a diving board or shall be properly guarded to prevent tripping.

**Exception:** Vacuum breakers, or other backflow prevention devices, may be used instead of air-gap separation. Such devices shall be installed on the discharge side of the last inlet valve with the critical level not less than 6 inches (152 mm) above the overflow rim of the swimming pool

**SECTION 3128B  
FILTERS (ALL TYPES)**

**3128B.1 General requirements.** All filters, regardless of type, shall be designed and constructed to withstand normal continuous use without deterioration which could affect filter opera-

tion. Each filter shall comply with all of the following provisions:

1. Maintain clean and clear pool water under anticipated operating conditions.
2. Structural or functional failures shall not permit the passage of unfiltered water.
3. Filtration surfaces shall be easily disassembled and inspected.
4. Filtration surfaces shall be easily restored to the design capacity.
5. Filter parts shall be capable of resisting electrolytic corrosion (galvanic electric currents) due to the use of dissimilar metals.

**3128B.2 Minimum pressure drop.** The maximum pressure drop of a pressure-type filter, measured from the filter housing inlet to the filter housing discharge, shall not exceed 3 pounds per square inch gage (psig) (20.68 kPa gage) when initially operating at design flow rate.

**3128B.3 Installation.** Each filter vessel and element shall be installed, piped and provided with necessary valves so that it can be isolated from the system for repairs and backwashed individually.

**3128B.4 Air release.** When the design of the filter perm its accumulation of air in the top of the housing or vessel, the filter vessel shall be equipped with an air-release valve connected at the top of the housing that will expel air which enters the filter vessel or tank.

**3128B.5 Underdrain system.** The underdrain system for sand filters shall provide uniform distribution and collection of the flow during filtering and backwashing. The underdrain system shall be constructed of corrosion-resistant material and shall be nonclogging.

**3128B.6 Freeboard.** For sand filters, not less than 10 inches (254 mm) of freeboard shall be provided between the upper surface of the filter sand and the lowest portion of the pipes or drains which serve as overflows during backwashing.

**SECTION 3129B  
RAPID SAND PRESSURE FILTERS**

**3129B.1 Flow rates.** The filtration rate shall not exceed 3 gallons per minute (gpm) per square foot (122.24 L/m per m<sup>2</sup>). The design backwash rate shall not be less than 12 gpm per square foot (488.96 L/m per m<sup>2</sup>) of filter area.

**3129B.2 Filter media.** The filter shall contain not less than 20 inches (508 mm) of depth of sand and not less than 10 inches (254 mm) of filter gravel above the underdrain system.

**3129B.2.1** The filter sand shall have an effective particle size of 0.3 to 0.5 mm and a uniformity coefficient of not more than 1.75.

**3129B.2.2** The filter gravel shall be graded and placed to provide uniform flow distribution from the underdrain system and to support the bed of filter sand without loss of sand to the pool or without development of jet streams or channeling in the filtration media.

**3129B.3 Coagulant addition.** Facilities with dosage-control features shall be provided for adding coagulating chemicals ahead of the filter when required by the enforcing agency.

### SECTION 3130B DIATOMACEOUS EARTH FILTERS

**3130B.1 Flow rates.** The filtration rate for both pressure and vacuum-type diatomaceous earth filters shall not exceed 2 gpm per square foot (81.49 L/m per m<sup>2</sup>) excepting that filters designed for continuous feeding of filter aid shall not exceed 2 ½ gpm per square foot (101.87 L/m per m<sup>2</sup>).

*Note:* See also Section 3128B for other requirements.

**3130B.2 Precoatng.** Provisions shall be made for precoating with diatomaceous earth filter aid. Continuous feeding of filter aid shall be required in a pool with a water surface area 2,000 square feet (186 m<sup>2</sup>) or more, and the continuous feeding equipment shall be capable of feeding not less than 0.1 pound (0.045 kg) per 24 hours per square foot (0.093 m<sup>2</sup>) of filter area.

### SECTION 3131B HIGH-RATE SAND FILTERS

**3131B.1 Permissible use.** Sand filters operating at filtration rates higher than the maximum rate specified in Section 3129B shall be permitted by the enforcing agency under the conditions as set forth in Section 3105B.

**3131B.2 Design and operating requirements.** A sand filter permitted under Sections 3105B.1, 3105B.2 and 3105B.3 shall comply with the following requirements instead of the requirements contained in Section 3129B.

1. The filter shall contain not less than 12 inches (305 mm) of depth of filter sand.
2. The filter sand shall not have an effective particle size greater than 0.45 mm and a uniformity coefficient not greater than 1.50.
3. The design backwash rate shall not be less than 15 gpm per square foot (611.21 L/m per m<sup>2</sup>) of filter area.
4. The filter bed shall not show any signs of migration or vary more than 1 inch (25 mm) on the surface after 15 minutes of backwashing, followed by 15 minutes of filtration.

*Note:* See Section 3128B for other requirements.

### SECTION 3132B CHEMICAL FEEDERS

All chemical feeders, including disinfectant feeders, and the auxiliary components shall comply with all of the provisions of this section.

*Note:* Chemical feeders include those used for solutions, slurries or solids and also include auxiliary parts such as pumps, strainers, tubing connections, tanks, injection fittings and other required components.

**3132B.1 General design requirements.** Chemical feeder equipment shall comply with all of the following:

1. Equipment shall be capable of being easily disassembled for cleaning and repair.
2. Equipment shall be constructed of corrosion-resistant materials.
3. Equipment shall be constructed to permit repeated adjustments without loss of output rate accuracy if equipped with an adjustable output rate device.
4. Equipment shall be constructed to minimize a stoppage from chemicals intended to be used therein or from foreign materials that may be contained in said chemicals.

**3132B.2 Piping.** Piping used for the chemical feeder and its auxiliary equipment shall be resistant to the chemical and erosion action of the chemicals intended to be used therein and shall be installed to permit cleaning or otherwise to prevent clogging of the parts with chemicals.

**3132B.3 Installation.** The feeder and its auxiliary equipment shall be constructed and installed to prevent uncontrolled discharge or siphonage of chemicals and fumes directly into the pool, its recirculating system or the pool area.

### SECTION 3133B DISINFECTANT FEEDERS

Disinfectant feeders shall comply with the provisions contained in this section in addition to the provisions contained in Section 3132B.

**3133B.1 Minimum capacity.** The disinfectant feeder shall be capable of supplying not less than the equivalent of 3 pounds (1 kg) of chlorine per day (PPD) per 10,000 gallons (37 850 L) of pool water capacity.

*Exception:* A feeder of lesser capacity shall be permitted when it can be demonstrated to the enforcing agency that the lesser capacity feeder can comply with the disinfection requirements of Section 65529, Title 22, Chapter 20, California Code of Regulations.

**3133B.2 Rate of flow adjustment.** Each feeder shall have a graduated and clearly marked rate of flow adjustment feature capable of providing disinfectant flows from 25 percent to 100 percent of rated capacity. The graduated markings shall be accurate within 10 percent of the flow rate at any setting.

**3133B.3 Compressed chlorine gas disinfection equipment.** Compressed chlorine gas disinfectant equipment shall comply with the provisions contained in this section in addition to the provisions contained in Sections 3133B.1 and 3133B.2.

*Note:* See Section 3122B for special construction requirements of a room containing compressed chlorine gas disinfectant equipment.

**3133B.3.1 Chlorine containers.** Each chlorine gas container or cylinder shall be firmly secured to prevent accidental movement. A precaution cap shall be provided in place at all times when the cylinder is not connected to the chlorinator.

**3133B.3.2 Container scale.** A means of weighing chlorine containers shall be provided in the gas chlorinator room.

**3133B.3.3 Chlorine feeding device.** In addition to the requirements contained in Section 3133B.1, the chlorine feeding device shall be capable of delivering chlorine in aqueous solution at maximum design rate. The device shall not allow the backflow of water into the chlorine solution container. The device shall not allow the release of chlorine gas to the atmosphere under normal operating conditions. The devices shall be designed and installed to conduct chlorine gas leaks to the outdoors during an accident or an interruption of the water supply.

**3133B.3.4 Piping.** Piping carrying chlorine gas under pressure shall not be located outside the chlorination equipment room.

### SECTION 3134B POOL FITTINGS

The pool shall be equipped with one or more skimming methods which, when combined, shall be capable of continually withdrawing not less than 75 percent of the required circulation capacity, to provide continuous skimming of the water surface and to provide an overflow drainage system.

**3134B.1 Surface skimmers.** Each surface skimmer shall comply with all of the following provisions:

1. The skimmer shall be of the built-in type, recessed into the pool wall.
2. Each skimmer shall be individually adjustable for the rate of flow with either an external or internal device.
3. The skimmer weir shall automatically adjust to variations in the pool water level over a range of not less than 4 inches (102 mm).
4. The skimmer shall be provided with an air-lock protective device which shall not permit leakage of air into the recirculation suction piping system. This device shall not leak more than 3 gpm (11.356 L/m) of water during normal operations.
5. Each skimmer shall be provided with a removable and cleanable screen or basket to trap large solids.
6. There shall not be less than one skimmer for each 500 square feet (46.45 m<sup>2</sup>) of pool water surface area, or fractional part thereof.
7. The skimmer shall be constructed with suitable materials and methods to withstand anticipated use conditions.
8. Each skimmer shall be located in relation to pool inlets to aid recirculation and skimming.

**Exception:** Skimmers shall not be used as the required overflow devices on a pool with a water surface area over 5,000 square feet (464.52 m<sup>2</sup>).

**3134B.2 Perimeter overflow systems.** A perimeter overflow system shall comply with all of the following provisions:

1. **Location.** The overflow system shall be built into the walls and extend completely around the pool except where steps require interruption.

2. **Channel detail.** The overflow channel shall not be less than 3 inches (76 mm) deep, the section shall not diverge with depth and the width of the bottom shall not be less than 3 inches (76 mm). The opening beneath the coping into the overflow system shall be a minimum of 4 inches (102 mm) beneath of the coping in any direction measured radially from the inner edge of the overflow channel lip.
3. **Channel lip.** The overflow channel lip shall not be more than 12 inches (305 mm) below the level of the deck. The lip edge shall be rounded and shall not be thicker than 2 1/2 inches (64 mm) or thinner than 1 inch (25 mm) from the top 2 inches (51 mm).
4. **Channel covering.** Covered overflow channels shall be permitted, providing bathers cannot enter it or get their arms or legs caught in the cover.
5. **Channel outlets.** Overflow channel outlets shall not be less than 2 1/2 inches (64 mm) in diameter spaced not more than 15 feet (4572 mm) apart and the channel bottom slope to the drain shall not be less than 1/4 inch (6.4 mm) per foot.

**Exception:** Other drain spacing or channel bottom slope shall be permitted if hydraulically designed in accordance with acceptable engineering principles.

6. **Channel outlet covers.** Overflow channel outlets shall be provided with a clear opening area in the grating not less than 1.5 times the cross-sectional area of the outlet required in Section 3134B.
7. **Overflow drain piping.** Overflow drain piping shall provide drainage of the overflow system, shall carry overflow water to a surge storage chamber and shall establish hydraulic equilibrium in the pool and return to skimming within 10 minutes after being flooded by a sudden large use of the pool by bathers.
8. **Surge storage capacity.** A perimeter overflow system shall be provided with a minimum surge storage of not less than 1 gallon per square foot (40.75 L/m<sup>2</sup>) of pool water surface area. Surge storage shall be permitted in the perimeter overflow channel, the overflow water drain piping returning to the surge chamber and in the surge chamber.
9. **Surge flow control.** Automatic makeup (fresh) water-flow controls with a manual override provision shall be provided to maintain the proper operating pool water level.

**3134B.3 Outlets.** Each pool shall be provided with a bottom drain and outlets through which circulation shall take place and by which the pool can be emptied. The bottom drain and recirculation outlets shall be covered with grates or other protective devices which shall be removable only with tools. Slots or openings in grates or covers shall not exceed 1/2 inch (12.7 mm) in the smaller dimension and shall be of such area, shape and arrangement to prevent physical entrapment or a suction hazard to bathers.

**Exception:** Recirculation outlets for a spa pool shall be either a safety type which cannot be completely covered by any part of the body, or shall be installed in duplicate so as to prevent a suction hazard to bathers.

**3134B.4 Hydrostatic devices.** In areas of anticipated high groundwater table, an approved hydrostatic relief device shall be installed.

**3134B.5 Inlet Fittings.** Each pool shall be provided with not less than two recirculation inlets for the first 10,000-gallon (37 850 L) capacity and one additional inlet for each additional 10,000-gallon (37 850 L) capacity, or fractional part thereof.

**Exception:** A spa pool shall be provided with not less than one inlet.

**3134B.5.1 Construction.** Inlet fittings shall not protrude greater than 1/4 inches (32 mm) into the pool and shall be shaped, rounded and smooth.

**3134B.5.2 Inlet fittings** shall be located greater than 18 inches (457 mm) below the waterline, except for the spa pool or wading pool. One floor inlet shall be provided for each 10,000 gallons (37 850 L) of pool capacity for a pool which exceeds 40 feet (12 192 mm) in width. Inlet fittings shall be separated by at least 10 feet (3048 mm) and shall be located to ensure uniform circulation.

**3134B.5.3 Adjustment.** Provisions shall be made for adjusting the volume of flow through each inlet. Wall inlets shall be capable of adjusting the direction of flow and to produce sufficient velocity to impart a substantial circulatory movement to the pool water.

#### SECTION 3135B

##### SPA POOL SPECIAL REQUIREMENTS

**3135B.1 Aeration system.** A spa pool aeration and/or jet system shall be completely separate from its filtration system and shall not be interconnected with any nonspa pool.

**3135B.2 Maximum operating temperature.** The maximum allowable water temperature shall be 104°F (57.8°C) for a spa pool.

#### SECTION 3136B

##### CLEANING SYSTEMS

A built-in or portable-type vacuum cleaning system shall be provided which is capable of removing sediment from all parts of the pool floor. When jet-type units are used, they shall be provided with approved-type backflow protection for the water system.

#### SECTION 3137B

##### WASTE WATER DISPOSAL

**3137B.1 General requirements.** Material cleaned from filters, waste water from temporary training pool showers and backwash water from any pool system shall be disposed of in a manner which will not create a (public) nuisance.

**3137B.1.1 Sand filters.** In accordance with applicable local regulations, the backwash water from a sand filter shall be disposed of to a storm drain or sewer system, dry

well, or, when approved, such water may be disposed of by surface or subsurface irrigation.

**3137B.1.2 Diatomaceous earth filters.** The backwash waste water from a diatomaceous earth filter shall discharge into a receiving chamber installed to collect the waste diatomaceous earth mixture, or, when approved, such waste shall be permitted to be disposed of by other means such as to a sanitary sewer.

**3137B.1.3 Piping.** Sumps and drain piping shall have sufficient capacity to receive pool system backwash without overflow of the sump receiver.

**3137B.1.4 Visual indicator.** A sight glass shall be installed on the waste water discharge line from a filter.

**Exception:** The sight glass shall not be required when an air-gap connection from the filter vessel to a sewer or other drainage system is clearly visible to the operator during actual backwash operation.

**3137B.2 Prohibited connection.** No direct connection of the pool or its recirculation system shall be permitted with a sanitary sewer, storm drain or drainage system. When permitted by local regulations, discharge to a sanitary sewer shall be through an air-gap-type separation.

SECTION 3138B  
Reserved

SECTION 3139B  
Reserved

SECTION 3140B  
Reserved

SECTION 3141B  
Reserved

SECTION 3142B  
Reserved

SECTION 3143B  
Reserved

SECTION 3144B  
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SECTION 3145B  
Reserved

**SECTION 3146B**  
Reserved

**SECTION 3147B**  
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**SECTION 3148B**  
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**SECTION 3149B**  
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**SECTION 3150B**  
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**SECTION 3151B**  
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**SECTION 3152B**  
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**SECTION 3153B**  
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**SECTION 3154B**  
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**SECTION 3155B**  
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**SECTION 3156B**  
Reserved

**SECTION 3157B**  
Reserved

**SECTION 3158B**  
Reserved

**SECTION 3159B**  
Reserved

**Division II—PUBLIC SWIMMING POOLS**

*Note: These building standards are in statute but have not been adopted through the regulatory process. Enforcement of these standards set forth in this section does not depend upon adoption of regulations; therefore, enforcement agencies shall enforce the standards pursuant to the timeline set forth in this section prior to adoption of related regulations.*

**SECTION 3160B**

1. "Public swimming pool," as used in this section, means any 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, including any swimming pool located on the grounds of a hotel, motel, inn, an apartment complex or any residential setting other than a single-family home. For purposes of this section, "public swimming pool" shall not include a swimming pool located on the grounds of a private single-family home, or a swimming pool owned or operated by the state or any local governmental entity as set forth in Section 116049 of the Health and Safety Code.
2. All dry-niche light fixtures, and all underwater wet-niche light fixtures operating at more than 15 volts in public swimming pools, as defined in this section, shall be protected by a ground fault circuit interrupter in the branch circuit, and all light fixtures in public swimming pools shall have encapsulated terminals.
3. Any public swimming pool that does not meet the requirements specified in Item 2 by January 1, 1998, shall be retrofitted to comply with these requirements by July 1, 1998.
4. The ground-fault circuit interrupter required pursuant to this section shall comply with Underwriter's Laboratory standards.
5. The owner or operator of a public swimming pool shall have its public swimming pool inspected by a qualified inspector on or before September 1, 1998, to determine compliance with this section.
6. All electrical work required for compliance with this section shall be performed by an electrician licensed pursuant to Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code.

**SECTION 3161B**

1. "Public wading pool" means a pool that meets all of the following criteria:
  - 1.1. It has a maximum water depth not exceeding 18 inches (457 mm).

- 1.2. It is a pool other than a pool that is located on the premises of a one-unit or two-unit residence, intended solely for the use of the residents or guests.
2. "Public wading pool" includes, but is not limited to, a pool owned or operated by private persons or agencies, or by state or local governmental agencies.
3. "Public wading pool" includes, but is not limited to, a pool located in an apartment house, hotel or similar setting that is intended for the use of residents or guests.
4. "Alteration" means any of the following:
- 4.1. To change, modify or rearrange the structural parts or the design.
  - 4.2. To enlarge.
  - 4.3. To move the location of.
  - 4.4. To install a new water circulation system.
  - 4.5. To make any repairs costing fifty dollars (\$50) or more to an existing circulation system.
5. A public wading pool shall have at least two circulation drains per pump that are hydraulically balanced and symmetrically plumbed through one or more T fittings, and are separated by a distance of at least 3 feet (914 mm) in any dimension between drains.
6. All public wading pool main drain suction outlets that are under 12 inches (305 mm) across shall be covered with antivortex grates or similar protective devices. All main drain suction outlets shall be covered with grates or antivortex plates that cannot be removed except with the use of tools. Slots or openings in the grates or similar protective devices shall be of a shape, area and arrangement that would prevent physical entrapment and would not pose any suction hazard to bathers.
7. The maximum velocity in the pump suction hydraulic system shall not exceed 6 feet per second (1.8 m/s) when 100 percent of the pump's flow comes from the main drain system and any main drain suction fitting in the system is completely blocked.
8. On and after January 1, 1998, all newly constructed public wading pools shall be constructed in compliance with this section.
9. Commencing January 1, 1998, whenever a construction permit is issued for alteration of an existing public wading pool, it shall be retrofitted so as to be in compliance with this section.
10. By January 1, 2000, every public wading pool, regardless of the date of original construction, shall be retrofitted to comply with this section.

[SB 873, Statutes of 1997, C.913]

### SECTION 3162B ANTI-ENTRAPMENT DEVICES AND SYSTEMS

1. The legislature finds and declares that the public health interest requires that there be uniform statewide health and safety standards for public swimming pools to prevent physical entrapment and serious injury to children

and adults. It is the intent of the legislature to occupy the whole field of health and safety standards for public swimming pools and the requirements established in this article and the regulations adopted pursuant to this article shall be exclusive to all local health and safety standards related to public swimming pools.

2. As used in this section, the following words have the following meanings:
- a. "ASME/ANSI performance standard" means a standard that is accredited by the American National Standards Institute and published by the American Society of Mechanical Engineers.
  - b. ASTM performance standard means a standard that is developed and published by ASTM International.
  - c. Main drain means a submerged suction outlet typically located at the bottom of a swimming pool that conducts water to a recirculating pump.
  - d. Public swimming pool means an outdoor or indoor structure, whether in-ground or above-ground, intended for swimming of recreational bathing, including a swimming pool, hot tub, spa, or nonportable wading pool, that is any of the following:
    - i. Open to the public generally, whether for a fee or free of charge.
    - ii. Open exclusively to members of an organization and their guests, residents of a multiunit apartment building, apartment complex, residential real estate development, or other multifamily residential area, or patrons of a hotel or other public accommodations facility.
    - iii. Located on the premises of an athletic club, or public or private school.
  - e. Qualified individual means a contractor who holds a current valid license issued by the State of California or a professional engineer licensed in the State of California who has experience working on public swimming pools.
  - f. Safety vacuum release system means a vacuum release system that ceases operation of the pump, reverses the circulation flow, or otherwise provides a vacuum release at a suction outlet when a blockage is detected.
  - g. Skimmer equalizer line means a suction outlet located below the water line and connected to the body of a skimmer that prevents air from being drawn into the pump if the water level drops below the skimmer weir. However, a skimmer equalizer line is not a main drain.
  - h. Unblockable drain means a drain of any size and shape that a human body cannot sufficiently block to create a suction entrapment hazard.

3. Subject to Subdivision (4), an ASME/ANSI or ASTM performance standard relating to anti-entrapment devices or systems or an amendment or successor to, or later published edition of an ASME/ANSI or ASTM performance standard relating to anti-entrapment devices or systems shall become the applicable standard in California 90 days after publication by ASME/ANSI or ASTM, respectively, provided that the performance standard or amendment or successor to, or later published edition is approved by the department within 90 days of the publication of the performance standard by ASME/ANSI or ASTM, respectively. Notwithstanding any other law, the department may implement, interpret or make specific the provisions of this section by means of a policy letter or similar instruction and this action by the department shall not be subject to the rulemaking requirements of the Administrative Procedures Act (Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code).
4. Subject to Subdivision (7), every public swimming pool shall be equipped with anti-entrapment devices or systems that comply with ASME/ANSI performance standard A112.19.8, as in effect December 31, 2009, or any applicable ASME/ANSI performance standard that has been adopted by the department pursuant to Subdivision (3).
5. Subject to Subdivisions (6) and (7), every public swimming pool with a single main drain that is not an unblockable drain shall be equipped with at least one or more of the following devices or systems that are designed to prevent physical entrapment by pool drain:
- A safety vacuum release system that has been tested by a department-approved independent third party and found to conform to ASME/ANSI performance standard A112.19.17, as in effect on December 31, 2009, or any applicable ASME/ANSI performance standard that has been approved by the department pursuant to Subdivision (3) or ASTM performance standard F2387, as in effect on December 31, 2009, or any applicable ASTM performance standard that has been approved by the department pursuant to Subdivision (3).
  - A suction-limiting vent system with a tamper-resistant atmospheric opening, provided that it conforms to any applicable ASME/ANSI or ASTM performance standard that has been approved by the department pursuant to Subdivision (3).
  - A gravity drainage system that utilizes a collector tank, provided that it conforms to any applicable ASME/ANSI or ASTM performance standard that has been adopted by the department pursuant to Subdivision (3).
  - An automatic pump shut-off system tested by a department-approved independent third party and found to conform to any applicable ASME/ANSI or ASTM performance standard that has been adopted by the department pursuant to Subdivision (3).
6. Every public swimming pool constructed on or after January 1, 2010, shall have at least two main drains per pump that are hydraulically balanced and symmetrically plumbed through one or more "T" fittings, and are separated by a distance of at least three feet in any dimension between the drains. A public swimming pool constructed on or after January 1, 2010, that meets the requirements of this subdivision, shall be exempt from the requirements of Subdivision (5).
7. A public swimming pool constructed prior to January 1, 2010, shall be retrofitted to comply with Subdivisions (4) and (5) by no later than July 1, 2010, except that no further retrofitting is required for a public swimming pool that completed a retrofit between December 19, 2007, and January 1, 2010, that complied with the Virginia Graeme Baker Pool and Spa Safety Act (15 U.S.C. Sec. 8001 et seq.) as in effect on the date of issue of the construction permit, or for a nonportable wading pool that completed a retrofit prior to January 1, 2010, that complied with state law on the date of issue of the construction permit. A public swimming pool owner who meets the exception described in this subdivision shall do one of the following prior to September 30, 2010:
- File the form issued by the department pursuant to Subdivision (8), as otherwise provided in Subdivision (9).
  - File a signed statement attesting that the required work has been completed.
  - Provide a document providing the name and license number of the qualified individual who completed the required work.
  - Provide either a copy of the final building permit, if required by the local agency, or a copy of one of the following documents if no permit was required:
    - A document that describes the modification in a manner that provides sufficient information to document the work that has been done to comply with federal law.
    - A copy of the final paid invoice. The amount paid for the services may be omitted or redacted from the final invoice prior to submission.
8. Prior to March 31, 2010, the department shall issue a form for use by the owner of a public swimming pool to

indicate compliance with this section. The department shall consult with county health officers and directors of departments of environmental health in developing the form and shall post the form on the department's internet website. The form shall be completed by the owner of a public swimming pool prior to filling the form with the appropriate city, county, or city and county department of environmental health. The form shall include, but not be limited to, the following information:

- a. A statement of whether the pool operates with a single or split main drain.
  - b. Identification of the type of anti-entrapment devices or systems that have been installed pursuant to Subdivision (4) and the date or dates of installation.
  - c. Identification of the type of devices or systems designed to prevent physical entrapment that have been installed pursuant to Subdivision (5) in a public swimming pool with a single main drain that is not an unblockable drain and the date or dates of the installation of the reason why the requirement is not applicable.
  - d. A signature and license number of a qualified individual who certifies that the factual information provided on the form in response to paragraphs (a) to (c), inclusive, is true to the best of his or her knowledge.
9. A qualified individual who improperly certifies information pursuant to Paragraph (d) of Subdivision (8) shall be subject to potential disciplinary action at the discretion of the licensing authority.
  10. Except as provided in Subdivision (7), each public swimming pool owner shall file a completed copy of the form issued by the department pursuant to this section with the city, county, or city and county department of environmental health in the city, county, or city and county in which the swimming pool is located. The form shall be filed within 30 days following the completion of the swimming pool construction or installation required pursuant to this section or, if the construction or installation is completed prior to the date that the department issues the form pursuant to this section, within 30 days of the date that the department issues the form. The public swimming pool owner or operator shall not make a false statement, representation, certification, record, report, or otherwise falsify information that he or she is required to file or maintain pursuant to this section.
  11. In enforcing this section, health officers and directors of city, county, or city and county departments of environmental health shall consider documentation filed on or with the form issued pursuant to this section by the owner of a public swimming pool as evidence of compliance with this section. A city, county, or city and county department of environmental health may verify the accuracy of the information filed on or with the form.
12. To the extent that the requirements for public wading pools imposed by Section 116064 conflict with this section, the requirements of this section shall prevail.
    - a. Until January 1, 2014, the department may assess an annual fee on the owners of each public swimming pool, to be collected by the applicable local health department, in an amount not to exceed the amount necessary to defray the department's costs of carrying out its duties under Section 116064.1 and this, but in no case shall this fee exceed six dollars (\$6).
    - b. The local health department may retain a portion of the fee collected pursuant to Paragraph (a) in an amount necessary to cover the administrative costs of collecting the fee, but in no case to exceed one dollar (\$1).
    - c. The local health department shall bill the owner of each public swimming pool in its jurisdiction for the amount of the state fee. The local health department shall transmit the collected state fee to the controller for deposit into the Recreational Health Fund, which is hereby created in the State Treasury. The local health department shall not be required to take action to collect an unpaid state fee, but shall submit to the department, every six months, a list containing the name and address of the owner of each public swimming pool who has failed to pay the state fee for more than 90 days after the date that the bill was provided to the owner of the public swimming pool.
    - d. Owners that are exempt from local swimming pool permit fees shall also be exempt from the fees imposed pursuant to this subdivision.
    - e. Except as provided in Paragraph (b), all moneys collected by the department pursuant to this section be deposited into the Recreational Health Fund. Notwithstanding Section 16305.7 of the Government Code, interest and dividends on moneys in the Recreational Health Fund shall also be deposited in the fund. Moneys in the fund shall, upon appropriation by the legislature, be available to the department for carrying out its duties under Section 116064.1 and this section and shall not be redirected for any other purpose.

