



Environmental Health ❖ 625 5<sup>th</sup> Street, Santa Rosa, CA 95404 ❖ 707-565-6565 ❖ [EH@sonoma-county.org](mailto:EH@sonoma-county.org)  
<https://sonomacounty.ca.gov/Health/Environmental-Health-and-Safety/>

## NEW POOL / SPA FACILITY CONSTRUCTION CHECKLIST

**PLAN SUBMITTAL**—a person proposing to construct a public pool shall submit plans shall submit legible plans and specifications to County of Sonoma, Environmental Health before any worked is completed. A local building department shall not issue a permit for a public pool or ancillary facility until the plans have been approved by Environmental Health.

*A valid California State Contractors License (C-53 Pool Contractor, or A Engineering) is required to construct public pools. A licensed architect or engineer may submit plans; however, the pool contractor must be identified prior to commencement of construction.*

✓	<b>GENERAL INFORMATION</b> —provide the following information on plans:
	Job site name, address, city, and zip
	C-53 Contractor's license number on plan.
<b>1.</b>	<b>SPA POOL SPECIAL REQUIREMENTS (3138B)</b>
	Maximum surface area 250 square feet; maximum depth 4 feet.
	Aeration and/or jet system completely separate from recirculation system and not connected with any other pool.
	Maximum water temperature 104°F.
	Emergency shut off switch for control of the recirculation system and aeration and/or jet system installed adjacent to spa pool; switch clearly labeled.
<b>2.</b>	<b>WADING POOLS (3161B)</b>
	Maximum depth 18 inches.
	Each pump connected to at least two suction outlets, hydraulically balanced and symmetrically plumbed; suction outlets at least 3 feet apart in any dimension.
	Suction outlets equipped with fittings that meet the ANSI/APSP-16 2011 standard.
	Flow velocity not to exceed 6 feet per second on suction piping.
<b>3.</b>	<b>POOL CONSTRUCTION (3108B)</b>
	Built of reinforced concrete or material equivalent in strength.
	Smooth, waterproof and durable interior finish.
	Except for SPAS, the finish color shall be white.
	SPA pools permitted to be finished in a pastel color other than white.
	Top surface edges of benches in SPA pools to be contrasting color.
	Top surface edges of steps (all pools) to be contrasting color.
	Pool free from projections or recessed areas.
<b>4.</b>	<b>POOL GEOMETRY (3109B)</b>
	Geometry of pool conforms to one of the appropriate criteria in figures 31B-1 through 31B-7. EXCEPTION: Special purpose pool may be exempted from construction standards that are not applicable to the proposed use.
	Pools 4½ feet deep or less have a uniform slope ≤ 1 foot of vertical in 10 feet of horizontal. Pools > 4½ feet deep, the slope shall meet the requirements in Figures 31B-1 through 31B-3.
	Water depth at base of stairs shall be uniform.
<b>5.</b>	<b>PERMANENT MARKINGS (3110B)</b>

	No markings, design or lettering on pool except lane markings, safety markings and depth marking lines.
	Width of slip-resistant lane line markings not to exceed 12 inches in width.
	A slip-resistant line of contrasting color 4-6 inches wide across bottom of pool required at 4½ feet depth. EXCEPTION: Pools with depth not exceeding 5 feet are exempt from requirement.
	Depth markers required at (a) maximum depth, (b) minimum depth, (c) each end, (d) both sides at each end, (e) break in slope, and (f) on perimeter at increments not exceeding 25 feet. EXCEPTION: SPA and wading pools shall have at least 2 depth markers indicating maximum depth. Located to be accurate within 6 inches as measured at the waterline.
	No diving markers with the universal symbol of no diving (red circle with slash superimposed over the image of a diver) required on the deck next to depth markers at pools ≤6 feet deep.
	Position of markers in accordance with 3110B.4.2.
	Depth markers shall have numerals a minimum of 4 inches in height and of color contrasting with the background and be marked in units of feet and inches. FT and IN may be used. Depth and no diving markers must be durable and slip resistant when located on the deck.
<b>6.</b>	<b>STEPS, RECESSED STEPS, LADDERS AND STAIRS (3111B)</b>
	If depth in shallow end exceeds 1 foot, means of entry and exit provided.
	If depth in deep portion is greater than 4½ feet a second means of entry and exit provided.
	If pool width exceeds 30 feet, means of entry and exit required on both sides at increments not exceeding 100 feet.
	Ladders – Corrosion resistant, slip resistant tread and clearance to pool wall must be not less than 3 inches or more than 5 inches.
	Stairs provided in shallowest portion of pool. Tread and risers in conformance with 31B-7.
	Recessed steps and step risers – minimum tread 5 inches; minimum width 14 inches; step risers uniform and do not exceed 12 inches in height. Handrails required on each side and must extend over deck edge.
	At least one hand rail extends from deck to a point above top of lowest step in accordance with Figure 31B-7. Upper surface of safety rail located at least 28 inches and not more than 36 inches above deck. EXCEPTION: See next.
	SPA: Treads in conformance with 31B-7. Risers not to exceed 12 inches in height. Two hand rails provided extending from the deck to not less than a point above the top of the lowest step in accordance with Figure 31B-7. Steps located where deck is at least 4 feet wide.
<b>7.</b>	<b>HANDHOLDS (3112B)</b>
	Located not more than 9 inches above water level, around entire pool perimeter.
	If perimeter overflow systems not provided, bull-nosed coping or cantilevered decking that is not over 2½ inches thick and extends more than 1 inch and less than 2 inches past vertical pool edge. EXCEPTION (1): Other types of handholds permitted at SPAS. EXCEPTION (2): See next.
	For special purpose pools used for instruction or competitive swimming, a handhold at water level similar to rim of perimeter overflow is required.
<b>8.</b>	<b>DIVING BOARDS AND PLATFORMS (3113B)</b>
	Anchored to deck of corrosion resistant, durable, slip resistant and easily cleanable materials.
	Ladder, stairs, handrails and guardrails for diving boards and platforms in conformance with 3113B.2
	Dimensions and clearances conform to Figures 31B-1 and 31B.
<b>9.</b>	<b>POOL DECKS (3114B)</b>
	Minimum four foot wide deck of concrete or like material to surround pool. The deck extends another 4 feet on sides and rear of diving board, fixed disabled access assistance device, slide or their appurtenances. EXCEPTION: Deck required only on continuous 50% of SPA pool perimeter. SPA deck to be at least 4 feet wide from all directions from steps.
	Six foot deck width provided between adjacent pools and/or SPAS.

	Deck slope no less than 1% (1/8 inch per foot) but no more than 2% (1/4 inch per foot) away from pool to deck drainage system. Constructed and finished to prevent standing water.
	SPA: Landscape planters, flower beds, rocks, or similar unpaved areas shall not be located within 4 feet of SPA.
<b>10.</b>	<b>POOL LIGHTING (3115B and 116049.1)</b>
	Pools open after dark shall have adequate underwater and deck lighting. See Part 3, Article 3-680, Title 24, California Code of Regulations for electrical installation requirements.
<b>11.</b>	<b>BATHHOUSE, DRESSING, SHOWER and TOILET FACILITIES (3116B)</b>
	One bather/15 square feet of pool surface area. Divide factor by 2 to determine sex distribution.
	One shower/50 bathers. EXCEPTION: Showers and dressing facilities not required if available in adjacent living quarters.
	Separate toilet facilities shall be provided for each sex. One toilet/60 women or less; one toilet and urinal/75 men or less; one lavatory/80 bathers. EXCEPTION: Restrooms not required if they are available within 300 feet of pool at living quarters or adjacent building.
	Floors sloped not less than 1/4 inch per foot to drains or other approved surface water disposal.
	Shower and lavatory temperature control provided to limit temperature to 110°F.
	Hot and cold water to showers and lavatories, supply may be tempered.
	Hard, nonabsorbent, slip resistant flooring used in bathrooms, showers, and route to bathrooms and showers. Flooring must extend up the wall 5 inches with coved base.
<b>12.</b>	<b>DRINKING FOUNTAINS (3117B)</b>
	Guarded jet drinking fountains required unless water is available at adjacent living quarters or adjacent building. Number of fountains based upon one bather/15 square feet and computed at 1 fountain/250 bathers plus an additional fountain for each additional 200 bathers.
<b>13.</b>	<b>HOSE BIBBS (3118B)</b>
	Provided at each pool and pool equipment area; protected against backflow (see 3118B); located within 75 feet of all deck areas.
<b>14.</b>	<b>POOL ENCLOSURE (3119B, Figures 31B-4 and 31B-5)</b>
	Provided at each pool and spa pool, enclosed by 5 feet minimum height fence, building, or enclosure. NOTE: Doors, operable windows, or gates of living quarters or associated private premises shall not be permitted as part of the pool enclosure.
	Openings, holes or gaps in the enclosure, doors and/or gates shall not allow the passage of a 4-inch diameter sphere. The bottom of the enclosure shall be constructed over a hard and permanent material equivalent to concrete within 4 inches of the finished grade.
	Horizontal members shall be spaced at least 48 inches apart. Horizontal and diagonal member designs, which might serve as a ladder for small children, are prohibited.
	Chain link openings are not greater than 1 3/4 inches measured horizontally.
	No planters or other structures that can be climbed are located within 5 feet of the enclosure or within 5-foot arc as shown in 31B-5.
	Gates and doors shall be equipped with self-closing and self-latching devices located at least 42 inches and not more than 44 inches above the deck or walkway.
	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.
	Gates and doors shall open outward away from the pool except where otherwise prohibited by law. At least one means of egress without key provided for emergency purpose.

<b>15.</b>	<b>REQUIRED SIGNS (3120B, 3119B.2, 65539) and Safety Equipment (65539)</b>
	Pool user capacity – bather/20 square feet of water surface area except SPA, 1 bather/10 square feet. EXCEPTION: Wading pools and spray grounds exempt
	“No Diving” for pools less than six feet deep.
	“No Lifeguard on Duty” (where no lifeguard service is provided).
	Artificial Respiration and CPR Procedures with lettering at least ¼ inch.
	Emergency Phone Number with ‘911’, number of nearest emergency services and name and street address of the pool facility.
	SPA use warning.
	“Emergency Shut-Off Switch” for spa with letters 1 inch.
	“No Use of Pool Allowed After Dark” posted at each entrance (pools without lights).
	“Keep Closed”, posted on exterior of gates and doors leading into the pool enclosure.
	“Diarrhea” warning with letters 1 inch posted at each entrance.
	Wave pool requirements and spray ground, if applicable (see 3120B.12 and 3120B.13)
	Gaseous Oxidizer (see 3120B.14 – 3120B.16)
	Direction of water flow for the recirculation equipment shall be clearly labeled and identified. Equipment clearly labeled with which pool it serves. Valves identified and labeled with directional flow.
	Rescue pole with body hook.
	Life ring with rope.
	At least one means to get out of enclosure without key, “Emergency Exit” sign posted on gate that is unlocked if key is required to get out of other gates.
<b>16.</b>	<b>INDOOR VENTILATION (3121B)</b>
	Indoor pools shall be adequately ventilated according to requirements in Chapter 4 of the California Mechanical Code.
<b>17.</b>	<b>POOL EQUIPMENT ENCLOSURE (3122B)</b>
	Equipment to be mounted on concrete pad and sloped at least ¼ inch per foot to drain, all equipment located to limit access to those persons authorized by owner or operator.
<b>18.</b>	<b>TURNOVER TIME (3124B)</b>
	SPA pool – one-half hour or less.
	Spray ground – one-half hour or less.
	Wading pool – one hour or less.
	Medical pool – two hours or less.
	All other types of public pools – six hours or less.
<b>19.</b>	<b>RECIRCULATION SYSTEM AND COMPONENTS (3123B, 3125B)</b>
	Separate recirculation system provided for each pool.
	All pumps, filters, chemical feeders, skimmers and supplemental equipment shall be listed as complying with the NSF/ANSI 50-2010 performance standard.
	Equipment shall be readily accessible for repair and replacement.
	Flow velocity not to exceed 6 feet per second on suction piping and 8 feet per second on return piping.
	Pressure and vacuum gauge provided for each pump system.
	Approved flow meter accurate within 10% located in accordance with manufacturers specs.
	Backwash piping and valves provided if required.
	Valves located in the equipment area, valves shall not be located in pool decks.
<b>20.</b>	<b>RECIRCULATION PUMP CAPACITY (3126B)</b>

	<p>Recirculation pumps shall have the following total dynamic head capacities:  Pressure D.E. – 60 feet head.  Vacuum D.E. – 40 feet total dynamic head and 20 inches vacuum on the suction side.  Rapid sand – 45 feet head.  High rate sand – 60 feet head.  Cartridge – 60 feet head.</p>
<b>21.</b>	<b>WATER SUPPLY (3127B)</b>
	Permanently installed line.
	If no air gap on incoming water supply, backflow prevention installed according to California Plumbing Code, Chapter 6.
	Auto-fill with manual override required to maintain proper pool level.
<b>22.</b>	<b>FILTERS (3128B THROUGH 3132B)</b>
	Designed and constructed in accordance with NSF/ANSI 50-2012.
	Valves installed to isolate filter for maintenance.
	Rapid sand – maximum 3 GPM per square foot; backwash minimum 15 GPM per square foot with media requirements installed according to 3129B.
	D.E. – maximum 2 GPM per square foot.
	High rate sand – maximum and minimum flow rates for filtration and backwash according to NSF/ANST 50-2010 with media installed according to 3131B.
	Cartridge – 0.375 GPM per square foot, wash down area provided in the pool equipment area with plumbing discharging to an approved wastewater system, extra set of filter elements available onsite to use when filter is being cleaned.
<b>23.</b>	<b>CHEMICAL AND DISINFECTANT FEEDERS (3133B and 3134B)</b>
	NSF/ANSI 50-2012.
	All feeders shall be capable of supplying not less than the equivalent of 3 pounds of 100 percent available chlorine per day per 10,000 gallons of pool water capacity.
	Automatic chemical monitoring and control system that regulates pH and disinfectant.
	Visible means of determining the rate of flow through the feeder.
	Compressed gas chlorine containers in use shall be on a scale in the gas chlorinator room (see 3135B for additional requirements).
<b>24.</b>	<b>GAS CHLORINE ROOM (3135B)</b>
	Room not located in any habitable building, above the first floor or below ground level.
	Entry door shall open to the exterior of the building and shall not open directly toward the pool or pool deck.
	Mechanical exhaust ventilation provided in accordance with the California Mechanical Code. Switch for mechanical ventilation located adjacent to the entry door outside the room.
	Audible and visual chlorine detection alarm system located in the room with additional requirements specified in 3135B.4.
	Provide artificial lighting of at least 50 foot candles as measured 30 inches above the floor. Switch for artificial lighting located adjacent to the entry door outside the room
	The gas chlorine feeding system must be interlocked with the pools recirculation pump so that the chlorine feed does not operate when the pump is off or during filter backwash.
	The room shall not be used for the storage of items not related to the use of the gas chlorine equipment.
<b>25.</b>	<b>POOL SKIMMING SYSTEMS – SURFACE SKIMMERS (3136B.1)</b>
	Provide continuous skimming capable of withdrawing minimal 100% required flow rate. Located to aid recirculation and surface skimming.

	One skimmer for each 500 square feet or less of pool water surface area or an adequate number to meet 100 percent of pump flow at the manufacturer's maximum flow rating, whichever is greater.
	NSF/ANSI Standard 50-2012 approved.
	Built-in type and recessed into pool wall.
	Individually adjustable for the rate of flow.
	Adjust automatically to variations in water level, minimum 4 inches range.
	If used, equalizer line located on pool wall split with suction grates meeting ANSI/APSP-16 2011 and separated by at least 3 feet in any dimension. Screen or basket removable via opening in deck.
<b>26.</b>	<b>PERIMETER OVERFLOW (3136B.2) (Required for pools w/ surface area ≥ 5000 Sq.Ft.)</b>
	Designed by an engineer or architect with experience working on public pools.
	Capable of withdrawing minimum of 100% required flow rate.
	Integrated with pool structure and extend around entire pool except at entry/exit.
	Channel minimum 3 inches deep; bottom width of channel minimum 3 inches; opening beneath deck into channel minimum 4 inches.
	Channel lip maximum 12 inches below top of deck; rounded lip edge shall not be thicker than 2 ½ inches nor thinner than 1 inch from the top 2 inches.
	If channels are covered, openings cannot exceed ½ inch in the smaller dimension.
	Channel outlet spacing and slope shall be hydraulically designed by an engineer or architect with experience working on public pools.
	Channel outlet covers accessible for cleaning; openings shall not pass a ½ inch sphere in the smaller dimension
	Channel drain piping carries overflow water to surge basin and return to skimming within 10 minutes after being flooded by pool users.
	Perimeter overflow system has minimum 1 gallon per square foot of pool surface for surge storage capacity; okay to include volume in channel drain, channel drain piping and surge basin as storage capacity.
	Automatic water level control for make-up water with manual override for maintaining pool water level at the overflow rim.
<b>27.</b>	<b>POOL FITTINGS (3137B, 3161B, 3162)</b>
	Each pump shall be connected to at least two suction outlets, hydraulically balanced and symmetrically plumbed; suction outlets at least 3 feet apart in any dimension
	Suction outlets equipped with fittings that meet the ANSI/APSP-16 2011 standard.
	Velocity of suction piping between the outlets 3 feet per second or less.
	If required by local plumbing codes a hydrostatic relief device shall be installed. If safety vacuum release system specified, the hydrostatic relief device must be installed per SVRS manufacturer requirements.
	Adequate number of return inlets provided - 2 returns for the first 10,000 gallons and one additional for each additional 10,000 gallons or less capacity.
	Pools ≥ 40 feet wide or 3,000 sf of surface area floor mounted returns located to provide uniform circulation, adjustable for flow and installed flush with finish floor.
	Inlet fittings do not protrude greater than 1¼ inches into the pool and are shaped, rounded and smooth; located at least 18 inches below water level; and adjustable for both flow and direction. EXCEPTION: Spa or wading pool inlet fittings separated by at least 10 feet and located to ensure uniform circulation.
<b>28.</b>	<b>SOLAR HEATING INSTALLATIONS (3139B)</b>
	Each pump connected to at least two suction outlets, hydraulically balanced and symmetrically plumbed; suction outlets at least 3 feet apart in any dimension Suction outlets located no closer than 5 feet to any pool inlet fittings.
	Suction outlets equipped with fittings that meet the ANSI/APSP-16 2011 standard.
	Velocity of suction piping conforms to 3125B.1.

<b>29.</b>	<b>CLEANING SYSTEMS (3140B)</b>
	Vacuum cleaning system capable of cleaning all parts of the pool floor.
	If uses potable water, approved backflow protection device provided.
	No built-in vacuum suction lines allowed.
<b>30.</b>	<b>WASTEWATER DISPOSAL (3141B)</b>
	DE Filters – separation tank, backwash may not be returned to the pool.
	Sand Filters – public sewer with approval from the sanitation district or appropriate agency.
	Approved cartridge filter cleaning area, with approval from the sanitation district or appropriate agency.
	Sumps and drain piping have sufficient capacity to receive backwash without overflowing.
	Sight glass installed on the wastewater discharge line when direct observation is not possible.
	No direct connection between the pool, its recirculation system, its overflow drain to any sewer, storm drain or drainage system.
<b>31.</b>	<b>GROUND FAULT CIRCUIT INTERRUPTERS (3160B)</b>
	Dry-niche and wet-niche light fixtures operating at more than 15 volts have GFCI protection complying with UL standards.