



Environmental Management Department
Recreational Health Plan Review Application
 New Construction / Major Remodel

OFFICE USE ONLY

PE:	_____	\$:	_____
Account #:	_____		
Date Paid:	_____		
Receipt #:	_____		
County BID #:	_____		

Submit this form with one complete set of plans to the Sacramento County Environmental Management Department (EMD) located at 11080 White Rock Rd, Ste 200, Rancho Cordova, CA. 95670. For electronic plan submittals, contact EMD Plan Review at (916) 874-6010 or email us at emd-ehplanreview@sacounty.gov to receive additional submittal instructions. All plans must be drawn to scale (min 1/4" per foot) and printed on at least 24" x 36" paper when applicable. **Note: EMD plan review application and approval will expire one year after the date submitted.**

SR: _____	FA: _____	PR: _____	CT: _____	PE: _____
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Facility information: Facility Name: _____ Ph #: _____

Address: _____ City: _____ Zip: _____

Owner / Plan Contact: Name: _____ Ph #: _____

Address: _____ City: _____ Zip: _____

Email: _____ Fax #: _____

Pool Contractor: Name: _____ Lic #: _____ Type (C36, C53, C61, D35): _____

Email: _____ Ph #: _____

- PE 1720 – New Construction – Spray Ground** **\$ 2075.00**
 (Splash pad with interactive water features) (Includes initial review, 3 resubmittals, 2 inspections)
- PE 1735 – New Construction – Pool or Spa** **\$ 2410.00**
 (Pool or spa with standard wall skimmers and returns) (Includes initial review, 3 resubmittals, 3 inspections)
- PE 1736 – New Construction – Pool or Spa (PO/FR)** **\$ 3372.00**
 (Pool or spa with perimeter overflow or floor returns) (Includes initial review, 3 resubmittals, 3 inspections)
- PE 1737 – New Construction – Pool or Spa (WFWS)** **\$ 3478.00**
 (Pool with interactive water features or waterslides) (Includes initial review, 3 resubmittals, 3 inspections)
- PE 1724 – Major Remodel (Resizing or replacing shell, replacing underground plumbing, adding new ancillary facilities)** **\$ 1583.00**
 (Includes initial review, 3 resubmittals, 2 inspections)

EQUIPMENT INFORMATION (OFFICE USE ONLY)

DESIGN:	Surface Area (ft ²): _____	Capacity: _____	Total Gallons: _____	Turnover Rate (gpm): _____
FILTER:	Make: _____	Model #: _____	Quantity: _____	
	Filter Medium: _____	Filter Area (ft ²): _____	Max Flow Rate (gpm): _____	
RECIRC PUMP:	Make: _____	Model #: _____	Quantity: _____	
	H.P.: _____	Flow Rate @ 60TDH (gpm): _____	Pressure (psi): _____	Vacuum (mmHg): _____
	Suction Pipe Size (in): _____	Return Pipe Size (in): _____	T Pipe Size (in): _____	
JET / FEATURE PUMP:	Make: _____	Model #: _____	Quantity: _____	
	H.P.: _____	Flow Rate @ 40TDH (gpm): _____	Pressure (psi): _____	Vacuum (mmHg): _____
	Suction Pipe Size (in): _____	Return Pipe Size (in): _____	T Pipe Size (in): _____	
FLOW METER:	Make: _____	Model #: _____	Size (in): _____	
CHEMICAL CONTROLLER:	Make: _____	Model #: _____		
CHEMICAL FEEDER:	Type: _____	Make: _____	Model #: _____	
SUCTION COVERS:	Main Drain:	Make: _____	Model #: _____	Max GPM: _____
	Jet / Feature:	Make: _____	Model #: _____	Max GPM: _____
	Equalizer:	Make: _____	Model #: _____	Max GPM: _____

Plan Approved By: _____ Date: _____

ITEMS ON THE FOLLOWING CHECK LIST ARE BASED UPON SECTIONS CONTAINED WITHIN CALIFORNIA HEALTH AND SAFETY CODE, CALIFORNIA CODE OF REGULATIONS, AND CALIFORNIA BUILDING AND ELECTRICAL CODE.

A. SPECIAL POOL CLASSIFICATIONS

- 1. SPA: Maximum surface area 250 ft²; maximum depth 4 feet (3138B.3 & 3138B.4).
- 2. Medical use pool (3102B).
- 3. Wading Pool: Maximum depth 18 inches (3102B).
- 4. Spray Ground: Minimum 4000 gal or 3x flowrate all pumps combined, whichever is higher (3106B.10).

B. POOL CONSTRUCTION (3108B)

- 1. Except for SPAS, the finish color shall be white.
- 2. SPA pools permitted to be finished in a light color other than white.
- 3. SPA bench and step edges shall be of a contrasting color. POOL step edges shall be of a contrasting color.
- 4. POOL free from projections or recessed areas.
- 5. Water depth over SPA bench does not exceed 24 inches (Figure 31B-6).

C. GEOMETRY (3109B.1)

- 1. Geometry of pool conforms to one of the appropriate diagrams at figures 31B-1 through 31B-6. EXCEPTION: Special purpose pool may be exempted from construction standards that are not applicable to the proposed use.
- 2. Uniform water depth along entire base of stairs.

D. PERMANENT MARKINGS (3110B)

- 1. Width of slip-resistant lane line markings not to exceed 12 inches.
- 2. Four to six inch wide slip-resistant line across bottom of pool required at 4 ½ feet depth. EXCEPTION: Pools with depth not exceeding 5 feet are exempt from requirement.
- 3. No markings, designs or lettering shall be permitted on pool shell except for slip resistant lane marking, depth marking lines and safety markings.
- 4. Depth markers required at (a) maximum depth, (b) minimum depth, (c) each end, (d) both sides at the shallowest and deepest part of the pool, (e) break in slope, (f) on perimeter at increments not exceeding 25 feet. EXCEPTION: SPA and wading pools shall have at least two depth markers on water-line tile and coping or deck.
- 5. Depth markers required on pool wall and edge of deck.
- 6. Depth markers on deck shall be slip resistant.
- 7. Depth markers shall have numerals a minimum of 4 inches in height of contrasting color with the background and be marked in units of "FT" or "IN."
- 8. Pools less than or equal to 6 feet in depth must have a "No Diving" marker symbol adjacent to each depth marker located on the deck.

E. STEPS AND LADDERS (3111B)

- 1. If the vertical distance from the bottom of the pool to the deck exceeds 1 foot in the shallow portion, steps or ladders are required.
- 2. If depth in deep portion exceeds 4 ½ feet, a second means of entry & exit is required at the deep end.
- 3. If pool width exceeds 30 feet, ladders are required on both sides at increments not exceeding 100 feet.
- 4. Ladders - clearance to pool wall must be not less than 3 inches or more than 5 inches.

- Minimum tread 5 inches, minimum width 14 inches. First step measured from the deck.
- _____ 5. Recessed steps – minimum tread 5 inches, minimum width 14 inches, handrails required on each side and must extend over deck edge. First step measured from deck.
 - _____ 6. Maximum risers 12 inches. Risers and treads shall be uniform. Top step 14"-18". If top steps curve convexly, top step tread to be 21"-24", measured at widest point. All other steps 12"-16" (Figure 31B-7).
 - _____ 7. Safety rail extends from deck to a point above top of lowest step. Upper surface of safety rail located at 28-36 inches above deck and each step.
 - _____ 8. SPA: Two safety rails required on all SPAs. Spa step shall be located where the deck is at least 4 feet wide.

F. HANDHOLDS (3112B)

- _____ 1. Located not more than 9 inches above water level, around entire pool perimeter.
EXCEPTION: Handholds not required at wading pools.
- _____ 2. Bull-nosed coping or cantilevered decking overhang shall not exceed 2 inches or be less than 1 inch and shall not exceed 2 ½ inches in thickness. EXCEPTION (1): Handholds not required for wading pools. EXCEPTION (2): Other types of handholds permitted at SPAs. EXCEPTION (3): See #3.
- _____ 3. For special use pools used for instruction or competitive swimming, perimeter overflow lip required.

G. DECKS (3114B)

- _____ 1. 4 feet minimum deck to surround pool and both sides and rear of diving board, fixed disabled access assistance device or slide and their appurtenances. EXCEPTION: Deck required only on 50% of SPA pool perimeter. SPA deck shall be at least 4 feet wide at steps. (3111B.6)
- _____ 2. 6 feet clearance required between SPA and adjacent pool.
- _____ 3. Deck sloping at least ¼ inch per foot away from pool to planter, deco drain, or other appropriate drainage (1/8 in./ft minimum; ¼ in./ft maximum).
- _____ 4. Coping shall be slip resistant.
- _____ 5. SPA: Landscape planters, flower beds, or similar unpaved areas shall not be located within 4 feet of spa.

H. SHOWERS, DRESSING FACILITIES, AND TOILETS (3116B)

- _____ 1. One bather/15 square feet of pool surface. Divide factor by 2 to determine sex distribution.
- _____ 2. One shower/50 bathers. EXCEPTION: Showers and dressing facilities not required if available in adjacent living quarters, within 300 feet of pool.
- _____ 3. One toilet/60 women; one toilet and urinal/75 men; one lavatory/80 bathers. EXCEPTION: Restrooms not required if they are available within 300 feet of pool at living quarters or adjacent building.
- _____ 4. Floors shall have hard, non-absorbent; 5" cove base required.
- _____ 5. Floors sloped not less than ¼ inch per foot to drains or other approved surface disposals.
- _____ 6. Shower and lavatory temperature control which limits temperature to 110° F.
- _____ 7. Hot and cold water to showers and lavatories.

I. DRINKING FOUNTAINS (3117B)

- _____ 1. Guarded angle 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.

J. HOSE BIBBS (3118B)

- _____ 1. Provided at each pool and protected against backflow, within 75 feet of all deck areas.
- _____ 2. Hose bibb shall be provided in equipment area.

K. FENCING AND GATES (3119B, Figures 31B-4 and 31B-5)

- _____ 1. Provided at each pool and spa pool, enclosed by 5 feet minimum height fence, building, or enclosure, as measured from the outside. NOTE: Doors, openable windows, or gates of living quarters or associated private premises shall not be permitted as part of the pool enclosure.
- _____ 2. Openings, holes or gaps in the enclosure, doors and/or gates shall not allow the passage of a 4 inch diameter sphere. The enclosure shall be constructed over a hard permanent material equivalent to concrete.
- _____ 3. 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.
- _____ 4. Chain link openings are not greater than 1 $\frac{3}{4}$ inches measured horizontally.
- _____ 5. Gates and doors shall be equipped with self-closing and self-latching devices located between 42 to 44 inches above the deck or walkway. EXCEPTION: Doors leading from areas of hotels and motels, as defined in the 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.
- _____ 6. 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.
- _____ 7. Gates and doors shall open outward away from the pool except where otherwise prohibited by law.
- _____ 8. Gates and doors capable of being locked when pool is closed.
- _____ 9. Pool enclosure shall have at least one means of egress without a key with sign in 4" letters stating "EMERGENCY EXIT".

L. SIGNS (3120B) and Safety Equipment (65529 & 65539)

- _____ 1. Occupant Load – bather/20 square feet of water surface area except SPA, 1 bather/10 square feet. Minimum 4" letters. EXCEPTION: Wading pools and spray grounds.
- _____ 2. "NO DIVING ALLOWED" sign for pools 6 feet deep or less. Minimum 4" letters.
- _____ 3. Gaseous Oxidizer warning sign. Minimum 4" letters. "DANGER: GASEOUS OXIDIZER-(SPECIFIC CHEMICAL NAME)."
- _____ 4. Gas Chlorination Equipment Room Switch sign, "TURN ON BEFORE ENTERING" at light & ventilation switch. Minimum 4" letters.
- _____ 5. SPA warning sign. Minimum 1" letters.
- _____ 6. Artificial respiration procedures and cardiopulmonary resuscitation sign. Minimum $\frac{1}{4}$ " letters.
- _____ 7. "NO LIFE GUARD ON DUTY" sign. Minimum 4" letters. The sign shall also state "Children under the age of 14 shall not use pool without a parent or adult guardian in attendance" in minimum 1" letters.
- _____ 8. Emergency phone number sign. Minimum 4" letters.
- _____ 9. Emergency Shut-Off Switch sign for spa. Minimum 1" letters.

- _____ 10. "NO USE OF POOL ALLOWED AFTER DARK" (pools without lights). Minimum 4" letters.
- _____ 11. Diarrhea sign which states that persons having currently active diarrhea or who have had active diarrhea within the previous 14 days shall not be allowed to enter pool water. Posted at entrance area of pool w/ minimum 1 inch letters.
- _____ 12. SPRAY GROUND: Visibly posted "CAUTION: WATER IS RECIRCULATED. DO NOT DRINK."
- _____ 13. "KEEP GATE/DOOR CLOSED" sign shall be posted on the exterior side of gates and doors leading into the pool enclosure area. Minimum 4" letters.
- _____ 14. Rescue pole with body hook.
- _____ 15. Life ring with rope.
- _____ 16. DPD chemical water test kit.

M. INDOOR VENTILATION (3121B)

- _____ 1. Indoor pools, dressing rooms and toilet rooms shall be adequately ventilated.

N. FOUNDATIONS FOR POOL EQUIPMENT (3122B)

- _____ 1. Equipment to be mounted on concrete pad and sloped at least ¼ inch per foot to drain or other approved surface disposal.
- _____ 2. Equipment installed so that access is limited to authorized persons.

O. GAS CHLORINE ROOM (3135B)

- _____ 1. Room not located below ground level or above first floor.
- _____ 2. Entry door shall open to the exterior of the building and shall not open directly toward the pool or pool deck.
- _____ 3. Mechanical exhaust ventilation systems shall be in compliance with CA mechanical Code.
- _____ 4. Audible alarm capable of producing a sound level of at least 90 decibels and a visible alarm consisting of a strobe light mounted directly over the entrance to chlorine room.
- _____ 5. Artificial illumination of at least 50 footcandles shall be provided in the room.
- _____ 6. Switches for the control of mechanical ventilation and lighting shall be located adjacent to the entry door outside the room.
- _____ 7. The gas chlorine feeding device shall be interlocked with pool recirculating pump.
- _____ 8. The gas chlorine storage room shall not be used for the storage of items not related to use of gas chlorine equipment.

P. RECIRCULATION SYSTEM, GENERAL REQUIREMENTS (3123B)

- _____ 1. Each pool shall be provided with a separate recirculation system.
- _____ 2. All equipment shall comply with NSF/ANSI 50 standards.

Q. TURNOVER TIME (3124B)

- _____ 1. SPA Pool – ½ hour or less.
- _____ 2. Wading Pool – 1 hour or less.
- _____ 3. Medical Pool – 2 hours or less.
- _____ 4. Public Swimming Pool – 6 hours or less.
- _____ 5. Spray ground – ½ hour or less.

R. RECIRCULATION (3125B)

- _____ 1. Flow velocity not to exceed 8 feet per second on return system and 6 feet per second on suction piping.
*Note: Check manufacturer's recommendation for maximum GPM suction flow thru skimmer.
- _____ 2. Pressure and vacuum gauge for each pump system. The pressure gauge located on the filter shall be marked with the clean start up pressure reading. (3125B.2)
- _____ 3. Approved flowmeter accurate within 10% (3125B.3).
- _____ 4. Valve identification with directional flow (3125B.6).
- _____ 5. No valves located in any deck area surrounding pool (3125B.6).
- _____ 6. Valves shall be installed on all recirculation backwashing and drain system lines which require shutoff isolation, adjustment, or control of the rate of flow. (3125B.6).

S. PUMP CAPACITIES – DESIGN FLOW (3126B)

- _____ 1. Pressure D.E. – 60 foot head.
- _____ 2. Vacuum D.E. – 40 foot head and 20 inches vacuum on the suction side.
- _____ 3. Rapid sand – 45 foot head.
- _____ 4. High rate sand – 60 foot head.
- _____ 5. Cartridge – 60 foot head.

T. WATER SUPPLY (3127B)

- _____ 1. Permanently installed potable water supply line for both pools and spas.
- _____ 2. No direct connection between any potable water supply and pool or its piping systems.
Air gap, vacuum breaker, or double check valve attached to permanently installed line.
- _____ 3. Automatic make-up water shall be provided to maintain proper pool water level.

U. FILTER REQUIREMENT (3128B THROUGH 3132B)

- _____ 1. Rapid sand – maximum 3 GPM per square foot; backwash minimum 15 GPM per square foot.
- _____ 2. D.E. – maximum 2 GPM per square foot of filter area.
- _____ 3. High rate sand – backwash minimum 15 GPM per square foot.
- _____ 4. Cartridge – 0.375 GPM per square foot, or less as per manufacturer – must be NSF approved.
- _____ 5. Extra set required for facilities that don't have a pool service provider.

V. DISINFECTANT FEEDER (3133B & 3134B)

- _____ 1. Approved type.
- _____ 2. If gas chlorine, scale required (3134B.3.2).
- _____ 3. Chemical controller required (3133B.1.2).

W. SKIMMERS (3136B) (Pool area not over 5000 square feet)

- _____ 1. One skimmer for each 500 ft², or fraction thereof, or enough to meet 100% pump flow.
- _____ 2. Capable of withdrawing not less than 100% required recirculating capacity.
- _____ 3. Built-in type and recessed into pool wall.
- _____ 4. Adjust automatically to variations in water level, minimum range of 4 inches.
- _____ 5. Screen trap (Basket).

- _____ 6. Equalizers, if present, split at least 3 feet apart.
- _____ 7. Located to aid recirculation & surface skimming.

X. PERIMETER OVERFLOW (3136B.2) (Required for pools 5000 square feet or greater.)

- _____ 1. Channel outlet spacing and channel bottom slope shall be hydraulically designed by an engineer or architect who has experience working on public pools.
- _____ 2. Capable of withdrawing minimum of 100% required recirculating capacity (3136B).
- _____ 3. Channel minimum 3 inches deep; bottom width of channel minimum 3 inches; opening beneath deck into channel minimum 4 inches.
- _____ 4. 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.
- _____ 5. Channel outlet spacing & slope designed by engineer or experienced architect as defined by Title 24.
- _____ 6. Surge tank storage capacity minimum 1 gallon per square foot of pool surface. Surge storage shall be permitted in the surge basin, perimeter overflow channel, and in the channel drain piping returning to the surge basin.
- _____ 7. Automatic surge flow control to make-up water with manual override for maintaining pool water level.
- _____ 8. Openings in channel outlet covers less than ½ inch.

Y. OUTLET FITTINGS (3137B.1)

- _____ 1. Each pool shall be provided with a main drain submerged suction outlet typically located at the bottom of a pool that conducts water to a recirculating pump.
- _____ 2. At least two suction outlets hydraulically balanced and at least 3 feet apart in in any dimension.
- _____ 3. Fittings meet ASME/ANSI standards.
- _____ 4. Velocity of suction piping between suction outlets shall not exceed 3 fps
- _____ 5. Hydrostatic relief device in areas with high ground water

Z. INLETS (3137B.2 & 3137B.2.4)

- _____ 1. Minimum of 2 inlets for the first 10,000 gallons and one inlet for each additional 10,000 gallons or fraction thereof.
- _____ 2. Located not less than 18 inches below waterline. EXCEPTION: SPA and wading pools exempt.
- _____ 3. Pools greater than 40 feet in width or 3000 ft² surface area need floor inlets.
- _____ 4. Separated by at least 10 feet and shall be located to ensure uniform circulation.
- _____ 5. Wall inlets must be adjustable for both flow and direction and protrude no more than 1 ¼ inches. Floor inlets shall be adjustable for flow and flush with floor.

AA. AERATION/JET SYSTEM (SPA ONLY) (3138B)

- _____ 1. Shall be separate from filtration system and not interconnected with any other pool.

BB. CLEANING SYSTEMS (3140B)

- _____ 1. Built-in.
- _____ 2. Portable.
- _____ 3. Jet type (Must have approved Backflow Protection Device).

CC. WASTE DISPOSAL (3141B, 3132B)

- _____ 1. Pressure D.E. – separation tank. Waste water from separation tank must discharge to sanitary sewer.
- _____ 2. Sand Filters – sump & pipes capable of receiving backwash without overflow.

- _____ 3. Sight glass installed on the waste water discharge line. EXCEPTION: Not required if visible air gap connection to sewer is provided.
- _____ 4. Approved cartridge filter wash down in pool equipment area. Permanently plumbed to sanitary sewer capable of receiving drainage from filter vessel.

DD. ELECTRICAL (Article #680) AND LIGHTING (3160B)

- _____ 1. SPA emergency shut-off switch. Single switch must shut off both filtration and booster pumps and shall be adjacent to the spa. (3138B.5)
- _____ 2. Electrical equipment shall be bonded and grounded in accordance with CEC 680.
- _____ 3. Underwater/Deck Lighting (Pool open at night) (3115B).
- _____ 4. GFCI required for underwater lights.

EE. SOLAR (3139B)

- _____ 1. Suction outlets shall comply with section 3137B.
- _____ 2. Suction outlets shall be located no closer than 5 feet from any pool inlet fitting.
- _____ 3. Solar system shall not interfere with required turnover rate.

FF. SVRS (3162.5)

- _____ 1. Pools with single drains must have SVRS, suction limiting vent system, gravity drainage system, automatic pump shut off, or any other system that is deemed, in accordance with federal law, to be equally effective at preventing or eliminating the risk of injury or death associated with the circulation system of the pool suction outlets.

GG. SPRAY GROUND (3106B)

- _____ 1. No standing water in the splash zone (3106B.4).
- _____ 2. No safety hazards (3106B.1).
- _____ 3. Minimum 4 ft. wide deck area around splash zone (3106B.2).
- _____ 4. Nozzles that spray from the ground shall be flush with the ground, & openings no more than ½" (3106B.5).
- _____ 5. Water features that extend above the ground must be clearly visible (3106B.5).
- _____ 6. Splash zone shall be sloped so that only water from the spray ground flows to surge pit (3106B.6).
- _____ 7. Foggers & misters that produce finely atomized mists shall be supplied directly from potable water source (3106B.7).
- _____ 8. Recirculation pump(s) & water feature pump(s) shall be interconnected so that when the recirculation pump is off, the feature pump is also off (3106B.8).
- _____ 9. Surge basin must be constructed of inert, corrosion resistant, nontoxic, watertight materials (3106B.9).
- _____ 10. Total volume of surge basin shall be at least 4,000 gallons or a minimum of 3 times the gallons per minute flow rate of all the feature pumps & recirculation pump combined, whichever is higher (3106B.10).
- _____ 11. Intake in the surge basin for the feature pump(s) shall be located adjacent to the recirculation return line (3106B.12).
- _____ 12. When separate pumps are used, the suction intake for the recirculation pump shall be located in the lowest portion of the surge basin on the opposite side from the suction intake for the spray ground pump (3106B.13).
- _____ 13. Surge basin shall be designed for easy access with at least one ladder and one 3' x 3' opening. Lids shall be locked or require a tool to open (3106B.14).
- _____ 14. Automatic make-up water fill device required. Must have air gap or other approved backflow protection (3106B.15).
- _____ 15. Ultraviolet light disinfection required in addition to required disinfection (3106B.16).

- _____ 16. Calibrated UV light meter shall be installed in the wall of the disinfection chamber at the point of greatest water depth from the light source (3106B.17).
- _____ 17. UV light unit shall be located on the recirculation system to provide treated water directly to spray features (3106B.18).
- _____ 18. UV disinfection system must be equipped with an automatic shutdown system that inactivates the water feature pump if the UV dosage rate drops below 40 mJ/cm² (3106B.19).
- _____ 19. A means of diverting storm water runoff from surge basin required when spray ground is not in operation (3106B.21).
- _____ 20. A removable and cleanable catch screen or basket shall be installed on the spray ground drainage system before it enters the surge basin (3106B.22).