



ENVIRONMENTAL HEALTH DIVISION
2120 Diamond Blvd., Suite 200
Concord, CA 94520
Phone: (925) 692-2500
Fax: (925) 692-2502
www.cchealth.org/eh/

PUBLIC SWIMMING POOL AND SPA OPERATING REQUIREMENTS

INTRODUCTION

To protect the public from preventable illness or injury, Contra Costa Environmental Health Division (EHD) regulates the construction and operation of approximately 1600 public pools and spas in the county. These include pools and spas operated by health clubs, hotels, apartments and condominium complexes, mobile home parks, homeowner associations, public & private schools, municipalities, water parks, spray parks, swim schools, and swim clubs.

Routine inspections are conducted to verify that the facility is operating in compliance with a variety of applicable codes, including the [California Health & Safety Code](#) and the [California Code of Regulations](#). Violations and the required corrections are listed on an inspection report provided to the operator.

Every pool and spa facility must be under the supervision of a person who is fully capable of, and shall assume responsibility for, compliance with all requirements relating to pool maintenance, operation and safety to bathers.

OPERATING REQUIREMENTS

The following is a list of items that will be checked during an inspection of a swimming pool or spa facility:

1. Water Chemistry

- Free chlorine residual must be maintained at or above 1.0 ppm (not to exceed 10 ppm). If stabilizers (cyanuric acid) are used, chlorine residual must be maintained at or above 1.5 ppm.
- pH must be kept at 7.2-8.0.
- Chlorine stabilizer (if used) must be kept below 100 ppm.
- A chemical test kit capable of measuring free chlorine residuals (DPD type), the pH and stabilizer levels are required.

Recommended Chemical Levels in Swimming Pools and Spas			
	Minimum	Ideal	Maximum
Free chlorine residual	2.0	2.0 - 3.0	10.0
Free chlorine residual with stabilizer	2.5	2.5 - 3.5	10.0
Combined chlorine	0	0	0.5
Bromine	4.5	4.5 - 6.5	11.0
pH	7.2	7.4 - 7.6	7.8
Cyanuric acid	25	30 - 50	100
Total alkalinity	80	100 - 150	180
Calcium Hardness	150	200 - 300	500
Copper	0	0	0.3
Iron	0	0	0.2
Total dissolved solids:			
Swimming pools	300	-	2,000 over start
Spa pools	300	-	1,500 over start

2. Restrooms and Shower Facilities (required at some sites)

- Restrooms and showers must have hot (max. 110°F) and cold water.
- Each shower must have a soap dispenser.
- Toilets must have filled toilet paper dispensers.
- Handsinks must have single-service, permanently installed soap and paper towel dispensers. An air dryer may be used in lieu of a paper towel dispenser.
- A drinking fountain is required if water is not available in an adjacent building (such as a bath house, cabana, club house or recreational facility.)
- Floors, walls, ceilings, partitions, doors, lockers and similar surfaces and equipment shall be kept in a safe of good repair.

3. Backflow Prevention

- Threaded faucets and submerged water supply inlets must be protected with approved backflow prevention devices.

4. Safety Equipment

The following safety equipment must be provided:

- Life ring (minimum 17 inch exterior diameter) with attached 3/16 inch rope long enough to span the maximum width of the pool.
- Mounted rescue pole with securely attached body hook (at least 12 foot long pole).

- Spa emergency shut off switch immediately adjacent to the spa. This switch is to be clearly labeled and readily accessible.
- Approved steps and/or ladders must be provided and maintained in good repair. Handrails must be an approved type allowing a consistent handhold height as the bather enters the pool or spa.
- First Aid kit when required by enforcing agent.

5. Signs

The following signs (minimum 4 inch high letters unless noted otherwise) are required to be clearly posted:

- **“Occupant Capacity”** of pool and spa (e.g. Pool – 1 bather per 20 ft²; Spa 1 bather per 10 ft².)
- **“No Diving Allowed”** - Required if the pool water depth is less than 6 feet.
- **“No Use of Pool Allowed After Dark”** - Required if the pool lacks lighting.
- **“No Lifeguard on Duty”** – Required if lifeguard service is not provided. The sign shall also state, **“Children under the age of 14 shall not use pool without a parent or adult guardian in attendance”** (if applicable to type of pool use).
- **“Keep Closed”** (posted on the exterior side of the gates and doors).
- **“Diarrhea”** with language directing persons who’ve had diarrhea within the last 14 days, not to use the pool (at the facility entrance – minimum 1 inch high lettering)
- Spa **Caution** sign (see California Code of Regulations section 3119B.5).
- Spa **Shut-off Switch** label (minimum 1 inch high lettering).
- Artificial respiration poster (minimum ¼ inch high lettering).
- Emergency telephone numbers indicating – 911, the number of the nearest emergency services, the name and street address of the pool facility.
- Unless all gates are a keyless exit type, the keyless exit gate(s) are to be marked with a sign that states **“Emergency Exit”**.

6. Pool Enclosure

- Pool enclosure must have at least one keyless exit.
- Gates must be self-closing and self-latching.
- The gate opening hardware must be at least 42 inches above the deck or walkway.
- Enclosure must preclude climbing.
- The opening at the base of a fence cannot be greater than 2 inches; the opening between vertical slats cannot be greater than 4 inches; the openings in a chain link fence cannot exceed 1 ¾ inches (measured horizontally).
- No private patios or building doors may open up directly into the pool area.

7. Fittings

- Main drains must have an anti-body entrapment, anti-hair entrapment cover (unless grate is larger than 18 inch x 23 inch). These covers must meet the American National Standards Institute (ANSI) A112.19.8 and applicable National Science Foundation (NSF) certifications and be installed as per the manufacturer’s specifications.

- Equalizer lines must also meet ANSI 112.19.8 and NSF standards and be installed as per the manufacturer's specifications.
 - Wading pools must have a spilt main drain with two grates (provided with anti-entrapment covers) that have been approved by the Contra Costa Environmental Health Plan Check Section.
 - All suction drain covers must be approved, properly secured and removable only with tools.
- 8. Operation Records** (Records must be kept for one year)
- Daily recordings of free chlorine and pH levels at least once a day. Recommended hourly recordings when pool is in heavy use.
 - If chlorine stabilizer is used, the concentration must be tested and recorded at least once a month.
 - Maintenance procedures such as cleaning of filters and quantity of chemicals used.
- 9. Submerged Hazards**
- Submerged benches or swim-outs are prohibited (except for spas).
- 10. Filtration and Treatment Systems**
- Filtration and treatment must be fully functional and running during hours of operation.
 - An accurate working flow meter must be installed.
 - Influent and effluent pressure gauges must be provided for filter.
 - Sufficient water flow is required to ensure the minimum turnover times are met (1/2 hour for spas, 1 hour for wading pools, 6 hours for a pool).
 - Filter backwash wastewater must drain to the sanitary sewer via an approve air gap. Discharge to the ground or storm water system is prohibited.
 - Clearly label the filtration equipment to indicate which is for the spa and which is for the pool.
- 11. Spa Temperature**
- Spa temperature must not exceed 104 °F.
 - An accurate thermometer must be in contact with the water.
- 12. Decking**
- Decking must be in good repair, free of tripping hazards, and slope away from the pool.
 - Pools must have at least 4 feet of unobstructed deck around the entire pool.
- 13. Water Clarity and Cleanliness**
- The water must be kept clean and clear.
 - Main drain must be visible from the deck.
 - The entire facility must be kept clean and in good repair.

14. Pool Lights

- Lighting is required if pool is open after dark.
- Light fixtures must be securely fastened, in good repair, and protected by a ground fault circuit interrupter (GFCI).

15. Pool/Spa Covers

- Pool or spa covers may not be in place during hours of operation.
- Pool covers must be stored in a manner that provides 4 feet of unobstructed deck around the pool.

16. Access

- Pool and spa operators must assure ready access to public pool facilities for Environmental Health personnel to conduct routine inspections. Unless management is available onsite all day, keys must be provided to allow inspectors access the pool, pump room, restrooms, showers and any other related areas. An onsite lockbox for retaining keys that allow entry into the pool and all ancillary areas is strongly recommended. Provide new keys or lockbox codes to EHD when they are changed.

17. Animals are not permitted in the pool or pool area.

CLOSURE FOR HEALTH AND SAFETY HAZARDS

Serious health or safety violations will result in the immediate closure of a facility. A closed facility must not reopen until the problem has been corrected and written authorization to reopen is received from EHD. Penalty fees may be assessed to facilities that fail to acquire written authorization to reopen. If any of the following violations are observed and cannot be immediately corrected by the pool operator, the **pool shall be closed**:

- Improper chemical levels (CCR Section 65529)
 - Free chlorine residual less than 1.0 ppm (without cyanuric acid.)
 - Free chlorine residual less than 1.5 ppm (with cyanuric acid)
- Filtration or treatment systems. (CCR Section 65525)
 - Pump turned off or inoperative during pool hours
 - Missing or inoperative automatic chlorinator or disinfection system
- Loose, missing or broken *main drain* or *skimmer equalizer line* suction outlet fittings.
- Lacking approved anti-entrapment devices/systems. (CCR Section 3134B and H&S Code Section 116064.2)
- Missing both body hook and life ring. (CCR Section 65539)
- Lacking clean and clear pool water, e.g. High turbidity or algae accumulation, where the main drain is not clearly visible. (CCR Section 65527, 65533)
- Broken or inaccessible spa emergency shut off switch. Switch must turn off both the jet

- and booster pumps. (CCR Section 680-13)
- Loose, missing or improperly secured pool light. (CCR Section 3114B H&S Code Section 116043)
- Bacterial levels in water exceed limits. (CCR Section 65531)
- Fecal accidents. (CCR Section 65533 and H&S Code Section 116043)

The following are violations that **may require** the closure of a swimming pool:

- pH below 7.2 or above 8.0
- Any condition which, in the opinion of the enforcing agent, is unhealthful, unsafe or unsanitary, e.g. physical hazards and potential electrocution hazards. (H&S Code Section 116043)
- Gate(s) that are not self-closing or self latching. (CCR Section 3118B.2)
- Fencing has large holes and/or gaps that allows for unintended entry. (CCR Section 3118.B)
- Remodel or construction work that has not been authorized by Environmental Health. (CCRSection65505)
- Spa temperature exceeding 104°F. (CCR Section 3135B)
- Cyanuric levels in excess of 100 ppm. (CCR Section 65529)
- Operating without a valid health permit. (Ord Article 413-3.602, 413-3.604)

CONSTRUCTION AND REMODEL REQUIREMENTS

Plans must be submitted to EHD for review and approval prior to commencing any construction or remodel work, or replacing equipment (see information packet titled ***Plan Check Construction Guidelines for New and Remodeled Swimming Pools and Spas***). This includes work involving fencing, decks, and ancillary facilities such as restrooms, showers, and locker rooms. Once plans are approved contact the local building department and obtain any necessary building permits. EHD Plan Check Staff are available daily from 9:00 a.m. to 12:00 p.m. on a drop in basis.

FEES

See handout titled ***Environmental Health Permit Fee Schedule*** for list of current permit fees.

Inspection fees (minimum 1 hour) will be assessed for the following services at the current rate:

- Reopen a pool or spa that has been ordered closed.
- When a follow-up inspection of a pool or spa that has not been closed shows that previous violations have not been corrected as required.
- Verified complaints.

LEGISLATIVE UPDATE

Assembly Bill 1020 Public Swimming Pools Anti-Entrapment Devices and Systems

The passage of Assembly Bill 1020 in October of 2009 requires existing public swimming pools to be equipped with anti-entrapment devices or system and, for pools with a single main drain that is blockable, to be equipped with specified devices or systems that are designed to prevent physical entrapment by pool drains. Newly constructed pools are required to have at least two main drains per pump that are hydraulically balanced and symmetrically plumbed through one or more “T” fittings. These devices or systems must conform to 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 California Department of Public Health (CDPH).

The following devices or systems are designed to prevent physical entrapment by pool drains:

1. Safety Vacuum Release System
2. Suction-limiting vent system with a tamper-resistant atmospheric opening
3. Gravity drainage system
4. Automatic pump shut-off system

Public swimming pools constructed prior to January 1, 2010 must be retrofitted by no later than **July 1, 2010**. Pools that were retrofitted between December 19, 2007 and January 1, 2010 and complied with Assembly Bill 1020 must complete the state certification form and submit to Contra Costa EHD prior to **September 30, 2010**.

The state certification form is currently being developed and is expected be posted on the CDPH (www.cdph.ca.gov) and EHD (www.cchealth.org/eh/) website by March 31, 2010.

The EHD point of contact, Lino Ancheta, EHS II, will respond to questions. He can be contacted at (925) 692-2523 between the hours of 7:30 a.m. to 9:00 a.m., Mondays through Fridays.