

**California Conference of Directors of Environmental Health
Recreational Health Technical Advisory Committee
September 17, 2003**

**RECREATIONAL WATER PARKS
GUIDELINES**

Definitions.

ACTIVITY POOL means a pool at a Recreational Water Park which features recreational water activities incorporating one or more of the following: ladders, climbable bars, ropes, chutes, bubblers, fountains or other similar devices.

CHILDREN'S POOL/RIDE means an activity pool, flume ride or other slide attraction at a Recreational Water Park designed primarily for use by small children.

DISCHARGE SECTION means the end of a modular flume or chute assembly attraction at a Recreational Water Park.

ENGINEER means a registered professional civil or structural engineer currently licensed in the State of California.

ENTRY POOL means a pool at a Recreational Water Park that is provided at the entrance of a waterslide or inner tube ride.

FLOW RIDER - means a pool at a Recreational Water Park that uses wave sheet technology for body boarding or body surfing activity.

FLUME means a trough-like or tubular structure generally recognized as a waterslide which directs the path of travel and rate of descent of a rider.

INNER TUBE RIDE means a gravity flow attraction at a Recreational Water Park designed to convey riders on tube-like devices through a series of chutes, channels, flumes or pools.

INTERMEDIATE POOL means any section of quiescent water flow between the entry and landing pools in attractions at a Recreational Water Park that utilize a series of pools.

LANDING POOL means a pool located at a Recreational Water Park at the end of a flume that is designed to safely receive the rider of an attraction.

LIFEGUARD means a qualified person who is responsible for supervision and lifesaving at a pool.

LIFEGUARD SERVICE means the attendance at a public pool during periods of use, of

one or more lifeguards who have no duties to perform other than to supervise the safety of pool users in water-contact activities

MAXIMUM POOL USER LOAD means the maximum number of persons allowed in a pool at any one time.

POOL USER LOAD means the estimated peak number of pool users per hour for a particular attraction at a Recreational Water Park.

RECREATIONAL WATER PARK means a facility, open to the public, that charges a fee for the use of pools with water contact activities that include but are not limited to wave pools, activity pools, inner tube rides, children's activity pools, water slides, run-out slides and water course rides.

RESPONSE TIME means the time between pool user distress and rescue by a lifeguard.

RUN-OUT SLIDE means an attraction at a Recreational Water Park that is usually characterized by a flume where the rider stops in the flume in preparation for exiting.

TURNOVER TIME - means the minimum time necessary to circulate the equivalent of the entire volume of the pool water through the recirculation system.

WATER ATTRACTION means an activity pool, inner tube ride, children's pool, run-out, water course ride, waterslide, wave pool or other water activity pool found at a Recreational Water Park and its components and appurtenances.

WATER COURSE RIDE/LAZY RIVER means an attraction at a Recreational Water Park designed to convey riders on inner tube-like or raft-like devices around a level course using an artificially created current.

WATER SLIDE means a flume attraction at a Recreational Water Park of varying slope and direction that regulates rider speed and discharges into a landing pool.

WAVE POOL means an attraction pool at a Recreational Water Park that produces waves, usually starting from the deep end and proceeding towards and dissipating at the shallow end.

Scope.

The provisions of this Article shall apply to the construction, installation or alteration of pools located at Recreational Water Parks. The sections in this Article address the basic differences between conventional pools and the pools associated with recreational water parks. All provisions of Chapter 31B, of Title 24 and Chapter 20 of Title 22, California Code of Regulations shall apply to pools at recreational water parks unless specifically addressed in this Article.

Design and Construction.

- A. The following factors shall be included in the design and operation to provide a safe environment for the public:
- (1) Prevention of slips, falls and collisions with structures or other users.
 - (2) Minimizing rider impact upon landing.
 - (3) Elimination or reduction of structural, mechanical, electrical and environmental hazards through proper design.
 - (4) Limitations of use based on the design of the attraction such as children vs adult use.
 - (5) Development and posting of rules.
 - (6) Provisions for effective communication between employees responsible for pool user safety.
- B. A registered professional engineer licensed in the State of California shall have the responsibility for the safe design and construction of attractions located in Recreational Water Parks.
- C. All structural elements of attractions at Recreational Water Parks that affect the public health and safety shall be inspected for safe operation and maintenance by a registered professional engineer. The inspection shall be conducted on at least an annual basis. Seasonal facilities shall be inspected prior to opening. A copy of the report shall be provided to the enforcing agency.
- D. Landscaping shall be designed so that dirt, vegetation, runoff and other foreign materials do not enter attractions.
- E. An adequate number of first aid facilities shall be provided in sufficient numbers to meet the emergency needs of the Recreational Water Park.
- F. A lifeguard safety plan shall be established and submitted to the enforcing agency that includes lifeguard stationing and areas of responsibility. The plan shall include and give consideration to conditions such as pool depths, wave action, line of sight, pool user load, training procedures, emergency procedures, lifeguard rotation and other special conditions that affect the safety of pool users. Lifeguards, in sufficient number, shall receive periodic training in the recognition and prevention of safety hazards at the individual water park attractions where they are stationed. Lifeguards shall be located to provide a response time to all pool users which shall not exceed 20 seconds. Provisions for back-up lifeguard coverage shall be provided so that the minimum response time is maintained during multiple rescues.
- G. Toilets, urinals and lavatories shall be provided as required by the current edition of the Uniform Plumbing Code, Appendix C, Assembly Places for Public Use. Toilets, urinals and lavatories shall be located so that they are easily accessible to pool users. The enforcing

agency may approve a lesser number of showers than required in Section 3115B.3.1.

Flume Design and Construction.

- A. The flume's structural design and materials used shall be in accordance with generally accepted engineering practices to provide a sound, durable structure that safely sustains all anticipated static, dynamic and earth stresses.
- B. All surfaces and edges of flumes including components and appurtenances which a rider may contact shall be constructed, installed, and finished so that they will not constitute a cutting, pinching, puncturing or abrasion hazard under normal contact and use.
- C. Flumes shall be made of smooth, durable and easily cleanable materials that are impervious to moisture.
- D. Colors other than white may be allowed when approved by the enforcing agency.
- E. Discharge sections shall be designed so as to assure safe exit speeds, angles, and stopping distances appropriate to the depth and size of the landing pool. Multiple exit attractions into a common landing pool shall have discharge sections that prevent bodily collisions.

Activity Pools.

- A. Projections and recessed areas may be permitted provided they do not contribute to trip, entanglement, entrapment or abrasion hazards. There shall be no underwater obstructions.
- B. Handholds shall be required on side walls where the water depth exceeds 18 inches.
- C. The turnover rate shall be a minimum of 6 hours.
- D. Perimeter overflow skimming systems, when required, may be omitted in areas where it is not feasible, when approved by the enforcing agency.
- E. A zero water depth may be allowed provided perimeter overflow skimming is provided along the entire section with the zero water depth.

Entry and Intermediate Pools.

- A. The maximum water depth of the attraction shall be indicated at the entrance to the attraction in clear view of the pool users. Depth markers shall also be provided at other locations in entry and intermediate pools as required by the enforcing agency.
- B. Handholds shall be required on side walls where the water depth exceeds 18

inches.

C. A maximum pool user capacity sign shall not be required.

D. The turnover rate shall be determined by the following formula:

Turnover Time in hours =
$$\frac{\text{(Pool Volume in gallons)}}{\text{(maximum pool user load per hour) x (75)}}$$
 or 6 hours, whichever is less.

Landing Pools.

A. At least 1 handrail per 10 feet of exit area shall be provided at stairs.

B. A maximum pool user capacity sign shall not be required.

C. The deck area at the exit end of the landing pool shall be a minimum of 6 feet wide.

D. The turnover rate shall be determined by the following formula:

Turnover Time in hours =
$$\frac{\text{(Pool Volume in gallons)}}{\text{(maximum pool user load per hour) x (75)}}$$
 or 6 hours, whichever is less.

E. The skimming system shall be designed so that there will be adequate skimming of the water during anticipated changes in water level during various phases of operation.

Run-out Slide.

A. Section 3108B, Title 24 California Code of Regulations, pool geometry, shall not be applicable to run-out slides.

B. The deck area shall be a minimum of 4 feet wide between two adjacent run-out slides.

C. A maximum pool user capacity sign is not required.

D. The turnover rate shall be determined by the following formula:

Turnover Time in hours =
$$\frac{\text{(Pool Volume in gallons)}}{\text{(maximum pool user load per hour) x (75)}}$$
 or 6 hours, whichever is less.

E. Alternative methods of skimming may be used when approved by the enforcing agency.

Water Course Ride.

A. There shall be no projections or recesses except for recessed stairs. Handrails

and stairs shall not project into the water course. All inlets and outlets shall be constructed and installed so they do not present a hazard.

- B. A maximum pool user capacity sign shall not be required.
- C. A water course ride shall have a minimum width of 12 feet and a maximum water depth of 4 feet.
- D. Exits shall be provided a minimum of every 200 feet.
- E. A minimum 6 foot unobstructed deck shall be provided on at least one side of the attraction along the entire perimeter.
- F. The turnover rate shall be a minimum of 6 hours.
- G. Alternative methods of skimming may be used when approved by the enforcing agency.

Wave Pools.

- A. Step holes shall be recessed such that the outer edges are flush with the vertical pool wall. Handrails and step holes shall extend down the pool wall so that they will be easily accessible at the lowest water level during wave action.
- B. Alternative handholds that are flush with the vertical pool wall may be allowed if approved by the enforcing agency. Handholds are not required in areas of wave pools where the static water level is less than 18 inches.
- C. The turnover rate shall be a minimum of 6 hours.
- D. A zero water depth may be allowed provided perimeter overflow skimming is provided along the entire section with the zero water depth.
- E. A clearly labeled and readily accessible emergency shut-off switch for the control of the wave action shall be installed at each permanent lifeguard station.
- F. Signs with clearly legible letters not less than 4 inches high shall be posted in conspicuous places and shall state "NO DIVING ALLOWED".