Title R14

SWIMMING AND SPA POOLS*

Chapters:

Chapter R14.04

SWIMMING POOLS

Sections:

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* **Editor's Notes**: For board rules and regulations relevant to the administrative rules set out herein, look for a preceding title of the same number not prefixed by "R."
To the extent that the administrative rules are inconsistent with the provisions of Title 14, the administrative rules are superseded.

R14.04.010 Definitions. As used in this chapter, unless the context clearly requires another meaning:

A. "Approved" means approved in writing by the director of public health.

B. "Department" means the public health department of the county.

C. "Director of public health" means the director of the department or his/her authorized representative.

D. "Person" means any individual, or a firm, partnership, company, corporation, trustee, association, or any public or private entity.

E. "Private swimming pool" means any swimming pool, wading pool, spa pool or spray pool maintained by an individual, the use of which is confined to members of his/her family or invited guests. Private pools shall not be subject to the provisions of this chapter.

F. "Public swimming pool" means any swimming pool together with buildings or appurtenances in connection therewith which is available to the general public with or without payment of an admission charge for the use of it, and shall include any swimming pool which is one thousand five hundred (1,500) square feet or more in surface area whether or not available to the general public, or any swimming pool not otherwise defined in this section.

G. "Semipublic swimming pool" means any swimming pool provided for and used by numbers of persons or multifamily or cooperative groups such as, but not limited to, hotels, motels, mobile home parks, apartments, condominiums, subdivisions, community clubs, private clubs, institutions or schools, the use of which is limited to such groups and their invited guests and where the pool is less than one thousand five hundred (1,500) square feet in surface area.

H. "Spray pool" means any pool or artificially constructed depression into which water is sprayed but is not allowed to pond in the bottom of the pool.

I. "Swimming pool" means any structure, basin, chamber or tank containing an artificial body of water for swimming, diving or recreational bathing and having a depth of two feet (2') or more at any point and including all facilities incidental thereto.

J. "Wading pool" means any artificial pool of water intended and constructed for wading purposes which is not over two feet (2') in depth at any point. (HDR 18 §1, 1-13-86)

R14.04.020 Water supply. A. The water supply serving the pool and all plumbing fixtures including drinking fountains, lavatories and showers, shall meet the requirements of the rules and regulations of the Washington State Board of Health.

B. All portions of the water distribution system serving the pool and auxiliary facilities shall be protected against backflow.

1. Water introduced into the pool, either directly or to the recirculation system, shall be supplied through an air gap or backflow preventer approved by the director.

2. In the case of plumbing connections to the potable water distribution system, the supply shall be protected by a suitable air gap whenever possible. When such air gaps are not possible, the supply shall be protected by an approved backflow preventer installed on the discharge side of the last control valve to the fixture, device or appurtenance. (HDR 18 §2, 1-13-86)

R14.04.030 Sewer. A. The sewer system shall be adequate to serve the facility, including bathhouse, locker room, and related accommodations.

B. There shall be no direct physical connection between the sewer system and any drain from the pool or recirculation system. Any pool or gutter drain or overflows from the recirculation system when discharged to the sewer system, storm drain or other approved natural drainage course shall connect through a suitable air gap so as to preclude the possibility of backup of sewage or waste into the pool piping system.

C. The sanitary sewer serving the pool and auxiliary facilities shall discharge to the public sewer system whenever possible. Where no such sewer is available, the connection shall be made to a suitable disposal system designed, constructed and operated in accordance with the requirements of the director. (HDR 18 §3, 1-13-86)

R14.04.040 Construction materials. A. Swimming pools and all appurtenances thereto shall be constructed of materials which are inert, nontoxic to man, water impervious and durable, which can withstand the design stresses, which will provide a tight tank, with a smooth, easily cleaned surface, or to which a smooth, easily cleaned surface finish can be applied, and shall be finished in white or light color.

B. All corners formed by intersection of walls with floors shall be rounded.

C. Sand or earth bottoms are not permitted in pool construction. (HDR 18 §4, 1-13-86)

R14.04.050 Design load, shape and depth. A. All pools shall be designed and constructed to withstand all anticipated loadings for both full and empty conditions. A hydrostatic relief valve shall be provided in areas having a high water table. The designing architect or engineer shall be responsible for certifying to the structural stability and safety of the pool.

B. The shape of any pool shall be such that the swimmer' s safety will not be impaired.

C. The minimum depth of water in the pool shall be three feet (3') except for special instructional pools or for restricted or recessed areas in general pools which are set aside primarily for the use of children. Such areas, when included as part of the pool, shall be separated from the pool proper by means of a safety line supported by buoys and attached to the side walls.

D. Wading pools for children, physically separated from the swimming pool, shall be served by a recirculation system separate from the pool.

E. The maximum depth at the shallow end of the pool shall not exceed three feet six inches (3'6") except for competitive or special purpose pools. (HDR 18 §5, 1-13-86)

R14.04.060 Depth markings. A. The depth of the water in the pool shall be plainly marked at maximum and minimum points and at the points of break between the deep and shallow portions and at intermediate two-foot (2') increments of depth, spaced at not more than twenty-five-foot (25') intervals measured peripherally. Depth markers shall be located on the vertical pool walls at or above the water level. Where depth markers cannot be placed on the vertical walls above the water level, other means shall be used, such markings to be plainly visible to persons in the pool. If a pool exceeds twenty feet (20') in depth, additional markers shall be located on the edge of the deck next to the pool. The depth in the diving areas shall be appropriately marked.

B. Depth markers shall be in numerals of four inches (4") minimum height and a color contrasting with background.

C. Wherever design considerations allow, it may be desirable to install a depth contour line, such as a recessed line on a wall adjacent to the pool.

D. A four-inch (4") minimum width line in a contrasting color shall be provided at the breakpoint between the shallow and deep ends of the pool. (HDR 18 §6, 1-13-86)

R14.04.070 Outlets. A. Main drains shall be provided at the deepest point of the pool. Openings must be covered with grates or other protective devices which shall be removable only with tools. Net area of outlet openings of the drains in the floor of the pool shall be such as to preclude the possibility of developing a suction dangerous to bathers' safety and shall be at least four (4) times the area of

the discharge pipe or provide sufficient area so the maximum velocity of the water passing the grate will not exceed one and one-half feet (1 1/2') per second or shall be an anti-vortex drain. Main drain piping shall be valved and shall discharge to the recirculation pump suction and have a capacity equal to one hundred percent (100%) of the recirculation pump capacity.

B. Where the width of the pool is more than thirty feet (30'), multiple main drain outlets shall be provided. In such cases, outlets shall be spaced not more than twenty feet (20') apart, nor more than ten feet (10') from side walls.

C. Spray pools shall be equipped at their low point with an unvalved trapped drain of sufficient capacity and design to prohibit accumulation of any water in the pool. (HDR 18 §7, 1-13-86)

R14.04.080 Inlets. Inlets for fresh and/or repurified water shall be located to produce uniform circulation of water and to facilitate the maintenance of a uniform disinfectant residual throughout the entire pool, without existence of dead spots. Inlets from the circulation system shall be flush with the pool wall and submerged at least twelve inches (12") below the water level.

A. Wall inlets shall be designed as an orifice capable of a deflection adjustment of forty-five degrees (45°) or must be provided with an individual gate or similar valve to permit balancing of water volume to obtain the best circulation and shall be a minimum of twelve inches (12") below the surface.

B. Floor inlets shall have flow adjusting plates so as to permit a full range of flow adjustment from closed to full open. (HDR 18 §8, 1-13-86)

R14.04.090 Slope of bottom. The slope of the bottom of any portion of a public pool having a water depth of less than five feet (5') shall not be more than one foot (1') in fifteen feet (15') and the slope shall be uniform. In portions with a depth greater than five feet (5'), the slope shall not exceed one foot (1') in three feet (3'). All portions of the pool bottoms shall have definite and continuous slope toward the bottom drains. (HDR 18 §9, 1-13-86)

R14.04.100 Side walls. A. Walls of a public pool shall be either vertical for water depth of least six feet (6'), or vertical for a distance of two and one-half feet (2 1/2') below the water level below which the wall shall be curved to the bottom with a radius not to exceed:

1. At three-foot (3') depth, a six-inch (6") radius cove at the base of a two-foot six-inch (2'6") vertical section;

2. At three-foot six-inch (3'6") depth, a one-foot

(1') radius cove at the base of a two-foot six-inch (2'6") vertical section;

3. At five-foot (5') depth, a one-foot six-inch (1'6") radius cove at the base of a three-foot six-inch (3' 6") vertical section. From this point the spring line or point of departure from vertical may rise through an eight-foot (8') transitional zone, measured horizontally, to a typical deep-end wall design consisting of at least a two-foot six-inch (2'6") vertical section with a curved section from that point meeting the floor of the pool.

B. Safety ledges when provided on vertical walls in the deep portion of the pool shall not be over four inches (4") wide, at least four feet (4') below the water surface, shall slope one-half inch (1/2") in four inches (4") away from the wall and shall be painted in a contrasting color.

C. When a movable bulkhead is used, it shall be positioned so that swimmers cannot swim under or be entrapped behind the bulkhead. (HDR 18 §10, 1-13-86)

R14.04.110 Overflow gutters. A. Overflow gutters shall be required on all pools having a surface area of over two thousand five hundred (2,500) square feet. (Pools having a surface area of less than two thousand five hundred (2,500) square feet shall be provided either with overflow gutters or skimming devices.)

B. Overflow gutters shall extend completely around the pool, except at steps or recessed ladders in the shallow portion. The overflow gutter shall also serve as a handhold. This gutter shall be capable of continuously removing one hundred percent (100%) of the recirculation pump capacity plus one-fifth (1/5) of the balancing tank capacity expressed in gallons per minute. All overflow gutters shall be connected to the recirculation system through a properly designed surge tank. The gutter, drains and return piping to the surge tank shall be adequately sloped to provide rapid drainage to drains not more than fifteen feet (15') apart, and such drainage shall be returned to the filters. The opening into the gutter beneath the coping shall not be less than four inches (4") and the interior of the gutter shall not be less than three inches (3") wide with a depth of at least three inches (3") and designed to be easily cleanable. Where large gutters are used, they shall be designed to prevent entrance or entrapment of bathers' arms or legs. The overflow edge or lip shall be rounded and not thicker than two and one-half inches (2 1/2") for the top two inches (2"). The outlet fittings shall have a clear opening in the grating at least equal to one and one-half (1 1/2) times the cross-sectional area of the outlet pipe.

C. Balancing tanks shall be required where overflow gutters or channels are used. The capacity shall be equal to six (6) times the maximum bathing load expressed in gallons. If the balancing tank is designed to serve as a

make-up water tank or to prevent air lock in the pump section line, or both, the capacity shall be increased sufficiently to accommodate these uses. Filter pits for vacuum-type filters may serve as balancing tanks if properly designed to accommodate this additional volume.

D. Nothing in this section shall preclude the use of roll-out or deck-level type pools. Such designs shall conform to the general provisions relating to overflow rates. The design of the curb and handhold shall conform to accepted standards, and the approval of the director shall be based on detailed review of this feature of construction and evaluated in light of proposed use of the pool. (HDR 18 §11, 1-13-86)

R14.04.120 Skimmers. Skimmers are permitted on public and semipublic pools with not more than two thousand (2,000) square feet of surface area, providing approved handholds are installed and sufficient motion of the pool water is induced by pressure-return inlets. At least one (1) skimming device shall be provided for each five hundred (500) square feet of surface area or fraction thereof plus one (1) additional device when considered necessary, with a minimum of two (2) skimmers per pool. They shall be so located as to minimize interference with each other and to ensure proper skimming of the entire pool surface. Handholds shall consist of bull-nosed coping not over two and one-half inches (2 1/2") thick for the outer two inches (2") or an equivalent approved handhold. The handholds must be not more than nine inches (9") above the normal water line. Skimming devices shall be built into the pool wall, shall be valved, shall develop sufficient velocity on the pool water surface to induce floating oils and wastes into the skimmer from the entire pool area, and shall meet the following general specifications:

A. The piping and other pertinent components of skimmers shall be designed for a total capacity of at least one hundred percent (100%) of the required filter flow of the recirculation system and no skimmer shall be designed for a flow-through rate of less than thirty (30) gallons per minute or 3.75 gallons per minute per lineal inch of weir.

B. The skimmer weir shall be automatically adjustable and shall operate freely with continuous action to variations in water level over a range of at least four inches (4"). The weir shall operate at all flow variations as described in Section 14.04.130(A). The weir shall be of such buoyancy and design so as to develop an effective velocity.

C. An easily removable and cleanable basket or screen through which all overflow water must pass shall be provided to trap large solids.

D. The skimmer shall be provided with a device to prevent airlock in the suction line. If an equalizer pipe is

used, it shall provide an adequate amount of water for pump suction should the water of the pool drop below the weir level; provided, that if any other device, surge tank or arrangement is used, a sufficient amount of water for pump suction shall be assured.

E. Where the equalizer pipe is used, it shall be sized to meet the capacity requirements of the filter and pump. This pipe shall be located at least one foot (1') below the lowest overflow level of the skimmer. It shall be provided with a valve or equivalent device that will remain tightly closed under normal operating conditions, but will automatically open when the skimmer becomes starved and the water level drops two inches (2") below the lowest weir level.

F. The skimmer shall be of sturdy, corrosion-resistant materials.

G. Prevailing winds shall be considered in placement of skimmers to assure removal of wind-blown material. (HDR 18 §12, 1-13-86)

R14.04.130 Recirculation system. A. A recirculation system, consisting of pumps, piping, fittings, water conditioning, and disinfection equipment and other accessory equipment, shall be provided at all pools, except spray pools, which will clarify and disinfect the pool volume of water in six (6) hours or less in a public pool and twelve (12) hours or less in a semipublic pool. Not less than sixty percent (60%) of the recirculated water shall be returned through the overflow channels or skimming devices.

B. All piping shall be designed to reduce friction losses to a minimum and to carry the required quantity of water at a maximum velocity not to exceed eight feet (8') per second.

C. On systems where the pump is located before the filter the recirculation system shall include a strainer to prevent hair, lint, etc., from reaching the pump and filters. Strainers shall be corrosion-resistant with openings which will provide a free flow area at least four (4) times the area of pump suction line and shall be readily accessible for frequent cleanings.

D. A vacuum cleaning system shall be provided. When an integral part of the recirculation system, sufficient connections shall be located in the walls of the pool, at least eight inches (8") below the water line, or may be a component part of the skimmer.

E. A rate-of-flow indicator, reading in gallons per minute, shall be installed and located on the pool return (inlet) line. The indicator shall be capable of flows measuring at least one and one-half (1 1/2) times the design flow rate, shall be accurate to within ten percent (10%) of true flow, measured in increments of not more than ten (10) gallons per minute, and shall be easy to read.

F. Pumps shall be of adequate capacity to provide the

required number of turnovers of pool water as specified in subsection A of this section, and whenever possible shall be so located as to eliminate the need for priming. If the pump or suction piping is located above the overflow level of the pool, the pump shall be self-priming. The pump or pumps shall be capable of providing adequate flow for the backwashing of filters.

G. Pressure filter systems shall be provided with influent and effluent pressure gauges, or loss-of-head gauges, and backwash sight glass on the waste discharge line. Air relief valves at the high point of the filter may be provided.

H. Vacuum filter systems shall provide a vacuum gauge between the filter and the motor. (HDR 18 §13, 1-13-86)

R14.04.140 Filtration--Slow sand filters. A. Sand filters shall be designed for a filter rate of not more than three (3) gallons per minute per square foot of bed area with sufficient area to meet the design rate of flow required by the prescribed turnover.

B. Filtering material shall consist of at least twenty inches (20") of screened, sharp filter sand with an effective size between .4 and .55 millimeters and a uniformity coefficient not exceeding 1.75, supported by at least ten inches (10") of graded filter gravel. Anthracite of appropriate size and uniformity coefficient of 0.6 to 0.8 millimeters with a uniformity coefficient of not greater than 1.8 may be used in lieu of the sand. The gravel shall effectively distribute water uniformly during filtration and backwashing. A reduction in this depth or an elimination of gravel may be permitted where equivalent performance and service are demonstrated.

C. The underdrain system shall be of corrosion-resistant and enduring material, so designed and of such material that the orifices or other openings will maintain approximately constant area. It shall be designed to provide even collection or distribution of the flow during filtration or backwashing.

D. At least twelve inches (12") of freeboard shall be provided between the upper surface of the filter media and the lowest portion of the pipes or drains which serve as overflows during backwashing.

E. The filter system shall be designed with necessary valves and piping to permit:

1. Filtering to pool;

2. Individual backwashing of filters to waste at a rate of not less than fifteen (15) gallons per minute per square foot of filter area;

3. Isolation of filters for repairs while other units are in service;

4. Complete drainage of all parts of the system;

5. The overall layout shall permit necessary

maintenance, operation and inspection in a convenient manner.

F. Each pressure sand filter shall be provided with an access opening of not less than a standard eleven-inch (11") by fifteen-inch (15") manhole and cover.

G. Aluminum sulfate (alum) or other compounds not disapproved by the director may be used as coagulants. Devices with reasonably accurate dosage control features shall be provided for adding coagulants ahead of the filter.

H. The tank and its integral parts shall be constructed of material capable of withstanding continuous, anticipated usage, and pressure tanks shall be designed for a pressure safety factor of four (4) based on the maximum shutoff head of the pump. This shutoff head for design purposes shall in no case be considered less than fifty (50) pounds per square inch. (HDR 18 §14, 1-13-86)

R14.04.150 Filtration--High-rate sand filters. A. The filter must be National Sanitation Foundation (NSF) approved.

B. Flow rates are not to exceed twenty (20) gallons per minute per square foot of bed area. Flow rates between fifteen (15) and twenty (20) gallons per minute per square foot will require manufacturer's justification.

C. Filter media shall be in accordance with NSF specifications.

D. Filter backwash must be designed and installed to prevent loss of filter media. The sand bed shall remain reasonably level after backwash, not exceeding one inch (1") difference across the bed.

E. Design information of the inlet and outlet is to be provided. Data is to be provided on distribution of inlet and backwash water as well as methods for detection and prevention from loss of media during filter and backwash cycles.

F. Routine monitoring is to be performed and recorded.

1. Chlorine: Note free and total chlorine at least twice per day.

2. pH: Note at least once per day.

3. Bather load: Note estimated daily total as well as peak number during any one (1) period.

4. Differential pressure on filter: Note at least daily.

5. Alkalinity: Note level at least weekly.

6. Hardness: Note at least monthly.

7. Clarity and color: Note daily.

8. Sand depth and condition: Record depth of sand and relative levelness (absence of channels or signs of breakthrough).

G. Water quality shall remain in compliance with Section R14.04.270. (HDR 18 §15, 1-13-86)

R14.04.160 Filtration--Diatomaceous earth filters.

A. Sufficient filter area shall be provided to meet the design pump capacity as required by Section R14.04.130(A).

B. Rate of filtration: The design rate of filtration shall not be greater than 1.5 gallons per minute per square foot of effective filtering surface.

C. Where a body feeding device is provided, the device shall be accurate (plus or minus ten percent (±10%)) and dependable, and shall be capable of continually feeding within a calibrated range, adjustable from two (2) to six (6) parts per million, at the design capacity of the recirculation pump.

D. Filter area, where fabric is used, shall be determined on the basis of effective filtering surfaces as created by the septum supports with no allowances for areas of impaired filtration, such as broad supports, folds or portions which may bridge.

E. The filter and all component parts shall be of such materials, design and construction to withstand normal continuous use without significant deformation, deterioration, corrosion or wear which could adversely affect filter operation.

F. The tank containing the filter elements shall be constructed of steel, concrete, plastic or other suitable material, which will satisfactorily provide resistance to corrosion, with or without coating. Pressure filters shall be designed for a minimum working pressure of fifty (50) pounds per square inch with a four (4) to one (1) safety factor. Vacuum filters shall be designed to withstand the pressure developed by the weight of the water contained therein and closed vacuum filters shall, in addition, be designed to withstand the crushing pressure developed under a vacuum of twenty-five inches (25") of mercury with a safety- factor of 1.5 in both instances. The septa shall be constructed to be resistant to rupture under conditions of the maximum differential pressure between influent and effluent which can be developed by the circulating pump and of adequate strength to resist any additional stresses developed by the cleaning operation.

G. The filter shall be so designed and constructed, or provision made, to preclude the introduction of filter aid into the pool during precoating operations. Public pools, during precoat, shall recirculate first-filtered water to filter or discharge to waste.

H. Where dissimilar metals, which may set up galvanic electric currents, are used in the filters, provision shall be made to resist electrolytic corrosion. The filters shall be designed in such a manner that they may be easily disassembled with allowances made for adequate working space above and around the filter to allow the removal and replacement of any part and for proper maintenance.

I. All pressure-type filters shall be piped so the

flow of water can be reversed for backwashing.

J. Provision shall be made for completely and rapidly draining the filter. (HDR 18 §16, 1-13-86)

R14.04.170 Ladders, steps, treads and handrails. A. Steps or ladders shall be provided at the shallow end of the pool if the vertical distance from the bottom of the pool to the deck or walk is over two feet (2'). A second means of entry and exit shall be provided in the deep portion of a pool having a depth greater than five feet (5'). If the pool is over thirty feet (30') wide, steps or ladders shall be installed on each side of the pool.

B. Steps leading into pools shall be of nonslip design and have a minimum tread of twelve inches (12"). Risers shall be uniform and not exceed twelve inches (12"). The stair tread edge shall be constructed of material so colored as to contrast with the color of the stairs. A safety railing shall be provided, extending from the deck to the bottom step.

C. Pool ladders shall be corrosion-resistant and shall be equipped with nonslip treads. All ladders shall be so designed as to provide a handhold and shall be rigidly installed. There shall be a clearance of not less than three inches (3") between any ladder and the pool wall. If steps are inserted in the walls or if stepholes are provided, they shall be of such design that they may be cleaned readily and shall be arranged to drain into the pool to prevent the accumulation of dirt thereon. Stepholes shall have a minimum tread of five inches (5") and a minimum width of fourteen inches (14"), except where freeze-proof stepholes must be installed.

D. Where ladders or stepholes are provided within the pool, there shall be a handrail at the top of both sides thereof, extending over the coping or edge of the deck.

E. Supports, platforms and steps for diving boards shall be of substantial construction and of sufficient structural strength to safely carry the maximum anticipated loads. Steps shall be of corrosion-resistant material, easily cleanable, and of nonslip design. Handrails shall be provided at all steps and ladders leading to diving boards more than one (1) meter above the water, except those set at fifteen degrees (15°) or less from the vertical. Platforms and diving boards which are over one (1) meter high shall be protected with guard railings extending beyond the coping or edge of the deck and all steps or ladders shall enter from the side. (HDR 18 §17, 1-13-86)

R14.04.180 Fencing--Adjacent areas. A. Decks. A continuous deck at least four feet (4') wide shall extend completely around the pool. The deck shall be sloped to drain away from the pool at a grade of at least one-fourth inch (1/4") per foot, be provided with adequate drains unless

specifically exempted by the director, be impervious, easily cleanable, and shall have a nonslip surface. For public swimming pools, total walkway area shall not be less than sixteen (16) square feet per bather, based on the bather load as computed in Section R14.04.260.

B. Fencing. Nonswimmers and animals shall be excluded from the swimming pool area. Fencing requirements shall be those required by the local building official. If no local requirements exist, the following shall apply:

At outdoor swimming pools, the entire area shall be enclosed by a fence having a minimum height of five feet (5') with a self-closing, self-latching gate with latch no less than forty-two inches (42") from the ground. Openings, holes or gaps in the fence shall not exceed six inches (6") except openings protected by grates or doors. Spray pools and wading pools shall be fenced so as to prevent the entrance of animals and minimize the entrance of persons not actively utilizing the pool facilities.

C. Sand and Grass Areas. Sand and grass areas shall not be allowed inside of the pool enclosure unless properly separated to prevent direct access on the part of bathers and unless satisfactory facilities are provided for the proper cleansing of bathers before they again enter the bathing area. Separation may consist of any barrier so designed and constructed as to prevent the free and easy passage of persons to the bathing area. The provisions of this subsection shall not apply to semipublic pools, spray pools and wading pools. (HDR 18 §18, 1-13-86)

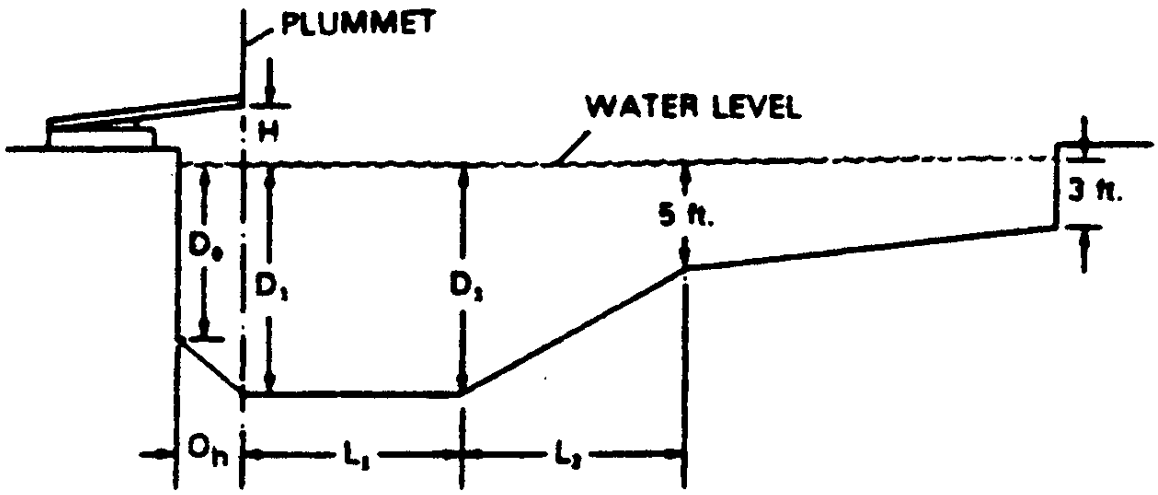
R14.04.190 Diving area. The dimensions for swimming pools in the diving area shall conform to the requirements A-1 through A-6 established by the American Public Health Association, which are codified as follows:

A-1

The dimensions of the diving area on all swimming pools shall conform to the following minimum dimensions:

TABLE 1
THE DIMENSIONS OF THE DIVING AREA ON ALL SWIMMING POOLS

Height of Diving Board	Water Depths		Lengths		
			Overhang	Length of Diving Well	Runout
(H)	(D_0)	(D_1)	(O_h)	(L_1)	(L_2)
Deck level to 2 ft.	6 ft.	8.5 ft.	3 ft.	12 ft.	10.5 ft.
2 ft. to 1 m.	6 ft.	10 ft.	5 ft.	12 ft.	15 ft.
1 m. to 3 m.	6 ft.	12 ft.	5 ft.	13 ft.	21 ft.



A-2
All swimming pools shall have at least 13 ft. (3.96 m) of free and unobstructed height above each diving board as measured from the center of the front end of the board, and this free unobstructed height shall extend horizontally at least 16 ft. (4.88 m) forward of the plummet, at least 8 ft. (2.44 m) behind the plummet, and at least 8 ft. (2.44 m) to both sides of the plummet. However, if the diving board manufacturer recommends a greater distance, at least that distance shall be provided.

A-3
All diving boards installed on swimming pools at heights not greater than 1 m above the water level shall be located at least 10 ft (3.05 m) from an adjacent diving board as measured plummet to plummet and at least 10 ft. (3.05 m) from the side wall of the swimming pool.

A-4
All diving boards installed on swimming pools at heights greater than 1 m above the water level shall be located at least 10 ft. (3.05 m) from an adjacent diving board as measured plummet to plummet and at least 12 ft. (3.66 m) from the side wall of the swimming pool.

A-5
All diving equipment shall be anchored firmly to the deck with corrosion-resistant connections and materials and shall be installed according to the manufacturer's instructions.

A-6
Diving stands supporting diving boards more than 2 ft. (0.61 m) above the water line shall have handrails.
(HDR 18 §19, Appx. A, 1-13-86)

R14.04.200 Dinsinfectant and chemical feeders. A. Swimming pools shall be equipped with a chlorinating, or other disinfectant feeder or feeders which meet the following requirements:

1. They shall meet the requirements of the National Sanitation Foundation (NSF) or equivalent.

2. They shall be of sturdy construction and materials which will withstand wear, corrosion or attack by disinfectant solutions or vapors and which are not adversely affected by repeated regular adjustments or other conditions anticipated in the use of the device. The feeder shall be capable of being easily disassembled for cleaning and maintenance. The design and construction shall be such as to preclude stoppage of chemicals intended to be used or foreign materials that may be contained therein. The feeder shall incorporate failure-proof features so that the disinfectant cannot feed directly into the pool, pool piping, water supply system, or pool enclosure under any type of failure of the equipment or its maintenance.

3. When chlorinators are used for public pools, the capacity shall be sufficient to feed at the rate of at least three (3) pounds of chlorine per twenty-four (24) hours per ten thousand (10,000) gallons of pool capacity.

4. They shall have a graduated and clearly marked dosage adjustment to provide flows from full capacity to twenty-five percent (25%) of such capacity. The device shall be capable of continuous delivery within ten percent (10%) of the dosage at any setting.

5. When the disinfectant is introduced at the suction side of the pump, a device or method shall be provided to prevent air lock of the pump or recirculation system.

6. When compressed chlorine gas is used, the following additional features shall be provided:

a. The chlorine and chlorinating equipment shall

be in a separate well-ventilated room. Such room shall not be below ground level and shall be provided with vents near the floor which terminate out of doors. The door of the room shall not open to the pool, and shall open to the outside and in a direction away from prevailing winds or ventilation systems.

b. The chlorinator equipment shall be of rugged design, capable of withstanding wear without developing leaks.

c. Chlorine cylinders shall be anchored to prevent their falling over. A valve stem wrench shall be maintained on the chlorine cylinder so the supply can be shut off quickly in the case of an emergency. Valve protection hood shall be kept in place except when the cylinder is connected to the chlorination system.

d. The chlorine feeding device shall be designed so that during accidents or interruptions of the water supply, leaking chlorine gas will be conducted to the out-of-doors.

e. The chlorinator shall be a solution-feed type, capable of delivering chlorine at its maximum rate without releasing chlorine gas to the atmosphere.

f. The chlorinators shall be designed to prevent the backflow of water into the chlorine solution container.

g. A gas mask with self-contained breathing apparatus designed for use in a chlorine atmosphere shall be provided. The gas mask shall be kept in a closed cabinet, accessible without a key, located outside of the room in which the chlorinator is maintained.

h. A chlorine leak detector, such as bottled ammonia, shall be provided in the chlorinator room.

7. When a hypochlorite solution is used it shall be fed through hypochlorinator equipment. Such equipment shall also provide the following additional features:

a. Feed shall be positive under all conditions of pressure in the circulating system.

b. Dosage adjustment shall be provided to ensure constant feed with varying supply or back pressure.

c. Positive features to prevent backflow from recirculation system to the solution container, and provision for reducing to a minimum the entry into the pool of free calcium released from calcium hypochlorite shall be provided.

d. There shall be provision to prevent siphoning of hypochlorite solution when the recirculation pump and hypochlorinator are both turned off. (This applies to above-pool-level installations only.)

B. Equipment and piping used to apply chemicals to the water shall be of such size, design and material that they may be cleaned and will be free from clogging, preferably of the positive displacement type. All material used for such equipment and piping shall be resistant to action of

chemicals to be used therein.

C. Hand feeding may be used in swimming pools on an emergency basis only. (HDR 18 §20, 1-13-86)

R14.04.210 Lighting and ventilation. A. Pool and pool enclosure: All pools at which night bathing is permitted shall be provided with lighting fixtures of such number and design as to light all parts of the pool enclosure and the water in the pool. The lighting intensity measured at a point thirty inches (30") above any part of the pool walkway shall be not less than fifteen (15) foot-candles. Arrangements and design of lighting fixtures shall be such that bather and/or attendant may see clearly every part of the pool waters, pool bottom, walkways, springboards and other appurtenances without being blinded by light. When underwater pool lighting is provided, such lights shall be so installed with ground fault interrupters.

B. Shower rooms and dressing rooms, where provided, shall have lighting fixtures of such number and design, and so located, as to provide lighting intensity of not less than twenty-five (25) foot-candles measured at a point thirty inches (30") above any part of the shower room or dressing room floor. Location and construction of lighting fixtures and control switches shall be protected by ground fault interrupters.

C. Indoor pools and any auxiliary pool buildings shall be well ventilated to preclude the presence of noxious or irritating odors and excessive condensation. (HDR 18 §21, 1-13-86)

R14.04.220 Dressing rooms. A. Bathhouses to be used simultaneously by both sexes shall be divided into two parts separated by a tight partition, each designed for men or women. The entrances and exits shall be screened to break the line of sight.

B. Floors of bathhouses shall be of smooth-finished material with nonslip surface, impervious to moisture, and sloped to a drain. Junctions between walls and floor shall be covered.

C. Walls and partitions shall be of smooth, impervious material, free from cracks or open joints. Partitions in each dressing, room shall terminate at least ten inches (10") above the floor or shall be placed on continuous raised masonry or concrete bases at least four inches (4") high. Lockers shall be set either on solid masonry bases four inches (4") high or on legs with bottom of locker at least ten inches (10") above the floor. Lockers shall be properly vented.

D. The requirements relating to bathhouses, dressing rooms, toilet facilities, wash basins and showers may be waived when such facilities are conveniently available to semipublic, wading and spray pool patrons. (HDR 18 §22, 1-13-86)

R14.04.230 Toilets and showers. A. Toilet, wash basin and shower facilities, except as exempted under Section R14.04.220(D), shall be provided on the basis of the following schedule:

PLUMBING FIXTURE SCHEDULE [1]

	Males	Females
Water closets	1--60	1--40
Urinals [2]	1--60	---
Lavatories	1	1
Showers [3]	2--40	2--40

1 Fixture schedules should be increased for pools at schools or similar locations where bather loads may reach peaks due to schedules of use.
2 Urinals shall be so constructed that urine does not splash onto the floor or bathers' legs.
3 Minimum of 2.

B. The layout of the bathhouse shall be such that the bathers, on leaving the dressing rooms, pass the toilets and then showers en route to the pool.

C. Showers shall be supplied with water at a temperature of a minimum of ninety degrees Fahrenheit (90°F), and maximum one hundred twenty degrees Fahrenheit (120°F) , at a rate of at least three (3) gallons per minute. Thermostatic, tempering or mixing valves shall be installed if necessary.

D. Wash basins: Where toilets are provided a minimum of one (1) wash basin shall be provided for each sex and be located adjacent to the toilets.

E. Soap: Liquid or powdered soap in suitable dispensing equipment shall be provided at each shower head and each wash basin, and soap dispensers shall be kept clean and filled at all times that the pool is in use.

F. Toilet tissue in suitable dispensers shall be provided at each toilet. Dispensers shall be kept filled at all times that the pool is in use.

G. Hose bibbs shall be provided at convenient locations within the dressing rooms and adjacent to the pool walkways at all public and semipublic pools and wading pools. All hose bibbs must be provided with approved antisiphon devices.

H. Angle-jet drinking fountains shall be provided at convenient locations within public pool enclosures. (HDR 18 §23, 1-13-86)

R14.04.240 Spectators and visitor areas. A. There shall be absolute separation between the spaces used by visitors and spectators from spaces used by bathers.

B. Where toilet facilities are provided for spectators, such facilities must be separate from those provided for bathers, and the approaches to spectators' toilet facilities shall not include areas where bathers pass in bare feet. (HDR 18 §24, 1-13-86)

R14.04.250 Outdoor location. Outdoor pools shall be located where they will not be exposed to excessive pollution by dust, smoke, soot, surface drainage from surrounding areas, or other undesirable substances. (HDR 18 §25, 1-13-86)

R14.04.260 Swimming and nonswimming areas. A. For the purpose of this chapter, those portions of the pool five feet six inches (5'6") or less in depth shall be designated as "nonswimmer" areas. Portions of the pool over five feet six inches (5'6") in depth shall be designated as the "swimming" area.

B. For the purposes of computing swimmer and bather capacity, pool areas shall be determined as follows:

$$\text{Maximum bathing load} = \frac{A - S}{27} + \frac{S}{10}$$

Where
A = Total area of water surface in square feet.
S = Area of pool less than five feet six inches (5' 6") deep in square feet.

C. A sign with clearly legible letters not less than four inches (4") high shall be posted near the main entrance to a pool indicating the maximum bathing load. (HDR 18 §26, 1-13-86)

R14.04.270 Disinfection and quality of water. A disinfection process or procedure shall be used at all pools subject to this chapter for the purpose of ensuring continuous disinfection of the water throughout the pool during the period the pool is in use. When chlorine compounds are used as the disinfectant, the water in the pool at all times while in use shall contain a free chlorine residual of not less than 1.0 parts per million as measured by the DPD method, or shall contain a free chlorine residual of a higher value to be determined by the health officer. If other halogens are used, residuals of equivalent disinfecting strength shall be maintained. A testing kit for measuring the concentration of the disinfectant, accurate within 0.1 part per million, shall be provided at each pool.

B. When cyanuric acid compounds are used as a

disinfectant the cyanurate concentration shall not exceed ninety (90) parts per million, and the chlorine and free chlorine residual shall be at least 1.5 parts per million. A test kit to monitor cyanuric acid shall be kept and used at each facility where cyanuric acid compounds are used.

C. The director may accept other disinfecting materials or methods when they have been adequately demonstrated to provide a satisfactory residual effect and to otherwise be equally as effective under conditions of use as the chlorine concentration required in this chapter, and not be dangerous to public health, create objectionable physiological effects, or impart toxic properties to the water.

D. The swimming pool water shall be maintained in an alkaline condition as indicated by a pH of between 7.2 and 8.0 and when pH is maintained at 7.8 and 8.0, the minimum free chlorine residual shall be no less than 2.0 parts per million. A pH testing kit accurate to the nearest 0.2 pH unit shall be provided at each swimming pool. The alkalinity of the water in pools shall be at least eighty (80) parts per million. Suitable equipment for the feeding of pH-regulating chemicals at such points that their use will be most effective shall be provided in public pools.

E. The water shall have sufficient clarity at all times so that the main drain is readily visible. Failure to meet this requirement shall constitute grounds for immediate closing of the pool.

F. Not more than fifteen percent (15%) of the samples covering any considerable period of time, nor more than two (2) consecutive samples, shall either (1) contain more than two hundred (200) bacteria per milliliter, as determined by the heterotrophic plate count, or (2) show positive test (confirmed test) for coliform organisms in any of the five (5) ten (10) milliliter portions of a sample or more than 1.0 coliform organisms per fifty (50) milliliters when the membrane filter test is used. All samples shall be collected, dechlorinated and examined in accordance with the procedures outlined in the latest edition of "Standard Methods for the Examination of Water and Waste-Water," (American Public Health Association). The director shall prescribe the type and frequency of collection and examination of samples to assure water quality meets minimum requirements. (HDR 18 §27, 1-13-86)

R14.04.280 Cleaning pool and floors. A. Visible dirt on the bottom of the pool shall be removed as frequently as required.

B. Visible scum or floating matter on the pool surface shall be removed by flushing or other effective means.

C. Floors in bathhouses and appurtenances as well as pool decks and walkways shall be scrubbed to ensure cleanliness at all times. Disinfection with chlorine solution or

other germicides shall be accomplished at least daily. (HDR 18 §28, 1-13-86)

R14.04.290 Cleansing before entry. All persons using public or semipublic pools shall be required to take a cleansing bath in the nude, using warm water and soap, and to rinse off all soapsuds before entering the pool. In the case of semipublic pools, the requirement of this section will be posted in a prominent location within each living unit, or on a prominent sign adjacent to the pool. (HDR 18 §29, 1-13-86)

R14.04.300 Communicable disease. No person having skin lesions; sore or inflamed eyes; mouth, nose or ear discharges; or who is a carrier of any communicable disease shall use any pool subject to this chapter. (HDR 18 §30, 1-13-86)

R14.04.310 Pollution of pool. A. Urinating, expectorating, blowing the nose or depositing any deleterious matter in any pool subject to this chapter is prohibited.

B. Glass or other breakable objects shall be completely banned from the enclosure of any swimming pool. (HDR 18 §31, 1-13-86)

R14.04.320 Spectators prohibited next to pool. Persons not dressed for bathing shall not be allowed on walks immediately adjacent to public pools. (HDR 18 §32, 1-13-86)

R14.04.330 Lifesaving and safety equipment. A. Every public and semipublic swimming pools shall be equipped with one (1) or more light but strong poles with attached body hook (blunt ends) and not less than twelve feet (12') in length, for making reaching assists and rescues, one or more throwing buoys not more than fifteen inches (15") in diameter, having three-sixteenths-inch (3/16") attached line long enough to span the maximum width of the pool, placed in easily accessible racks adjacent to the pool, a standard twenty-four (24) unit first aid kit, which shall be kept filled and readily accessible for emergency use, and two (2) or more blankets reserved for emergency use. In addition, there shall be prominently displayed immediately adjacent to the telephone, a telephone number list to include the nearest available doctor, ambulance service, hospital or police or fire department rescue unit.

B. Swimming pools not providing lifeguards shall post a warning sign in plain view, "Warning -- No Lifeguard on Duty."

C. Swimming pools with a maximum depth of less than six feet shall post a warning sign in plain view, "No Diving Allowed." (HDR 18 §33, 1-13-86)

R14.04.340 Personal equipment. Common towels, bathing suits, caps, combs, brushes and drinking cups are prohibited. Bathing suits, towels and bathing caps furnished patrons at any pool subject to this chapter shall be laundered with soap and hot water, and thoroughly rinsed and dried before reuse. (HDR 18 §34, 1-13-86)

R14.04.350 Posting of regulations. Placards reciting Sections R14.04.290 through R14.04.340 shall be posted conspicuously at the pool or enclosure and in the dressing rooms and offices of all pools subject to the provisions of this chapter. (HDR 18 §35, 1-13-86)

R14.04.360 Pools not in operation. Pools not in operation shall do one of the following:

A. Be adequately fenced and locked to prevent entrance of persons to the pool area and covered with a safety cover;

B. Be adequately fenced and locked to prevent entrance of persons to the pool area and the pool completely drained or water quality maintained with sufficient clarity at all times so that the main drain is readily visible;

C. Emptied of water and filled with an appropriate fill material. (HDR 18 §37, 1-13-86)

R14.04.370 Variances. The director may grant a variance from requirements of this chapter as follows:

A. Where it is demonstrated to the satisfaction of the director that strict compliance with this chapter would be highly burdensome or impractical due to special conditions or cause;

B. Where the public or private interest in the granting of the variance is found by the director to clearly outweigh the interest of the application of uniform rules; and

C. Where such alternative measures are provided which in the opinion of the director will provide adequate public health and safety protection. (HDR 18 §38, 1-13-86)

R14.04.380 Violation--Closure. A. If, in the opinion of the director, a pool is maintained or operated in a manner which creates an unhealthful, unsafe or insanitary condition, the pool may be closed by the director. The pool shall not be reopened until correction is made, and upon specific written approval of the director.

B. Unhealthful, unsafe or insanitary conditions include, but are not limited to, the failure to meet clarity, disinfection, pH, safety or bacteriological standards, the presence of pathogenic organisms, or evidence of a disease outbreak. (HDR 18 §36, 1-13-86)

Chapter R14.08
SPA POOLS

Sections:

R14.08.010 Definitions. As used in this chapter, unless the context clearly requires another meaning:

A. "Approved" means approved in writing by the director of public health.

B. "Department" means the Seattle-King County department of public health.

C. "Director of public health" means the director of the department or his/her authorized representative.

D. "Person" means any individual, or a firm, partnership, company, corporation, trustee, association, or any public or private entity.

E. "Private spa pool" means any spa pool maintained by an individual, the use of which is confined to members of his/her family or invited guests. Private spa pools shall not be subject to the provisions of this chapter.

F. "Spa pool" means a unit designed for recreational and therapeutic use which is not drained, cleaned or refilled for each user. It may include, but not be limited to, hydrojet circulation, hot water, cold water, mineral baths, air induction bubbles, or any combination thereof. Industry terminology for a spa pool includes, but is not limited to, "therapeutic pool," "hydrotherapy pool," "whirlpool," "hot spa," "hot tubs," "sensory deprivation tanks," etc. This standard excludes hospitals nursing homes, boarding homes, and medical clinics. (HDR 17 §1, 1-13-86)

R14.08.020 Water supply. A. The water supply serving the spa pool and all plumbing fixtures including drinking fountains, lavatories and showers, shall meet the requirements of the rules and regulations of the Washington State Board of Health.

B. All portions of the water distribution system serving the spa pool and auxiliary facilities shall be protected against backflow.

1. Water introduced into the spa pool, either directly or to the recirculation system, shall be supplied through an air gap or backflow preventer approved by the director.

2. In the case of plumbing connections to the potable water distribution system, the supply shall be protected by a suitable air gap whenever possible. When such air gaps are not possible, the supply shall be protected by an approved backflow preventer installed on the discharge side of the last control valve to the fixture, device or appurtenance. (HDR 17 §2, 1-13-86)

R14.08.030 Sewer. A. The sewer system shall be adequate to serve the facility, including bathhouse, locker room, and related accommodations.

B. There shall be no direct physical connection between the sewer system and any drain from the spa pool or recirculation system. Any spa pool drain or overflows from the recirculation system when discharged to the sewer system, storm drain or other approved natural drainage course shall connect through a suitable air gap so as to preclude the possibility of backup of sewage or waste into the spa pool piping system.

C. The sanitary sewer serving the spa pool and auxiliary facilities shall discharge to the public sewer system whenever possible. Where no such sewer is available, the

connection shall be made to a suitable disposal system designed, constructed and operated in accordance with the requirements of the director. (HDR 17 §3, 1-13-86)

R14.08.040 Construction materials. A. Spa pools and all appurtenances thereto shall be constructed of materials which are inert, nontoxic to man, water impervious and durable, which can withstand the design stresses, which will provide a tight tank, with a smooth, easily cleaned surface, or to which a smooth, easily cleaned surface finish can be applied, and which may be finished in white or light color.

B. All corners formed by intersection of walls with floors shall be rounded. All surfaces which may come in contact with the user must be assembled, finished and maintained so that they will not constitute a cutting, pinching, puncturing or abrasion hazard under expected or casual contact.

C. Wood shall be considered to be an acceptable material for spa pools. (HDR 17 §4, 1-13-86)

R14.08.050 Design load, certification and shape. A. All spa pools shall be designed and constructed to withstand all anticipated loadings for both full and empty conditions. A hydrostatic relief valve shall be provided in outdoor spa pools in areas having a high water table. The designing architect or engineer shall be responsible for certifying to the structural stability and safety of the pool.

B. The shape of any spa pool shall be such that the user's safety will not be impaired. (HDR 17 §5, 1-13-86)

R14.08.060 Outlets. Two (2) main drains shall be provided in the spa pool. Openings must be covered with grates or other protective devices which shall be removable only with tools. Net area of outlet openings of the drains in the floor of the spa pool shall be such as to preclude the possibility of developing a suction dangerous to users' safety and shall be at least four (4) times the area of the discharge pipe or provide sufficient area so the maximum velocity of the water passing the grate will not exceed one and one-half feet (1½') per second or shall be an anti-vortex drain. Main drain piping shall be valved and shall discharge to the recirculation pump suction and have a capacity equal to one hundred percent (100%) of the recirculation pump capacity. (HDR 17 §6, 1-13-86)

R14.08.070 Inlets. Inlets for fresh and/or repurified water shall be located to produce uniform circulation of water and to facilitate the maintenance of a uniform disinfectant residual throughout the entire spa pool, without existence of dead spots. Inlets from the circulation system shall be flush with the spa pool wall and submerged at least

twelve inches (12") below the water level. (HDR 17 §7, 1-13-86)

R14.08.080 Slope of bottom. All portions of the spa pool bottom shall have definite and continuous slope toward the bottom drains. (HDR 17 §8, 1-13-86)

R14.08.090 Air induction systems. A. Air induction systems, when provided, shall totally prevent water backup that would cause electrical shock hazards.

B. Air intake sources shall be positioned and/or designed to minimize contaminants (such as deck water, dirt, etc.) from being introduced into the spa pool. (HDR 17 §, 1-13-86)

R14.08.100 Skimmers. Skimmers are required on spa pools. At least one (1) skimming device shall be provided for each one hundred (100) square feet of surface area or fraction thereof. If more than one (1) skimmer is used, they shall be so located as to minimize interference with each other and to ensure proper skimming of the entire spa pool surface. Skimming devices shall be built into the spa pool wall, shall be valved, shall develop sufficient velocity on the pool water surface to induce floating oils and wastes into the skimmer from the entire spa pool area, and shall meet the following general specifications:

A. The piping and other pertinent components of skimmers shall be designed for a total capacity of at least one hundred percent (100%) of the required filter flow of the recirculation system and no skimmer shall be designed for a flow-through rate of less than thirty (30) gallons per minute or 3.75 gallons per minute per lineal inch of weir.

B. The skimmer weir shall be automatically adjustable and shall operate freely with continuous action to variations in water level over a range of at least four inches (4"). The weir shall operate at all flow variations as described in Section 14.08.110(A). The weir shall be of such buoyancy and design so as to develop an effective velocity.

C. An easily removable and cleanable basket or screen through which all overflow water must pass shall be provided to trap large solids.

D. The skimmer shall be provided with a device to prevent airlock in the suction line. If an equalizer pipe is used, it shall provide an adequate amount of water for pump suction should the water of the spa pool drop below the weir level; provided, that if any other device, surge tank or arrangement is used, a sufficient amount of water for pump suction shall be assured.

E. Where the equalizer pipe is used, it shall be sized to meet the capacity requirements of the filter and pump. This pipe shall be located at least one foot (1') below the

lowest overflow level of the skimmer. It shall be provided with a valve or equivalent device that will remain tightly closed under normal operating conditions, but will automatically open when the skimmer becomes starved and the water level drops two inches (2") below the lowest weir level.

F. The skimmer shall be of sturdy, corrosion-resistant materials.

G. Prevailing winds shall be considered in placement of skimmers to assure removal of wind-blown material. (HDR 17 §10, 1-13-86)

R14.08.110 Recirculation system. A. A recirculation system, consisting of pumps, piping, fittings, water conditioning, and disinfection equipment and other accessory equipment, shall be provided at all spa pools which will circulate the spa pool volume of water in thirty (30) minutes or less. Not less than sixty percent (60%) of the recirculated water shall be returned through the overflow channels or skimming devices.

B. All piping shall be designed to reduce friction losses to a minimum and to carry the required quantity of water at a maximum velocity not to exceed eight feet (8') per second.

C. On systems where the pump is located before the filter the recirculation system shall include a strainer to prevent hair, lint, etc., from reaching the pump and filters. Strainers shall be corrosion-resistant with openings which will provide a free flow area at least four (4) times the area of pump suction line and shall be readily accessible for frequent cleaning.

D. A rate-of-flow indicator, reading in gallons per minute, shall be installed and located on the spa pool return (inlet) line. The indicator shall be capable of flows measuring at least one and one-half (1 1/2 times the design flow rate, shall be accurate to within ten percent (10%) of true flow, and shall be easy to read.

E. Pumps shall be of adequate capacity to provide the required number of turnovers of spa pool water as specified in subsection A of this section, and whenever possible shall be so located as to eliminate the need for priming. If the pump or suction piping is located above the overflow level of the spa pool, the pump shall be self-priming. The pump or pumps shall be capable of providing adequate flow for the backwashing of filters.

F. Pressure filter systems shall be provided with influent and effluent pressure gauges, or loss-of-head gauges, and backwash sight glass on the waste discharge line. Air relief valves at or near the high point of the filter may be provided.

G. Vacuum filter systems shall provide a vacuum gauge between the filter and the motor.

H. Provision shall be made for valving to provide drainage of each spa pool as necessary for routine cleaning and maintenance. (HDR 17 §11, 1-13-86)

R14.08.120 Filtration--Slow sand filters. A. Sand filters shall be designed for a filter rate of not more than three (3) gallons per minute per square foot of bed area with sufficient area to meet the design rate of flow required by the prescribed turnover.

B. Filtering material shall consist of at least twenty inches (20") of screened, sharp filter sand with an effective size between .4 and .55 millimeters and a uniformity coefficient not exceeding 1.75, supported by at least ten inches (10") of graded filter gravel. Anthracite of appropriate size and uniformity coefficient of 0.6 to 0.8 millimeters with a uniformity coefficient of not greater than 1.8 may be used in lieu of the sand. The gravel shall effectively distribute water uniformly during filtration and backwashing. A reduction in this depth or an elimination of gravel may be permitted where equivalent performance and service are demonstrated.

C. The underdrain system shall be of corrosion-resistant and enduring material, so designed and of such material that the orifices or other openings will maintain approximately constant area. It shall be designed to provide even collection or distribution of the flow during filtration or backwashing.

D. At least twelve inches (12") of freeboard shall be provided between the upper surface of the filter media and the lowest portion of the pipes or drains which serve as overflows during backwashing.

E. The filter system shall be designed with necessary valves and piping to permit:

1. Filtering to spa pool;

2. Individual backwashing of filters to waste at a rate of not less than fifteen (15) gallons per minute per square foot of filter area;

3. Isolation of filters for repairs while other units are in service;

4. Complete drainage of all parts of the system;

5. The overall layout shall permit necessary maintenance, operation and inspection in a convenient manner.

F. Each pressure sand filter shall be provided with an access opening of not less than a standard eleven-inch (11") by fifteen-inch (15") manhole and cover.

G. Aluminum sulfate (alum) or other compounds not disapproved by the director may be used as coagulants. Devices with reasonably accurate dosage control features shall be provided for adding coagulants ahead of the filter.

H. The tank and its integral parts shall be constructed of material capable of withstanding continuous, anticipated usage, and pressure tanks shall be designed for a

pressure safety factor of four (4) based on the maximum shutoff head of the pump. This shutoff head for design purposes shall in no case be considered less than fifty (50) pounds per square inch. (HDR 17 §12, 1-13-86)

R14.08.130 Filtration--High-rate sand filters. A. The filter must be National Sanitation Foundation (NSF) approved.

B. Flow rates are not to exceed ten (10) gallons per minute per square foot of bed area. Any rates in excess of ten (10) gallons per minute per square foot must be justified by the manufacturer. In no case shall flows exceeding twenty (20) gallons per minute per square foot be considered.

C. Filter media shall be in accordance with NSF specifications.

D. Filter backwash must be designed and installed to prevent loss of filter media. The sand bed shall remain reasonably level after backwash, not exceeding one inch (1") difference across the bed.

E. Design information of the inlet and outlet is to be provided. Data is to be provided on distribution of inlet and backwash water as well as methods for detection and prevention from loss of media during filter and backwash cycles.

F. Routine monitoring is to be performed and recorded.

1. Chlorine: note free and total chlorine at least twice per day.
2. pH: note at least once per day.
3. Bather load: note estimated daily total as well as peak number during any one (1) period.
4. Differential pressure on filter: note at least daily.
5. Alkalinity: note level at least weekly.
6. Hardness: note at least monthly.
7. Clarity and color: note daily.
8. Sand depth and condition: record depth of sand and relative levelness (absence of channels or signs of breakthrough).

C. Water quality shall remain in compliance with Section R14.08.250. (HDR 17 §13, 1-13-86)

R14.08.140 Filtration--Diatomaceous earth filters. A. Sufficient filter area shall be provided to meet the design pump capacity as required by Section R14.08.110(A).

B. Rate of filtration: The design rate of filtration shall not be greater than 1.5 gallons per minute per square foot of effective filtering surface.

C. Where a body feeding device is provided, the device shall be accurate (plus or minus ten percent (±10%)) and dependable, and shall be capable of continually feeding within a calibrated range, at the design capacity of the

recirculation pump.

D. Filter area, where fabric is used, shall be determined on the basis of effective filtering surfaces as created by the septum supports with no allowances for areas of impaired filtration, such as broad supports, folds or portions which may bridge.

E. The filter and all component parts shall be of such materials, design and construction to withstand normal continuous use without significant deformation, deterioration, corrosion or wear which could adversely affect filter operation.

F. The tank containing the filter elements shall be constructed of steel, concrete, plastic or other suitable material, which will satisfactorily provide resistance to corrosion, with or without coating. Pressure filters shall be designed for a minimum working pressure of fifty (50) pounds per square inch with a four (4) to one (1) safety factor. Vacuum filters shall be designed to withstand the pressure developed by the weight of the water contained therein and closed vacuum filters shall, in addition, be designed to withstand the crushing pressure developed under a vacuum of twenty-five inches (25") of mercury with a safety factor of 1.5 in both instances. The septa shall be constructed to be resistant to rupture under conditions of the maximum differential pressure between influent and effluent which can be developed by the circulating pump and of adequate strength to resist any additional stresses developed by the cleaning operation.

G. The filter shall be so designed and constructed, or provision made, to preclude the introduction of filter aid into the pool during precoating operations.

H. Where dissimilar metals, which may set up galvanic electric currents, are used in the filters, provision shall be made to resist electrolytic corrosion. The filters shall be designed in such a manner that they may be easily disassembled with allowances made for adequate working space above and around the filter to allow the removal and replacement of any part and for proper maintenance.

I. All pressure-type filters shall be piped so the flow of water can be reversed for backwashing.

J. Provision shall be made for completely and rapidly draining the filter. (HDR 17 §14, 1-13-86)

R14.08.150 Filtration--Cartridge filters. A. The filter must be National Foundation System approved.

B. The filter rate on a cartridge filter shall not exceed 0.375 gallons per minute per square foot of effective filter area with sufficient area to meet the prescribed turnover.

C. The filter and all component parts shall be of such materials, design and construction to withstand normal continuous use without significant deformation, deterioration,

corrosion or wear which could adversely affect filter operation.

D. The tank containing the filter elements shall be constructed of steel, concrete, plastic or other suitable material, which will satisfactorily provide resistance to corrosion, with or without coating.

E. Pressure filters shall be designed for a minimum working pressure of fifty (50) pounds per square inch with a four (4) to one (1) safety factor.

F. Provision shall be made for completely and rapidly draining the filter.

G. An extra set of cartridges shall be provided for cleaning purposes. (HDR 17 §15, 1-13-86)

R14.08.160 Ladders, steps, treads and handrails. . A. Recessed steps, ladders or stairways shall be provided if the vertical distance from the bottom of the spa pool to the deck or walk is over two feet (2'). If the spa pool is over fifty feet (50') in perimeter, such steps or ladders shall be installed on each side. When stairs extend into the spa pool the stair tread edge must be constructed of a material so colored as to contrast with the color of the stairs and be clearly visible and evident to bathers.

B. Stairs leading into pools shall be of nonslip design, have a minimum tread of twelve inches (12") and a maximum rise or height of ten inches (10"). The stair tread edge shall be constructed of material so colored as to contrast with the color of the stairs. There shall be no abrupt drop off or submerged projections into the spa pool, unless guarded by handrails.

C. Spa pool ladders shall be corrosion-resistant and shall be equipped with nonslip treads. All ladders shall be so designed as to provide a handhold and shall be rigidly installed. There shall be a clearance of not less than three inches (3") between any ladder and the spa pool wall. If steps are inserted in the walls or if stepholes are provided, they shall be of such design that they may be cleaned readily and shall be arranged to drain into the spa pool to prevent the accumulation of dirt thereon. Stepholes shall have a minimum tread of five inches (5") and a minimum width of fourteen inches (14"), except where freeze-proof step- holes must be installed.

D. Where stepholes or ladders are provided within the spa pool, there shall be a handrail at the top of both sides thereof, extending over the coping or edge of the deck. (HDR 17 §16, 1-13-86)

R14.08.170 Fencing--Adjacent areas. A. Decks. A continuous deck at least four feet (4') wide shall extend around at least fifty percent (50%) of the spa pool. The deck or floor shall be sloped to drain away from the spa pool at a grade of at least one-fourth inch (1/4") per foot,

be provided with adequate drains unless specifically exempted by the director, and shall have a nonslip surface.

B. Fencing. Nonswimmers and animals shall be excluded from the spa pool area. Fencing requirements for outdoor spa pools shall be those required by the local building official. If no local requirements exist, the following shall apply:

The entire area shall be enclosed by a fence having a minimum height of five feet (5') with a self-closing, self-latching gate with latch no less than forty-two inches (42") from the ground. Openings, holes or gaps in the fence shall not exceed six inches (6") except openings protected by grates or doors.

C. Sand and Grass Areas. Sand and grass areas shall not be allowed inside of the spa pool enclosure unless properly separated to prevent direct access on the part of bathers and unless satisfactory facilities are provided for the proper cleansing of bathers before they again enter the bathing area. Separation may consist of any barrier so designed and constructed as to prevent the free and easy passage of persons to the bathing area. (HDR 17 §17, 1-13-86)

R14.08.180 Disinfectant and chemical feeders. A. Disinfectant feeders must meet the following requirements:

1. They shall meet the requirements of the National Sanitation Foundation (NSF) or equivalent.

2. They shall be of sturdy construction and materials which will withstand wear, corrosion or attack by disinfectant solutions or vapors and which are not adversely affected by repeated regular adjustments or other conditions anticipated in the use of the device. The feeder shall be capable of being easily disassembled for cleaning and maintenance. The design and construction shall be such as to preclude stoppage of chemicals intended to be used or foreign materials that may be contained therein. The feeder shall incorporate failure-proof features so that the disinfectant cannot feed directly into the spa pool, spa pool piping, water supply system, or pool enclosure under any type of failure of the equipment or its maintenance.

3. When chlorinators are used for public pools, the capacity shall be sufficient to feed at the rate of at least three (3) pounds of equivalent chlorine per twenty-four (24) hours per ten thousand (10,000) gallons of pool capacity.

4. They shall have a graduated and clearly marked dosage adjustment to provide flows from full capacity to twenty-five percent (25%) of such capacity. The device shall be capable of continuous delivery within ten percent (10%) of the dosage at any setting.

5. When the disinfectant is introduced at the suction side of the pump, a device or method shall be provided to prevent air lock of the pump or recirculation system.

6. When compressed chlorine gas is used, the

following additional features shall be provided:

a. The chlorine and chlorinating equipment shall be in a separate well-ventilated room. Such room shall not be below ground level and shall be provided with vents near the floor which terminate out of doors. The door of the room shall not open to the spa pool, and shall open to the outside and in a direction away from prevailing winds or ventilation systems.

b. The chlorinator equipment shall be of rugged design, capable of withstanding wear without developing leaks.

c. Chlorine cylinders shall be anchored to prevent their falling over. A valve stem wrench shall be maintained on the chlorine cylinder so the supply can be shut off quickly in the case of an emergency. Valve protection hood shall be kept in place except when the cylinder is connected to the chlorination system.

d. The chlorine feeding device shall be designed so that during accidents or interruptions of the water supply, leaking chlorine gas will be conducted to the out-of-doors.

e. The chlorinator shall be a solution-feed type, capable of delivering chlorine at its maximum rate without releasing chlorine gas to the atmosphere.

f. The chlorinators shall be designed to prevent the backflow of water into the chlorine solution container.

g. A gas mask with self-contained breathing apparatus designed for use in a chlorine atmosphere shall be provided. The gas mask shall be kept in a closed cabinet, accessible without a key, located outside of the room in which the chlorinator is maintained.

h. A chlorine leak detector, such as bottled ammonia, shall be provided in the chlorinator room.

Generally, chlorine gas shall not be used in conjunction with spa facilities unless this is a large complex with trained personnel cognizant of proper operation of chlorine gas, chlorinators, and associated safety equipment.

7. When a hypochlorite solution is used it shall be fed through hypochlorinator equipment. Such equipment shall also provide the following additional features:

a. Feed shall be positive under all conditions of pressure in the circulating system.

b. Dosage adjustment shall be provided to ensure constant feed with varying supply or back pressure.

c. Positive features to prevent backflow from recirculation system to the solution container, and provision for reducing to a minimum the entry into the spa pool of free calcium released from calcium hypochlorite shall be provided.

d. There shall be provision to prevent siphoning of hypochlorite solution when the recirculation pump and hypochlorinator are both turned off. (This applies to

above-spa-pool-level installations only.)

B. Equipment and piping used to apply chemicals to the water shall be of such size, design and material that they may be cleaned and will be free from clogging, preferably of the positive displacement type. All material used for such equipment and piping shall be resistant to action of chemicals to be used therein.

C. Hand feeding will be allowed only on an emergency basis. (HDR 17 §18, 1-13-86)

R14.08.190 Lighting and ventilation. A. Spa pool and spa pool enclosure: All spa pools at which night bathing is permitted shall be provided with lighting fixtures of such number and design as to light all parts of the spa pool enclosure and the water in the spa pool. The lighting intensity measured at a point thirty inches (30") above any part of the spa pool walkway shall be not less than fifteen (15) foot-candles. Arrangements and design of lighting fixtures shall be such that bather and/or attendant may see clearly every part of the spa pool waters, spa pool bottom, walkways, and other appurtenances without being blinded by light. When underwater pool lighting is provided, such lights shall be so installed in conformance with local electrical codes.

B. Shower rooms and dressing rooms, where provided, shall have lighting fixtures of such number and design, and so located, as to provide lighting intensity of not less than twenty-five (25) foot-candles measured at a point thirty (30) inches above any part of the shower room or dressing room floor. Location and construction of lighting fixtures and control switches shall be protected by ground-fault interrupters.

C. Indoor pools and any auxiliary pool buildings shall be well ventilated to preclude the presence of noxious or irritating odors and excessive condensation. (HDR 17 §19, 1-13-86)

R14.08.200 Dressing rooms. A. Bathhouses to be used simultaneously by both sexes shall be divided into two (2) parts separated by a tight partition, each designed for men or women. The entrances and exits shall be screened to break the line of sight.

B. Floors of bathhouses shall be of smooth-finished material with nonslip surface, impervious to moisture, and sloped to a drain. Junctions between walls and floor shall be covered.

C. Walls and partitions shall be of smooth, impervious material, free from cracks or open joints. Partitions in each dressing room shall terminate at least ten inches (10") above the floor or shall be placed on continuous raised masonry or concrete bases at least four inches (4") high. Lockers shall be set either on solid masonry bases four

inches (4") high or on legs with bottom of locker at least ten inches (10") above the floor. Lockers shall be properly vented.

D. The requirements relating to bathhouses, dressing rooms, toilet facilities, wash basins and showers may be waived when such facilities are conveniently available. (HDR 17 §20, 1-13-86)

R14.08.210 Toilets and showers. A. Toilet, wash basin and shower facilities, except as exempted under Section R14.08.200(D), shall be provided on the basis of the following schedule:

PLUMBING FIXTURE SCHEDULE [1]

	Males	Females
Water closets	1--60	1--40
Urinals [2]	1--60	---
Lavatories	1	1
Showers [3]	2--40	2--40

1 Fixture schedules should be increased for pools at schools or similar locations where bather loads may reach peaks due to schedules of use.

2 Urinals shall be so constructed that urine does not splash onto the floor or bathers' legs.

3 Minimum of 2.

B. The layout of the bathhouse shall be such that the bathers, on leaving the dressing rooms, pass the toilets and then showers en route to the spa pool.

C. Showers shall be supplied with water at a temperature of a minimum of ninety degrees Fahrenheit (90°F), and maximum one hundred twenty degrees Fahrenheit (120°F), at a rate of at least three (3) gallons per minute. Thermostatic, tempering or mixing valves shall be installed if necessary

D. Wash basins: Where toilets are provided a minimum of one (1) wash basin shall be provided for each sex and be located adjacent to the toilets.

E. Soap: Liquid or powdered soap in suitable dispensing equipment shall be provided at each shower head and each wash basin, and soap dispensers shall be kept clean and filled at all times that the spa pool is in use.

F. Toilet tissue in suitable dispensers shall be provided at each toilet. Dispensers shall be kept filled at

all times that the spa pool is in use.

G. Hose bibbs shall be provided at convenient locations within the dressing rooms and adjacent to the spa pool walkways. All hose bibbs must be provided with approved antisiphon devices.

H. Angle-jet drinking fountains shall be provided at convenient locations at public spa pools. (HDR 17 §21, 1-13-86)

R14.08.220 Spectators and visitor areas. A. There shall be absolute separation between the spaces used by visitors and spectators from spaces used by bathers.

B. Where toilet facilities are provided for spectators, such facilities must be separate from those provided for bathers, and the approaches to spectators' toilet facilities shall not include areas where bathers pass in bare feet. (HDR 17 §22, 1-13-86)

R14.08.230 Outdoor location. Outdoor pools shall be located where they will not be exposed to excessive pollution by dust, smoke, soot, surface drainage from surrounding areas, or other undesirable substances. (HDR 17 §23, 1-13-86)

R14.08.240 Bather load. A. Bather capacity shall be not greater than one (1) person per ten (10) square feet of surface area of the spa pool.

B. A sign with clearly legible letters not less than four inches (4") high shall be posted near the spa indicating the maximum bather load. (HDR 18 §24, 1-13-86)

R14.08.250 Disinfection and quality of water. A. A disinfection process or procedure shall be used at all spa pools subject to this chapter for the purpose of ensuring continuous disinfection of the water throughout the spa pool during the period the spa pool is in use. When chlorine compounds are used as the disinfectant, the water in the spa pool at all times while in use shall contain a free chlorine residual of not less than 2.0 parts per million as measured by the DPD method, or shall contain a free chlorine residual of a higher value to be determined by the health officer. If other halogens are used, residuals of equivalent disinfecting strength shall be maintained. A testing kit for measuring the concentration of the disinfectant, accurate within 0.1 part per million, shall be provided at each spa pool.

B. When cyanuric acid compounds are used as a disinfectant the cyanurate concentration shall not exceed ninety (90) parts per million, and the chlorine and free chlorine residual shall be at least 2.0 parts per million. A test kit to monitor cyanuric acid shall be kept and used at each facility where cyanuric acid compounds are used.

C. The director may accept other disinfecting materials or methods when they have been adequately demonstrated to provide a satisfactory residual effect and to otherwise be equally as effective under conditions of use as the chlorine concentration required in this chapter, and not be dangerous to public health, create objectionable physiological effects, or impart toxic properties to the water.

D. The spa pool water shall be maintained in an alkaline condition as indicated by a pH of between 7.2 and 7.6. A pH testing kit accurate to the nearest 0.2 pH unit shall be provided at each spa pool. The alkalinity of the water in pools shall be at least eighty (80) parts per million measured as calcium carbonate.

E. The water shall have sufficient clarity at all times so that a standard two-inch (2") (five (5) centimeter) diameter clarity disc divided into alternate black and red quadrants is clearly visible and the separate colors discernible through four feet (4') of water. Alternately, there may be a maximum of 1.0 NTU (nephelometric turbidity unit).

F. Not more than fifteen percent (15%) of the samples covering any considerable period of time, nor more than two (2) consecutive samples, shall either (1) contain more than two hundred (200) bacteria per milliliter, as determined by the heterotrophic plate count, or (2) show positive test (confirmed test) for coliform organisms in any of the five (5) ten (10) milliliter portions of a sample or more than 1.0 coliform organisms per fifty (50) milliliters when the membrane filter test is used. All samples shall be collected, dechlorinated and examined in accordance with the procedures outlined in the latest edition of "Standard Methods for the Examination of Water and Waste-Water," (American Public Health Association). The director shall prescribe the type and frequency of collection and examination of samples to assure water quality meets minimum requirements. (HDR 17 §25, 1-13-86)

R14.08.260 Cleaning spa pool and floors. A. Visible dirt on the bottom of the spa pool shall be removed as frequently as required.

B. Visible scum or floating matter on the spa pool surface shall be removed by flushing or other effective means.

C. Any oil rings shall be removed around the edge of the spa to avoid build up.

D. The spa pool shall be emptied, cleaned and refilled with fresh water when the total dissolved solids reach one thousand five hundred (1,500) parts per million or once every thirty (30) days, whichever is oftener.

E. Floors in bathhouse and appurtenances as well as the spa pool decks and walkways shall be scrubbed to ensure cleanliness at all times. Disinfection with chlorine

solution or other germicides shall be accomplished at least daily. (HDR 17 §26, 1-13-86)

R14.08.270 Cleansing before entry. All persons using spa pools shall be required to take a cleansing bath in the nude, using warm water and soap, and to rinse off all soapsuds before entering the spa pool. The requirement of this section will be posted in a prominent location within each living unit, or on a prominent sign adjacent to the spa pool. (HDR 17 §27, 1-13-86)

R14.08.280 Communicable disease. No person having skin lesions; sore or inflamed eyes; mouth, nose or ear discharges; or who is a carrier of any communicable disease shall use any spa pool subject to this chapter. (HDR 17 §28, 1-13-86)

R14.08.290 Pollution of spa pool. A. Urinating, expectorating, blowing the nose or depositing any deleterious matter in any spa pool subject to this chapter is prohibited.

B. Breakable containers shall be completely banned from the enclosure of any spa pool.

C. The use of oils, body lotions and minerals is prohibited. (HDR 17 §29, 1-13-86)

R14.08.300 Spectators prohibited next to spa pool. Persons not dressed for bathing shall not be allowed on walks immediately adjacent to spa pools. (HDR 17 §30, 1-13-86)

R14.08.310 Lifesaving and safety equipment. A. Every spa pool shall be equipped with a standard twenty-four (24) unit first aid kit, which shall be kept filled and readily accessible for emergency use, and two (2) or more blankets reserved for emergency use. In addition, there shall be prominently displayed immediately adjacent to the telephone, a telephone number list to include the nearest available doctor, ambulance service, hospital or police or fire department rescue unit.

B. The hydrotherapy pump and air blower shall be connected to a maximum fifteen (15) minute time switch located no closer than ten feet (10') from the spa water's edge.

C. Recirculation pumps and heater thermostat switches shall be inaccessible to bathers; provided, that a safety switch to the recirculation pump shall be located within ten feet (10') of the spa pool water's edge.

D. Spa pools located in private rooms shall have intercoms or similar communication systems to communicate with the establishment personnel at a central reception area.

E. The maximum water temperature shall be one hundred four degrees Fahrenheit (104°F).

F. The consumption of alcohol by persons using a spa pool is prohibited. (HDR 17 §31, 1-13-86)

R14.08.320 Personal equipment. Common towels, bathing suits, caps, combs, brushes and drinking cups are prohibited. Bathing suits, towels and bathing caps furnished patrons at any spa pool subject to this chapter shall be laundered with soap and hot water, and thoroughly rinsed and dried before reuse. (HDR 17 §32, 1-13-86)

R14.08.330 Posting of regulations. Placards reciting Sections R14.08.260 through R14.08.290 shall be posted conspicuously at the spa pool or enclosure and in the dressing rooms and offices of all spa pools subject to the provisions of this chapter. In addition, a precaution sign will be mounted adjacent to the entrance of the spa pool. It shall contain the following warnings:

CAUTION

A. No person shall use the spa pool alone.

B. All children under 14 years of age shall be accompanied by a responsible adult observer.

C. No person shall run or engage in horseplay in or around the spa pool.

D. Persons should spend no more than 15 minutes in the spa pool at any one session.

E. Women of child-bearing age should not use the spa pool without consulting their physician.

F. Do not use while under the influence of alcohol, anticoagulants, antihistamines, vasoconstrictors, vasodilators, stimulants, hypnotics, narcotics or tranquilizers.

G. Elderly persons and those suffering from heart disease, diabetes, high or low blood pressure should not use the spa pool without consulting their physician.

(HDR 17 §33, 1-13-86)

R14.08.340 Spa pools not in operation. Spa pools not in operation shall do one of the following:

A. Be adequately fenced and locked to prevent entrance of persons to the spa pool area and covered with a safety cover;

B. Be adequately fenced and locked to prevent entrance

of persons to the spa pool area and the spa pool completely drained or water quality maintained with sufficient clarity at all times so that the main drain is readily visible;

C. Emptied of water and filled with an appropriate fill material. (HDR 17 §35, 1-13-86)

R14.08.350 Variances. The director may grant a variance from requirements of this chapter as follows:

A. Where it is demonstrated to the satisfaction of the director that strict compliance with this chapter would be highly burdensome or impractical due to special conditions or cause;

B. Where the public or private interest in the granting of the variance is found by the director to clearly outweigh the interest of the application of uniform rules; and

C. Where such alternative measures are provided which in the opinion of the director will provide adequate public health and safety protection. (HDR 17 §36, 1-13-86)

R14.08.360 Violation--Closure. A. If, in the opinion of the director, a spa pool is maintained or operated in a manner which creates an unhealthful, unsafe or insanitary condition, the spa pool may be closed by the director. The spa pool shall not be reopened until correction is made, and upon specific written approval of the director.

B. Unhealthful, unsafe or insanitary conditions include, but are not limited to, the failure to meet clarity, disinfection, pH, safety or bacteriological standards, the presence of pathogenic organisms, or evidence of a disease outbreak. (HDR 17 §34, 1-13-86)