JOHNSON COUNTY
ENVIRONMENTAL SANITARY CODE
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BY RESOLUTION 008-04

JOHNSON COUNTY ENVIRONMENTAL SANITARY CODE

CHAPTER III

SWIMMING POOLS

ARTICLE 1: GENERAL PROVISIONS

Section 1. Purpose. The purpose of this chapter is to protect, promote, and preserve the public health, safety and general welfare by providing for the establishment and enforcement of minimum standards for safety, cleanliness, and general sanitation for all swimming pools, spa pools, and public bathing places now in existence or hereafter constructed or developed, and to provide for inspection and licensing of all such facilities.

Section 2. Definitions: Unless the context requires or specifies otherwise, the following words, terms or phrases, as used in this Chapter, shall be given the meaning defined in the Section.

A. Bather Load: The maximum number of persons that may use the pool at one time without creating undue health or safety hazards.

B. Bath House: A structure which contains dressing rooms, showers, and toilet facilities for use with an adjacent public pool, semi-public, spa pool, or public bathing place.

C. Department: The Johnson County Environmental Department or its authorized representative.

D. Director: The Director of the Johnson County Environmental Department or his/her authorized representative.

E. Inlet: An opening or fitting through which filtered water enters the pool.

F. Licensed Operator: Any person schooled and certified in a training course in swimming pool operation by the Johnson County Environmental Department or any equivalent course approved by the Director. Certification is valid for three years.

G. Lifeguard: A person schooled and certified in a senior course of instruction in life saving and water safety, equivalent to that offered by the American Red Cross.

H. Main Drain: The outlet or outlets at the deep portion of the pool through which the main flow of water leaves the pool.

I. Overflow Gutter: A trough or gutter around the inside of the perimeter of the pool walls with the overflow lip effecting a skimming action to clean the pool water surface.

J. Pool Deck: The unobstructed area around the outside of the pool curb, diving boards, and/or pool slides.

K. Pool Depth: The distance measured from the floor of the pool to either the midpoint of the vertical dimension of the skimmer box or the lip of the overflow gutter.

L. Public Pool: Any swimming or wading pool owned or operated by a city, county, state, federal, or any other public agency or any other swimming or wading pool, other than a private residential pool or semi-public pool, operated by any person as defined herein, whether he be owner, lessee, operator, licensee, or concessionaire, regardless of whether or not a fee is charged.

M. Public Bathing Place: A body of water, natural or modified by man, for swimming, diving, and recreational bathing, together with adjacent shoreline or land area, buildings, equipment, and appurtenances pertaining thereto, used by consent of the

owner or owners and by being held out to the public by an individual, group, firm, corporation, organization, governmental agency, municipality or political subdivision, irrespective of whether a fee is charged for the use thereof. The bathing water areas of public bathing places include, but are not limited to, lakes, ponds, rivers, streams, and artificial impoundments.

N. Recirculating System: The pump, piping, and appurtenances provided for conveying swimming pool water to, through, and from the filter.

O. Semi-public Pool: Any swimming and wading pool serving a private club, motel, hotel, apartment building, or any cooperative living type project of three or more living units, the use of which is limited to members or residents and their guests.

P. Skimmer: A mechanical device connected to the recirculation piping which is used to skim the pool surface.

Q. Spa Pools: A pool, not used under medical supervision, that contains water of elevated temperature and incorporates a water jet system, an aeration system, or a combination of the two systems.

R. Swimming Pool: A watertight basin, chamber, or tank containing an artificial body of water for swimming, diving, or recreational bathing.

S. Turnover: The time required to recirculate the volume of water the pool contains through the filtration system and back to the pool.

T. Wading Pools: Any constructed or prefabricated public pool two (2) feet or less in depth which is designed to be used exclusively for wading purposes.

Section 3. General Requirements. The monitoring and inspection of public or semi-public swimming pools, spa pools, or public bathing places is considered by the Department to be significant in prevention of disease, sanitary nuisances, and accidents by which the health or life of an individual or individuals may be threatened or impaired.

No provision of this Code shall be deemed to require a construction change in any portion of the facility regulated by this Code when such facility was installed and is maintained in accordance with law in effect prior to the effective date of this Code, except when any such construction regulated by this Code is determined by the Director to be in fact dangerous, unsafe, unsanitary or a nuisance, and a menace to life, health or property.

Animals are prohibited in public or semi-public swimming pools, spa pools, or public bathing places and on pool decks.

Any water discharged from any pool, or from any portion of the recirculation system, shall be disposed of through a sanitary sewer system according to law.

Section 4. Operating Permit. No person shall cause to be operated, managed, or maintained, a public or semi-public swimming pool, spa pool, or public bathing place, unless the facility holds a current valid operating permit from the Director. Operating permits are not transferable.

Permit applications for public, semi-public pools, pool spas, or public bathing places shall be submitted no later than April 1st of each year and shall be in effect for one (1) year following the date of issuance. A pool or public bathing place permit fee shall be paid to the Johnson County Environmental Department to help defray the cost of administration and service.

The Director shall issue an operating permit for a public or semi-public swimming pool, spa pool,

or public bathing place which complies with the provisions of this Code.

Section 5. Inspections, Operational Requirements and Violations. The Department is authorized to conduct such inspections as it deems necessary to determine compliance with all provisions of these rules and shall have the right to enter the pool or public bathing place facilities at any reasonable hour for this purpose.

A. Equipment: All items of equipment designed for recirculation, filtration, disinfection, and pool water treatment shall be in good repair at all times and shall be properly maintained to perform the functions of the units and protect the swimming pool water from contamination.

B. Water Quality: The pool water level shall be maintained at an elevation suitable for continuous skimming flow into the surface overflow system without flooding during quiescence. Chemical, bacteriological, and physical water quality in the pool shall meet the minimum standards set forth by this Code.

C. Posted Closing: Any public or semi-public pool or spa pool can be immediately posted closed by the Department as not being in compliance with this Code whenever any of the following conditions occur:

1. The free active chlorine residual in the pool water is less than one (1) part per million or the bromine residual is less than two (2) parts per million.

2. The pH of the pool water is below seven point two (7.2) or above eight point zero (8.0).

3. The clarity of the pool water is such that the main drain grate is not readily visible from the pool deck or a black disc six (6) inches in diameter

placed at the deepest point is not clearly visible from the deck of the pool.

4. The recirculation system or the pool disinfection feeding equipment is missing or not functioning.

5. Any other conditions exist which may endanger the health, safety, or welfare of the persons using the pool.

ARTICLE 2. PLAN APPROVAL

Section 1. Plan Requirement. No person shall construct, install, extend, alter, or modify a public or semi-public swimming pool, spa pool, or public bathing place unless the plans and specifications for such work have been submitted to and approved by the Department.

Section 2. Application. Application for approval of such plans and specifications shall be made on forms to be provided by the Director and shall be accompanied by duplicate sets of plans and specifications fully describing the proposed swimming pool or extension or alteration.

Section 3. Specifications. Plans shall be drawn to scale, be a minimum size of eighteen (18) by twenty-four (24) inches and a maximum size of thirty-six (36) by forty-two (42) inches, and be accompanied by all specifications to clearly illustrate what is to be constructed. These plans shall include:

a. Plan and sectional view dimensions of both the pool and the area enclosed by the barrier fence, to include the bathhouse and the equipment room.

b. Specifications and layout of all treatment equipment used.

c. One piping schematic showing piping, pipe size, inlets, main drains, skimmer, gutter outlets, vacuum fittings, and all other appurtenances connected to the pool piping system.

d. Layout of the chemical storage room.

e. Specifications for the water supply and wastewater disposal systems. This includes aspects such as well location and backwash water disposal where applicable.

f. Plans must bear the seal and signature of a licensed professional engineer or architect registered to practice in Kansas. They shall certify that all building plan

requirements and standards have been met. They shall also certify that the licensed professional engineer or architect has completed a final inspection.

Section 4. Approval. The Director shall approve the plans and specifications only if they comply with the standards of construction, design, and equipment as required by this Code. The Director shall retain one (1) set of the plans and specifications and shall return the other set to the applicant. Upon completion of construction, the contractor and/or owner shall notify the Director for a final inspection. At or prior to the time of the final inspection, the contractor shall furnish the Department and the owner with a complete set of drawings, which show, as built, the location of all pipes and the connections of all equipment.

Section 5. Terms and Modifications. If construction is not commenced within one (1) year from the date of approval, the approval shall be void. Any modifications of the plan review requirements must be approved in writing by the Director.

ARTICLE 3. CONSTRUCTION SPECIFICATIONS

Section 1. Materials. Swimming pools and all appurtenances thereto shall be constructed of materials which are inert, nontoxic, impervious, permanent, and enduring; which can withstand the design stresses; which will provide a tight tank with a smooth and easily cleaned surface, or to which a smooth, easily cleaned surface finish can be applied.

Sand, clay, or earthen bottoms are not permitted in swimming pool construction.

Swimming pool finish, including bottoms and sides, must be of white or light colored materials, with a smooth finished surface.

Section 2. Depth Markings and Lines. Depth of water shall be plainly marked with numerals or letters at least four (4) inches high on the vertical wall of the swimming pool; on the edge of the deck or walk next to the swimming pool at maximum and minimum points; and at the points of break between the deep and shallow portions. The depth in the diving areas will be appropriately marked.

When provided, the lifeline shall be securely fastened to wall anchors. Wall anchors shall be of corrosive-resistant materials and shall be recessed or have no projections which constitute safety hazards when the lifeline is removed. It shall be marked with visible floats at not greater than seven foot intervals. The line shall be of sufficient size and strength to offer a good handhold and to support loads normally imposed by bathers.

Section 3. Inlets and Outlets. Inlets and outlets for all swimming pools regulated by this Chapter shall be designed and constructed in accordance with this section.

A. Outlets. All swimming pools shall be provided with an outlet at the deepest point to permit the pool to be completely and easily emptied. Openings must be covered by

proper grating which is not readily removable by bathers. Pools shall not be operated with broken, damaged, or missing drain covers. Outlet openings of the grating in the floor of the pool shall be at least four (4) times the area of discharge pipe. The minimum width of grate shall be one-half (1/2) inch, and the maximum not more than one (1) inch.

In swimming pools with deep water at or near one end, multiple outlets shall be provided where the width of the pool is more than thirty (30) feet. In such cases, outlets shall be spaced not more than thirty (30) feet apart, with the outermost outlets not more than fifteen (15) feet from side walls.

B. Drain devices. Devices used for draining swimming pools shall be sized to prevent the surcharging of the sanitary sewer.

C. Inlets. Inlets for fresh and/or re-purified water shall be located to produce uniform circulation of water and to facilitate the maintenance of a uniform disinfectant residual throughout the entire swimming pool without existence of dead spots. Where water from the public water system is added to the pool, cross-connections between the public water system and the pool water shall be prohibited. Inlets shall be placed around the pool perimeters so that ample recirculation of fresh water is assured.

Each inlet shall be designed to permit adjustment of water volume to obtain the best circulation.

Section 4. Floor Slope. The slopes at the bottom of any portion of the swimming pool having a water depth of less than five (5) feet shall not be more than one (1) foot in ten (10) feet and said slope shall be uniform. In portions with a depth of greater than five (5) feet, the slope shall not exceed one (1) foot in three (3) feet.

Section 5. Side Walls. Walls of a swimming pool shall be either (a) vertical for water depths up to at least six (6) feet; or (b) vertical for a distance of at least three (3) feet below the water level, below which the wall may be curved to the bottom with a radius equal to the difference between the depth at that point and the depth at the vertical sidewall, provided that the vertical is interrupted to permit slopes not greater than one (1) foot horizontally for each five (5) feet of depth of sidewall eleven (11) degrees from vertical.

Safety ledges, when provided on vertical walls in the deep portion of the swimming pool, shall not be more than six (6) inches wide, shall be at least four (4) feet below the water surface, and shall slope one-half (1/2) inch in six (6) inches toward the pool.

Section 6. Overflow Gutters. Overflow gutters shall be required on all swimming pools having a surface area of more than 1,600 square feet. Pools having a surface area of less than 1,600 square feet shall be provided either with overflow gutters or skimmers.

A. Gutters: Overflow gutters shall extend completely around the swimming pool, except at steps or recessed ladders. The overflow gutter shall also serve as a handhold. This gutter shall be capable of continuously removing 50% or more of the recirculated water and returning it to the filter. 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 designed to rapidly remove overflow water caused by recirculation displacement, wave action, or other causes produced from the maximum pool bathing load. The opening into the gutter beneath the coping shall be not less than three (3) inches wide with a depth of at least three (3) inches. 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 (2-1/2) inches for the top two (2) inches. The overflow outlets shall be provided with outlet pipes which shall in any case be at least two (2) inches in diameter. 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.

B. Skimmers: Skimmers are permitted on public swimming pools with not more than 1,600 square feet of water area, providing approved handholds are installed and sufficient motion to the pool water is induced by the pressure return inlets. At least one skimming device shall be provided for each 500 square feet of water surface area or fraction thereof. Where two or more skimmers are required, they shall be so located as to minimize interference with each other. The handholds must be no more than nine (9) inches above the normal water line. Skimming devices shall be built into the pool wall and shall meet the following general specifications:

(1) 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 (4) inches. The weir shall operate at all flow variations.

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

(3) The skimmer shall be of sturdy, corrosion-resistant materials.

(4) The skimmer weir and basket shall be maintained in a clean and sanitary condition.

Section 7. Depth. The minimum depth of water in the swimming pool shall be three (3) feet.

Section 8. Ladders, Recessed Treads, and Stairs. Steps or ladders shall be provided at the shallow end of the pool. Recessed steps or ladders shall be provided at the deep portion of the swimming pool; and, if the pool is more than thirty (30) feet wide, such steps or ladders shall be installed on each side.

A. Steps: Steps leading into the swimming pool shall be of nonslip design, have a minimum tread length of twenty-four (24) inches, a minimum tread width of twelve (12) inches, a maximum rise or height of ten (10) inches.

B. Ladders: Swimming pool ladders shall be corrosion-resistant and shall be equipped with nonslip treads. All ladders shall be designed to provide a handhold and shall be rigidly installed. There shall be a clearance of not more than five (5) inches nor less than three (3) inches between any ladder and the pool wall. If steps are inserted in the walls or if step-holes 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 width of five (5) inches and a minimum length of twelve (12) inches.

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

D. Diving Boards: 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 non-slip 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 (15) degrees or more from the vertical. Platforms and diving boards which are over one (1) meter high shall be protected with guard railings.

Section 9. Decks and Walkways. A continuous deck at least five (5) feet (and preferably eight [8] or more feet) wide shall extend completely around the swimming pool. The deck shall be sloped away from the pool to drain at a grade of one-fourth (1/4) inch to three-eighths (3/8) inch per lineal foot and shall have a non-slip surface. Deck drains shall not be connected to the recirculation system.

Decks shall be maintained in a sanitary condition and free from litter. Carpeting, if used, should not be installed within eight (8) feet of the pool and shall be wet vacuumed frequently so as to keep it clean and free of accumulated moisture.

Section 10. Enclosures. All outdoor swimming and wading pool areas shall be enclosed by a protective wall, fence, or other effective barrier. The entire barrier shall be at least five (5) feet in height.

Each entrance shall be equipped with a door or gate that is self-closing and self-latching with hardware provided for padlocking.

ARTICLE 4. WATER QUALITY

Section 1. Disinfectant Residual. Chlorine residual shall be maintained between one (1) part per million and three (3) parts per million as free available chlorine.

Bromine residual shall be maintained between two (2) parts per million and five (5) parts per million as free available bromine.

Section 2. pH Control. The pH of the pool water shall be maintained in a range of seven point two (7.2) to eight point zero (8.0). The Department may allow the maintenance of a higher pH in conjunction with maintenance of a higher disinfectant residual in special cases where corrosive water supplies dictate the need for such measures for protection of equipment.

Section 3. Turbidity. The pool water shall be sufficiently clear so that the main drain is readily visible from the pool deck or a black disc six (6) inches in diameter placed at the deepest point is clearly visible from the deck of the pool.

Section 4. Bacteriological Quality. When there is reason to believe that the pool water poses a potential health hazard, water samples for bacteriological analysis shall be taken to ascertain the sanitary quality of the pool water and to aid in proper control.

ARTICLE 5. RECIRCULATION SYSTEMS

Section 1. General Requirements. A recirculation system, consisting of pumps, piping, filters, water conditioning and disinfection equipment, and other accessory equipment, shall be provided. This recirculation system must clarify and disinfect the swimming pool volume of water in eight (8) hours or less, thus providing a minimum turnover of at least three (3) times in twenty-four (24) hours, except that the recirculation rate shall be increased to provide a six-(6) hour turnover for swimming pools subjected to heavy bather loads as determined by the Department. The recirculation equipment shall be operated continually except for periods of routine maintenance.

Section 2. Pipes. Piping shall be of nontoxic material, resistant to corrosion, and able to withstand operating pressures. Pipes shall be identified by a color code or tags.

Section 3. Strainer. The recirculation system shall include a strainer to prevent hair, lint, etc., from reaching the pump. Strainers shall be corrosion resistant with openings not more than one-eighth (1/8) inch in size providing a free flow area of at least four (4) times the area of pump suction line and shall be readily accessible for frequent cleaning. Strainers shall be maintained in a clean and sanitary condition at all times.

Section 4. Cleaning Systems. A vacuum cleaning system shall be provided. Vacuum fittings shall be mounted approximately twelve (12) inches below the lip of the gutter, flush with the pool walls, and shall be provided with plugs or covers which shall be in place at all times when the pool is not being vacuumed.

Section 5. Flow Indicating. A rate of flow indicator, reading in gallons per minute, shall be installed and located so that the rate of recirculation and backwash will be indicated. The indicator shall be capable of measuring flows from a few gallons

per minute up to at least one and one half (1-1/2) times the design flow rate.

Section 6. Pumps. Pumps shall be of adequate capacity to provide the required number of turnovers of swimming pool, spa pool, or wading pool water as specified in Section 5(1), Section 19(1), and Section 8(3) of this Chapter. The pump or pumps shall be capable of providing the flow adequate for the backwashing of filters.

Section 7. Heater. Pools equipped with heaters shall have a fixed thermometer mounted in the pool recirculation line downstream from the heater outlet. Thermometers mounted on heater outlets do not meet this requirement.

ARTICLE 6. FILTERS

Section 1. Rapid Sand Type Filters. Rapid sand filters shall meet the specifications prescribed in this section.

A. Design Rate: Rapid sand filters shall be designed for a filter rate not to exceed three (3) gallons per minute per square foot of bed area meeting the design rate of flow required by the prescribed turnover.

B. Pressure Gauges: The filter system shall be provided with influent and effluent pressure gauges to indicate the condition of the filters. Also, air-relief valves shall be provided at or near the high point of the filter or piping system.

C. Piping: The filter system shall be designed with necessary valves and piping which permit the following requirements:

(1) The system shall have filtering to the swimming pool.

(2) The system shall have 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) The system shall be able to be throttled to ensure that the backwash rate is not greatly exceeded.

(4) Rapid sand filters' backwash water must discharge to the sanitary sewer.

(5) Isolation of individual filters for repairs while other units are in service shall be required.

(6) The system shall be capable of complete drainage of all parts of the system.

(7) Necessary maintenance, operation and inspection shall be provided in a convenient manner.

D. Access: Each pressure type filter tank shall be provided with an access opening of not less than a standard eleven (11)-inch by fifteen (15)-inch manhole and cover.

E. Materials: On pressure type filters, the tank and its integral parts shall be constructed of substantial material capable of withstanding continuous anticipated usage.

Section 2. Hi-rate Sand Type Filters. Hi-rate sand type filters shall meet the specifications prescribed in this Section.

A. Rate: Hi-rate sand filters shall be designed for a filter rate not to exceed fifteen (15) 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. Installation: The filter tank and all components shall be installed in compliance with the manufacturers' recommendations.

C. Relief Valve: An air-relief valve shall be provided at or near the high point of the filter or piping system.

D. Pressure Gauges: The filter system shall be provided with influent and effluent pressure gauges as are required to indicate the condition of the filter.

E. Backwash: The filter system shall have individual backwashing of filters to waste at a rate of not less than fifteen (15) gallons per minute per square foot of surface area.

F. Piping: The pumping and piping arrangement shall be able to be throttled to ensure that the backwash rate is not greatly exceeded.

G. Discharge: Hi-rate sand filter backwash water must discharge to the sanitary sewer.

Section 3. Diatomaceous Earth Type Filters. All diatomaceous earth type filters, whether of the vacuum or pressure type, shall meet the design pump capacity as required by Article 5, Section 1, of this Chapter and the specifications prescribed in this Section.

A. Design Rate: The design rate of filtration shall not be greater than two (2) gallons per minute per square foot of effective filtering surface without continuous feed, and not greater than two and one half (2 1/2) gallons per minute per square foot with continuous feed.

B. Filter Area: Filtering area, where fabric is used, shall be determined on the basis of effective filtering surface, with no allowances for areas of impaired filtration, such as broad supports, folds, or portions which may bridge.

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

D. Pre-coating: A suitable pre-coating device, equipped with a water supply delivered through an approved air gap, shall be provided, and the filter shall be so designed and constructed, or provision made, to preclude the introduction of appreciable quantities of filter-aid into the pool during pre-coating operations.

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

septa, or elements which support the filter-aid, shall be of corrosion-resistant material. 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.

F. Maintenance: 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 to allow for proper maintenance.

G. Gauges: The filter system shall be provided with such pressure, vacuum, or compound gauges as are required to indicate the condition of the filter. In vacuum-type filter installations where the circulating pump is two (2) horsepower or higher, an adjustable high vacuum automatic shut-off shall be provided to prevent damage to the pump. Also, air-relief valves shall be provided at or near the high point of the piping system.

H. Cleaning: All filters shall be easily cleanable, and provision shall be made for completely and rapidly draining the filter.

I. Discharge: Diatomaceous earth filter backwash water must discharge to the sanitary sewer system through a separation tank. The separation tank must have a visible precautionary statement warning the user not to start up the filter pump without first opening the air release.

J. Monitoring: All types of filters must have a visible means of observing the discharge backwash water in order to determine if the filter cells are relatively clean.

ARTICLE 7. DISINFECTANT AND CHEMICAL FEEDERS

Section 1. General Requirements. The swimming pool shall be equipped with a chlorinator, hypochlorinator, brominator, or other disinfectant feeder or feeders which meet the following requirements:

(1) The feeder shall be of sturdy construction and materials which will withstand wear, corrosion, or attack by disinfectant solutions.

(2) The feeder shall be capable of supplying a sufficient amount of chlorine or bromine for adequate disinfection as required by Section 4(1) of this Chapter.

(3) The feeder shall have a graduated and clearly marked dosage adjustment to provide adequate disinfectant flow.

(4) 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.

Section 2. Chlorine Gas. When compressed chlorine gas is used, the following additional features shall be provided:

(1) The chlorine and chlorinating equipment shall be in a separate, enclosed well-ventilated area. Such area shall not be below ground level; and when tightly enclosed in a room, it shall be provided with vents near the floor which terminate at a suitable location out-of-doors and shall be so located as not to contaminate air inlets to any buildings or areas used by people.

(2) Forced air ventilation shall be provided which will give one complete air change per minute.

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

(4) 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 case of an emergency. Valve protection hoods shall be kept in place except when the cylinder is connected.

(5) 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.

(6) The chlorinator shall be a solution feed, capable of delivering chlorine at its maximum rate without releasing chlorine gas to the atmosphere.

(7) The chlorinator shall be designed to prevent the backflow of water into the chlorine solution container.

(8) A bottle of concentrated ammonium hydroxide (approximately 28 to 30 percent) shall be available for chlorine leak detection.

(9) A gas mask or self-contained breathing apparatus, approved for use in chlorine gas contaminated air, shall be provided and shall be located out of the area of possible contamination.

(10) Installation of chlorinator equipment, and the operation thereof, shall be carried out under the supervision of personnel experienced with installation and operation of such equipment.

(11) The Johnson County Environmental Department shall be notified immediately of any escape of chlorine gas.

Section 3. Other Method. Bactericidal agents, other than chlorine, and their feeding apparatus shall be acceptable if approved by the Director.

Hypochlorinators or other adjustable output rate chemical feeding equipment shall be capable of permanently and precisely feeding the required quantity of disinfecting agent to the pool water.

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

ARTICLE 8. WATER QUALITY TESTING EQUIPMENT FOR PUBLIC AND SEMI-PUBLIC SWIMMING POOLS

Section 1. Disinfectant. A disinfectant residual testing device shall be provided at each public swimming pool. Where chlorine is used as a disinfectant, an indicator capable of measuring residual chlorine in the pool water shall be graded between zero point one (0.1) parts per million and three point zero (3.0) parts per million. Where bromine is used as a disinfectant, an indicator capable of measuring residual bromine in the pool shall be graded between one point zero (1.0) parts per million and three point zero (3.0) parts per million.

Section 2. pH Measurement. A testing device for measuring the pH of pool water shall be provided at each public pool. The device shall have a minimum range from six point eight (6.8) to eight point four (8.4).

ARTICLE 9. EQUIPMENT AREAS

Section 1. Sheltering. Chlorinators, brominators, filters, pumps, and other electrical equipment shall be sheltered in a weather-proof enclosure.

Section 2. Drainage. Drainage in and around the enclosure shall be such as to preclude the possibility of water entering or accumulating on any interior surface of the enclosure.

Section 3. Access. A permanent means of access will be provided to all equipment areas. There will be adequate clearance between the walls, ceilings, and floor, and each piece of equipment, to allow for inspection, maintenance, and repair operations. The entrance to the equipment enclosure shall be kept locked.

Section 4. Ventilation. Natural or forced ventilation is recommended.

ARTICLE 10. DIVING AREAS

Section 1. Dimensions. The dimensions of the swimming pool in the diving area shall conform to the following table:

Height of Board		Minimum Water Depth At End of Board and 12 Feet Beyond		Minimum Pool Width At End of Board with 12 Feet Beyond	
Meters	Feet	Meters	Feet	Meters	Feet
0.0-1.0	0-3'3"	2.6	8'6"	6.1	20'0"
1.1-3.0	3'7"-9'10"	3.0	10'0"	9.1	30'0"
3.1 plus	10'1" or more	3.5	13'0"	9.1	30'0"

Section 2. Head Room. At least fifteen (15) feet (4.6 meters) free and unobstructed head room shall be provided above diving board.

Section 3. Spacing. Horizontal separation of at least ten (10) feet (3.0 meters), measured from the plummet line, shall be provided between adjacent diving boards, and diving boards and side walls.

ARTICLE 11. LIGHTING, VENTILATION AND ELECTRICAL REQUIREMENTS

Section 1. Lighting. Where underwater lighting is used, such lights shall be spaced to provide illumination so that all portions of the pool, including the bottom, may be readily seen without glare.

Area lighting shall provide at least zero point six (0.6) watts per square foot of deck area.

Section 2. Electrical Wiring. All electrical wiring shall conform with the National Electrical Code of the National Underwriters Laboratory and local ordinances and codes. No overhead electrical wiring shall pass within twenty (20) feet of the swimming pool enclosure.

Section 3. Ventilation. All indoor swimming pools, bathhouses, dressing rooms, shower rooms, and toilet spaces shall be adequately ventilated, either by natural or mechanical means.

ARTICLE 12. BATHER LOAD

Section 1. Capacity. For the purposes of computing user loading, those portions of the swimming pool five (5) feet or less in depth shall be designated as "non-swimmer" areas. Portions of the pool over five (5) feet in depth shall be designated as the "swimming" area.

In order to compute swimmer and non-swimmer capacity, swimming pool areas shall be determined as follows:

A. Non-swimmer: Fifteen (15) square feet of pool water surface area shall be provided for each non-swimmer expected at time of maximum load.

B. Swimmer: Twenty-four (24) square feet of pool water surface area shall be provided for each swimmer expected at time of maximum load.

C. Diving: Three hundred (300) square feet of pool water surface area shall be reserved around each diving board or diving platform, and this area shall not be included in computing the area of the swimming section.

ARTICLE 13. BATHHOUSES, TOILETS AND SHOWERS

Section 1. Requirement. Semi-public pools shall not be required to provide bathhouses, toilets, and showers. When these facilities are provided, they shall be in conformance with this section.

A. Partitions: Bathhouses to be used simultaneously by both sexes shall be divided into two parts separated by a tight partition, each designated for men or women. The entrances and exits shall be screened to break line of sight.

B. Floors: Floors of bathhouses shall be of smooth-finished material with non-slip surface, impervious to moisture, and sloped to drain. Junctions between walls and floors shall be sealed.

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

D. Facilities: Toilet and shower facilities shall be provided on the basis of the following fixture schedules:

	Males	Females
Water Closets	1/75	1/50
Urinals	1/75	-
Lavatories	1/100	1/100
Showers	1/50	1/50

Drinking Fountain - Minimum of one (1) to be located in swimming pool area.

ARTICLE 14. SAFETY REQUIREMENTS - LIFESAVING EQUIPMENT

Section 1. Lifeguard Area. Swimming pools operated primarily for unorganized use and having an area of more than 2,250 square feet of water surface area shall be provided with an elevated lifeguard platform or chair. In pools with 4,000 square feet or more of water surface area, additional elevated chairs or stations shall be provided, on the basis of one (1) for each additional 2,250 square feet, and located so as to provide a clear unobstructed view of the pool bottom in the areas under surveillance.

Section 2. Equipment. One unit of lifesaving equipment shall consist of the following: a ring buoy not more than fifteen (15) inches in diameter to which shall be attached a sixty (60)-foot length of three-sixteenth (3/16)-inch manila rope; a life pole or shepherd's crook type of pole having blunted ends with a minimum length of twelve (12) feet. Not less than one unit of equipment, as above, shall be provided at every public swimming pool and semi-public swimming pool. One unit shall be presumed to be adequate for 2,000 square feet of water surface area, and one additional unit shall be provided for each additional 2,000 square feet, or major fraction thereof, of water surface area.

Section 3. First Aid. Every public swimming pool shall be equipped with a standard twenty-four (24) unit first aid kit which shall be kept filled and available and ready for use.

Section 4. Location. Lifesaving equipment shall be mounted in conspicuous places, distributed around the swimming pool deck, at lifeguard chairs, or elsewhere, readily accessible, its function plainly marked, and kept in repair and ready condition. Bathers or others shall not be permitted to tamper with such equipment, use such equipment for any purpose other than its intended use, or remove such equipment from its established location.

Section 5. Warning Signs. Where no lifeguard service is provided, a warning sign shall be placed in plain view and shall state, "WARNING - NO LIFEGUARD ON DUTY," with clearly legible letters, at least four (4) inches high. In addition, the sign shall also state "CHILDREN SHOULD NOT USE POOL WITHOUT AN ADULT IN ATTENDANCE."

Section 6. Care Area. Where lifeguard service is a requirement, the swimming pool shall have a readily accessible area designated and equipped for emergency care.

ARTICLE 15. SUPERVISION OF SWIMMING POOLS

Section 1. Operator. Every swimming pool shall be operated under the close supervision of a licensed operator.

Section 2. Records. A written record shall be kept of all information pertinent to proper operation, maintenance, and sanitation of each pool and its equipment and appurtenances, and shall be recorded daily. This record shall include disinfectant residual in the pool water, pH and temperature of the pool water, quantities of chemical aid used, filter washing schedule, the cleaning and disinfecting schedule for pool decks and bathhouses, bather load, and such other information as may be required.

Section 3. Loads. Bather load standards shall be maintained at all times as necessary to insure adequate safety of bathers and suitable pool water quality.

Section 4. Maintenance. When a pool is not in use it shall be maintained in a sanitary condition in order to avoid stagnation and septic conditions developing. It is the responsibility of the pool owner to prevent unsightly or unsanitary conditions and/or noxious odors in the pool.

ARTICLE 16. SUPERVISION OF BATHERS

Section 1. Lifeguard. Where the lifeguard service is provided, the number of lifeguards shall be adequate to continuously maintain surveillance over the bathers. A lifeguard shall be on duty at all times when the public swimming pool is open to use by bathers. A lifeguard shall be in full charge of bathing and have authority to enforce all rules of safety and sanitation. When the swimming pool is not open for use, access to the pool shall be prohibited.

Section 2. Hygiene. The following personal regulations shall be enforced:

A. Showers: All persons using the swimming pool shall take a cleansing shower bath before entering the swimming pool. A bather leaving the pool to use the toilet shall take a second cleansing bath before returning to the swimming pool room.

B. Diseases: Any person having an infectious or communicable disease shall be excluded from a public swimming pool, semi-public swimming pool, spa pool, and public bathing place. Persons having any considerable area of exposed sub-epidermal tissue, open blisters, cuts, etc., shall be warned that these are likely to become infected and advised not to use the pool.

C. Conduct: No running, boisterous or rough play, except supervised water sports, shall be permitted in the pool, on the decks, diving boards, floats, platforms, or in dressing rooms, shower rooms, etc.

D. Notices: Suitable placards embodying the above personal regulations and instructions shall be conspicuously posted.

ARTICLE 17. PUBLIC SWIMMING POOLS - DRINKING WATER AND FOOD

Section 1. Drinking Water. Potable water shall be provided at pools where wet sanitary facilities are located at poolside. The water shall be obtained from a community, or non-community public water supply. An angle jet type drinking fountain or other acceptable drinking water facility shall be provided at such pools.

Section 2. Food or Drink. Food or drink is prohibited in the pool or on the wet pool deck area within four (4) feet of the pool curb. Food or drink service facilities shall not be located within twelve (12) feet of the inner edge of the pool deck.

ARTICLE 18. WADING POOL REQUIREMENTS

Section 1. General Requirements. Wading pools shall be made of concrete or other inert, non-toxic, impervious, permanent and enduring materials with a smooth slip-resistant finish.

These pools shall be of such shape and size as to be operated and maintained in a safe and sanitary manner. In addition to the requirements of this Section, compliance is required with all other applicable articles of this chapter.

Section 2. Depth. Wading pools shall have a maximum depth of two (2) feet, and the operating water level shall be at the same elevation as the operating water level of other pools on the same recirculation system. The pool floor shall slope to the main drain and the slope shall not exceed one (1) foot in twelve (12) feet.

Section 3. Recirculation. Wading pools shall have a minimum of one (1) turnover every two (2) hours. Unless a separate recirculation system is provided for the wading pool, the main pool recirculation system shall be designed for the additional flow. All recirculation piping to and from the wading pool shall be valved. Rate of flow indicators shall be installed on wading pool return lines.

Section 4. Skimmers. Surface skimmers may be used in lieu of perimeter overflow gutters on wading pools. The minimum number of surface skimmers required shall be designed for a total capacity of at least 80% of the required filter flow of the recirculation system. The resultant number of skimmers shall be equally spaced around the pool perimeter.

Section 5. Drainage. All wading pools shall have drainage to waste disposal system (without a cross-connection) through a quick opening valve to facilitate emptying the wading pool should accidental bowel or other discharge occur.

Section 6. Vacuuming. All wading pools shall have provisions for vacuuming.

Section 7. Deck. Wading pools shall have a minimum five (5)-foot wide deck around their perimeters. An adjacent swimming pool deck may be included as part of the wading pool deck. The deck of a wading pool shall slope a minimum of one-fourth (1/4) inch to three-eighths (3/8) inch per foot away from the pool to drainage or to deck drains.

ARTICLE 19. SPA POOLS

Section 1. General Requirements. Spa pools shall be subjected to the same design and operation criteria which apply to public swimming pools with the following additional provisions:

(1) Recirculation equipment should provide a turnover rate for the entire water capacity at least once every 30 minutes.

(2) Maximum water depth shall not exceed four (4) feet.

(3) Surface skimmers required shall be based on one (1) skimmer for each one hundred (100) feet of water surface area. Skimmers shall be equally spaced around the perimeter of the spa.

(4) A main drain outlet shall be provided in the deepest part of the spa pool.

(5) Deck surfaces shall be slip-resistant. Wooden decks are prohibited.

(6) The maximum depth of any seat or sitting bench shall be two (2) feet measured from the water line.

(7) Depth markings shall be placed on the deck edge.

(8) There shall be at least one (1) ladder, recessed steps, or a stairway for each fifty (50) feet of spa pool perimeter. Handrails must be provided on steps or stairways.

(9) The recirculation system shall be a two (2)-pump system. One pump will provide the required turnover rate, filtration, and disinfection for the spa water.

The second pump shall provide the water for the hydrotherapy turbulence of the water. The second pump shall operate on a timer which will not exceed fifteen (15) minutes.

Spa pool recirculation systems shall be separate from companion swimming pools.

(10) Temperature should not exceed 104 degrees Fahrenheit.

Section 2. Maintenance. Spa pools shall be drained, cleaned and superchlorinated routinely.

Section 3. Hygiene. No person suffering from a communicable disease transmissible via water shall use the spa pool.

Section 4. Supervision. All children under fourteen (14) years of age shall be accompanied by a responsible adult observer.

ARTICLE 20. PUBLIC BATHING PLACES

Section 1. Permit Required. Approval for the development of a public bathing place and a permit to operate a public bathing place shall be obtained from the Johnson County Environmental Department.

Section 2. Sanitary Conditions. The bathing area shall be free of sludge deposits, solid refuse, floating waste solids, oils, grease, scum, and any other physical or chemical hazards that may be dangerous to the health and welfare of the bather.

Section 3. Water Quality. The fecal coliform content of the water shall not exceed a geometric mean of 200 colonies per 100 mL. The calculation shall be based on not less than five (5) samples taken during five (5) separate 24-hour periods, during not more than a 30-day period.

Section 4. Safety. The wading, swimming, and diving areas shall be separated by lines securely anchored and buoyed. Within these bathing areas there shall be no boating, underwater obstructions, or other hazards which may be dangerous or injurious to swimmers. Signs shall be provided on the beach describing such markers and stating that they indicate the limits of safe bathing.

Section 5. Diving Area. The design and layout of the diving facilities and associated depths shall be in accordance with Article 10 of this Chapter.

Section 6. Facilities. Bather preparation facilities shall be provided unless the public bathing place is intended to serve a residential development located around the lake. Bathhouses shall be designed in accordance with the requirements of Article 13 of this Chapter. The bathhouse shall be kept clean and free of debris at all times.

Section 7. Other Requirements. The standards for supervision, lifesaving equipment, and first aid equipment, outlined in Article 14 through 16 of this Chapter shall be applied to public bathing places.