CABINET FOR HEALTH AND FAMILY SERVICES
Department for Public Health
Division of Public Health Protection and Safety
(Amended After Comments)

902 KAR 10:190. Splash pads operated by local governments.

RELATES TO: KRS 13A.010, Chapter 13B, 211.015, 211.180
STATUTORY AUTHORITY: KRS 194A.050(1), 211.205
NECESSITY, FUNCTION, AND CONFORMITY: KRS 194A.050(1) requires the secretary of the Cabinet for Health and Family Services to promulgate administrative regulations necessary to protect, develop, and maintain the health, personal dignity, integrity, and sufficiency of Kentucky citizens and to operate programs and fulfill the responsibilities vested in the cabinet. KRS 211.205 requires the cabinet to promulgate an administrative regulation to set the standards for the operation and maintenance of splash pads operated by local governments. This administrative regulation establishes the procedures for splash pads.

Section 1. Definitions.

(1) "Accessible" means, if applied to a fixture, connection, appliance or equipment, having access to it, but may require the removal of an access panel, door or similar obstruction.
(2) "Agitation" means the mechanical or manual movement to dislodge the filter aid and dirt from the filter element.
(3) "Air gap" means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water or waste to a tank, plumbing fixture, receptor or other device, and the flood level rim of the receptacle.
(4) "Alkalinity" or "total alkalinity" means the amount of carbonates or bicarbonate present in water solution as expressed in parts per million (ppm).
(5) "Approved" means that which is acceptable to the cabinet.
(6) "Backwash" means the flow of water through the filter element or media in the reverse direction sufficient to dislodge the accumulated dirt and filter aid and remove them from the filter tank.
(7) "Backwash cycle" means the time required to backwash the filter system thoroughly.
(8) "Backwash rate" means the rate of application of water through a filter during the backwash cycle expressed in gallons per minute per square foot of effective filter area.
(9) "Cabinet" is defined by KRS 211.015(1)(a).
(10) "Cartridge filter" means a filter that utilizes a porous cartridge as its filter media.
(11) "Diatomaceous earth (DE) filter" means a filter that utilizes a thin layer of diatomaceous earth as its filter media that must be periodically replaced.
(12) "Disinfectant" means an approved chemical compound designed for the destruction of pathogenic organisms in bathing facilities and includes chlorine and bromine.
(13) "Equalizer line" means the connection from the skimmer housing to the holding tank below the weir box, which is sized to satisfy pump demand and prevent air lock or loss of prime, and contains a float valve assembly and pop-up valve.
(14) "Facility operator" means a person or employee of that person who is responsible for the proper operation and maintenance of the facility.
(15) "Filter" means a device that separates solid particles from water by recirculating it through a porous substance.
(16) "Filter aid" means an enhancement to the efficiency of the filter media.
(17) "Filter cycle" means the operating time between cleaning or replacing the filter media or backwash cycles.

(18) "Filter element" means a device within a filter tank designed to entrap solids and conduct water to a manifold, collection header, pipe, or similar conduit.
(19) "Filtration rate" means the rate of water flow through a filter while in operation.
(20) "Float valve assembly" means a mechanism designed to disengage the skimmer in order to prevent air from entering the pump if the water level drops below the skimmer level.
(21) "Flow meter" means a device that measures the flow of water through piping.
(22) "Head loss" means the total pressure drop between the inlet and the outlet of a component.
(23) "Holding tank" means a storage vessel to retain water for a spray pad recirculation system.
(24) "Inlet" means a fitting or fixture through which filtered water returns to a pool or spa.
(25) "Local government" is defined by KRS 13A.010(11).
(26) "Main outlet" means an outlet fitting at the horizontal bottom of a pool through which water passes to a recirculating pump. It is often referred to as a "main drain."
(27) "Perlite filter" means a filter that utilizes a thin layer of perlite as its filter media deposited on a septum that must be periodically replaced.
(28) "Pop-up valve" means a mechanism located under the float valve assembly that opens to allow water to reach the pump when the float valve is activated.
(29) "Precoat" means the process of depositing a layer of diatomaceous earth or perlite on the filter element at the start of a filter cycle.
(30) "Readily accessible" means direct access without the necessity of removing any panel, door, or similar obstruction.
(31) "Septum" means that part of the filter element consisting of cloth, or closely woven fabric or other porous material on which the filter cake is deposited.
(32) "Skimmer" means a device designed to continuously remove surface film and water and return it through the filter.
(33) "Splash pad" is defined by KRS 211.205(1).
(34) "Strainer" means a device used to remove hair, lint, leaves, or other coarse material on the suction side of a pump.
(35) "Suction piping" means the portion of the circulation piping located between the facility structure and the inlet side of a pump.
(36) "Superchlorinate" means the addition to facility water of an amount of chlorine sufficient to produce a free available chlorine that is at least equal to ten (10) times the amount of combined chlorine plus the required minimum level of free available chlorine in order to oxidize the ammonia and nitrogenous materials which may be dissolved in the facility water.
(37) "Total discharge head" means the amount of water that a pump will raise water above its center line.
(38) "Total dynamic head" means the arithmetical difference between the total discharge head and total suction head (a vacuum reading is considered as a negative pressure). This value is used to develop the published performance curve.
(39) "Total residual chlorine" means the arithmetical sum of free available chlorine and combined chlorine, and is composed of the following components:
(a) Free available chlorine, which is the amount of chlorine available to inactivate microorganisms and that has not reacted with ammonia, nitrogenous material, and other contaminants in swimming pool water; and
(b) Combined chlorine (also called "chloramine"), which is the amount of chlorine that has reacted and combined with ammonia and other nitrogenous material to form chloro-ammonia compounds.
(40) "Total suction head" means the amount of water that a pump will lift by suction.

(41) "Turnover rate" means the time in hours or minutes, required for the circulation system to filter and recirculate a volume of water equal to the facility volume.

(42) "Weir box" means an overflow system placed at normal operating water surface level to remove surface debris.

Section 2. Submission of Plans and Specifications for Approval.

(1) A local government shall not construct, alter, or reconstruct a splash pad until approval of detailed plans and specifications, with supporting design data as required in this administrative regulation, is granted in writing by the state or local agency having jurisdiction.

(2) The original plans and five (5) copies shall be submitted to the local health department with payment pursuant to 902 KAR 10:121.

(3) The front page of the plans submitted for review and approval shall contain the:

(a) Location by city and county;

(b) Name and contact information for the facility operator;

(c) Name of the installer; and

(d) Name of the engineer, landscape architect, or architect.

(4) Plans submitted by an engineer or architect shall bear that individual's official seal.

(5) Plans and specifications for splash pads constructed by a local government shall be prepared by an engineer, landscape architect, or architect registered in the State of Kentucky.

(6) The plans shall be:

(a) Drawn to scale;

(b) Accompanied by proper specifications to permit a comprehensive review of the plans including the piping and hydraulic details; and

(c) Include:

1. A site plan of the general area with a plan and sectional view of the facility complex with all necessary dimensions;

2. A piping diagram showing all appurtenances including treatment facilities in sufficient detail, as well as pertinent elevation data, to permit a hydraulic analysis of the system;

3. The specifications on all treatment equipment, including performance ranges of pumps, disinfecting equipment, chemical feeders, filters, strainers, lights, skimmers, suction outlets or return inlets, safety equipment, and other related equipment; and

4. Drawing of equipment room showing placement of equipment, as applicable.

(7) One (1) set of approved plans shall be kept at the job site and available for inspection.

(8) Upon completion of the construction of the recirculation piping system, and prior to such piping being covered and air pressure tested at ten (10) pounds per square inch of pressure for fifteen (15) minutes, the facility operator or builder shall contact the cabinet for inspection.

(9) Upon completion of construction, a notarized statement certifying the splash pad was constructed in accordance with the approved plans and this administrative regulation shall be submitted by the local government to the cabinet.

(10) The splash pad shall not be used before receiving a final inspection and written approval from the cabinet.

(11) Unless construction is begun within one (1) year from the date of approval, the approval shall expire. Extension of approval may be considered upon written request to the cabinet.

(12) No change in location, construction, design, materials, or equipment shall be made to approved plans or the splash pad without the written approval of the cabinet.

Section 3. Water Supplies.

(1) Potable water from an approved municipal water system or water district shall be supplied to all splash pad features. If these supplies are not available, a potable water supply meeting the approval of the Energy and Environment Cabinet shall be provided.

(2) The water supply shall be capable of providing sufficient quantities of water under pressure to all splash pad fixtures and equipment at the facility.

Section 4. Sewage and Wastewater Disposal.

(1) Sewage or wastewater generated from the operation of a splash pad shall discharge to a public sanitary sewer.

(2) If a public sanitary sewer is not available, sewage or wastewater shall be discharged to a system which complies with 902 KAR 10:085.

(3) Outdoor deck or surface area drainage water may be discharged directly to storm sewers, natural drainage areas, or to the ground surface without additional treatment. Such drainage shall not result in nuisance conditions that create an offensive odor, a stagnant wet area, or an environment for the breeding of insects.

(4) Filter backwash shall be discharged to public sanitary sewers, or if unavailable to a system approved by the cabinet.

Section 5. Refuse Disposal.

(1) All refuse at a splash pad shall be disposed of in a manner approved by the Energy and Environment Cabinet.

(2) An adequate number of refuse containers shall be provided at readily accessible locations at all splash pads.

Section 6. Facility Design and Construction. All splash pads and attendant structures, as applicable, shall meet the design, materials, fixture, and construction requirements of the State Building Code.

Section 7. Facility Water Treatment Systems.

(1)

(a) A recirculation system, consisting of a holding tank, pumps, piping, filters, water conditioning, disinfection equipment, skimmers, and other accessory equipment shall be provided to clarify, chemically balance, and disinfect the water for all recirculating splash pads;

(b) All system components, including piping, shall bear the NSF International (NSF) potable water (NSF-pw) mark; and

(c) Pumps greater than seven and five-tenths (7.5) horse power that are not required to meet NSF testing standards shall be considered on a case-by-case basis.

(2) Holding tanks.

(a) Holding tanks shall be sized at a minimum of five times the manufacturer's requirement for each feature at maximum flow plus the volume of water contained within the recirculation system piping and the drain pipe from the splash pad back to the holding tank.

(b) Holding tanks shall be equipped with an inspection hatch meeting Occupational Safety and Health Administration requirements.

(c) Holding tanks shall be kept locked and inaccessible to the public.

(3) Pumping equipment.

(a) The recirculation pump and motor shall deliver the flow necessary to obtain a thirty (30) minute turnover rate.

(b) The pump shall be of sufficient capacity to provide a minimum backwash rate of fifteen (15) gallons per square foot of filter area per minute in sand filter systems.

(c) The pump or pumps shall supply the required recirculation rate of flow to obtain the turnover rate required at a total dynamic head of at least:

1. Fifty (50) feet for all vacuum filters;

2. Seventy (70) feet for pressure sand or cartridge filters; or

3. Eighty (80) feet for pressure diatomaceous earth filters and perlite filters.

(d) If the pump is located at an elevation higher than the facility water line, it shall be self-priming.

(e) If vacuum filters are used, a vacuum limit control shall be provided on the pump suction line. The vacuum limit switch shall be set for a maximum vacuum of eighteen (18) inches of mercury.

(f) A compound vacuum-pressure gauge or vacuum gauge shall be installed on the suction side of the pump.

(g) A pressure gauge shall be installed on the pump discharge line adjacent to the pump.

(h) The manufacturer's pump curve shall be laminated and posted above the recirculation system pump.

(i) Valves shall be installed to allow the flow to be shut off during cleaning, switching baskets, or inspection of hair and lint strainers.

(j) A hair or lint strainer with openings no more than one-eighth (1/8) inch is required except for pumps that are used with vacuum filter systems.

(4) Water heaters shall be installed at all indoor splash pads, and shall comply with the following:

(a) A water heater piping system shall be equipped with a bypass. A valve shall be provided at the bypass and on the influent and effluent heater piping. The influent and effluent heater piping shall be metallic and installed in accordance with heater manufacturer's recommendations;

(b) A heating coil, pipe, or steam hose shall not be installed in any swimming and bathing facility;

(c) At least one (1) break proof thermometer shall be:

1. Provided in the piping to check the temperature of the water returning from the facility and the temperature of the blended water returning to the facility;

2. Located in a conspicuous location; and

3. Securely mounted to prevent tampering;

(d) Heaters for indoor splash pads shall be capable of maintaining an overall water temperature between seventy-six (76) degrees Fahrenheit and eighty-four (84) degrees Fahrenheit;

(e) An automatic temperature limiting device with thermostatic control that prevents the introduction of water in excess of 100 degrees Fahrenheit to all splash pad features shall be provided, and be accessible only to the facility operator;

(f) A pressure relief valve shall be provided and shall be piped to within six (6) inches of the floor;

(g) Venting of gas or other fuel burning water heaters shall be provided in accordance with the State Building Code;

(h) Combustion and ventilation air shall be provided for fuel burning water heaters in accordance with manufacturer recommendations or the State Building Code;

(i) Heaters for indoor spray pads shall be sized on a basis of 150 British Thermal Units per hour input per square foot of pool water surface area; and

(j) All heaters shall be NSF or UL listed.

(5) A flow meter, if provided, shall be:

(a) Located so that the rate of recirculation may be easily read;

(b) Installed on a straight length of pipe at a distance of at least ten (10) pipe diameters downstream, and five (5) pipe diameters upstream from any valve, elbow, or other source of turbulence except for those specifically designed without distance requirements; and

(c) Installed on each recirculation system, spray pad feature, any other type of spray feature, and on multiple filtration units.

(6) Vacuum cleaning system shall be:

(a) Provided on all recirculating splash pad holding tanks; and

(b) Capable of reaching all parts of the bottom of the holding tank.

(7) Piping, skimmer, and overflow system.

(a) Piping shall comply with the material specifications listed in the Kentucky State Plumbing Code for potable water.

(b) All piping, valves, and fittings shall be color coded, suitably labeled, or marked to denote its purpose within the facility water treatment system.

(c) The piping shall be designed to carry the required quantities of water at velocities not exceeding five (5) feet per second in suction piping, and ten (10) feet per second in pressure piping.

(d) Gravity piping shall be sized so that the head loss in piping, fittings, and valves does not exceed the difference in water levels between the facility and the maximum operating level in the holding tank.

(e) The following waste lines shall be provided with six (6) inch air gaps at their points of discharge to the waste pump or sewer:

1. Main outlet bypass or other connections to waste;
2. Holding tank drain and overflow lines; and
3. Pump discharge to waste lines.

(8) Inlets.

(a) Each inlet shall be directionally adjustable.

(b) The velocity of flow through any inlet orifice shall be in the range of five (5) to twenty (20) feet per second, except in facilities equipped with skimmers, which shall be in the range of ten (10) to twenty (20) feet per second.

(c) Inlets shall be located and directed to produce uniform circulation of water to facilitate the maintenance of a uniform disinfectant residual throughout the entire holding tank without the existence of dead spots.

(d) Inlets shall be placed completely around the holding tank with each serving a linear distance of not more than fifteen (15) feet on center. The pipe serving the inlets shall form a loop completely around the holding tank.

(e) A minimum of two (2) inlets is required on all holding tanks regardless of size.

(9) Outlets.

(a) Main suction piping shall be sized for removal of the water through it at a rate of at least 100 percent of the design recirculation flow rate at velocities specified in subsection (7)(c) of this section. It shall function as a part of the recirculation system. The piping system shall be valved to permit adjustment of flow through it.

(b) At least one (1) skimmer shall be provided for all holding tanks with a minimum of two (2) skimmers provided, except for holding tanks with a water surface area of 144 square feet or less where a minimum of one (1) skimmer shall be required.

(c) Skimmers shall be located to minimize interference with each other.

(d) The rate of flow per skimmer shall not be less than thirty (30) gallons per minute, and all skimmers shall be capable of handling at least eighty (80) percent of required flow rate.

(e) Surface skimmer piping shall have a separate valve in the equipment room to permit adjustment of flow.

(f) Skimmers equipped with an equalizer line shall be sized at least one and one-half (1 1/2) inches in diameter, located at least one (1) foot below the lowest overflow level of the skimmer, and provided with a self-closing valve and cover.

(g) A basket that can be removed without the use of tools and through which all overflow water must pass.

(10) All recirculated splash pads shall be equipped for the addition of make-up water from a potable water source that discharges through:

(a) An air gap of at least six (6) inches; and

(b) Piping with vacuum breaker, antisiphon, or other protection as specified by the State Plumbing Code.

(11) Filtration.

(a) Filters shall comply with the following:

1. Pressure filters shall have:

a. Pressure gauges;

b. An observable free fall or a sight glass installed on the backwash discharge line; and

c. A manual air-relief valve at the high point;

2. The filter backwash disposal facility shall have sufficient capacity to prevent flooding during the backwash cycle;

3. All filters shall be designed so that they can be completely drained. Filters shall be drained through a six (6) inch air gap to a pump or sanitary sewer; and

4. Filter media shall be listed as NSF approved.

(b) Each facility shall have separate filtration and treatment systems.

(c) Filter equipment and treatment systems shall operate continuously twenty-four (24) hours per day except if the facility is closed for repairs or at the end of the swimming season.

(d) Rapid sand or gravity sand filters shall be designed for a filter rate not to exceed three (3) gallons per minute per square foot of bed area at time of maximum head loss with sufficient area to meet the design rate of flow required by the prescribed turnover.

(e) At least eighteen (18) inches of freeboard shall be provided between the upper surface of the filter media and the lowest portion of the pipes or drains that serve as overflows during backwashing.

(f) High rate sand filters. The design filtration rate shall be a minimum of five (5) gallons per minute per square foot of filter area. The maximum design filtration rate shall be the lesser of fifteen (15) gallons per minute per square foot of filter area or seventy-five (75) percent of the NSF listed filtration rate. The backwash rate shall be fifteen (15) gallons per minute per square foot of filter area.

(g) Diatomaceous earth filters.

1. The design filtration rate shall not exceed one and one-half (1 1/2) gallons per minute per square foot of filter area on diatomaceous earth filters, except that the rate of filtration may be increased to two (2) gallons per minute per square foot of filter area if continuous feeding of diatomaceous earth is employed;

2. A precoat pot shall be provided on the pump suction line for pressure diatomaceous earth systems. All diatomaceous earth filter systems shall have piping arranged to allow recycling of the filter effluent during precoating;

3. If equipment is provided for the continuous feeding of diatomaceous earth to the filter influent, the equipment shall have a capacity to feed at least one and one-half (1 1/2) ounces of this material per square foot of filter area per day;

4. Overflow piping on vacuum diatomaceous earth filters shall be provided on the filter tank to discharge overflow water;

5. All filters shall be equipped for cleaning by one (1) or more of the following methods:

a. Backwashing;

b. Air-pump assist backwashing;

c. Spray wash;

d. Water pressure to wash vacuum filter; or

e. Agitation; and

6. Perlite may be used in filters listed by NSF for perlite, but it may not be substituted for diatomaceous earth without NSF listing.

(h) Vacuum sand filters.

1. The design filtration rate shall be seventy-five (75) percent of that listed by NSF or fifteen (15) gallons per minute whichever is lesser. The backwash rate shall be at fifteen (15) gallons per minute per square foot of filter area; and

2. Overflow piping shall be provided in order to drain overflow water.

(i) Cartridge filters.

1. Cartridge filters shall only be used on indoor splash pads;

2. The design filtration rate shall not exceed fifteen hundredths (0.15) gallons per minute per square foot of filter surface area; and

3. A clean duplicate set of cartridges shall be maintained at the facility.

(12) Disinfectant and chemical feeders.

(a) The minimum chemical feed equipment required at any facility shall include a unit for feed of a disinfectant and a unit for feed of a chemical for pH control, except as stated in paragraph (d) of this subsection.

(b) Equipment capacity.

1. Equipment for supplying chlorine or compounds of chlorine shall be of sufficient capacity to feed the chlorine at a rate of:

a. Eight (8) ppm or two and seven-tenths (2.7) pounds per day chlorine for each 10,000 gallons of holding tank volume for outdoor facilities; or

b. Three (3) ppm or one (1) pound per day for chlorine for each 10,000 gallons of holding tank volume for indoor facilities based on the flow rate specified in subsection (3)(c) of this section.

2. The equipment for supplying chlorine shall not be controlled by an automatic day-date clock.

3. The injection point for chlorine shall be placed on the discharge side of the pump and downstream of the flow meter.

4. Pot feeders for supplying bromochlorodimethylhydantoin sticks shall contain at least five tenths (0.5) a pound of bromochlorodimethylhydantoin per thousand gallons of facility capacity, or fraction thereof. The feeder shall have a method of feed rate adjustment.

5. Supplemental NSF listed ultraviolet (UV) light disinfection systems shall be provided on all splash pads with a recirculating water system. UV systems should be installed on a bypass line and shall be equipped with a flow indicator.

(c) If positive displacement pumps (hypochlorinators) are used to inject the disinfectant solution into the recirculation line, they shall be of variable flow type and shall be of sufficient capacity to feed the amount of disinfectant required by paragraph (b)1 of this subsection. If calcium hypochlorite is used, the concentration of calcium hypochlorite in the solution shall not exceed five (5) percent. The solution container shall have a minimum capacity equal to the volume of solution required per day at the feed rate required in paragraph (b)1 of this subsection.

(d) pH control feeders. All facilities shall install a chemical feeder of positive displacement type for the purpose of applying chemicals to maintain pH of facility water within the range of seven and two-tenths (7.2) to seven and eight-tenths (7.8). A solution tank of adequate capacity shall be provided.

(13)

(a) Testing equipment shall be provided at all recirculating splash pads, maintained with fresh reagents, and consist of a DPD (Diethyl-P-Phenylene-Diamine) colorimetric test kit used to determine free disinfectant residual, combined disinfectant residual, total alkalinity, and pH of the facility water. Test kits using orthotolidine reagents are not acceptable;

(b) Chlorine standards shall range from one-tenth (0.1) to five (5.0) ppm;
(c) pH standards shall range from six and eight-tenths (6.8) to eight and four-tenths (8.4);
(d) Both tests shall be accurate to within two-tenths (0.2) units; and
(e) Facilities using cyanurates for stabilization shall have a test kit to measure the cyanuric acid concentration. The cyanuric acid test kit shall permit readings up to 100 ppm.

Section 8. Operational Water Quality Standards.
(1) Disinfectant residuals for holding tanks:
(a) Chlorine residual shall be maintained between one (1.0) and five (5.0) ppm as free available chlorine.
(b) Bromine residual shall be maintained between two (2.0) and six (6.0) ppm as free available disinfectant.
(c) Holding tanks stabilized with cyanuric acid shall meet the following criteria:
1. Be an outdoor facility;
2. Maintain one and five-tenths (1.5) to five (5.0) ppm free available chlorine residual; and
3. Cyanuric acid concentration not to exceed fifty (50) ppm.
(d) If the presence of chloramines is determined, superchlorination is required, and the chloramine level shall not exceed two-tenths (0.2) ppm.
(2) The pH of the facility water shall be maintained in a range of seven and two-tenths (7.2) to seven and eight-tenths (7.8). For corrosive water supplies, the alkalinity level shall be suitably adjusted to allow maintenance of the pH level.
(3) Turbidity. Facility water shall have sufficient clarity at all times so that the bottom of the holding tank is clearly visible by an observer on the deck.
(4) Total alkalinity. The alkalinity of the facility water shall not be less than fifty (50) nor more than 180 ppm, as determined by suitable test kits.
(5) The air temperature at an indoor facility shall be higher than the water temperature.
(6) The facility operator shall perform tests for each of the above water quality characteristics before opening and during all hours of operation based on the frequency schedule listed below, and record all test results on a daily operational log sheet:
(a) Disinfectant residual, temperature, and pH shall be checked at least three (3) times daily with a greater frequency if usage or climatic conditions warrant.
(b) Turbidity shall be checked daily, or more often as needed.
(c) Alkalinity, cyanuric acid (if used) shall be checked weekly, or more often as needed.

Section 9. General Facility Operation and Maintenance.
(1) Operator. A facility operator shall be responsible for the operation and maintenance of all splash pads. The operator shall be available at all times when the facility is open for use.
(2) Facility and facility area.
(a) All facilities shall be maintained free from sediment and debris, and be maintained in good repair;
(b) Decks shall be kept clean. Indoor decks shall be disinfected at least weekly. All areas of the facility shall be kept in good repair, clean, and sanitary; and
(c) Management of each facility shall adopt rules for controlling of food, drink, and smoking in the facility and surrounding areas.
(3) Automatic surface skimmers shall be clean and free of leaves or other debris. The strainer baskets for skimmers shall be cleaned daily. The flow through each skimmer shall be adjusted as often as necessary to maintain a vigorous skimming action. The facility water shall be maintained at an elevation so that effective surface skimming is

accomplished. The flow returning from the facility shall be balanced or valved so that the majority of flow is returned through the skimmer system.

(4) Inlet fittings. Inlets shall be checked frequently to insure that the rate of flow through each inlet is correct so that a uniform distribution pattern is established.

(5) Bather preparation facilities, if provided, shall meet the following:

(a) The floors of dressing rooms, shower stalls, and other interior rooms shall be cleaned and disinfected daily;

(b) Toilet rooms and fixtures shall be kept clean, free of dirt and debris, and in good repair;

(c) Floors shall be maintained in a nonslip condition;

(d) Soap dispensers shall be filled and operable; and

(e) Adequate supplies of toilet tissue, disposable hand drying towels, or suitable hand drying devices shall be maintained.

(6) Street attire. Shoes of any kind, including water shoes, shall not be worn on the facility decks or wet areas of the bather preparation facilities, except for those persons engaged in official duties.

(7) Electrical systems. Repairs to any electrical system shall be made by an electrician. All repairs shall be in accordance with the National Electrical Code and shall be approved by a certified electrical inspector.

(8) Operation of mechanical equipment.

(a) Manufacturers' instructions for operation and maintenance of mechanical and electrical equipment, as well as pump performance curves, shall be kept available at the facility;

(b) Pumps, filters, disinfectant feeders, pH controls, flow indicators, gauges, and all related components of the facility water recirculation system shall be kept in continuous operation twenty-four (24) hours a day; and

(c) Recirculation pumps. The pump shall not be throttled on the suction side (except the bottom drain line valve) during normal operation, and shall be kept in good repair and condition. The flow control valve on the discharge side shall be adjusted as necessary to maintain the design flow rate.

(9) Filtration.

(a) Sand filters.

1. The filter air release valve shall be opened as necessary, to remove air which collects in the filter, and following each backwash; and

2. The filter shall be backwashed if the design flow rate can no longer be achieved, or as specified by the filter manufacturer, whichever occurs first.

(b) Diatomaceous earth filters.

1. The dosage of diatomaceous earth precoat shall be at least one and one-half (1 1/2) ounces per square foot of element surface area. Pressure diatomaceous earth filters shall be backwashed if the design flow rate can no longer be achieved or as specified by the filter manufacturer, whichever occurs first. If the recirculation pump stops or is shut off, the filter shall be thoroughly backwashed and the elements shall be precoated before placing the pump back into operation. Vacuum diatomaceous earth filters shall be washed if the design flow rate can no longer be achieved or as specified by the filter manufacturer, whichever occurs first;

2. Following the precoating operation, the initial filter effluent shall be either recirculated through the filter until the filter effluent is clear, or the initial filter effluent shall be discharged to waste until properly clarified water is produced; and

3. If continuous diatomaceous earth feed is required (filter loading rate exceeds one and five-tenths (1.5) gallons per minute per square foot of filter surface area), it shall be applied at a rate of one-half (1/2) to one and one-half (1 1/2) ounces per square foot of surface area per day, or as needed to extend filter cycles.

(10) Hair and lint strainers. Hair and lint strainers shall be cleaned to prevent clogging of the suction line and cavitation. The pump shall be stopped before the strainer is opened. In all cases, the hair strainer basket shall be cleaned during the time the filter is being backwashed.
(11) Flow meters. Flow meters, if used, shall be maintained in an accurate operating condition and readily accessible. The glass and the connecting tubes shall be kept clean.
(12) Vacuum and pressure gauges. The lines leading to the gauges shall be bled occasionally to prevent blockage.
(13) Positive displacement feeders.
(a) Positive displacement feeders shall be periodically inspected and serviced;
(b) To minimize sludge accumulation in the unit, the lowest practicable concentration of solution shall be used. If liquid chlorine solution is used, the dilution with water is not critical to the operation of the unit; and
(c) Sludge accumulations shall be cleaned periodically from the unit.
(14) Chlorinated cyanurates. The use of chlorinated cyanurates is prohibited.
(15) pH adjustment.
(a) Soda ash or caustic soda may be used to raise the facility water pH;
(b) Caustic soda shall only be used in accordance with the manufacturer's instructions. If caustic soda is intended for use, the cabinet shall be notified in writing. Protective equipment and clothing, including rubber gloves and goggles, shall be available for the handling and use of this chemical;
(c) Sodium bisulfate or muriatic acid may be used to lower water pH;
(d) Hydrochloric (muriatic) acid may only be used with proper supervision and care. Protective equipment and clothing, including rubber gloves and goggles, shall be available for handling this chemical; and
(e) The cabinet shall be consulted in the event of unusual pH problems including corrosion or scaling or wide fluctuations in pH.
(16) Algae control.
(a) The development of algae shall be eliminated by superchlorinating. The facility shall not be open for use during this treatment. If superchlorination fails to eliminate the algae, the cabinet shall be consulted for further advice.
(b) Treated algae which cling to the bottom and sides of the facility shall be brushed loose, and removed by the suction cleaner and filtration system.
(17) Miscellaneous chemicals.
(a) Chemicals other than approved disinfectants shall be used only with the advice and under the supervision of the cabinet;
(b) Chemicals shall be kept covered and stored in the original container, away from flammables and heat, in a clean, dry, and well-ventilated place that prevents unauthorized access to the chemicals;
(c) The chemicals used in controlling the quality of water shall be used only in accordance with the manufacturer's instructions; and
(d) If polyphosphates are used for sequestering iron, the concentration of polyphosphates shall not exceed ten (10) ppm.
(18) Equipment rooms.
(a) Equipment necessary for splash pad operation shall be housed in a lighted, ventilated room that affords protection from the weather, prevents unauthorized access, has ceilings of at least seven (7) feet in height, and is of sufficient size for operation and inspection;
(b) The equipment room floor shall slope toward drains and shall have a nonslip finish;
(c) A hose bib with a vacuum breaker shall be installed in the equipment room;
(d) Suitable space, if not provided in the equipment room, shall be provided for storage of chemicals, tools, equipment, supplies, and records where they can be acquired by

the facility operator without leaving the premises. The storage space shall be dry and protected from unauthorized access; and

(e) The equipment room and all other storage areas shall be maintained in a clean, uncluttered condition, and shall not be used for storage of materials not essential to operation and maintenance of the facility.

Section 10. Facility Records.

(1) The operator of each facility shall keep a daily record of information regarding operation including disinfectant residuals, pH, maintenance procedures, and recirculation, together with other data as may be required on form DFS-352, Swimming Pool Log Sheet, incorporated by reference in 902 KAR 10:120. This data shall be kept on file by the operator and submitted to the cabinet as requested. Proper operating records, which include the following shall be kept showing daily or weekly results as applicable:

(a) Disinfectant residuals;

(b) pH readings, total alkalinity, cyanuric acid level (if applicable); and

(c) Equipment malfunctions.

(2) If two (2) or more facilities are operated on the same site, separate records shall be maintained for each facility.

(3) All injuries requiring hospitalization shall be immediately reported to the local health department and the Department for Public Health.

Section 11. Spectator and User Administrative Regulations.

(1) Rules governing the use of the splash pad and instructions to users shall be displayed on placards at the entrance to the splash pad and enforced by the facility operator.

(2) Admission to the splash pad shall be refused to a person:

(a) Having any contagious disease, infectious conditions such as colds, fever, ringworm, foot infections, skin lesions, carbuncles, boils, inflamed eyes, ear discharges, or any other condition that has the appearance of being infectious;

(b) Having excessive sunburn, abrasions that have not healed, corn plasters, bunion pads, adhesive tape, rubber bandages, or other bandages of any kind; and

(c) Under the influence of alcohol, illegal substances, or exhibiting erratic behavior.

(3) No food, drink, gum, tobacco, or vapor producing product, will be allowed.

(4) Personal conduct shall assure that the safety of self and others is not jeopardized.

(5) No running and no boisterous or rough play is permitted.

(6) Spitting, spouting of water, blowing the nose, or otherwise introducing contaminants into the splash pad water is not permitted.

(7) Glass, soap, or other material that creates hazardous conditions or interferes with efficient operation of the splash pad shall not be permitted in the facility or on the deck.

(8) All apparel worn shall be clean.

(9) Animals shall be excluded from the splash pad and deck area.

Section 12. Facility Inspection.

(1) Seasonal facilities.

(a) All operators of seasonal splash pads, prior to opening to the public, shall certify to the cabinet, in writing, that the splash pad is in compliance with the requirements of this administrative regulation except in instances where the cabinet has made an inspection prior to its opening.

1. For seasonal splash pads, the cabinet shall make at least two (2) full inspections during the operating season.

2. The cabinet, at its discretion, may require one (1) of the full inspections to be performed prior to opening.

(b) The facility operator shall be responsible for notifying the cabinet of the proposed opening date.

(2) Continuous operation indoor splash pads shall receive a full inspection by the cabinet at least once each six (6) months.

(3) New splash pads shall receive final construction approval inspections by the cabinet and other affected state and local regulatory agencies prior to placing the splash pad in operation. It shall be the facility operator's responsibility to notify the cabinet and other involved agencies of construction completion and call for inspection.

(4) Splash pads shall be inspected at a minimum of once each thirty (30) day period by the cabinet on a monitoring basis. The monitoring inspection shall consist of:

(a) Disinfectant residual testing (free available residual) and combined disinfectant in ppm;

(b) pH testing;

(c) Total alkalinity testing;

(d) Cyanuric acid testing (if cyanuric acid stabilizers are used);

(e) Turbidity assessment;

(f) Temperature testing (if heated water facility);

(g) Review of operator's daily log;

(h) Visual scanning for algae or debris in the holding tank; and

(i) Other checks as necessary.

(5) The cabinet may make as many additional inspections and reinspections as are necessary for the enforcement of this administrative regulation.

(6) If an agent of the cabinet makes an inspection of a splash pad, the findings shall be recorded on the DFS-349, Public Swimming and Bathing Facilities Inspection, incorporated by reference in 902 KAR 10:120, and a copy provided to the facility operator. The inspection report shall:

(a) Set forth any violation observed;

(b) Establish a specific and reasonable period of time for the correction of the violation observed; and

(c) State that failure to comply with any notice issued pursuant to the provisions of this administrative regulation may result in closure of the facility.

Section 13. Water Sampling and Testing.

(1) A water sample may be collected from the splash pad if inspection or monitoring indicates water quality standards are not being maintained, or there is a suspected water borne disease outbreak, and shall be submitted to the Division of Laboratory Services in an approved container and by approved sampling procedures for analysis.

(2) Samples shall be collected and analyzed for any of the following or other contaminants:

(a) Total coliform;

(b) E. coli; and

(c) Pseudomonad organisms.

(3) If a sample is positive test for a contaminant, the test shall be repeated within one (1) to seven (7) days.

(4) For a facility, no more than two (2) consecutive samples shall be positive for:

(a) More than two (2) coliform organisms per 100 milliliter (mL);

(b) Pseudomonas organisms; or

(c) E. coli.

(5) Additional samples may be requested to ensure compliance with this administrative regulation.

Section 14. Bacteriological Quality of Facility Water. No more than two (2) consecutive samples shall:

(1) Contain more than 200 bacteria per mL;

(2) Show a positive test (confirmed test) for coliform organisms in any of the five (5) ten (10) milliliter portions of a sample or more than two (2.0) coliform organism per 100 mL when the membrane filter test is used;
(3) Show a positive test (confirmed test) for pseudomonas organisms; or
(4) Show a positive test for fecal coliform organisms.

Section 15. Conditions requiring Closure of a Splash Pad and Enforcement Provisions.
(1) The cabinet shall order the immediate closure of a splash pad and prohibit any person from using the splash pad by written notice to the facility operator if:
(a) There is an immediate danger to health or safety;
(b) The water does not conform to the bacteriological standards contained in this administrative regulation;
(c) Turbidity levels do not meet the requirements of this administrative regulation;
(d) The disinfectant residual is outside the range prescribed in this administrative regulation;
(e) The pH is outside the range prescribed by this administrative regulation;
(f) The cyanuric acid level exceeds fifty (50) ppm;
(g) The facility operator is not available;
(h) There has been a fecal accident in the splash pad;
(i) In any instance where the facility operator, an employee, or representative of the operator interferes with duly authorized agents of the cabinet, bearing proper identification, in the performance of their duties;
(j) If recirculation systems, filtration systems, or disinfectant systems are not in operation (with exceptions for maintenance, and seasonal shut down); or
(k) If serious or repeated violations of any of the requirements of the administrative regulations are found.
(2) The notice shall state the reasons prompting the closing of the splash pad and a copy of the notice shall be posted conspicuously at the splash pad by the operator.
(3) Any owner or operator affected by an order is entitled, upon written request on form DFS-212, Request for a Conference, incorporated by reference in 902 KAR 1:400, to a conference in accordance with 902 KAR 1:400.
(4) If the conditions rendering closure are abated or further analyses prove to not render closure, the cabinet may authorize reopening the facility.
(5) In all other instances of a violation of the provisions of this administrative regulation, or 902 KAR 10:121 for the nonpayment of fees, the cabinet shall issue a written notice specifying the violation in question and afford a reasonable opportunity to correct same. If the facility operator fails to comply with any written notice issued under the provisions of this administrative regulation or 902 KAR 10:121, the facility operator and local government shall be notified in writing that the splash pad shall be closed at the end of ten (10) days following service of such notice, unless a written request for a conference pursuant to 902 KAR 1:400 is filed with the cabinet, by the local government, within the ten (10) day period.
(6) All administrative hearings shall be conducted in accordance with KRS Chapter 13B.
(7) A local government whose splash pad has been closed may, at any time make application for a reinspection on form DFS-215, Application for Reinstatement, incorporated by reference in 902 KAR 45:005, for the purpose of reopening the splash pad. Within ten (10) days following receipt of a written request, including a statement signed by the applicant that in his or her opinion the conditions causing closure of the facility have been corrected, the cabinet shall make a reinspection. If the splash pad is found to be in compliance with the requirements of this administrative regulation, it shall be reopened.

(8) For serious or repeated violations of any of the requirements of this administrative regulation or for interference with the agents of the cabinet in the performance of their duties, the splash pad may be permanently closed after an opportunity for a conference has been provided in accordance with 902 KAR 1:400. Prior to the action, the cabinet shall notify the facility operator and local government, in writing, stating the reasons for which the splash pad is subject to closure and advising that it shall be permanently closed at the end of ten (10) days following service of the notice unless a request for a conference is filed with the cabinet by the owner or operator within the ten (10) day period.

Section 16. Effect on Local Administrative Regulations. Compliance with this administrative regulation does not relieve a local government from compliance with any other state or local laws, dealing with splash pad operation and maintenance matters, or zoning requirements that may also be applicable.

STEVEN J. STACK, MD, MBA, Commissioner
ERIC C. FRIEDLANDER, Secretary

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CONTACT PERSON: Krista Quarles, Policy Analyst, Office of Legislative and Regulatory Affairs, 275 East Main Street 5 W-A, Frankfort, Kentucky 40621; phone 502-564-6746; fax 502-564-7091; email CHFSregs@ky.gov.