

CHAPTER 4-06
SWIMMING POOLS

4-06-01. Purpose. The purpose of this chapter is to provide guidance in the design, construction and operation of swimming pools so as to protect the health, safety and general welfare of the public.
(Ord. 4865, 08-26-97; Ord. 5316, 05-25-04)

4-06-02. Rules and Regulations. The fire chief shall promulgate reasonable rules and regulations covering approval of the design and construction of swimming pools and covering the operation and maintenance of public and semi-public swimming pools for the protection and promotion of public health and safety.
(Ord. 4865, 08-26-97; Ord. 5316, 05-25-04; Ord. 5707, 02-24-09)

4-06-03. Enforcement. The fire chief or agent shall enforce this chapter.
(Ord. 4865, 08-26-97; Ord. 5188, 7-23-02; Ord. 5316, 05-25-04; Ord. 5642, 11-13-07; Ord. 5707, 02-24-09)

4-06-04. Definitions.

1. "Swimming pool" means any structure, basin, chamber or tank containing an artificial body of water for swimming, diving, recreational bathing or whirlpools and treatment pools.

2. "Residential swimming pool" means any swimming pool located on private property under the control of the homeowner, the use of which is limited to swimming or bathing by members of the homeowner's family or their invited guests.

3. "Public swimming pool" means any swimming pool usually open to any member of the public.

4. "Semipublic swimming pool" means any swimming pool, other than a residential pool or a public pool, which is intended to be used collectively by numbers of persons for swimming or bathing regardless of whether a fee is charged for such use. This definition includes swimming pools located in condominium and apartment house complexes.

5. "Seasonal swimming pool" means any above ground, prefabricated structure for holding water for swimming, diving or recreational wading or bathing including wading pools and hot tubs. The requirements

of this chapter do not apply to the residential use of a seasonable swimming pool.

(Ord. 4865, 08-26-97; Ord. 5316, 05-25-04; Ord. 5642, 11-13-07)

4-06-05. Approval of Plans and Permits. A person may not construct, alter or reconstruct any public or semipublic swimming pool without:

1. Submitting the plans and specifications to the building official for approval. The plans must be drawn to scale and accompanied by proper specifications so as to permit a comprehensive engineering review of the plans including the piping and hydraulic details and must include:

a. Plan and sectional views with all necessary dimensions of both the pool and surrounding area.

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

c. The specifications shall contain details on all treatment equipment, including catalog identification of pumps, chlorinators, chemical feeders, filters, strainers, interceptors and related equipment.

The criteria to be followed by the city in the review and approval of plans must be promulgated by rules and regulations as authorized by this chapter.

2. Obtaining a permit from the building official subject to the following:

a. An application for a permit to construct or remodel a public or semi-public swimming pool must be on forms provided, together with any supporting data as may be required for the proper review of the plans.

b. The pool and facilities must be built in accordance with the plans as approved. The owner or agent shall notify the city at specific predetermined stages of construction and at the time of completion of the pool to permit adequate inspection of the pool and related equipment during and after construction.

The pool may not be placed in operation until inspections show compliance with the requirements of this chapter.

(Ord. 4865, 08-26-97; Ord. 5316, 05-25-04; Ord. 5707, 02-24-09)

4-06-06. Design Standards. All public and semi-public swimming pools must meet the following minimum standards:

1. The site of the proposed swimming pool must have approved water supply and waste disposal facilities available. In the case of outdoor pools, topography, protection from prevailing winds, the absence of trees in the near vicinity, distance from dusty roads and industries producing smoke or obnoxious odors, shall be considered in determining the suitability of proposed sites.

2. Grass, earth and sand areas must be excluded from the pool area. Overhanging foliage shall also be eliminated.

3. A high climb resistant fence, or other barrier, at least six feet in height shall completely encircle the pool area. Indoor pools without safety barriers may be located only in an area that can be locked during periods of nonuse, or be located so as to be under direct supervision at all times. Whirlpools or treatment pools may be located in locker rooms, used solely by adults, without the required barrier if there is at least a railing around such pool to warn of its presence.

4. Once the designed bather load is determined, the size of the swimming pool must be computed as follows:

a. Allow fifteen square feet per bather where water depth is less than five feet.

b. Allow twenty square feet of area per bather where water depth is over five feet excluding three hundred square feet of pool surface area around each diving board.

5. All materials used must be nontoxic, durable, waterproof and easily cleaned. The bottom and sides of pools must be either white or light color, except that aluminum or green-colored paints shall not be used as a finish. Pool sides and bottoms must be smooth and free from cracks or open joints.

6. A hydrostatic relief valve must be provided to prevent pool damage from high ground water levels.

7. The slope of the floor in the shallow portion of the pool may not be greater than one foot in fifteen feet where the water depth is less than five and one-half feet. There may not be sudden changes in slope in this area. In pools less than forty-two feet in length, the rate of slope in the shallow portion may not exceed one foot in eight feet. The bottom slope of the pool at depths greater than five and one-half feet may not be greater than one foot in three feet. The bottom of the pool shall slope to the main drain or the outlets. Joints between the floors and walls shall have a cove radius of at least one inch and may not exceed more than eight inches if the water depth is less than six feet.

8. Diving areas shall have adequate depth and clearance for safe diving. There may not be obstructions extending from the wall or the floor into the clear area of the diving portion of the pool. Extensively remodeled or newly constructed swimming pools with diving areas shall meet the standards of the American National Standards Institutes-Standard for Public Swimming Pools.

9. Elevated diving boards for use by the general public may not be higher than ten feet above the water level. At least sixteen feet of unobstructed headroom extending eight feet behind, eight feet to each side and sixteen feet ahead of the center of the front tip of the board is required.

10. Ladders or stairs must be located at the shallow end and at both sides of the deep end of the pool and at intervals not to exceed seventy-five feet. All stairs entering a pool must be recessed, except that stairs entering special purpose or therapy pools need not be recessed if the design is approved by the building inspector. Treads of stairs where used must be of nonslip material. Steppholes are not recommended; however, where used, they must be of the recessed type and shall be self-draining into the pool and easily cleanable. Steps, ladders, or steppholes shall have a sturdy and easily visible handrail on either side and at the top leading out over the walk area.

A whirlpool or health pool not exceeding fifteen feet in maximum horizontal dimensions may have only one means of egress. Each means of egress must meet the requirements of this section.

11. A lifeline must be provided at or near the break in grade between the shallow and deep portions of the pool if the deep part of the pool exceeds 5 feet. It must be at least three-quarters inch in diameter, marked with color floats, and must be securely fastened to the pool walls with a non-corrosive recessed connector.

12. The depth of water in the pool must be plainly marked at points of maximum and minimum depth, at the break between the deep and shallow areas, and at intermediate depths spaced at not more than twenty-five foot intervals. The markers must be placed on the pool wall and edge of deck, be at least four inches in height and of a contrasting color, and must be located on both sides and ends of the pool. The depth markers on the pool decking shall be non-slip type.

The depth or depths of water in a whirlpool or health pool must be plainly marked at the water surface on the pool wall and/or on the deck next to the pool.

13. All walks and deck areas shall completely encircle the pool, be ample in size, and restricted to use of those attired for aquatic activities.

The finish texture of the walks and decks must be non-slip and comfortable to bare feet. Carpeting, floor matting or other porous materials which interfere with floor cleaning or provide a place for bacteria and fungi to multiply are prohibited.

All walks and decks must be uniformly sloped to drains or points at which the water will have a free unobstructed flow to points of collection. Sidewalks and deck areas not less than eight feet wide shall extend entirely around public pools. Walks and decks must have a slope of about one-quarter inch to the foot away from the pool or to a deck drain system, and must be smooth, free of open cracks and/or broken areas, easily cleanable, non-slip construction. The edge of the pool at the junction with the runways must be rounded to form a handhold.

A minimum width of four feet of walk area must be provided for semipublic pools and shall extend entirely around the pool.

A minimum deck width of two feet must be provided on the sides and rear of any piece of diving equipment.

A whirlpool or health pool must be completely surrounded by a four-foot walkway. If the space is limited and the pool is no more than ten feet wide, a four-foot deck is required on its long side. A deck of at least twelve inches wide shall be maintained on the remaining sides.

Whirlpools or health pools maintained in the same areas as swimming pools must be separated from the pool by at least twelve inches and must be protected with a railing to prevent the use of the separation as a walkway unless the walkway is eight feet or greater in width.

Sufficient hose bibs of not less than three-fourths inch, equipped with approved type backflow preventers, must be provided for cleaning all of the pool area.

14. One lifeguard must be provided for each two thousand square feet of pool surface area or fraction thereof. If a pool requires two lifeguards, they must be positioned on opposite sides of the pool. Lifeguards are not required if the pool is less than two thousand feet in water surface and is classified as semipublic.

At least one set of lifesaving equipment must be provided consisting of:

a. One or more poles at least one-half the width of the pool plus two feet, but need not exceed sixteen feet in length, having a shepherd's crook with an aperture of at least eighteen inches between the tip of the hook and the pole;

b. One or more U. S. Coast Guard approved throwing rings having a minimum diameter of eighteen inches equipped with one-quarter-inch line not less than one and one-half the width of the pool.

15. The water supply serving the pool must meet the requirements of the North Dakota Department of Health for

potable water. The state health officer may approve the use of water from natural sources when special water treatment is provided. All portions of the potable water supply serving the pool and auxiliary facilities must be protected against backflow. Potable water introduced into the pool, either directly or to the recirculation system shall be supplied through an air gap, an approved-type backflow preventer, or other approved means.

16. The recirculation system shall consist of pumps, hair and lint catchers and filters, necessary pipe connections to the inlets, outlets and skimmers of the pool and a system for backwashing of the filters. A pool which has only one main drain must have an anti-vortex cover securely attached to the drain. The re-circulation, skimmer and overflow systems shall meet the current design standards of the National Spa and Pool Institute when the pool is designed and built. As an integral part of the system, equipment must be provided for disinfecting the water and adding any necessary chemicals and makeup water.

The recirculation system must have adequate filtration and pumping capacity to provide one complete turnover of the pool water every six hours.

The water circulation and treatment system for a wading pool, plunge pool or health pool must be adequate for re-circulating and treating the entire pool volume of water in no more than two hours, and in less time, if necessary, to meet the hydraulic requirements for a surface skimmer system. The water circulation and treatment system for a whirlpool must be adequate for re-circulating and treating the entire pool volume of water in no more than thirty minutes.

17. Suction cleaners either of the portable type or as part of the permanent piping system are required.

18. A rate-of-flow indicator capable of measuring at least one and one-half times the design flow rate must be installed on the filter effluent line leading to the pool. The indicator must be calibrated to read in gallons per minute and capable of measuring both water for filtration and backwash where applicable.

19. A hair and lint catcher of acceptable design must be provided on all recirculation systems except where the filter is located prior to the pump suction.

20. Pool heaters must be installed on a bypass line on the discharge side of the filtration system. A heater capacity of from seven to ten BTU per hour per gallon of water is recommended.

Swimming may not be permitted when the water temperature falls below sixty-five degrees Fahrenheit or when the water temperature exceeds ninety degrees Fahrenheit.

Water temperatures of whirlpools or health pools may not exceed one hundred five degrees Fahrenheit.

21. Filtration.

a. Pressure sand filter systems must be provided with the following:

(1) Gauges on each battery on the inlet and outlet pipe to determine loss of head in the filter medium.

(2) Air release with a manual control on the highest point of each filter.

(3) A readily removable head or manhole with sufficient working space to facilitate inspection and repair.

(4) A sight glass installed on the waste discharge line so the operator may watch the progress of filter washing.

(5) Freeboard of eighteen inches between the surface of the filter material and the overflow troughs.

(6) Filter piping arrangement should be as simple as possible to accomplish filtration, backwashing, and filter to waste.

b. High rate sand filters must be sized to operate at filtration rates no greater than fifteen gallons per minute per square foot of surface area.

c. The following special requirements must be satisfied in diatomaceous earth filtration:

(1) Slurry feeding equipment to provide for continuous application at an accurate and uniform rate of filter aid material into a filter influent line. This equipment shall have a capacity to feed not less than 0.1 pounds of diatomaceous earth per square foot of filter area over a twenty-four hour period. The slurry feeder is required when exceeding 1.5 gallons per minute per square feet of filter area.

(2) Pressure gauges installed on both the influent and effluent side of each filter for pressure diatomite filter system. A vacuum diatomite system must have a pressure and vacuum gauge for each filter.

(3) The filter piping must be installed with a re-circulating pre-coat line to permit recirculation of the water from the effluent side of the filter back to the influent side until a satisfactory clear filter effluent is produced prior to admitting the water into the pool.

d. Cartridge filtration shall not exceed .187 gallons per minute per square foot. An extra set of cartridges must be available.

e. All filters shall comply in all respects with the standards of the National Sanitation Foundation covering filters.

22. The system shall include a feeder and monitor for the introduction of approved chemicals to control the pH of the water. Solution pots are not approved. Positive feed chemical machines are required.

23. Every pool must be provided with approved testing equipment for determination of disinfection residuals and hydrogen ion (pH) concentration. The disinfectant residual tester must have a minimum range between zero and five

milligrams per liter. The hydrogen ion tester must have a pH range of from 6.8 to 8.4.

24. Equipment must be provided to adequately disinfect the pool at all times. The most common means of pool disinfection is through the application of chlorine; but other elements in the halogen group, bromine or iodine, may be used in swimming pools.

Chlorine gas, when used, must be supplied by means of a cylinder mounted vacuum operated gas chlorinator of the fail safe type in all public and semipublic pools.

All public and semi-public pools must be equipped with automatic monitoring and chemical feeding equipment.

25. The housing for the gas chlorinator and all appurtenances must meet the following specifications:

a. Be a separate reasonably gas-tight, corrosion-resistant mechanically vented enclosure or room. The room shall be at ground level and permit easy access to all equipment. The door of the room shall open to the outside and shall not open to the swimming pool or equipment room area.

b. The exhaust fan must be capable of one or more air exchanges per minute. The fan must be located at floor level or equipped with an intake extending to within six inches floor level exhausting to an outside atmosphere in an unrestricted area. Fresh air intake louvers near the top of the enclosure are required.

c. A clear glass window must be installed in the door or wall of the chlorinator room to permit the chlorinator to be viewed without entering the room.

d. Electrical switches for the control of artificial lighting and ventilation must be activated by the operation of the door. The electrical switch must be provided with a manual override in a secure area.

e. A gas mask approved by the U. S. Bureau of Mines for protection against chlorine gas must be provided. In addition replacement canisters must be provided and a record shall be kept of gas mask usage

to insure that the mask will be serviceable when needed.

f. Scales must be provided for weighing chlorine cylinders. Automatic switching tank and/or metered valves may be used.

g. Safety chains must be provided for securing the chlorine cylinders.

h. A chlorine institute-approved safety kit is recommended.

26. A complete system of artificial lighting must be provided for all pools, bathhouses and dressing rooms which are to be used at night.

Area lighting shall provide at least 0.6 watt per square foot of pool and deck area.

The entire electrical installation must meet the requirements of the state electrical code.

27. There must be an absolute separation of the space used by spectators and that used by bathers. There should be no means by which the bather can enter the space reserved for the spectators or vice versa. The spectator area must have a separate entrance. Galleries for spectators shall not overhang any portion of the pool surface. Floor of the gallery should be tightly constructed to prevent dirt from getting into the pool.

28. Bathhouse: if provided:

a. The bathhouse must be located to provide entrance to the pool area near the shallow end of the pool only.

b. A dressing room area of not less than 3.5 square feet per person must be provided.

c. Floors must be of smooth, non-slip, impervious construction and sloped to drains at one-quarter inch per foot. Adequate floor drains must be installed in all areas subject to water accumulation.

d. Dressing room booths and furnishings must be of simple design and must be constructed of impervious and smooth materials that will permit hose cleaning. Partitions in booths shall terminate six inches above the floor.

e. Connections of three-quarter inch hose bibs must be provided for area cleanup.

f. Natural and/or artificial ventilation must be provided.

g. A minimum lighting level of ten foot candles at a point three feet from the floor must be available during both day and night.

h. A clothing storage area must be provided.

29. All piping and plumbing must be installed in compliance with the requirements of the North Dakota State Plumbing Code.

30. Warm water must be provided at all shower heads. The water heater and thermostatic mixing valve must be inaccessible to the bathers and be capable of supplying two gpm of ninety degrees Fahrenheit water to each shower head.

One shower head must be provided for each forty swimmers expected at maximum pool load.

Shower rooms must be located adjacent to the dressing rooms and shall not be used as hallways between the dressing rooms and pool.

31. Soap dispensers must be provided for each lavatory and between each pair of shower heads.

32. Piping carrying wastewater from swimming or wading pools including pool drainage, backwash from filters, water from overflow systems or floor drains which serve walks around pools, must be installed as an indirect waste utilizing any existing circulation pump, if necessary, when indirect waste line is below the sewer grade.

33. A wading pool must have a maximum depth at the deepest point not greater than eighteen inches. It may be

constructed adjacent to the swimming pool, but it may not be part of the swimming pool and must be separated therefrom by a fence or partition sufficiently high to prevent waders from entering the swimming pool area.

The supply to the wading pool must be filtered and chlorinated water from the pool recirculation system. The outlets from the wading pool shall be piped independently to the filter. Due to the high degree of pollution a wading pool shall have a maximum turnover cycle of two hours.

34. A training pool must have a minimum depth of 18 inches and a maximum depth of 3 feet. It may be constructed adjacent to a swimming pool and must be separated therefrom by a fence or partition of sufficient height to prevent waders from entering the swimming pool area.

The supply to the training pool must be filtered and chlorinated water from the pool recirculation system. The outlets from the training pool must be piped to the filtration system independently of the pool. The maximum turnover rate cycle is four hours.

35. Each public swimming pool must be supervised by a person qualified in the fields of lifeguard training, CPR, first aid, equipment operation and pool sanitation. Individuals are considered qualified in lifeguard training CPR and first aid if they hold an appropriate Red Cross, YMCA or equivalent certificate.

36. Indoor pools:

a. Humidity. A relative humidity of forty to sixty percent must be maintained.

b. Ventilation. Ventilation must be provided to remove excess moisture and help control humidity, within the pool and dressing room areas, without subjecting bathers to drafts.

c. Lighting. Artificial illumination must be designed to maintain a minimum of fifteen and preferably one hundred footcandles of illumination at deck level.

d. Heating. The dressing rooms must be provided with heating facilities that are capable of

maintaining a constant temperature level of between 70 and 75 degrees Fahrenheit.

e. Pool rooms must be equipped with heating facilities that are capable of maintaining a constant temperature level of 75 to 82 degrees Fahrenheit.

(Ord. 4865, 08-26-97; Ord. 5316, 05-25-04; Ord. 5642, 11-13-07; Ord. 5707, 02-24-09; Ord. 5963, 05-13-13)

4-06-07. Operation Permits. A person may not operate or maintain a public or semipublic swimming pool unless a permit has been obtained to operate such pool. The permit must be obtained by January 1st of each year from the fire chief, and is valid for one year unless revoked for cause. A person operating a semi-public or public pool must be licensed as a "Certified Pool Operator" by the National Swimming Pool Foundation. If a certified operator is no longer employed by the pool owner, the new operator, if not already certified, must seek certification at the earliest opportunity not to exceed six months.

(Ord. 4865, 08-26-97; Ord. 5316, 05-25-04; Ord. 5642, 11-13-0, Ord. 5707, 02-24-09)

4-06-08. Permit Fee. The fee for a permit to conduct, operate and maintain a public or semipublic swimming pool is as determined from time to time by the city commission, shall be kept on file with the office of the city administrator and must be paid before the issuance of any permit.

(Ord. 4865, 08-26-97; Ord. 5316, 05-25-04; Ord. 5642, 11-13-07)

4-06-09. Operational Practices. The following are minimum operational practices required at all public and semipublic swimming pools:

1. Operate recirculation system continually 24 hours per day during the normal seasonal operation to insure clarity of pool water.

2. Maintain pH values between 7.4 to 7.6, except that other values may be acceptable provided they are approved by the city.

3. Maintain a free chlorine residual of between 2.0 to 4.0 mg/liter for swimming pools and 3.0 to 5.0 mg/liter for whirlpools. Swimming pools using bromine as a disinfectant shall operate at levels between 4.0 to 6.0 mg/liter. Combined chlorine levels must be no more than 0.5 mg/liter for all pools. Achieve break point chlorination (combined chlorine X 10) as soon as possible when combined chlorine levels are greater than 0.5 mg/liter.

4. In the event that a pool is contaminated with fecal matter, vomit or blood, the operator shall do the following:

If the pool is contaminated with a formed (solid, non-liquid) stool or vomit:

- a. Immediately close the pool and evacuate swimmers;
- b. Remove the fecal matter or vomit with a net or scoop and dispose in a sanitary manner;
- c. Maintain the free chlorine residual of 2.0 mg/liter or higher and ensure the pH is 7.5 or less and the pool temperature is 77 degrees Fahrenheit or higher for at least 25 minutes;
- d. Reopen the pool once disinfectant levels and pH are within the normal operating range;
- e. Document the incident in the daily records.

If the pool is contaminated with a loose stool (diarrheal discharge):

- a. Immediately close the pool and evacuate swimmers;
- b. Remove as much fecal material as possible using a net or scoop and dispose in a sanitary manner;
- c. Raise the free chlorine residual to 20 mg/liter and confirm by using chlorine test strips or making test kit sample dilutions. Maintain a pH of 7.5 or less and a pool temperature of 77 degrees Fahrenheit or higher. Maintain the pH and chlorine level for at least 12.75 hours;
- d. Backwash the filter after the full disinfection time. Discharge the effluent directly to waste;
- e. Reopen the pool once disinfectant levels and pH are within the normal operating range.
- f. Document the incident in the daily records.

If the pool is contaminated with blood:

- a. Check the free chlorine or bromine residual at the time of the incident. If below the required minimum residual level, the operator shall immediately close the pool until free chlorine or bromine residual is verified at or above the required minimum.
- b. Document the incident in the daily records.

Brominated pools contaminated with fecal matter or vomit shall have chlorine added to the pool in the amount that will increase the free chlorine residual to the level specified for the specific type of contamination for the specified time. The bromine residual and pH shall be within the normal operating range before reopening the pool.

Small capacity pools and whirlpools may be optionally drained, disinfected and refilled. Chlorine levels must be within normal range before re-opening the pool.

5. Infants and bathers requiring diapers, must use approved "Swim Diapers."

6. Bathers having any communicable infection, must not be permitted to use the pool.

7. Post pool rules in an easily viewed location.

8. Maintain the pool and related facilities in a clean manner at all times.

9. Keep the pool surface free of film and floating dirt and the pool bottom free of sediment.

10. Scrub the bathhouse floors daily with a liberal application of 0.25 - 1.0% chlorine solution.

11. Require all patrons to take a cleansing shower using warm water before entering the pool.

12. Keep a daily record of operation of the recirculation system, chemical additions, pH and chlorine residuals, and bathing load. Monitoring record of the operation shall be performed during bather activity.

Chlorine and pH testing must be performed and recorded at least three times daily; upon opening and at intervals not less than two hours apart. Due to the limited usage of condominium pools, testing must be conducted at least once daily and written daily record keeping indicating pH and chlorine residuals must be maintained. Fecal, vomit and blood contamination incidents shall be documented in the daily record. The information recorded at the time of the incident shall include:

- a. Person conducting response;
- b. Date and time of incident;
- c. Specific area contaminated by incident;
- d. Bather load at the time of incident;
- e. Incident specifics, including type and form of body fluid observed (for example, loose or formed stool, vomit or blood);
- f. The date and time the pool was closed;
- g. Whether the pool uses chlorine stabilizer;
- h. Free chlorine residual, pH and pool temperature at the time of incident;
- i. Remediation procedures used after the incident;
- j. The date and time the pool was reopened;
- k. Free chlorine residual, pH and pool temperature at the time of reopening;
- l. Total contact time of disinfectant.

13. Collect bi-monthly samples of the pool water and submit to the North Dakota State Department of Health public health laboratory or other certified laboratory for bacterial analysis. All samples collected will be analyzed by the North Dakota Department Public Health Laboratory or

other certified laboratory. Fees for analysis of samples will be determined by the laboratory conducting the testing and charged to the owner. All billing and collections for sample analysis will be the responsibility of the laboratory. Failure to perform the testing as required may constitute closure of the pool.

14. No more than 15 percent of water samples submitted may exceed the current acceptable bacteriological standards for swimming pools as established by the North Dakota State Department of Health.

15. All swimming pools must be super chlorinated to between ten to fifteen mg/liter for at least six hours prior to seasonal startup and at any time during seasonal operation when needed for algae control, disinfection or chemical balance.

16. The swimming pool water must be of such chemical and physical qualities that when a standard test disc is placed in the deepest portion of the pool it is readily visible. Failure to meet this requirement constitutes grounds for immediate closing.

(Ord. 4865, 08-26-97; Ord. 5316, 05-25-04; Ord. 5642, 11-13-07; Ord. 5963, 05-13-13)

4-06-10. Residential Pools. Residential swimming pools are subject to the following:

1. Private swimming pools in residential areas may be located only in the rear yards and no part of the pool may be less than four feet from any property line. Equipment enclosures and any other above grade pool-related structures shall comply with the requirements for accessory structures in the zoning district in which the pool is located.

2. No cross-connection is allowed between any private swimming pool and the city water supply.

3. Private pools may not be located, designed, operated or maintained as to interfere unduly with the enjoyment of the property rights of the adjacent property owners.

4. An admission fee may not be charged for the use of any private swimming pool located within the city.

5. Lights used to illuminate any private swimming pool must be so arranged and shaded as to reflect light away from the adjacent premises.

Outdoor Residential Swimming Pool

All outdoor swimming pools shall be provided with a barrier that shall be installed, inspected and approved prior to plastering or filling with water. The barrier shall comply with the following:

1. The top of the barrier shall be at least 72 inches above grade measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance at the bottom of the barrier may be increased to 4 inches when a grade is a solid surface such as concrete deck, or when the barrier is mounted on the top of the aboveground pool structure. When barriers have horizontal members spaced less than 45 inches apart, the horizontal members shall be placed on the pool side of the barrier. Any decorative design work on the side away from the swimming pools, such as protrusions, indentations or cutouts, which render the barrier easily climbable, is prohibited.

2. Openings in the barrier shall not allow passage of a 1 3/4 inch diameter sphere.

EXCEPTIONS:

a. When vertical spacing between such openings is 45 inches or more, the opening size may be increase such that the passage of a 4 inch diameter sphere is allowed.

b. For fencing composed of vertical and horizontal members, the spacing between vertical members may be increase up to 4 inches when the distance between the tops of the horizontal members is 45 inches or more.

3. Chain link fences used as a barrier shall not be less than 11 gauge.

4. Access gates shall comply with the requirements of Items 1 through 3. Pedestrian access gates shall be self-closing and have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches from the bottom of the gate, (1) the release mechanism shall be located on the pool side of the barrier at least 3 inches below the top of the gate, and (2) the gate and barrier shall have no opening greater than 1/2 inch within 18 inches of the release mechanism. Pedestrian gates shall swing away from the pool. Any gates other than pedestrian access gates shall be equipped with lockable hardware or padlocks and shall remain locked at all times when not in use.

5. Where a wall of a residential dwelling unit serves as a part of the barrier and contains door openings between the dwelling unit and outdoor swimming pool, which provide direct access to the pool, a separation fence meeting the requirements of Items 1, 2, 3 and 4 of this section shall be provided.

EXCEPTION: When approved by the building official, one of the following may be used:

a. Self-closing and self-latching devices installed on all doors with direct access to the pool with a release mechanism located a minimum of 54 inches above the floor.

b. An alarm installed on all doors with direct access to the pool. The alarm shall sound continuously for a minimum of 30 seconds immediately after the door and its screen, if present, are opened, and be capable of providing a sound pressure level of not less than 85 dBA when measured indoors at 10 feet. The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as a touchpad or switch, to temporarily deactivate the alarm for a single opening. Such deactivation shall last no longer than 15 seconds. The deactivation switch shall be located at least 54 inches above the threshold of the door.

c. Other means of protection may be acceptable so long as the degree of protection is afforded is not less than that afforded by any of the devices described above.

6. Where an aboveground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then (1) the ladder or steps shall be capable of being secured, locked or removed to prevent access or (2) the ladder or steps shall be surrounded by a barrier which meets the requirements of Items 1 through 5. When the ladder or steps are secured, locked or removed, any opening created shall be protected by a barrier complying with Items 1 through 5.

Covered hot tubs with secured lids and swimming pools with water depths of 24 inches or less are exempt from this section.

Indoor Residential Swimming Pools

For an indoor swimming pool, protection shall comply with the requirements of Item 5 for Outdoor Residential Swimming Pools.

(Ord. 4865, 08-26-97; Ord. 5316, 05-25-04)