

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.10 DEFINITIONS**

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**Section 820.10 Definitions**

In addition to the definitions in the Illinois Swimming Facility Act, the following additional definitions shall apply:

"Act" means the Swimming Facility Act [210 ILCS 125].

*"Agent Health Department" means a certified local health department that the Department has designated as its agent for making inspections and investigations under Section 11 of the Act. (Section 3.23 of the Act)*

"Appurtenance" means an accessory facility or feature at a swimming facility, such as a diving board, slide, wading pool, plunge pool, spray pool or bather preparation facility. The term does not refer to a therapy pool as defined in this Section.

"Approval" means compliance with the Act and this Part.

"Approved Certification Agency" means an organization that has been accredited by the American National Standards Institute (ANSI) and found to meet the requirements specified in ANSI Z 34.1, Third Party Certification Program, to evaluate swimming facility equipment for compliance with Standard 50, "Equipment for Swimming Pools, Spas, Hot Tubs and other Recreational Water Facilities", published by the National Sanitation Foundation (NSF) International.

*"Aquatic Feature" means any single element of a swimming facility other than a swimming pool or spa or bathing beach, including, but not limited to, a lazy river, water slide, spray pool, or other feature that provides aquatic recreation or therapy. (Section 3.16 of the Act) It does include small slides, play structures and other similar equipment. It does not include diving boards or starting blocks.*

"Attendant" means a person at least 16 years of age, stationed at the top of a water slide and responsible for ensuring safe use of the slide.

"Bather Load" means the maximum number of persons that may be allowed in the swimming facility area at one time without creating undue health or safety hazards. (See Section 820.200(b).)

*"Bathing Beach" or "Public Bathing Beach" means any body of water, except a swimming pool as defined in this Part, or that portion thereof used for the purpose*

*of public swimming or recreational bathing, and includes beaches at: apartments, condominiums, subdivisions, and other groups or associations having 5 or more living units, clubs, churches, camps, schools, institutions, parks, recreational areas, motels, hotels and other commercial establishments. It includes shores, equipments, buildings and appurtenances pertaining to such areas. It does not include bathing beaches at private residences intended only for the use of the owner and guests.* (Section 3.02 of the Act)

"Certified Safety Cover" means a cover for a swimming facility suction outlet that has been certified for conformance to ANSI and the Association of Pool & Spa Professionals (APSP) standard ANSI/APSP 16.

"Community Water System" means a public water system that serves at least 15 service connections used by residents or regularly serves at least 25 residents for at least 60 days a year.

"Construction" means the process of building or fabricating a swimming facility or appurtenance.

"Construction in a Flood Plain" means the placement or erection of structures or earthworks; land filling, excavation or non-agricultural alteration of the ground surface; installation of public utilities; channel modification; storage of materials or any other activity undertaken to modify the existing physical features of a flood plain with respect to the storage and conveyance of flood waters.

"Deep Area" means an area of a swimming pool in which the water depth exceeds 5 feet.

*"Department" means the Department of Public Health, State of Illinois.* (Section 3.06 of the Act)

"Diving Pool" means a pool designed and intended for use exclusively for diving.

"Drop Slide" means a slide with an exit angle exceeding 11 degrees measured downward from the horizontal.

"Field-Fabricated Suction Outlet" means a suction outlet having a cover that is not a certified safety cover or a safety cover installed in a manner that is not specified by the manufacturer. The term includes suction outlet covers consisting of a certified safety cover installed together with other components and covers comprising multiple certified safety covers covering a single suction outlet.

"Flume" means the inclined channel of a water slide.

"Homeowner's Association" is a not-for-profit corporation composed of members who have common ownership interest in property owned or operated by the association for the benefit of all the members.

*"Initial Inspection" means an inspection conducted by the Department to determine compliance with the Act and this Part in order to approve the operation of a swimming facility after the Department has issued a permit for construction or major alteration.* (Section 3.22 of the Act)

*"Initial Review" means the first review of any submittal made by an applicant for a permit for construction or major alteration, as provided for in Section 5 of the Act. If the requirements of Section 5 are met, a permit shall be issued; otherwise the Department shall issue correspondence indicating deficiencies. (Section 3.21 of the Act)*

"Inlet" means an opening or fitting through which filtered water enters the swimming facility.

"Installation" means the emplacement of a swimming facility manufactured and transported to the intended site.

*"Lapsed Fee" means the amount charged to a licensee for failing to renew a swimming facility license within one year after the expiration of the license. This fee is in addition to any other fees associated with renewal of a swimming facility license. (Section 3.17 of the Act)*

"Lazy River" means a swimming facility intended for use with flotation devices and consisting of a closed loop with an artificially induced current.

*"Living Unit" means a home, mobile home, duplex unit, apartment unit, condominium unit, or any dwelling unit in a multi-unit residential structure or a campground lot. (Section 3.18 of the Act)*

"Main Drain" means the outlet or outlets in the floor of the swimming facility.

*"Major Alteration" means any change to a swimming facility or its aquatic features or appurtenances that alters the facility's functionality or as-built or as-permitted condition. This includes, but is not limited to, an alteration of a swimming facility that changes the water surface area, depth, or volume, addition of a permanently installed appurtenance such as a diving board, slide, or starting platform, modification of the design of the recirculation system, and replacement or modification of a bather preparation facility. It does not include maintenance or minor repair or the replacement of equipment with comparable components. (Section 3.19 of the Act) Examples of alterations that are not major include, but are not limited to, painting of a swimming facility, replacement of a swimming facility filter or pump having identical characteristics, or replacement of plumbing fixtures in a bather preparation facility.*

"Make-up Water" means the water added to a swimming facility to replace that which is lost.

"Manager/Operator" means the person or entity responsible for the actual daily operation, or for the supervision of the operation, of a swimming facility.

"Office of Water Resources" means the Illinois Department of Natural Resources, Office of Water Resources, One Natural Resources Way, Springfield IL 62702.

*"Ordinance Health Department" means a certified local health department belonging to a unit of local government that has adopted an ordinance electing to administer and enforce the Act and adopting, by reference, this Part. (Section 3.24 of the Act)*

"Perimeter Overflow System" means a channel normally extending completely around the pool used to skim the surface layer of water or also known as an overflow gutter.

"Permit" means a certificate issued by the Department allowing the construction, major alteration or installation of a swimming facility under the provisions of the Act.

"Plunge Area" means a location in a swimming facility at the exit of a slide, or the area in a pool below and in front of a diving board or platform.

"Plunge Pool" means a pool used exclusively as a plunge area for one or more slides.

"Pool" means a swimming pool, plunge pool, spa, or other water basin used by the public. The term does not refer to basins for individual use that are drained after each use.

"Pool Depth" means the vertical distance between the pool floor and the water level.

*"Prequalified Architect" or "Prequalified Professional Engineer" means an individual who is prequalified by the Department and is responsible for coordinating the design, planning, and creation of specifications for swimming facilities and for applying for a permit for construction or major alteration. (Section 3.14 of the Act)*

*"Prequalified Swimming Facility Contractor" means a person who is prequalified by the Department to perform the construction, installation, modification, or repair of a swimming facility and its appurtenances. (Section 3.15 of the Act)*

"Project Designer" means a prequalified architect or prequalified professional engineer as defined in this Part and the Act.

"Recirculation Piping" means the piping from the pool to the filters and back to the pool, through which the pool water circulates.

"Safety Vacuum Release System" means a device or combination of devices that has been designed to prevent bather entrapment on a suction fitting in a pool. Methods include, but are not limited to, immediately admitting air into the suction piping, de-energizing the pump upon sensing an increase in vacuum in the suction pipe, reversing the circulation flow or any combination of these.

"Safety Vent Pipe" means a piping arrangement designed to admit air into suction piping to break a vacuum caused by a blocked suction fitting in a pool.

"Self-Perform" means:

designing, planning and creating specifications for swimming facilities and applying for a permit for construction or major alteration of a swimming facility without subcontracting the work; or

constructing, installing, modifying or repairing a swimming facility without subcontracting the work.

"Shallow Area" means an area in a swimming pool in which the water depth does not exceed 5 feet at any point.

"Skimmer" means a mechanical device connected to the recirculation piping that is used to skim the pool surface.

"Slide" means a recreational feature, including a water slide or drop slide, with a smooth, inclined flume or channel by which a rider is conveyed downward to a plunge area.

"Slip-Resistant" means not conducive to slipping under contact with bare feet when wet.

*"Spa" means a basin of water designed for recreational or therapeutic use that is not drained, cleaned, or refilled for each user. It may include hydrojet circulation, hot water, cold water mineral bath, air induction bubbles, or some combination thereof. It includes "therapeutic pools", "hydrotherapy pools", "whirlpools", "cold spas", "hot spas", and "hot tubs". It does not include these facilities at individual single-family residences intended for use by the occupant and his or her guests. (Section 3.10 of the Act) The term does not apply to a swimming pool as defined in the Act.*

*"Spray Pool" means an aquatic feature that is not a swimming pool and that has structures or fittings for spraying, dumping, or shooting water. The term does not include features having as a source of water a public water supply that is regulated by the Illinois Environmental Protection Agency or the Illinois Department of Public Health and that has no capacity to recycle water. (Section 3.13 of the Act)*

*"Subsequent Inspection" means any inspection made by the Department or its agents or certified local health departments that are authorized by local government ordinance to administer and enforce the Act for purposes of annual renewals, responding to a substantiated complaint, complying with a request by the licensee or its agent, or ensuring compliance with an order of the Department. The term does not include initial inspections performed by the Department relating to permitted construction, interim compliance inspections, or Department inspections in a case in which no violations are found. (Section 3.20 of the Act)*

"Suction Outlet" means a fitting or opening in a pool basin through which water flows out of the pool. The term does not include a skimmer or a drain for a perimeter overflow system.

"Superchlorination" means the establishment of an elevated chlorine residual in pool water for the purpose of removing combined chlorine (chlorine that has reacted with nitrogenous compounds) or destroying unwanted organisms in the pool.

*"Swimming Facility" means a swimming pool, spa, public bathing beach, or aquatic feature and its appurtenances, singular or aggregated together, that exists for the purpose of providing recreation or therapeutic services to the public. It does not include isolation or flotation tanks. (Section 3.12 of the Act)*

*"Swimming Pool" means any artificial basin of water that is modified, improved, constructed or installed for the purpose of public swimming, wading, floating, or diving, and includes: pools for community use, pools at apartments, condominiums, and other groups or associations having five or more living units, clubs, churches,*

*camp, schools, institutions, Y.M.C.A.'s, Y.W.C.A.'s, parks, recreational areas, motels, hotels, health clubs, golf and country clubs, and other commercial establishments. It does not include pools at private single-family residences intended only for the use of the owner and guests.* (Section 3.01 of the Act) The term refers to swimming pools used for swimming, wading pools, lazy rivers, therapy pools, and plunge pools. The term does not refer to spas or to spray pools.

"Therapy Pool" means a pool that is not a spa and is intended only for medical treatment, physical therapy or muscle relaxation.

"Transition Point" means a location in a shallow area of a swimming pool where an area, having a floor slope of no more than 1 foot vertical in 12 feet horizontal, adjoins an area where the floor slope exceeds 1 in 12.

"Turnover Period" means the time required to recirculate a volume of water equivalent to the water volume of the pool through the filtration system.

"Wading Area" means a portion of a pool, other than an area of limited extent such as a stair, seat or ramp, where the water depth does not exceed 30 inches; or the portion of a bathing beach where the water depth is less than 5 feet, or that portion of a bathing beach designated by the installation of a buoyed line to separate this area from deeper water.

"Wading Pool" means a swimming pool having a maximum water depth not exceeding 30 inches.

"Water Level" means the level of the overflow lip of a perimeter overflow system or the mid-level of the skimmer operating range.

"Water Slide" means a ride with a flow of water and having a flume exceeding 30 feet in length. (Section 3.11 of the Act)

"Wave Pool" means a swimming pool designed for the purpose of producing wave action in the water.

"Zero-Depth Edge" means that portion of the perimeter of a zero-depth pool where the pool floor intersects the pool water surface.

"Zero-Depth Pool" means a swimming pool where the pool floor intersects the water surface along a portion of its perimeter.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules****ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH  
CHAPTER I: DEPARTMENT OF PUBLIC HEALTH  
SUBCHAPTER n: RECREATIONAL FACILITIES  
PART 820 SWIMMING FACILITY CODE  
SECTION 820.20 INCORPORATED AND REFERENCED MATERIALS**

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**Section 820.20 Incorporated and Referenced Materials**

- a) The following materials are referenced in this Part and are available for inspection at the Department's Springfield office:
- 1) State and Federal Statutes
    - A) Swimming Facility Act [210 ILCS 125]
    - B) 2011 Internal Revenue Code (26 USC 501)
  - 2) State Administrative Rules
    - A) Illinois Plumbing Code (77 Ill. Adm. Code 890). (See Sections 820.200(r), 820.2109(c)(1), and 820.210(f)(1)(A).)
    - B) Regulation of Construction within Flood Plains (17 Ill. Adm. Code 7362). (See Sections 820.10 and 820.100 (b)(3)(A).)
    - C) Drinking Water Systems Code (77 Ill. Adm. Code 900). (See Section 820.110(a).)
    - D) Private Sewage Disposal Code (77 Ill. Adm. Code 905). (See Section 820.120.)
    - E) Food Service Sanitation Code (77 Ill. Adm. Code 750). (See Section 820.130.)
    - F) Public Water Supplies (35 Ill. Adm. Code: Subtitle F, Chapters I and II). (See Section 820.110(a).)
    - G) Public Area Sanitary Practice Code (77 Ill. Adm. Code 895). (See Section 820.110(a).)
    - H) Practice and Procedure in Administrative Hearings (77 Ill. Adm. Code 100) (See Section 820.150(e).)
- b) The following materials are incorporated in this Part and are available for inspection at the Department's Springfield office:

- 1) National Electrical Code (2008 Edition)  
National Fire Protection Association  
1 Batterymarch Park  
Quincy MA 02169
  - 2) NSF Standard 50, Equipment for Swimming Pools, Spas, Hot Tubs and other Recreational Water Facilities (2012)  
NSF International  
789 N. Dixboro Road  
P.O. Box 130140  
Ann Arbor MI 48113-0140
  - 3) ANSI Z 34.1 (1993), Third Party Certification Program  
American National Standards Institute  
25 West 43<sup>rd</sup> Street  
New York NY 10036
  - 4) ANSI/APSP 16-2011, Standard Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs  
The Association of Pool & Spa Professionals  
2111 Eisenhower Avenue  
Alexandria VA 22314
  - 5) ASME A112.19.17-2010, "Manufactured Safety Vacuum Release Systems (SVRS) for Residential and Commercial Swimming Pool, Spa, Hot Tub, and Wading Pool Suction Systems"  
The American Society of Mechanical Engineers  
Two Park Avenue  
New York NY 10016-5990
  - 6) ASTM F2387-04 (2012), "Standard Specification for Manufactured Safety Vacuum Release Systems (SVRS) for Swimming Pools, Spas and Hot Tubs"  
ASTM International  
100 Barr Harbor Dr., P.O. Box C700  
West Conshohocken PA 19428-2959
  - 7) IAPMO SPS 04-2009, "Special Use Suction Fittings for Swimming Pools, Spas and Hot Tubs (For Suction Side Automatic Swimming Pool Cleaners)"  
The International Association of Plumbing and Mechanical Officials  
4755 E. Philadelphia St.  
Ontario CA 91761
- c) All incorporations by reference of the standards of nationally recognized organizations refer to the regulations and standards on the date specified and do not include any amendments or editions subsequent to the date specified.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)



**820.100**

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**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.105 FEES**

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## Section 820.105 Fees

Fee Schedule Sections 8.1, 8.2 and 8.3 of the Act establish fees in accordance with the ownership designation of the swimming facility.

- a) The fee schedule includes the following: Construction Permit Fee, Major Alteration Permit Fee, Plan Resubmittal Fee, Original License Fee, License Renewal Fee and Inspection Fee. A fee schedule is provided in Appendix B.Tables F, G and H.
  - 1) Permit Fees
    - A) Construction Permit Fee and Major Alteration Permit Fee. *No swimming facility shall be constructed or altered in a major manner until plans, specifications, and other information relative to the swimming facility and appurtenant facilities as may be requested on forms provided by the Department are submitted to and reviewed by the Department and found to comply with minimum sanitary and safety requirements and design criteria, and until a permit for the construction or major alteration is issued by the Department. Permits are valid for a period of one year from date of issue. They may be reissued upon application to the Department and payment of the permit fee. (Section 5 of the Act)*
    - B) Fee Schedule for Construction and Major Alteration. The fee to be paid by an applicant for a permit for construction, major alteration or installation of each swimming facility shall be in accordance with Appendix B.Tables F, G and H and shall accompany the application. Fees for a permit for construction or major alteration shall be determined by the total water surface area of the swimming facility, except that aquatic features and bathing beaches shall be charged a fixed fee regardless of water surface area.
    - C) Plan Resubmittal Fee. *Those permit applications failing to qualify for a permit for construction or major alteration after review by the Department shall be supplemented within 30 days by a plan resubmittal. (Section 5.2 of the Act) If a plan is not resubmitted, the application for a permit shall be deemed null and void. A plan resubmittal shall include, but not be limited to, revised plans, specifications and other required documentation sufficient to correct*

deficiencies in the application and demonstrate compliance with this Part, and shall be accompanied by the fee set forth in Appendix B. Tables F, G and H.

2) License Fees

- A) Original License Fee. *It shall be unlawful for any person to open, establish, maintain or operate a swimming facility within this State without first obtaining a license from the Department or, where applicable, from the ordinance health department. Applications for original licenses shall be made on forms furnished by the Department or, where applicable, by an ordinance health department. Each application shall be signed by the applicant and accompanied by an affidavit of the applicant as to the truth of the application. Each application shall contain: the name and address of the applicant, or names and addresses of the partners if the applicant is a partnership, or the names and addresses of the officers if the applicant is a corporation or the names and addresses of all persons having an interest in the corporation if the applicant is a group of individuals, association, or trust; and the location of the swimming facility. A license shall be valid only in the possession of the person to whom it is issued and shall not be the subject of sale, assignment, or other transfer, voluntary or involuntary, nor shall the license be valid for any premises other than those for which originally issued. In no case shall license fees be assessed by both the Department and the ordinance health department.* (Section 4 of the Act) The original license fee shall be determined by the total water surface area of the swimming facility, except that aquatic features and bathing beaches shall be charged a fixed fee regardless of water surface area. (See Appendix B. Tables F, G and H.)
- B) License Renewal Fee. Applications and fees for renewal of the license shall be made in writing by the holder of the license, on forms furnished by the Department, and shall be accompanied by a license application fee in accordance with Appendix B. Tables F, G and H. The license fee shall not be refundable and shall contain any change in the information submitted since the original license was issued or the latest renewal granted. License renewal fees shall be determined by the total water surface area of the swimming facility, except that special features and bathing beaches shall be charged a fixed fee regardless of water surface area. In addition to any other fees required for the renewal of a swimming facility license, the Department shall charge the following fees as stated in Appendix B. Tables F, G and H:
- i) Late Fee. A late fee shall be charged when any renewal application is received by the Department after the license has expired. The late renewal fee shall be a fixed fee regardless of water surface area.
- ii) Lapsed Fee. This fee is in addition to any other fees due with the renewal of a swimming facility license. The lapsed fee shall be a fixed fee regardless of water surface area.

## 3) Inspection Fees

- A) Initial Inspection. The initial inspection fee shall be a fixed fee regardless of water surface area, as set forth in Appendix B.Tables F, G and H.
  - B) Subsequent Inspection. The subsequent inspection fee shall be a fixed fee regardless of water surface area, as set forth in Appendix B.Tables F, G and H.
- b) All fees, unless otherwise established specifically by an agent or ordinance health department, shall be paid as set forth in Appendix B.Tables F, G and H.

(Source: Added at 37 Ill. Reg. 16539, effective October 4, 2013)

drinking

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.120 WASTEWATER DISPOSAL**

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**Section 820.120 Wastewater Disposal**

- a) Sewage generated from the operation of a swimming facility shall discharge to a public sanitary sewer or to a system that complies with the Department's Private Sewage Disposal Code.
- b) Deck or surface area drainage water may be discharged directly to storm sewers, natural drainage areas, or the ground surface. Drainage shall not result in nuisance conditions that create an offensive odor, produce a stagnant wet area, or create an environment for insect breeding.
- c) Wash or backwash water from filters shall be discharged to natural drainage areas, sanitary sewers, storm sewers, or to the ground surface in a manner that does not result in a nuisance condition.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

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**SECTION 820.130 FOOD SERVICE SANITATION**

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**Section 820.130 Food Service Sanitation**

All food service establishments operated in conjunction with swimming facilities shall be constructed and operated in accordance with the Department's Food Service Sanitation Code.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
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**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.140 EXEMPTIONS**

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**Section 820.140 Exemptions**

- a) Design standards contained in Sections 820.200 to 820.250 shall not apply to a licensed swimming facility existing on or before May 20, 1999, except when, in the interest of public health or safety, remedial action to correct a condition not in compliance with a design standard is ordered by the Department or authorized agent. Conditions requiring remedial action may include, but shall not be limited to, inadequate lighting or enclosure barriers, unsafe deck conditions, lack of depth markers, disinfection systems that do not allow the minimum disinfectant levels to be maintained, and previously cited violations that were not corrected as required. However, in accordance with Section 820.100(e), construction, repairs, remodeling or major alterations of existing facilities shall comply with the design standards of this Part.
- b) Exempt facilities may be subject to operational procedures in addition to or in place of those specified in Section 820.340, as specified by the Department, in lieu of compliance with the design standards of this Part.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)



**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

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**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.145 SWIMMING FACILITIES IN EXISTENCE PRIOR TO JANUARY 1,**  
**2009**

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**Section 820.145 Swimming Facilities in Existence Prior to January 1, 2009**

- a) All swimming facilities with suction outlets located in the pool shall comply with Section 820.200(e) and Section 820.210(f)(3). Compliance with Section 820.210(f)(3)(G) is not required when suction outlets comply with one or more of the following:
- 1) The suction outlet piping system is equipped with a safety vent pipe that will introduce air into the suction pipe if the water level in the vent pipe drops to a level of no more than 5 feet below the water level in the pool, but shall not introduce air into the suction piping when there is no obstruction of a suction outlet or in suction piping. The diameter of the vent pipe shall be at least  $\frac{1}{2}$  the diameter of the suction pipe, but not less than  $1\frac{1}{2}$  inches. The top of the vent pipe shall be open to the atmosphere and shall not be accessible to the public. The opening shall be protected against entry of dirt, rodents, birds, leaves, and other objects, and shall be accessible for cleaning and inspection; or
  - 2) The suction outlet piping system is equipped with a safety vacuum release system, which shall be installed in accordance with the manufacturer's specifications. A safety vacuum release system shall be certified in accordance with ASME A112.19.17 or ASTM F2387; or
  - 3) Water flows from the suction outlet to a surge tank, vacuum filter tank or balance tank by force of gravity, and the pump suction pipe draws water from the surge, vacuum filter or balance tank and is not directly connected to the suction outlet. The vacuum filter, surge or balance tank shall be vented to the atmosphere. The vent shall be designed to prevent blockage.
- b) Existing skimmer equalizer lines shall be permanently disabled or the piping shall be rerouted as required by Section 820.210(f)(5)(F).

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

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**ADMINISTRATIVE CODE**

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**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.150 VARIANCES**

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**Section 820.150 Variances**

- a) The Department may approve variances to this Part when the variance will provide appropriate protection of public health and safety. A request for a variance may be submitted to the Department only by a facility owner or licensee, by a project designer, or by a permit applicant. A variance request must state each specific code requirement from which a variance is sought and a complete description of the condition that does not or would not comply with this Part, the reason for the request, and an explanation of the manner in which the design will provide protection of public health and safety substantially equivalent to that provided by compliance with this Part. When requested by the Department, plans and specifications showing an existing condition or proposed construction or major alteration shall be submitted.
- b) The Department will notify the applicant in writing of its decision whether to approve the variance. The Department will give consideration to difficulties in complying with this Part and to innovative designs.
- c) When granting a variance request, the Department may attach conditions necessary to protect public health that the recipient of the variance must comply with as a condition of the variance. When determining whether to attach conditions to the variance, the Department shall consider the degree of risk to the public posed by the variance, the degree to which the risk can be safely mitigated, and other factors that affect public health and safety. Failure to comply with the conditions shall constitute a violation of this Part.
- d) If, at any time, the Department finds that a variance has resulted in a compromise of public health or safety, or if the licensee or permit applicant has failed to comply with conditions attached to the variance, the Department will revoke the variance. The licensee or permit applicant shall then take action required to comply with this Part.
- e) A person from whom a variance has been revoked shall have an opportunity for a hearing before the Department in accordance with the Department's Practice and Procedure in Administrative Hearings.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

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**ADMINISTRATIVE CODE**

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**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.200 GENERAL DESIGN REQUIREMENTS**

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**Section 820.200 General Design Requirements**

Swimming facilities and appurtenances, including other pools associated with or provided as appurtenances to swimming pools, shall comply with this Subpart.

- a) Enclosures
  - 1) The swimming pool area shall be completely enclosed by a protective wall, fence or other barrier, at least 4 feet high, measured on the inside and outside, and not providing ready footing for climbing. The height of an opening under the bottom of the barrier shall not exceed 4 inches. The openings in any barrier shall not exceed 4 inches in width and height.
  - 2) Each entrance into the pool enclosure shall be equipped with a door or gate that is self-closing and self-latching. This requirement is not necessary when people enter the pool area through the bather preparation facility and lifeguards are provided in the pool area. Doors and gates at all entrances to the pool enclosure shall be equipped with hardware that permits secure locking of the entrance.
  - 3) A balcony shall not overhang or extend within 10 feet horizontally of any portion of the water surface of a swimming pool.
  - 4) Sand areas shall not be allowed inside of the pool enclosure unless a barrier is provided to control access to the pool. If access is allowed to sand areas, bathers passing from the sand area to the pool area shall be required to pass through a shower facility with heated or tempered water for removal of sand.
- b) Bather Load. The Department will compute a bather load for each swimming pool area. A bather load shall be specified with the issuance of a construction permit for a new swimming pool. In the case of multiple swimming pools contained within a common enclosure, the Department may compute a combined bather load for the pool enclosure. The criteria to be used for computing the bather load are as follows:
  - 1) Shallow Area. Fifteen square feet of water surface shall be required for each bather.
  - 2) Deep Area. Twenty-five square feet of water surface shall be required for each bather, with 300 square feet deducted for each diving board or

platform.

- 3) The bather load for wading pools shall be computed at 15 square feet of pool water surface for each bather.
  - 4) A designated plunge area or landing area for a slide, as specified in Section 820.250, shall not be considered in computing a bather load.
  - 5) One bather shall be allowed for each 50 square feet of pool deck area in excess of the minimum specified in subsection (j)(1).
- c) **Structure.** A licensed architect or structural engineer shall certify that the pool is designed to withstand all anticipated hydraulic structural loadings for both full and empty conditions. All appurtenances to the pool, such as diving boards and slides, shall be designed to carry the anticipated load.
  - d) **Material.** Pools shall be constructed of materials that provide a rigid, watertight shell with a smooth, impervious, light-colored finish that is non-toxic and easily cleaned. The floor of shallow areas shall have a slip-resistant finish. Pool vinyl liners may be installed only over a base of concrete, steel or other rigid material.
  - e) **Obstruction.** An obstruction creating a safety hazard shall not extend into or above the pool, or shall not protrude from the floor of the pool. Certified safety covers for suction outlets shall not protrude more than 2 inches from the floor or walls of the pool.
  - f) **Slope of Pool Floor.** The floor of a pool shall slope downward toward the main drain. The slope in shallow areas shall not exceed 1 foot vertical in 12 feet horizontal except for a slope directed downward from a transition point, which shall not exceed 1 foot vertical in 3 feet horizontal. In portions of the pool with a depth greater than 5 feet, the front slope of the deep area shall not be steeper than 1 foot in 3 feet. The slope requirements are illustrated in Appendix A.Illustration A.
  - g) **Transition Point.** Transition points shall be marked with a stripe on the pool floor at least 4 inches wide in a color that contrasts with that of the floor, and with a buoyed safety rope with colored buoys, installed at least 1 foot on the shallow side of the transition point. In other pools having adjoining shallow and deep areas, a safety rope with colored buoys shall be installed where the water depth reaches 5 feet.
  - h) **Pool Walls**
    - 1) Pool walls shall meet the following requirements:
      - A) Where the pool depth is 42 inches or less, pool walls shall be vertical to the floor. The junction of the wall with the floor shall consist of a cove with a radius not exceeding 6 inches.
      - B) Where the pool depth exceeds 42 inches, pool walls shall meet one of the following criteria:
        - i) The wall shall be vertical for a distance of at least 5 feet below the water level, below which the wall may angle to the floor; or

- ii) The wall shall be vertical for a distance of at least 3 feet below the water level, below which the wall shall form a curve to the floor. The curve shall be tangent to the pool wall and shall have a radius of curvature at least equal to the vertical distance between the center of curvature and the pool floor.
  - 2) If pool ledges are provided, they shall have a maximum 6-inch width, shall be located at least 3 feet below the water level, shall slope away from the pool wall and shall have a slip-resistant surface with a color that contrasts with the pool walls and floor. The pool wall below the ledge shall be constructed in accordance with the requirements of this Section, except that the pool wall may slope inward toward the pool at an angle not exceeding 11 degrees from vertical.
  - 3) Underwater seat benches shall be located a maximum of 20 inches below the water level, be visually set apart, have a slip-resistant surface, and be recessed into the pool wall or be installed so that there are no exposed corners or vertical edges in the pool.
  - 4) All junctions between pool walls, and between pool walls and the pool floor, shall be coved with a minimum radius of 1 inch.
  - 5) Devices for anchoring safety ropes and racing lane divider ropes shall be recessed into the pool wall.
  - 6) An effective handhold shall be provided at or near the water level where the pool depth is 30 inches or greater. The handhold may consist of the rounded lip of a perimeter overflow system or bullnose coping with round, raised handhold not exceeding 2½ inches in thickness, or other effective handhold. The handhold shall not protrude more than 2 inches into or over the pool.
- i) Depth Markers
- 1) The water depth shall be marked at or above the water surface on the wall of the pool and on the edge of the deck next to the pool so as to be readable by persons entering or in the pool. If depth markers cannot be placed on the walls at or above the water level so that at least 50 percent of the marking is above water level, they shall be placed on the pool wall as high as practicable and also on the fencing or pool enclosure so as to be plainly visible to persons in the pool. Depth markings shall be provided at the shallow and deep ends of the pool, the transition point, and the point of maximum depth, and shall be spaced at not more than 25 foot intervals measured peripherally, except that depth markings are not required at a zero-depth edge.
  - 2) Depth markers shall indicate pool depth in either feet, feet and inches, or feet and fractions of a foot, and shall be of a color that contrasts with the background. Numerals indicating depth shall be a minimum of 4 inches high.
  - 3) In shallow areas, "no diving" markers or symbols at least 4 inches high shall be located at not more than 25 foot intervals around the pool perimeter except at a zero-depth edge.

## j) Walkways and Deck Areas

- 1) Except for plunge pools, wave pools and lazy rivers, pools shall be completely surrounded by a deck that is at least 4 feet in width and extends completely around and adjacent to the pool. Except as allowed for wave pools in subsection (u)(3), there shall be no obstructions or interruptions of the pool deck within the 4 feet adjacent to the pool other than necessary structural supports, or appurtenances such as diving boards, slides, perimeter overflow systems, or handrails. A clear, unobstructed walkway at least 42 inches in width shall be maintained at obstructions or interruptions.
- 2) Structural supports located within the minimum required deck width or within 4 feet of the swimming pool shall be no closer than 10 feet apart measured parallel to the adjacent perimeter of the pool, with the dimension of any single support in a plane parallel to the adjacent pool perimeter no greater than 3 feet and the sum of all support dimensions no greater than 10 percent of the pool perimeter.
- 3) The deck between two adjacent swimming pools shall be at least 8 feet wide. All decks and walkways shall have an unobstructed overhead clearance of at least 7 feet.
- 4) Deck Coverings. Synthetic material may be installed if it meets the following criteria:
  - A) It is non-fibrous and allows drainage so that it will not remain wet or retain moisture;
  - B) It is inert and will not support bacterial or fungal growth;
  - C) It is durable;
  - D) It is cleanable; and
  - E) It provides a slip-resistant finish.
- 5) The deck shall slope at least 1 inch per 10 feet to deck drains or to the surrounding ground surface. The maximum slope of the pool deck shall not exceed 1 inch per foot.
- 6) Except for linear drains, deck drains shall be located so that not more than 900 square feet of deck area is tributary to each drain, and deck drains shall not be more than 30 feet apart. Deck drains shall be located so that water does not drain more than 15 feet in any one direction. Where deck widths are 15 feet or less, deck drains are not required, provided that the deck drains to the ground surface. The deck drains shall not be connected to the pool water recirculation system. Pools designed to operate where the pool water level is at the deck level may be allowed to drain the first 4 feet of deck into the pool perimeter overflow system. Up to 10 feet of the deck adjacent to a zero-depth edge may be drained into the pool.
- 7) The decks and walkways shall have a paved surface. The surface of the pool deck, and other surfaces used for foot contact, such as gratings of perimeter

overflow systems, shall be slip-resistant.

- 8) The outer perimeter of the deck for outdoor pools shall be at least 4 inches higher than the surrounding ground surface except where access is provided to adjacent turf areas.
  - 9) Any opening in the deck shall have a locking type cover that is flush with the deck.
  - 10) Hose bibbs shall be provided for cleaning all parts of the pool and deck (maximum separation 150 feet).
  - 11) Except for wave pools, the vertical distance between the surface of the deck, pool curb or pool rim and the water level shall not exceed 10 inches.
  - 12) A pool perimeter curb or raised rim, if provided, shall be at least 4 inches in height, measured above the adjacent pool deck surface. This requirement does not apply to a handhold provided in accordance with subsection (h)(6).
- k) Ladders, Step-Holes, Steps and Ramps
- 1) Swimming pools shall have at least two means of egress, located near opposite ends. Pools 30 feet or more in width shall have at least four means of egress, which shall be located near each end and on opposite sides. A means of egress shall consist of a ladder, step-holes and grab rails, stair, ramp, or zero-depth edge. The distance from any point with a depth greater than 30 inches in the swimming pool to a means of egress shall not exceed 50 feet. At least two ladders or sets of step-holes shall be located at the deep area of the swimming pool if more than one diving board is provided.
  - 2) Step-holes shall have a minimum tread depth of 5 inches. Where step-holes or ladders are provided, there shall be a handrail or grab rail at the top on both sides that extends to the edge of the pool.
  - 3) Steps shall be of contrasting color or marked to contrast with the pool floor and have uniform size treads of at least 12 inches and a rise of no more than 12 inches. Steps shall be located where the water depth is 3½ feet or less and shall have no pointed or sharp edges. One sturdy handrail or grab rail per 12 feet of step width or fraction of step width, extending the length of the steps, shall be provided.
  - 4) All ladders, step-holes, and steps shall have slip-resistant surfaces.
  - 5) Ramps shall slope at no more than 1 foot in 12, shall have a slip-resistant surface, shall be no more than 4 feet wide, and shall have handrails on both sides.
- l) Drinking Fountains. A drinking fountain shall be provided on the pool deck for the use of bathers.
- m) Diving Area
- 1) Handrails shall be provided at all steps and ladders leading to diving boards, except for those ladders set at 15° or less from the vertical. Platforms and

diving boards that are 1 meter or higher shall be protected with guard railings. One meter diving board guard rails shall be at least 30 inches above the diving board and extend to the pool water's edge. All platforms or diving boards higher than 1 meter shall have guard rails that are at least 36 inches above the diving board or platform and extend to the pool water's edge. Three-meter platforms and boards shall have a side rail barrier.

- 2) The dimensions of the diving area of a pool that has diving boards or platforms of 3 meters or less in height shall conform to those shown in Appendix A.Illustration C. The distance from the plummet to the pool wall ahead shall be at least 34 feet.
- 3) Swimming pools constructed with diving facilities in excess of 3 meters in height shall comply with dimensions given in Appendix B.Table A and illustrated in Appendix A.Illustration D. If the pool is used for swimming as well as diving and if slope N transitions from the deep to the shallow end, then transition slope N shall not be steeper than 1 foot in 3.
- 4) There shall be no obstruction extending from the wall or the floor into the clear area of the diving portion of the pool. There shall be an unobstructed distance of 16 feet above the diving board, measured from the center of the front end of the board, and this clearance shall extend at least 8 feet behind, 8 feet to each side, and 16 feet ahead of the measuring point.
- 5) A plunge area shall be designated for each diving board or platform. There shall be no overlap from plunge areas of other diving facilities or slides. The plunge area for a diving board of 1 meter height or less shall extend 4 feet laterally from the center of the board on either side and for a distance of 28 feet in front of the tip of the board. For diving boards or platforms greater than 1 meter in height, the plunge area shall extend 6 feet laterally from the center of a diving board or from the side of a platform on either side and for a distance of at least 34 feet in front of the board or platform.

n) Starting Platforms

- 1) For swimming pools issued a construction permit after May 20, 1999, or starting platforms installed after that date at existing pools, starting platforms shall be installed only where the water depth is at least 3½ feet.
- 2) The top front edge of the platform shall be no more than 30 inches above the water level for water depths 4 feet or more. For water depths between 3½ and 4 feet, the top front edge of the platform shall not exceed 20 inches above the water level.

o) Electrical Installation – Lighting

- 1) All aspects of the facility shall comply with the 2008 National Electrical Code.
- 2) Artificial lighting shall be provided at all indoor pools and at all outdoor pools that are open for use after sunset in accordance with one of the following:



- A) Underwater lighting of at least 8.35 lumens or 0.5 watts per square foot of pool water surface area, located to provide illumination of the entire pool floor; plus area lighting of at least 10 lumens or 0.6 watts per square foot of deck area.
  - B) If underwater lights are not provided, at least 33.5 lumens or 2.0 watts per square foot of pool water surface area and deck area.
- 3) Where portable electric vacuum cleaning equipment is used, electrical receptacles with ground-fault circuit interrupter protection shall be provided. Separation between receptacles shall be a maximum of 100 feet. All receptacles installed in the swimming pool area shall have waterproof covers and ground-fault circuit interrupter protection.
  - 4) Light dimmers shall not be installed on underwater lighting or lights for the pool deck.
  - 5) Lighting controls shall not be accessible to the public.
- p) Acoustics. Indoor pools shall receive acoustical treatment.
  - q) Ventilation. Indoor pools shall be mechanically ventilated and have humidity control. The ventilation system shall be capable of admitting 0.5 cubic feet per minute of outdoor air per square feet of floor area, including water surface area, in the pool enclosure.
  - r) Plumbing. All plumbing shall be in accordance with the Illinois Plumbing Code.
  - s) Emergency Telephone. Every swimming pool shall have a telephone that is accessible within the confines of the pool area or within 300 feet of the pool area, in case of emergencies.
  - t) Equipment Rooms
    - 1) Equipment for swimming pool water treatment shall be housed in a lighted and ventilated room that affords protection from the weather and prevents unauthorized access.
    - 2) The equipment room floor shall slope toward drains and shall have a slip-resistant finish.
    - 3) A hose bibb shall be installed in the equipment room.
    - 4) Suitable space, if not provided in the equipment room, shall be provided within the premises for storage of chemicals, tools, equipment, supplies and records and shall be weatherproof and protected from unauthorized access.
    - 5) Electrical receptacles in the equipment room shall have ground-fault circuit interrupter protection.
  - u) Wave Pools. Wave pools shall comply with the following, and, except as specified in this subsection (u), with the requirements of this Section and Sections 820.210 and 820.220:

- 1) Overflow gutters, skimmers and inlets are not required along the deep end wall from which waves are generated.
- 2) Wave-generating equipment shall be installed and shall be provided with an emergency shut-off located at lifeguard chairs or stations on each side of the deep end of the pool.
- 3) A deck as specified in subsection (j) is required, except at the end of the pool where wave-generating equipment is located. Railings or other barriers may be installed on the deck adjacent to the sidewalls of the pool to control entry into the pool from the sides.
- 4) A safety rope will not be required if the pool is to be used only as a wave pool.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

## Joint Committee on Administrative Rules

# ADMINISTRATIVE CODE

**TITLE 77: PUBLIC HEALTH  
CHAPTER I: DEPARTMENT OF PUBLIC HEALTH  
SUBCHAPTER n: RECREATIONAL FACILITIES  
PART 820 SWIMMING FACILITY CODE  
SECTION 820.210 SWIMMING FACILITY WATER TREATMENT SYSTEM**

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### Section 820.210 Swimming Facility Water Treatment System

a) General Requirements

- 1) A water treatment system, consisting of pumps, piping, filters, water conditioning, disinfection equipment and other accessory equipment shall be provided to clarify, chemically balance and disinfect the swimming pool water. The system shall be designed for a recirculation flow rate that will result in a turnover period in each pool not exceeding those specified below. Systems serving pools with skimmers shall be designed for a flow rate of at least 30 gallons per minute for each skimmer.

Type of Pool	Maximum Turnover Period
Diving Pools	8 Hours
Wading Pools, Wading Areas	2 Hours
Plunge Pools and Plunge Areas for Water Slides	2 Hours
Lazy Rivers	2 Hours
Other Pools	6 Hours
Spas	30 Minutes

- 2) Other than equipment for circulating, heating, filtering and chemically treating water, as specified in this Section, or for automation of water quality control, no other type of device may be used as part of a pool water treatment system.

b) Pumping Equipment

- 1) The recirculation pump shall deliver the flow necessary to obtain a turnover as specified in subsection (a). A valve for regulating the rate of flow shall be provided in the recirculation pump discharge piping.
- 2) The pump shall provide a minimum backwash rate of 15 gallons per minute per square foot of filter area in sand filter systems. The pump shall supply the required recirculation rate at a total dynamic head of at least 50 feet for all vacuum filters, 70 feet for pressure sand or cartridge filters, or 80 feet for

pressure diatomaceous earth filters, unless a lower head is shown by the designer to be hydraulically appropriate.

- 3) If the pump operates with static suction lift, it shall be self-priming.
  - 4) Where vacuum filters are used, a vacuum limit switch shall be provided on the pump suction line. The vacuum limit switch shall be set for a maximum vacuum of 18 inches of mercury.
  - 5) A compound vacuum-pressure gauge shall be installed on the pump suction line as close to the pump as possible. A vacuum gauge may be used for pumps with suction lift. A pressure gauge shall be installed on the pump discharge line adjacent to the pump, with no valves between the pump and the gauge. Gauges shall be installed where they can be easily read.
  - 6) Hair and Lint Strainer. A hair and lint strainer shall be installed on the suction side of the pump except on vacuum filter systems. The strainer basket shall be easily removable. Valves shall be installed to allow the flow to be shut off during cleaning, switching baskets, or inspection.
- c) Water Heater. A water heater shall be installed at all indoor pools. Pool water heaters shall be installed in accordance with the manufacturer's recommendations.
- 1) The heater piping system shall be equipped with a valve bypass pipe around the heater, sized for the swimming pool design flow rate. The influent and effluent heater piping shall be valved, and shall conform to material specifications as approved for water distribution applications in the Illinois Plumbing Code.
  - 2) A heating coil, pipe or steam hose shall not be installed in a swimming pool.
  - 3) Thermometers shall be provided in the piping to check the temperature of the water returning from the pool and the temperature of the blended water returning to the pool.
  - 4) The design of the water heating system shall prevent the introduction of water in excess of 115° F. to the pool.
  - 5) A pressure relief valve with a maximum pressure rating of 75 pounds per square inch and having a thermal capacity at least equal to the heat input rating of the heater shall be provided, with the discharge piped to within 6 inches of the floor.
  - 6) Gas or other fuel-burning water heaters shall be vented to the outdoors.
  - 7) Heaters for indoor pools shall be capable of maintaining a minimum pool water temperature of 76° F.
  - 8) Combustion and ventilation air shall be provided for fuel-burning water heaters as required by the heater manufacturer.
  - 9) Heaters for indoor swimming pools shall be sized on a basis of 150 British Thermal Units (BTU) per hour input per square foot of pool water surface area.

(1 kilowatt = 3,412 BTU/hr.)

- 10) Heat exchangers used to heat pool water by use of a toxic transfer fluid, as defined in Section 890.120 of the Illinois Plumbing Code, shall be of double-wall construction, with the space between the two walls having a drain open to the atmosphere.
- d) Flow Meter. Flow meters shall be located so that the rate of recirculation and the backwash rate of sand filters can be read. In a multiple pool system, flow meters shall be provided for each pool. Separate flow meters shall be provided to monitor the flow for each area of a pool with a turnover rate that differs from adjacent areas according to subsection (b)(1). Flow meters shall be provided on inlet supply piping in accordance with subsection (f)(2)(G). Flow meters shall be installed on a straight length of pipe with no valves, elbows or other sources of turbulence within 10 pipe diameters upstream or 5 diameters downstream from the flow meters. (See Appendix A.Illustration G.)
- e) Vacuum Cleaning System
  - 1) A vacuum cleaning system capable of reaching all parts of the pool floor shall be provided.
  - 2) When the vacuum cleaning system is an integral part of the pool recirculation system, the wall fitting shall connect to the suction side of the pump ahead of the hair and lint strainer. Vacuum outlets in pools shall be equipped with covers that automatically close and latch when the vacuum hose is removed. A shut-off valve shall be installed in the piping. The suction outlet fitting shall comply with IAPMO SPS.
- f) Piping, Skimmer and Overflow System
  - 1) Piping
    - A) The pool recirculation piping shall comply with Section 890.Appendix A.Table A of the Illinois Plumbing Code for water service pipe or water distribution pipe.
    - B) The piping shall be designed to carry the required flow at velocities not exceeding 5 feet per second in suction piping, and 10 feet per second in pressure piping, unless greater velocities can be hydraulically provided. Gravity piping shall be sized so that the head loss in piping, fittings, valves, etc., does not exceed the head available during normal operating conditions.
    - C) The following waste lines shall be provided with 6-inch air gaps at their points of discharge to the waste sump or sewer:
      - i) Main drain bypass or other connections to waste;
      - ii) Sub-surface drains or deck drains around a pool that discharge to a sanitary or combined sewer;
      - iii) Filter backwash or drain lines and overflow lines;

- iv) Surge tank drain and overflow lines;
  - v) Pump discharge to waste lines; and
  - vi) Gutter bypass to waste lines.
- 2) Inlets
- A) Inlets for filtered water shall be located and directed to produce uniform circulation of water to maintain a uniform disinfectant residual throughout the entire pool without the existence of dead spots, and to produce surface flow patterns that effectively assist skimming. In pools with skimmers, inlets installed where the water depth is 18 inches or more shall be installed in the pool wall at a depth of 8 inches to 16 inches below the mid-point on the skimmer throat. Each inlet installed in a wall of a pool where skimmers are used shall be directional.
  - B) The velocity of flow through any inlet orifice shall be in the range of 5 to 20 feet per second, except that in pools equipped with skimmers it shall be in the range of 10 to 20 feet per second. Velocities for various flows are shown in Appendix B. Table C.
  - C) Inlets installed in pool walls shall be spaced as follows:
    - i) In the shallow end wall, each inlet shall serve a linear distance of no more than 8 feet. In the deep end wall, each inlet shall serve a linear distance of not more than 15 feet.
    - ii) In pools with a water surface area greater than 1,500 square feet or length in excess of 60 feet, additional inlets shall be provided along side walls at no more than 15-foot intervals.
    - iii) The location of inlets in pools with skimmers may vary from the requirements of this subsection (f)(2)(C) to allow locations that will assist in skimming.
  - D) At least one inlet shall be located in each recessed stairwell or other space where water circulation might be impaired.
  - E) Where floor inlets are used, inlets shall be uniformly spaced at a distance of no greater than 20 feet apart, and rows of inlets shall be within 15 feet of each side wall. Floor inlets shall be flush with the pool floor and shall include a diffuser plate to evenly distribute the flow in all directions.
  - F) Floor inlets are required in wading areas that are more than 30 feet in width.
  - G) If both wall and floor inlets are used in a swimming pool, the wall inlets and the floor inlets shall be supplied by separate piping, with valves and flow meters installed in each so that the flow can be individually regulated and monitored.

- 3) Outlets
- A) Each pool shall be provided with a main drain system installed at the deepest point, which shall be connected to the pool recirculation system. For multiple-purpose pools, with a floor consisting of more than one drainage area, at least one drain shall be provided in each basin, so that each portion of the pool floor is sloped to drain.
  - B) Main drains shall be spaced not less than 3 feet apart, nor more than 30 feet apart, nor more than 15 feet from side walls, and shall be connected in parallel.
  - C) A hydrostatic relief valve shall be provided for in-ground pools.
  - D) Main drain 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. The piping system shall be valved to permit adjustment of flow through it.
  - E) If the pool cannot be drained completely through the main drain, a portable pump that will effect complete pool drainage shall be provided.
  - F) Each outlet, including main drains and suction outlets, but not including skimmers, shall be covered with a certified safety cover having openings not exceeding  $\frac{1}{2}$  inch that is not removable without the use of tools or meets the requirements of subsection (f)(3)(K). The water flow rate through certified safety covers shall not exceed the maximum flow rate recommended by the manufacturer.
  - G) Suction outlets shall be equipped with a certified safety cover with dimensions of at least 18 by 23 inches or 29 inches diagonally, or the suction system shall include a minimum of two hydraulically balanced outlets spaced at least 3 feet apart, center to center. In a spa, the two outlets may be installed closer than 3 feet apart if installed on different surfaces, e.g., one outlet in the floor and one in a wall.
  - H) For systems with multiple suction outlets, the sum of the maximum flow rates for the covers shall be at least twice the system maximum flow rate. This requirement shall not apply to systems in which each suction outlet is at least 18 inches by 23 inches or 29 inches as measured diagonally.
  - I) A suction outlet shall not be installed on a horizontal surface of a stair or seat.
  - J) Suction outlets and certified safety covers shall be installed in accordance with the manufacturer's requirements. For suction outlets with field-fabricated sumps or other sumps not specified by the manufacturer of a certified safety cover installed on the outlet, there shall be a spacing of at least  $1\frac{1}{2}$  pipe diameters between the outlet pipe or fitting and the bottom of the cover.

- K) Field-fabricated suction outlets that are at least 18 inches by 23 inches in size shall be certified for compliance with ANSI/APSP 16 by a professional engineer licensed to practice in Illinois. The Licensed Professional Engineer shall provide documentation of the testing and a certification document to the property owner. The Licensed Professional Engineer shall certify a maximum flow rate for each outlet. Copies of all documentation shall be retained on the swimming facility premises for inspection by the Department.
  - L) The following documentation is required to certify a field-fabricated suction outlet for compliance with the ANSI/APSP 16 standard:
    - i) The suction fitting shall not protrude from the installed surface more than 2 inches.
    - ii) The maximum allowable flow through the cover shall be calculated and specified.
    - iii) The maximum system flow rate for the pool pump shall be specified.
    - iv) The design of a field-fabricated suction outlet shall be specified by a licensed engineer to fully address the considerations of cover/grate loadings; durability; hair, finger and limb entrapment issues; cover/grate secondary layer of protection; related sump design; and other features specific to the site.
    - v) Field-fabricated suction outlets shall have the following information specified by the licensed engineer: compliance with ANSI/APSP 16; statement of single or multiple drain use; maximum certified flow rate; installed life of the fitting in years; installation position of the outlet (wall or floor); and instructions on installation and service for the fitting.
- 4) Perimeter Overflow Systems
- A) Pools that have a width exceeding 30 feet shall have a continuous perimeter overflow system.
  - B) A perimeter overflow system shall:
    - i) Extend completely around the pool except that interruptions not exceeding 25 percent of the pool perimeter nor 30 feet each may be allowed for steps, water slide entries, and side walls adjacent to zero-depth edges;
    - ii) Permit inspection, cleaning, and repair;
    - iii) Be designed so that no ponding or retention of water occurs;
    - iv) Be designed to prevent the entrapment of bather's arms, legs and feet;



- v) Except at a zero-depth edge, have an overflow lip that provides a good handhold and is level to within  $\frac{1}{8}$  inch. At a zero-depth edge, a trench drain covered with a slip-resistant grating installed flush with the pool deck and with the pool floor, and level to within  $\frac{1}{8}$  inch measured along the pool perimeter, shall be provided;
  - vi) Provide for the removal of all surface debris skimmed from the pool;
  - vii) Be designed for removal of water from the pool surface at a rate of at least 100 percent of the design turnover flow rate;
  - viii) Discharge to the recirculation system;
  - ix) Be provided with drains and piping that will not allow the overflow channel to become flooded when the pool is in use; and
  - x) Have drain gratings with open area at least equal to two times the area of the outlet pipe and that can be removed for cleaning.
- C) Surge Capacity. Perimeter overflow systems shall be provided with a surge capacity of at least 0.6 gallon per square foot of pool water surface area. Surge capacity shall be provided either in a vacuum filter tank, a surge tank, or combination of vacuum filter tank and surge tank. Valving shall be provided to maintain the proper operating water level in the pool.
- 5) Skimmers. Skimmers are permitted on pools where the width does not exceed 30 feet. If skimmers are provided, the following shall be met:
- A) At least one skimmer shall be provided for each 500 square feet of water surface area or fraction of that area;
  - B) Skimmers shall be located to optimize skimming;
  - C) Each skimmer and piping shall be designed to be capable of providing a flow-through rate of not less than 30 gallons per minute;
  - D) Skimmers shall be piped to provide approximately equal flow through each skimmer;
  - E) The surface skimmer piping shall have a valve to permit adjustment of flow through it;
  - F) If an equalizer pipe is installed, the skimmer shall be equipped with a valve that will restrict flow through the equalizer pipe during normal operation of the skimmer. The equalizer pipe shall be connected to the main drain pipe;

- G) The skimmer shall be tested in accordance with NSF Standard 50 and listed by an approved certification agency;
  - H) Skimming devices shall be built into the pool wall;
  - I) A basket that can be removed without the use of tools, and through which all overflow water must pass, shall be provided; and
  - J) The skimmer shall be provided with a floating weir and shall operate at variations in water level over a range of at least 4 inches.
- g) **Make-up Water.** Make-up water shall be added through a fixed air gap of at least 6 inches to the pool, surge tank, vacuum filter tank, or other receptacle. When make-up water is added directly to the pool, the fill-spout shall be located under a low diving board or immediately adjacent to a ladder rail, grab rail, or fixed lifeguard chair. There shall be no connection between a therapy pool or associated water treatment system and a swimming pool or its recirculation system.
- h) **Filtration**
- 1) Filters shall be certified to comply with NSF Standard 50 and listed by an approved certification agency. The design filtration rate in the particular application in which the filter is used shall not exceed the maximum design filtration rate for which the filter was certified. An official certification label from the certifying agency shall be permanently affixed to the filter.
  - 2) Pressure gauges that indicate the inlet and outlet pressures of pressure filters shall be installed.
  - 3) For pressure filters, an observable free-fall discharge, sight glass or other means of determining the clarity of backwash water shall be provided.
  - 4) Overflow piping shall be connected to vacuum filters if the rim of the filter tank is below the pool water level. Drain piping for vacuum filter tanks shall be provided.
  - 5) The backwash rate for sand filters shall be at least 15 gallons per minute per square foot of filter area. A lesser backwash rate may be allowed when air scouring is used in accordance with the filter manufacturer's specifications.
  - 6) A filter backwash disposal facility, designed so that flooding, overflowing or excessive splashing does not occur when the filter is backwashed at the required flow rate, shall be provided where filters designed to be backwashed are used.
  - 7) A filter pre-coat pot or funnel shall be installed on the pump suction piping when diatomaceous earth filters are used, unless a pre-coat pot is provided as an integral part of the filter. The filter piping shall allow recycling or disposal of filter effluent during the pre-coating operation.
  - 8) If continuous feeding of diatomaceous earth is used with a vacuum diatomaceous filter to permit a design filtration rate higher than would otherwise be allowable, equipment capable of feeding diatomaceous earth at

a rate of at least 1.5 ounces per day per square foot of filter area shall be provided.

- 9) Filter media for sand filters shall be as specified by the filter manufacturer.
- 10) Prior to disposal, wash or backwash water from diatomaceous earth filters shall be passed through a separation tank designed for removal of suspended diatomaceous earth and solids.
  - i) Chemical Feeders
    - 1) Equipment Capacity
      - A) Chlorine. Equipment for supplying chlorine or chlorine compounds shall be of sufficient capacity to feed chlorine at a rate of 8 parts per million (p.p.m.) for outdoor pools and three parts per million for indoor pools, based on the flow rate required by the table in subsection (a). Feed rates for various chlorinators and solutions are shown in Appendix B. Table D.
      - B) Bromine. Equipment for supplying bromine shall be capable of delivering at least 15 p.p.m. for outdoor pools and 5 p.p.m. for indoor pools based on a minimum design flow rate as required by the table in subsection (a).
      - C) Ozone
        - i) Ozone may be used as a supplement to chlorination or bromination as required in subsection (i)(1). Ozone-generating equipment and its components shall be tested in accordance with NSF Standard 50 and listed by an approved certification agency.
        - ii) The ambient air ozone concentration shall be less than 0.10 p.p.m. in the vicinity of the ozonator and at the pool water surface. Ambient ozone monitors shall be installed in the equipment room, in the vicinity of the ozone-generating equipment, and, when the ozonation system is used at an indoor swimming pool facility, in the swimming pool enclosure. Audible and visual alarms that are activated by ozone concentrations in excess of .10 p.p.m. shall be connected to the ozone monitor. The ozone-generating equipment shall automatically shut off when the ozone concentration in the air exceeds 0.30 p.p.m. or when the pool recirculation flow is interrupted.
        - iii) All corona discharge systems shall include a method for removing ozone in the water in excess of 0.1 p.p.m. prior to return to the pool.
    - 2) Positive Displacement Pumps (Hypochlorinators). Positive displacement pumps that are used to inject the disinfectant solution into the recirculation line shall be of variable flow type, shall be of sufficient capacity to feed the amount of disinfectant required by subsection (i)(1), and shall be installed so

that feeding of chemicals is interrupted whenever the swimming pool recirculation flow is interrupted. Positive displacement pumps for feeding chlorine compounds or chemicals for control of pH shall be certified by a certified laboratory to conform to NSF Standard 50. If calcium hypochlorite is used, the concentration of calcium hypochlorite in the solution shall not exceed 5 percent by weight. The solution container shall have a minimum capacity equal to the volume of solution required per day at the feed rate required in subsection (i)(1).

3) Gas Chlorinators

A) The chlorine supply and gas-feeding equipment shall be housed in a separate, relatively air-tight room with an out-swinging door. The room shall be provided with an exhaust system that takes its suction not more than 8 inches from the floor and discharges outdoors in a direction to minimize exposure to toxic fumes. The fan shall be capable of producing one air change per minute. Openings such as filters or grill openings at a high point opposite the exhaust fan intake shall be provided for introducing a fresh air supply to the enclosure. The intake to the make-up air supply shall be located where the discharge from the exhaust system will not be drawn back into the room. The room shall have a window with an area of at least 100 square inches and shall have artificial lighting. Electrical switches for lighting and ventilation shall be outside and adjacent to the door. Scales for weighing chlorine cylinders in service shall be provided.

B) The chlorine-feeding device shall be designed so that gas feed is automatically terminated during interruptions of the flow of the water supply. In addition, the release of chlorine shall be terminated when the recirculation pump is shut off. Where other than swimming pool recirculated water is used, the supply line shall be equipped with an electric shutoff valve wired to the recirculation pump and shall be equipped with a suitable backflow preventer. (See Appendix A.Illustrations L and N for methods of installation.)

C) Chlorinator vent lines shall terminate outdoors. A screen made from a chlorine-resistant material shall be installed where the vent line terminates outdoors to exclude insects.

D) The gas chlorinator shall be the solution feed type capable of delivering chlorine at its maximum rate without releasing chlorine gas to the atmosphere.

E) The water supply for the gas-feeding equipment shall produce the flow rate and pressure required according to the manufacturer's specifications for proper operation of the equipment.

4) pH Control Feeders. At pools with a volume greater than 100,000 gallons, or pools using gas chlorine as a disinfectant, a chemical feed system shall be installed to maintain the pH of pool water within the range of 7.2 to 7.6. The system shall be installed so that the feeding of the pH controlling chemical is automatically interrupted whenever the swimming pool recirculation flow is interrupted. A solution tank of at least 15 gallons capacity shall be provided and shall be marked as containing a chemical to control pH. Alternatively, a

system incorporating a cylinder of carbon dioxide and injecting mechanism may be employed to lower pH.

- 5) Erosion-Type Chemical Chlorine Feeders
  - A) Erosion type chlorine and bromine feeders shall be tested in accordance with NSF Standard 50 and listed by an approved certification agency.
  - B) Only the chemical specified by the feeder manufacturer shall be used as the disinfecting agent.
  - C) Erosion type chemical feeders shall be installed in accordance with the equipment manufacturer's instructions.
- 6) Copper/Silver and Copper Ion Generators. All copper/silver and copper ion generators shall be tested in accordance with NSF Standard 50 and listed by an approved certification agency and may be used only as a supplement to chlorination or bromination as required in subsection (i)(1).

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.220 SWIMMING FACILITY BATHER PREPARATION FACILITIES**

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**Section 820.220 Swimming Facility Bather Preparation Facilities**

- a) General Requirements. Bather preparation facilities shall be provided in accordance with subsections (b), (c) and (d) of this Section except where the facility is intended to serve living units (such as hotels, motels, apartments, condominiums, dormitories, subdivisions, and resident institutions) where each living unit contains at least one toilet and one shower and is within 500 feet of the facility entrance.
- b) Design Requirements
  - 1) Bather preparation facilities to be used by both sexes shall be divided into separate areas designated for each sex.
  - 2) Floors of bather preparation facilities, including showers, restrooms, dressing and locker rooms, and connecting walkways, shall be slip-resistant, impervious to moisture, and sloped to drain at least 1 inch in 10 feet. Material used for floor covering in these areas shall comply with Section 820.200(j)(4). Alternative floor coverings may be installed in locker or dressing areas with prior approval of the Department, if the Department determines that the installation is unlikely to result in a condition detrimental to public health. In considering approval of an installation of an alternative product, the Department shall consider:
    - A) Whether the product is likely to become or to remain wet, considering separation distance between locations where the floor covering product would be installed and wet areas, such as toilet and shower facilities, and anticipated usage of the facility;
    - B) Properties of the product, including factors affecting rate of drying, propensity of the product to support microbial growth, and ease of cleaning and disinfecting;
    - C) If the Department learns that a condition detrimental to public health results from the installation of an alternative product, or if there is failure to comply with the care and maintenance conditions specified with the approval, whether to order removal of the alternative product.

- 3) Bather preparation facilities serving swimming facilities with bather loads of greater than 200 shall be designed so that passage from the showers to the swimming facility shall not be through dressing room areas and other dry areas of the bather preparation facility.
  - 4) The rooms shall be ventilated and lighted.
  - 5) A hose bibb shall be provided in each side of the bather preparation facilities.
- c) Showers, Toilets, and Lavatories. Showers and lavatories shall be provided with liquid or powdered soap dispensers. Showers shall be supplied with water at a temperature of at least 90° F and not more than 115° F with temperature controls that prevent scalding. The number of fixtures provided shall be as shown in Appendix B. Table E. At a swimming facility used by school classes, one shower for every four persons in the largest class shall be provided for each sex, except that in no case shall the number be less than shown in Appendix B. Table E.
  - d) Dressing Rooms. For swimming facilities with a bather load of more than 300, a dressing area shall be provided for each sex. Shower and toilet areas and walkways shall not be considered dressing areas.
  - e) Foot Spray. A foot spray, if provided, shall be supplied from the potable water system or the swimming facility recirculation system, have a spray head 18 to 24 inches above the walkway, have a conveniently located valve, be arranged to spray the bathers from knees to feet as they enter the enclosure, and have a drain.
  - f) Foot Bath. No new footbaths may be constructed or installed after May 20, 1999.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules****ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH  
CHAPTER I: DEPARTMENT OF PUBLIC HEALTH  
SUBCHAPTER n: RECREATIONAL FACILITIES  
PART 820 SWIMMING FACILITY CODE  
SECTION 820.230 WADING POOLS**

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**Section 820.230 Wading Pools**

- a) Floor. The floor shall be slip-resistant and sloped to the main drain. The slope shall not exceed 1 vertical foot in 12 horizontal. No obstructions such as raised drains or steps on which children may fall or become injured shall be placed in the wading pool area. Play items shall be designed and located to provide maximum safety to the children.
- b) Material. The floor and walls shall be of light-colored impervious materials. All corners shall be coved.
- c) Walk Area. A walkway at least 4 feet wide shall extend entirely around the pool and shall be sloped to drain away from the pool. The walks shall be constructed of impervious material with a slip-resistant finish. The walks shall slope not less than 1 inch in 10 feet away from the pool edge. A hose bibb shall be installed in the pool area.
- d) Barrier. A fence or other effective barrier, at least 3½ feet in height, shall totally enclose the wading pool and shall separate the wading pool from other pools. Except with regard to height, the barrier shall comply with Section 820.200(a). Any entrance into the wading pool enclosure shall be equipped with a self-closing and self-latching door or gate.
- e) Inlets. Inlets shall be provided as specified for swimming pools by Section 820.210(f)(2). At least two water inlets shall be installed.
- f) Drains. A minimum of two main drains shall be provided at the low point, located at least 3 feet apart center to center and connected to the recirculation system. The drains shall be piped and valved so that water from the wading pool can be drained by bypassing the filter. Drains shall be provided with certified safety covers in compliance with Section 820.210(f)(3).
- g) Overflow System. A perimeter overflow system shall be provided along at least  $\frac{1}{6}$  of the perimeter or a skimmer shall be provided for each 500 square feet of water surface area or fraction of that area. The design of the overflow system shall comply with Section 820.210, except that, if a skimmer equalizer line is provided, it shall be connected to the main drain line.



- h) Water Treatment. Recirculation and filtration equipment shall be installed and operated at wading pools that cannot be adequately served by an adjacent swimming pool recirculation system or when existing equipment on adjacent swimming pool recirculation systems cannot meet the requirements of Section 820.210. A separate disinfection system shall be installed and operated for the wading pool. The design of water recirculation, filtration and disinfection systems shall comply with Section 820.210.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.240 SPRAY POOLS**

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**Section 820.240 Spray Pools**

- a) **Material.** Spray pools shall be constructed of impervious material with a slip-resistant finish.
- b) **Slopes.** The floor of a spray pool shall slope at least 1 inch in 10 feet and not more than 1 foot in 12 feet toward the drain. No obstructions other than designed play items shall be placed in the spray pool area.
- c) **Drains.** The spray pool shall be equipped at its low point with an unvalved drain. The drain shall be sized and designed so that water sprayed into the pool will not pond in the pool floor.
- d) **Water Supply.** The water supply shall meet the requirements of Section 820.110 or be provided from the water treatment system from another pool. Alternatively, the water may be circulated from a tank or basin, with a water treatment system as required for a pool by Section 820.210 and designed to provide a turnover rate for the tank or basin of no more than two hours. Spray heads shall be installed so that they will not be submerged.
- e) **Hose Connection.** A hose bibb shall be provided within 75 feet of the spray pool.
- f) **Walk Area.** The spray pool shall be entirely surrounded by a walk constructed of impervious material with a slip-resistant finish.
- g) **Barrier.** A fence or other effective barrier, at least 3½ feet in height, shall totally enclose the spray pool and shall separate the spray pool from other pools. Except with regard to height, the barrier shall comply with the requirements of Section 820.200(a). Each entrance into the spray pool enclosure shall be equipped with a self-enclosing, self-latching door or gate.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.250 SLIDES**

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**Section 820.250 Slides**

- a) General Requirements
  - 1) Structure. All slides shall be designed and constructed in accordance with the manufacturer's instructions to carry the anticipated load. Plans for water slides shall be signed and sealed by a structural engineer licensed to practice in Illinois.
  - 2) Steps. Slide steps shall be slip-resistant and have a minimum tread of 2 inches and a minimum length of 12 inches. The riser height of the steps shall not exceed 12 inches. Specific requirements that apply to water slides are included in subsection (b)(1).
  - 3) Plunge Pools. Plunge pools shall comply with Sections 820.200 and 820.210, except that, for a plunge pool for a water slide, a deck is not required where the slide exits into the pool.
- b) Water Slides
  - 1) Design and Construction. All curves, turns and tunnels on the path of a flume shall be designed and constructed in accordance with the manufacturer's instructions.
  - 2) Walkways. Walkways or stairs leading to the top of water slides shall be slip-resistant and rigid, and shall have a 4 feet minimum clear width.
  - 3) Slide Position
    - A) A flume shall be perpendicular to the pool wall for a distance of at least 10 feet from the exit end of the slide. The last 10 feet of the flume shall have a slope that is not steeper than 1 foot in 10.
    - B) A flume shall terminate between a depth of 6 inches below to 2 inches above the pool water surface level.
    - C) The plunge area water depth shall be between 2½ and 4 feet at the end of the flume and for at least 10 feet beyond. The pool floor slope

in the plunge area shall not exceed 1 foot vertical in 12 feet horizontal.

- 4) Surge Reservoir. A surge storage reservoir shall be provided except where the pool water elevation will not be lowered more than 1 inch when the water slide pumps are in operation. The surge reservoir shall not be accessible to the public.
- 5) Plunge Area. A slide plunge area shall extend at least 5 feet on either side of the centerline of the slide terminus and 25 feet in front of the slide. This area shall not infringe on the plunge area for any other slides or diving equipment. Steps shall not infringe on this area. A water slide plunge area in a swimming pool shall be roped off from the rest of the pool when the slide is in operation. A means of egress shall be provided near the side of the plunge area opposite the flume terminus.
- 6) Grates. The intake openings for water pumped from a beach shall be covered by grating that cannot be removed without the use of tools. The grate openings shall be at least four times the area of the intake pipe or have an open area so that the maximum velocity of the water passing through the grate does not exceed 1½ feet per second. The maximum width of the grate openings shall be ½ inch. Pump suction intakes at a beach shall be located or protected so as to be inaccessible to bathers.

c) Drop Slides

- 1) Slide Position. A slide landing area shall extend at least 5 feet on either side of the centerline of the slide terminus and 20 feet in front of the slide. This area shall not infringe on the landing area for any other slides or diving equipment. Steps shall not infringe on this area.
- 2) Water Depth. The water depth directly below the slide discharge point and for a distance of 12 feet beyond shall comply with the following requirements:

Slide Platform Height Above Water Level in Feet	Minimum Water Depth in Feet
3.5 to 5	8
5 to 10	10
10 to 12	12

- 3) Platform Height. The drop slide platform shall not exceed 12 feet in height, measured above the water level in the plunge area.

d) Other Slides

- 1) A slide plunge area shall extend at least 3½ feet on either side of the centerline of the slide terminus and 20 feet in front of the slide. This area shall not infringe on the landing area for any other slides, water slides, drop slides, or diving equipment.
- 2) Unless the slide is designed by the manufacturer for safe exits at lesser water depths, the water depth and slide exit height above the water shall be in

accordance with the following table. The exit height shall not exceed 48 inches above the water surface.

Exit Height Above Waterline, Inches	Minimum Water Depth in Feet
0 to 6	2.0
6 to 12	2.5
12 to 18	3.5
18 to 24	5.0
24 to 30	6.0
30 to 42	8.0
42 to 48	10.0

- 3) Slides shall be positioned so that any water flowing off the end of the slide terminus drops into the pool.
- 4) Handrails. Slides shall be equipped with handrails to aid the slider in safely making the transition from the ladder to the runway. Handrails shall begin at a point no more than 4 feet above the pool deck.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.260 NEW EQUIPMENT, CONSTRUCTION AND MATERIALS**  
**(REPEALED)**

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**Section 820.260 New Equipment, Construction and Materials (Repealed)**

(Source: Repealed at 23 Ill. Reg. 6079, effective May 20, 1999)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.270 LAZY RIVERS**

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**Section 820.270 Lazy Rivers**

Lazy rivers shall be provided with a water treatment system in accordance with Section 820.210. A system for effectively skimming the pool surface and uniformly distributing filtered water shall be provided.

(Source: Added at 23 Ill. Reg. 6079, effective May 20, 1999)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.290 APPLICABILITY OF OPERATION REQUIREMENTS**

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**Section 820.290 Applicability of Operation Requirements**

Swimming pools and other pools associated with or provided as an appurtenance to a swimming pool shall be operated in accordance with this Subpart D.

(Source: Added at 23 Ill. Reg. 6079, effective May 20, 1999)



**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.300 PERSONNEL**

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**Section 820.300 Personnel**

- a) **Manager/Operator.** A swimming facility manager/operator shall be designated and shall be responsible for the operation of the swimming facility in compliance with this Subpart.
- b) **Lifeguards.** Lifeguards shall be provided at all wave pools and water slides. Lifeguards shall be provided at all pools, as defined in Section 820.10, when persons under the age of 16 are allowed in the pool enclosure specified in Section 820.200(a) without supervision by a parent, guardian or other responsible person at least 16 years of age. At facilities where lifeguards are not provided, a sign shall be posted that states "This facility is not protected by lifeguards. Persons under the age of 16 must be accompanied by a parent, guardian or other responsible person at least 16 years of age. Swimming alone is not recommended."
  - 1) **Certification.** Lifeguards shall be currently certified by the American Red Cross, the National Pool and Water Park Lifeguard Training Program, the YMCA, or another lifeguard certifying organization with an equivalent lifeguard certification program, as determined by the Department. If the certification was issued with restrictions, the certification shall be appropriate for the duty to which the lifeguard is assigned.
  - 2) **Authority.** Lifeguards shall have the authority to order any person who does not comply with the rules of the Department or those of the facility to leave the pool.
  - 3) **Identification.** Lifeguards shall be dressed in swimming attire and be identified as a lifeguard. A copy of each lifeguard's certificate shall be available for inspection at the facility.
  - 4) **Minimum number.** At facilities where lifeguards are required, the following minimum number shall be on duty:
    - A) One lifeguard per 100 bathers or 2,000 square feet of water surface area, whichever will result in the smaller number of lifeguards. All areas of the pool must be visible to a lifeguard. At wave pools, in addition to satisfying the other criteria of this subsection (b)(4)(A), the number of lifeguards shall not be fewer than three. A lifeguard shall not simultaneously guard more than one pool unless the areas

under surveillance can be continuously monitored with a clear unobstructed view and immediate assistance can be rendered if needed.

- B) At water slides or drop slides, one lifeguard within 50 feet of the discharge point of the slide. Lifeguards shall be responsible for guarding the plunge area for the slide and for no other areas and shall be in voice or visual communication with the attendant or lifeguard at the top of the slide to facilitate safe use of the slide. One lifeguard may monitor up to three slides and no other areas if they are adjacent to and discharge to the same plunge area.
- 5) Lifeguards shall not be subject to duties that would distract their attention from proper observation of persons in the pool area, or that would prevent immediate assistance to persons in distress in the water.
- c) Attendants. At least one attendant or lifeguard shall be on duty at the top of all water slides and drop slides when the slide is in operation to control the traffic of individuals using the slide. Attendants shall ensure that the slide is used in a safe and responsible manner. For multiple slides having a common starting platform, an attendant shall not be assigned to monitor more than two slides concurrently.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.310 SAFETY EQUIPMENT**

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**Section 820.310 Safety Equipment**

The following safety equipment shall be readily available for emergency use at all times when the swimming facility is open for use:

- a) **Rescue Equipment.** The following rescue equipment shall be provided and conspicuously displayed at swimming pools, except when certified lifeguards are provided and each lifeguard is equipped with a rescue device approved by the lifeguard certifying organization.
  - 1) A U.S. Coast Guard approved ring buoy with an attached throw rope with a length at least equal to the maximum width of the swimming pool or 50 feet, whichever is less. One buoy shall be provided for every 2000 square feet of water surface or fraction of that area.
  - 2) A life hook or shepherd's crook at least 12 feet in length.
- b) **First Aid Kit.** One or more first aid kits shall be kept filled with contents as required in Appendix B. Table B. Items that have a shelf life shall be kept current.
- c) **Emergency Telephone and Emergency Contact List.** A telephone shall be accessible in the vicinity of the swimming pool, in or within 300 feet of the pool enclosure. At a multi-level facility, the emergency telephone shall be located within three levels of the level on which the pool is located. The telephone numbers of the local police, State Police, fire department, physician, ambulance service, and a hospital, or 911 where applicable, shall be posted in a conspicuous place near the telephone. The name, address and telephone number of the swimming pool shall be listed by the telephone. The location of the emergency telephone shall be posted in the swimming pool area unless the telephone is located in the pool area.
- d) **Lifeguard Stations.** Lifeguard stations shall be located so as to provide a clear, unobstructed view of the pool area under surveillance.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.315 NOTIFICATION**

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**Section 820.315 Notification**

All drownings and injuries or illnesses requiring hospitalization shall be reported to the Department within 24 hours. A written report, on forms provided by the Department, shall be completed and submitted within 7 days after the occurrence.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.320 WATER QUALITY**

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**Section 820.320 Water Quality**

- a) Testing Equipment
  - 1) Water testing equipment for determining pH and disinfectant level of pool water shall be provided. The equipment for determining pH shall include at least five color standards with a range of pH 6.8 to 8.0, as a minimum.
  - 2) If chlorine is used as a disinfectant, a DPD-type test kit shall be provided that includes at least four chlorine color standards with a range of 0.5 to 3.0 p.p.m., as a minimum.
  - 3) If bromine is used as a disinfectant, a colorimetric test kit shall be provided that will determine free bromine residual and pH. The test kit shall include at least five bromine standards covering a range of 1.0 to 5.0 p.p.m.
  - 4) Pools using chlorinated cyanurates for disinfection shall have a test kit to measure cyanuric acid concentration. The cyanuric acid test kit shall permit readings up to 100 p.p.m.
  - 5) Where silver/copper or copper ion generators are used, a test kit to determine the concentration of copper shall be provided.
  
- b) Disinfectant Residual
  - 1) If chlorine is used as a disinfectant, the chlorine residual shall be maintained between 1.0 and 4.0 p.p.m. as free chlorine residual. A free chlorine residual of at least 2.0 p.p.m. shall be maintained when the pool water temperature exceeds 85° F.
  - 2) If bromine is used as a disinfectant, a bromine residual shall be maintained between 2.0 and 8.0 p.p.m. as total bromine. A bromine residual of at least 4.0 p.p.m. shall be maintained when the pool water temperature exceeds 85° F.
  - 3) If chlorinated cyanurates are used, the cyanuric acid concentration shall not exceed 100 p.p.m.

- 4) When combined chlorine in excess of 0.5 p.p.m. is detected, the pool shall be superchlorinated to attain a free chlorine concentration of at least 10 times the combined chlorine concentration, or oxidized by other means to eliminate the combined chlorine.
  - 5) If silver/copper or copper ion generators are used, the concentration of copper shall not exceed 1.3 p.p.m. and the concentration of silver shall not exceed 0.05 p.p.m.
  - 6) If ozone is used, the ambient air ozone concentration shall be less than 0.1 p.p.m. at all times either in the vicinity of the ozonator or at the pool water surface.
- c) pH. The pH of the pool water shall be maintained between 7.2 and 7.6.
  - d) Turbidity. The pool water shall be sufficiently clear that the entire pool basin is clearly visible from the pool deck.
  - e) Alkalinity. The alkalinity of the pool water shall not be less than 50 nor more than 200 p.p.m. as calcium carbonate.
  - f) Temperature. The pool water temperature for indoor swimming pools shall not be less than 76° F or more than 92° F. Air temperature at an indoor pool shall be higher than the water temperature.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.350 OPERATION REPORTS AND ROUTINE SAMPLING**

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**Section 820.350 Operation Reports and Routine Sampling**

- a) Operation Reports. The swimming facility manager/operator shall record operational data daily on a report form furnished by the Department, or equivalent, that shall be kept at the facility for a minimum of 3 years for inspection by the Department. A separate report form shall be completed for each pool or aquatic feature.
- b) Water Quality Testing. With the exception of bathing beaches, disinfectant residual and pH tests shall be made on samples collected at least twice daily from the shallow and deep areas of each pool, and from all other aquatic features. If chlorine is used as a disinfectant, testing for combined chlorine shall be performed at least weekly. If chlorinated cyanurates are used as a chlorine disinfectant, testing for cyanuric acid concentration shall be performed at least weekly.
- c) If ozone is used, testing to determine the ozone concentration immediately above the pool water surface shall be performed monthly.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.360 PATRON REGULATIONS**

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**Section 820.360 Patron Regulations**

Rules governing the use of the swimming facility and instructions to patrons shall be displayed on placards at the entrance to bather preparation facilities and adjacent to the swimming facility entrance and shall be enforced by the swimming facility manager/operator. The swimming facility management has the authority to implement and enforce rules that are more stringent than, or that supplement, those listed in this Section. Posting of rules and other instructions shall provide that:

- a) Admission to the swimming facility shall be refused to all persons having any contagious disease, infectious conditions such as colds, fever, ringworm, foot infections, skin lesions, carbuncles, boils, diarrhea, vomiting, inflamed eyes, ear discharges, or any other condition that has the appearance of being infectious. Persons with excessive sunburn, abrasions that have not healed, corn plasters, bunion pads, adhesive tape, rubber bandages, or other bandages of any kind shall also be refused admittance. A person under the influence of alcohol or exhibiting erratic behavior shall not be permitted in the swimming facility.
- b) The pool water is not suitable for drinking. Patrons should avoid swallowing pool water.
- c) Littering is prohibited. No food, drink, gum or tobacco is allowed in other than specially designated and controlled sections of the swimming facility. Glass containers are prohibited.
- d) No one should swim alone.
- e) Personal conduct within the swimming facility shall not jeopardize the safety of self and others. No running or boisterous or rough play, except supervised water sports, is permitted.
- f) Persons less than 16 years of age must be accompanied by a responsible person 16 years of age or older unless a lifeguard is present.
- g) Spitting, spouting of water, blowing the nose or otherwise introducing contaminants into the swimming facility is not permitted.
- h) Glass, soap or other material that might create hazardous conditions or interfere with efficient operation of the swimming facility shall not be permitted in the swimming facility or on the deck.



- i) If present, lifeguards are responsible for enforcing safety rules and responding to emergencies. Parents or guardians should supervise their children.
- j) All children who are not toilet-trained shall wear tightly fitting disposable swim diapers.
- k) Diving in water less than 5 feet deep is not permitted except when allowed for competitive swimming and training.
- l) Caution shall be exercised in the use of diving facilities.
- m) Swimming is prohibited at outdoor swimming facilities when thunder is heard or lightning is seen, including a 15-minute period after the last lightning or thunder is detected.
- n) All persons are encouraged to take a shower before swimming.
- o) Only clean footwear, baby strollers or wheelchairs are allowed in the swimming facility.
- p) All apparel worn in the swimming facility shall be clean.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

effective

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.380 WADING POOLS, SPRAY POOLS AND THERAPY POOLS**

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**Section 820.380 Wading Pools, Spray Pools and Therapy Pools**

- a) The wading pool operation shall comply with Sections 820.300, 820.310, 820.320, 820.330, 820.340 and 820.350.
- b) The spray pool and associated deck areas shall be cleaned daily. Drains shall be kept clear. For spray pools that use recirculated water, the water shall be filtered and treated in accordance with Section 820.340; the water quality shall be maintained as specified by Section 820.320; and water quality testing shall be performed as specified by Section 820.350.
- c) Water in therapy pools located in a swimming facility enclosure shall comply with disinfectant residual and pH standards in Section 820.320.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.390 REFUSE DISPOSAL**

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**Section 820.390 Refuse Disposal**

- a) General Requirements. The equipment provided for storing, collecting and disposing of refuse produced at a swimming facility shall prevent the creation of conditions detrimental to public health, such as rodent harborage, insect breeding areas, odors, air pollution and accidents.
- b) Containers. All refuse shall be stored in water-tight metal or water-tight rigid plastic containers having tight-fitting lids. Containers shall be provided as needed throughout food preparation areas and eating areas to provide for trash collection.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.330 SWIMMING FACILITY CLOSING**

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**Section 820.330 Swimming Facility Closing**

The manager/operator shall immediately close any swimming facility, except a bathing beach, whenever any of the following conditions exist:

- a) The manager/operator determines that conditions at a swimming facility create an immediate danger to health or safety.
- b) Bacteriological results show any of the following:
  - 1) Coliform concentration of 10 per 100 ml in two consecutive samples;
  - 2) Presence of fecal coliform, E coli, beta hemolytic Streptococcus or Pseudomonas in any sample.
- c) Turbidity exceeds the criteria outlined in Section 820.320(d).
- d) A disinfectant residual consisting of a minimum of 0.5 p.p.m. free chlorine or 1.0 p.p.m. bromine is not present or the disinfection system is inoperable.
- e) The total chlorine concentration exceeds 5 p.p.m. or the total bromine concentration exceeds 10 p.p.m.
- f) The recirculation pumps or the filters are inoperable.
- g) The pH of the swimming facility water is less than 6.8 or greater than 8.0.
- h) A patron has defecated or vomited in the pool or aquatic feature. When this occurs, the manager/operator shall remove visible foreign matter and superchlorinate the affected area of the swimming facility. The swimming facility shall remain closed for a minimum of 30 minutes following superchlorination, or longer if necessary, for the disinfectant residual to return to prescribed levels. When an incident occurs in a swimming facility with a capacity greater than 50,000 gallons, the swimming facility manager/operator may elect to prohibit use of only the affected area in lieu of closing the swimming facility.
- i) A suction outlet cover is loose, improperly installed, damaged or missing.

- j) The Department issues a written notice to close the swimming facility, in which case the notice shall be posted by the owner, manager/operator or licensee at the entrance to the swimming facility area. The swimming facility shall remain closed until the Department has authorized the reopening of the swimming facility.
- k) Lightning is sighted or thunder is heard at outdoor swimming facilities (see Section 820.360).

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.340 OPERATION AND MAINTENANCE**

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**Section 820.340 Operation and Maintenance**

- a) Swimming Facility
- 1) The pool and aquatic features shall be maintained free from sediment, lint, dirt and hair. Cracks and other defects in the pool and aquatic features shall be repaired. The walls, ceilings, floors, equipment and swimming facility proper shall be maintained so that they are protected from deterioration. All equipment shall be maintained in proper condition, with all required components in place. Equipment required to be NSF Standard 50 certified, including filters, skimmers and chemical feeding equipment, shall not be altered or modified in any way.
  - 2) Swimming facility decks shall be rinsed daily. Indoor swimming facility decks shall be disinfected at least weekly. The walks, overflow gutters, counters, lockers, equipment, furniture, interior partitions and walls shall be kept in good repair, clean, and sanitary. No furniture, plants or other furnishings shall be placed within 4 feet of the swimming facility. This area shall be kept free of obstructions such as chairs and baby strollers. The deck shall be kept free of tripping hazards, such as deck surface irregularities, hoses, baby strollers, and maintenance equipment. The deck, walkways and floors shall be free of areas with poor drainage that retain water.
  - 3) Floats or tubes not in use shall be removed from the swimming facility.
  - 4) Starting Platforms. Starting blocks shall not be used for any purpose other than competitive swimming activities. Starting blocks shall be securely anchored when in use but removed or prohibited from use when not being used in conjunction with competitive swimming or training. The maximum height of the platform above the water shall be 30 inches where the water depth is 4 feet or greater and 20 inches when the water depth is less than 4 feet.
  - 5) Safety ropes shall be kept in place except when the swimming facility is being used exclusively for lap swimming or competition.
  - 6) Access to grass areas shall be prevented when bare areas develop, when the grass is not regularly maintained, when debris is allowed to accumulate, or an unsightly condition, offensive odor, or a muddy condition exists.

- b) **Perimeter Overflow, Suction Outlet Covers and Skimmers.** The perimeter overflow systems, suction outlet covers or automatic surface skimmers shall be clean and free of leaves or other debris that would restrict flow. The strainer baskets for skimmers shall be cleaned daily. Broken or missing skimmer weirs shall be replaced. Broken or missing suction outlet covers shall be replaced immediately and installed in accordance with the manufacturer's requirements. The flow through each skimmer shall be adjusted as often as necessary to maintain a vigorous skimming action that will remove all floating matter from the surface of the water. The pool water shall be maintained at an elevation so that effective surface skimming is accomplished. A higher water level may be maintained during official swimming competition. For pools with perimeter overflow systems, adequate surge storage capacity shall be maintained so that flooding of the perimeter overflow system does not occur during periods of peak usage. The flow returning from the pool shall be balanced or valved so that the majority of flow is returned through the perimeter overflow or skimmer system.
- c) **Inlet Fittings.** Inlets shall be checked frequently so that the rate of flow through each inlet establishes a uniform distribution pattern. Inlets in pools with surface skimmers shall be adjusted as necessary to provide vigorous skimming.
- d) **Bather Preparation Facilities**
  - 1) Floors shall be cleaned and disinfected daily.
  - 2) Toilet rooms and fixtures shall be kept clean, free of dirt and debris and in good repair. Floors shall be maintained in a slip-resistant condition. Soap dispensers shall be filled and operable. A supply of toilet paper shall be provided at each toilet at all times.
- e) **Foot Baths.** Foot baths shall be free of dirt, debris and other floating matter and shall be operated by continuously introducing fresh water and discharging used water to waste.
- f) **Security.** Doors or gates in the swimming facility enclosure shall be kept closed and locked when the swimming facility is closed.
- g) **Bather Loads.** The number of persons within a swimming facility enclosure shall not exceed the permissible bather load established by the Department. Additional patrons may be allowed at other recreational features within the swimming facility enclosure, such as sand play areas, turf sun-bathing areas and picnic areas, if additional toilet facilities are provided. However, the number of patrons in swimming facilities or their decks shall not exceed the bather load. The bather load shall be posted at the swimming facility entrance or at a location where it can be seen by all patrons and shall be enforced by the manager/operator.
- h) **Electrical Systems.** Electrical systems shall be maintained in accordance with the National Electrical Code.
- i) **Diving Equipment.** Diving equipment shall be maintained in a safe condition, be securely anchored, and have a slip-resistant surface.
- j) **Vacuum Cleaners.** Vacuum cleaning shall not be conducted when the swimming facility is in use.



- k) Operation of Mechanical Equipment
- 1) Manufacturers' instructions for operation and maintenance of mechanical and electrical equipment, as well as pump performance curves, shall be kept available at the swimming facility. All valves and piping in the equipment room shall be permanently identified as to use and direction of flow. A valve operating procedure shall be provided in the equipment room for each operation (e.g., recirculation, filtration, backwashing).
  - 2) Pumps, filters, disinfectant feeders, flow indicators, gauges, and all related components of the swimming facility water recirculation system shall be kept in continuous operation 24 hours a day. A recirculation and filtration flow rate that will result in a turnover period as specified in Section 820.210 shall be maintained at all times. For wading areas in swimming facilities constructed prior to May 20, 1999 where the specified flow rate cannot be attained without alteration of the recirculation system, a recirculation flow rate that will result in a turnover period of no more than 6 hours shall be maintained in the wading area.
  - 3) Recirculation Pumps. The pump shall not be throttled on the suction side during normal operation except for necessary regulation of flow through main drain piping. Recirculation pumps shall be kept in good repair and condition. The pump discharge or inlet supply line valve shall be adjusted as necessary to maintain the design flow rate.
  - 4) Filtration
    - A) The filtration flow rate shall not exceed the maximum filtration design flow rate specified by the filter manufacturer for public swimming facility use in accordance with NSF Standard 50. If this rate is not known or has not been determined, the flow rate shall not exceed 15 gallons per minute per square foot of filter area for high-rate sand filters, 3 gallons per minute per square foot for other sand filters, 1.5 gallons per minute per square foot for diatomaceous earth filters, or 0.375 gallons per minute per square foot for cartridge filters. A filtration flow rate of up to 2.0 gallons per minute per square foot may be allowed where continuous feeding of diatomaceous earth is used with a diatomaceous earth filter in accordance with subsection (k)(3)(C)(iii).
    - B) Sand Filters
      - i) The filter air release valve shall be opened as necessary, to remove air that collects in the filter, and following each backwash.
      - ii) The filter shall be backwashed when the design flow rate can no longer be achieved, or when specified by the filter manufacturer, whichever occurs first.
    - C) Diatomaceous Earth Filters

- i) The dosage of diatomaceous earth pre-coat shall be at least 1½ ounces per square foot of element surface area. Pressure diatomaceous earth filters shall be backwashed when the design flow rate can no longer be achieved or when specified by the filter manufacturer, whichever occurs first. Whenever the recirculation pump stops or is shut off, the filter shall be thoroughly backwashed and the elements shall be pre-coated before placing the pump back into operation. Vacuum diatomaceous earth filters shall be washed when the design flow rate can no longer be achieved or when specified by the filter manufacturer, whichever occurs first. Backwashing shall not be performed when the swimming facility is in use.
  - ii) During the pre-coating operation, either the initial filter effluent shall be 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.
  - iii) When continuous diatomaceous earth feed is used so that a filter may be operated at a filtration rate higher than would otherwise be allowable, it shall be applied at a rate of ½ to 1½ ounces per square foot of surface area per day, or as needed to extend filter cycles.
- D) Cartridge Filters. A clean extra set of filter cartridges shall be available at the swimming facility.
- 5) 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 to avoid drawing air into the pump and losing the prime. In the case of diatomaceous earth filters, the hair strainer basket shall be cleaned immediately prior to pre-coating the filter.
  - 6) Flow Meters. Flow meters shall be maintained in an accurate operating condition and shall be readable.
  - 7) Vacuum and Pressure Gauges. The lines leading to the gauges shall be bled occasionally to prevent blockage.
  - 8) Gas Chlorinators
    - A) Gas chlorinators shall be repaired only by a person trained in servicing these units. The manager/operator shall post the telephone numbers of the appropriate emergency personnel to contact in a chlorine gas emergency.
    - B) Chlorine cylinders shall be stored indoors in the area designed for that purpose and away from a direct source of heat. They shall be chained or strapped to a rigid support to prevent accidental tipping. Cylinders shall not be moved unless the protection cap is secured over the valve. A gas mask that is approved by the National Institute of Occupational Safety and Health (NIOSH) or Mine Safety and Health Administration (MSHA) for use in a chlorine atmosphere shall be kept outside the chlorine room in an unlocked container at

all times. The gas mask canister shall be replaced regularly per the manufacturer's recommendations.

- C) Chlorinators, gas lines, injectors, vent lines and cylinders shall be checked daily for leaks. In case of a chlorine leak, corrective measures shall be undertaken only by trained persons wearing proper safety equipment. All other persons shall leave the dangerous area until conditions are again safe.
- 9) Positive Displacement Feeders
- A) Positive displacement feeders shall be periodically inspected and serviced.
  - B) When a chemical feeder is used with calcium hypochlorite solution, to minimize sludge accumulation in the unit, the lowest practicable concentration of solution shall be used, and this concentration shall not exceed 5 percent (about 20 pounds of 65 percent chlorine powder in 50 gallons of water). If liquid chlorine solution is used, the dilution with water is not critical to the operation of the unit. After first thoroughly rinsing with water, a small amount of mild acid solution may be fed through the unit periodically to dissolve sludge accumulations.
- 10) Safety Vacuum Release System and Safety Vent Pipe. Safety vacuum release systems shall be maintained in operable conditions and in accordance with the manufacturer's requirements. Safety vent pipes and atmospheric vents for gravity drainage systems shall be maintained free of blockages.
- l) Chlorinated Cyanurates. The use of chlorinated cyanurates is subject to the following requirements:
- 1) Superchlorination shall be accomplished by using a chlorine product other than a cyanurate; and
  - 2) When the cyanuric acid level exceeds the maximum permissible limit of 100 p.p.m., 50 percent of the water shall be drained and replenished with potable water until the cyanuric acid concentration is less than 50 p.p.m.
- m) pH Adjustment
- 1) Soda ash or caustic soda may be used to raise the swimming facility water pH.
  - 2) Caustic soda shall be used only in accordance with the manufacturer's instructions. Protective equipment and clothing, including rubber gloves and goggles, shall be available for the handling and using this chemical.
  - 3) Sodium bisulfate, carbon dioxide gas or muriatic acid shall be used to lower swimming facility water pH. Carbon dioxide cylinders shall be securely chained or otherwise restrained in a manner that will prevent tipping.
  - 4) Hydrochloric (muriatic) acid shall be used only in accordance with the manufacturer's instructions. Protective equipment and clothing, including

rubber gloves and goggles, shall be available for handling this chemical.

- 5) The Department shall be consulted if unusual pH problems occur, including corrosion or scaling or wide fluctuations in pH.
- n) Algae Control
- 1) Algae shall be eliminated by superchlorinating to 10 p.p.m. and maintaining this level for several hours. The swimming facility shall not be open for use during this treatment. If this fails to eliminate the algae, the Department shall be consulted for further advice.
  - 2) Treated algae that cling to the floor and sides of the swimming facility shall be brushed loose and removed by the suction cleaner and filtration system.
- o) Miscellaneous Chemicals
- 1) Chemicals shall be kept covered and stored in the original labeled container, away from flammables and heat and in a clean, dry, well-ventilated place that prevents unauthorized access to the chemicals.
  - 2) The chemicals used in controlling the quality of water shall be used only in accordance with the manufacturer's instructions.
  - 3) If polyphosphates are used for sequestering iron, the concentration of polyphosphates shall not exceed 10 p.p.m.
- p) Acoustics. If noise is excessive, so that safety instructions cannot be heard, corrective action shall be taken.
- q) Slides
- 1) Water slide equipment shall be maintained in a safe condition and securely anchored.
  - 2) Only one rider at a time shall be allowed to enter a slide, unless the slide is designed by the manufacturer for two or more riders.
  - 3) For water slides and drop slides, if the plunge area is not visible from the top of the slide, a means of communication shall be provided between the attendant at the top and the lifeguard at the bottom.
  - 4) At the entrance to water slides and drop slides, a sign shall be posted at the top of the slide warning all sliders not to proceed down the slide until instructed to do so by the slide attendant.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

## Joint Committee on Administrative Rules

# ADMINISTRATIVE CODE

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.APPENDIX B TABLES**

### Section 820.APPENDIX B Tables

#### Section 820.TABLE D Sizing Swimming Facility Chlorinators and Brominators

(Chlorine dosage is based on a rate of 8 p.p.m. for outdoor pools and 3 p.p.m. for indoor pools at a 6 hour pool turnover flow rate. Bromine dosage is based on a rate of 15 p.p.m. for outdoor pools and 5 p.p.m. for indoor pools at a 6 hour pool turnover flow rate)

Pool Volume Gallons	lbs/day chlorine gas		gal/day hypo-chlorinator (calcium hypochlorite) powder, 65% chlorine – 5% solution)		gal/day hypo-chlorinator (Sodium hypochlorite) liquid, 10% chlorine – straight)		lbs/day Bromine (Bromo-chloro-dimethylhydantoin)	
	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Indoor
10,000	2.7	1.0	9.8	3.7	3.2	1.2	5.0	1.7
20,000	5.3	2.0	19.7	7.4	6.4	2.4	10.0	3.3
30,000	8.0	3.0	29.5	11.1	9.6	3.6	15.0	5.0
40,000	10.7	4.0	39.4	14.8	12.8	4.8	20.0	6.7
50,000	13.3	5.0	49.2	18.5	16.0	6.0	25.0	8.3
60,000	16.0	6.0	59.1	22.2	19.2	7.2	30.0	10.0
70,000	18.7	7.0	68.9	25.8	22.4	8.4	35.0	11.7
80,000	21.4	8.0	78.8	29.5	25.6	9.6	40.0	13.3
90,000	24.0	9.0	88.6	33.2	28.8	10.8	45.0	15.0
100,000	26.7	10.0	98.5	36.9	32.0	12.0	50.0	16.7
120,000	32.0	12.0	118.1	44.3	38.4	14.4	60.0	20.0
140,000	37.4	14.0	137.8	51.7	44.8	16.8	70.1	23.4
160,000	42.7	16.0	157.5	59.1	51.2	19.2	80.1	26.7
180,000	48.0	18.0	177.2	66.5	57.6	21.6	90.1	30.0
200,000	53.4	20.0	196.9	73.8	64.0	24.0	100.1	33.4
250,000	66.7	25.0	246.1	92.3	80.0	30.0	125.1	41.7
300,000	80.1	30.0	295.4	110.8	96.0	36.0	150.1	50.0
350,000	93.4	35.0	344.6	129.2	112.0	42.0	175.1	58.4
400,000	106.8	40.0	393.8	147.7	128.0	48.0	200.2	66.7
450,000	120.1	45.0	443.1	166.1	144.0	54.0	225.2	75.1
500,000	133.4	50.0	492.3	184.6	160.0	60.0	250.0	83.4
600,000	160.1	60.0	590.7	221.5	192.0	72.0	300.2	100.1

700,000	186.8	70.1	689.2	258.5	224.0	84.0	350.3	116.8
800,000	213.5	80.1	787.7	295.4	256.0	96.0	400.3	133.4
900,000	240.2	90.1	886.1	332.3	288.0	108.0	450.4	150.1
1,000,000	266.9	100.1	984.6	369.2	320.0	120.0	500.4	166.8

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)

**Joint Committee on Administrative Rules**  
**ADMINISTRATIVE CODE**

**TITLE 77: PUBLIC HEALTH**  
**CHAPTER I: DEPARTMENT OF PUBLIC HEALTH**  
**SUBCHAPTER n: RECREATIONAL FACILITIES**  
**PART 820 SWIMMING FACILITY CODE**  
**SECTION 820.APPENDIX B TABLES**

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**Section 820.APPENDIX B Tables**

**Section 820.TABLE B First Aid Kit Contents**

2 Units – 3" Bandage Compress  
2 Units – Eye Dressing Packet  
1 Unit – Scissors – Tweezers  
1 Unit – Adhesive Tape 1"  
1 Box Band-Aids of Various Sizes  
Antiseptic  
2 Pairs Latex Gloves  
1 CPR Barrier Shield

(Source: Amended at 23 Ill. Reg. 6079, effective May 20, 1999)