

1.0 Definitions

When used in the Code unless otherwise expressly stated, or unless the context or subject matter requires a different meaning, the following terms shall have the respective meanings hereinafter set forth or indicated.

- a) Swimming pool shall mean a structure, together with buildings and appurtenances used in connection therewith, intended for bathing, swimming or diving purposes, made of concrete, masonry, metal, or other impervious material, located either indoors or outdoors.
- b) Wading pool shall mean a swimming pool that contains water a maximum of two feet deep.
- c) Spa pool shall mean a swimming pool, primarily designed for therapeutic use or relaxation, which is normally not drained, cleaned or refilled for each individual. It may include, but is not limited to, hydrojet circulation, hot water, cold water, mineral bath, air induction, bubbles or any combination thereof. Spa pools are shallow in depth and are not designed for swimming or diving.
- d) White-water slide shall mean a swimming pool consisting of a starting platform, one or more flumes, and a plunge pool.
- e) Wave pool shall mean a swimming pool of special shape and design with water-wave-making machinery.
- f) Special-purpose pool shall mean a swimming pool of special design primarily for use by persons with physical disabilities.
- g) Moveable-bottom pool shall mean a swimming pool with a hydraulic lift arrangement for floor movement and a jet water self-cleaning system.
- h) Pool feature shall mean any apparatus, amusement, recreational or interactive equipment, device, etc. where pool water is sprayed, streamed, poured, falls or otherwise flows back into the pool. This definition shall not apply to spa pools, white-water slides, or run-out slides, and shall not apply to the pool's recirculation/filtration system.
- i) Bathing shall mean to become partially or totally immersed in water.
- j) Adequate shall mean sufficient to accomplish the purposes for which something is intended, and to such a degree that no unreasonable risk to health or safety is presented. An item installed, maintained, designed and assembled, an activity conducted or act performed, in accordance with generally accepted standards, principles or practices applicable to a particular trade, business, occupation or profession, is adequate within the meaning of this Subpart.
- k) Uniform Code shall mean the New York State Uniform Fire Prevention and Building Code, 9 NYCRR Subtitle S, Chapter I.
- l) Recreational aquatic spray grounds, also known as "spray grounds", are the buildings and appurtenances used in conjunction with a spray pad in which sprayed water is continually drained and collected in a treatment and recirculation system.

Definitions (cont'd.)

- m) Spray pad shall mean the specific area consisting of the play surface, spray features, and drains, upon which the patrons stand and are sprayed with water.
- n) Run-Out Slide shall mean a slide or flume used by patrons, together with equipment used in connection therewith, where there is no plunge pool and where water travels down the slide or flume and empties into a pump reservoir.
- o) Spray features shall mean the devices and plumbing used to convey the treated water to the spray pad to spray the patrons.
- p) Spray pad treatment tank shall mean the vessel used to collect the water that has been sprayed on the spray pad and returned through the spray pad drains.
- q) Foot shower shall mean a shower head or similar water fixture for use in rinsing debris from patrons' feet.
- r) Spray pad treatment system shall mean the equipment and processes used to filter, disinfect and circulate the water used for the spray pad and spray features.

2.0 Application

- (a) The requirements of this Article shall apply to all swimming pools except:
 - (1) a swimming pool, or other bathing facility, owned and/or maintained by an individual for the use of his family and friends;
 - (2) spa pools used under medical supervision or associated with hospitals; and
 - (3) float tank or relaxation tank used for solitary body immersion in skin-temperature salt water.
- (b) The requirements of this Article shall apply to all spray grounds except:
 - (1) A facility owned and/or maintained by an individual for the use of his family and friends;
 - (2) A facility that uses water that complies with Part 5, Subpart 5-1 of the New York State Sanitary Code or equivalent standards that discharges to waste without impoundment or recirculation of the water.
- (c) The requirements of this Article shall apply to all Run-Out Slides except:
 - (1) A facility owned and/or maintained by an individual for the use of his family and friends;
 - (2) A facility that uses water that complies with Part 5, Subpart 5-1 of the New York State Sanitary Code or equivalent standards that discharges to waste without impoundment or recirculation of the water.

3.0 Approval of Plans

- (a) No municipality, school district, person, group of persons, firm, corporation, association, organization or institution shall install or construct a swimming pool, spray ground or run-out slide or make any addition or modification to any existing swimming pool, spray ground or run-out slide until plans and specifications shall have been submitted to and received the prior approval of the Commissioner or his representative. All plans shall be prepared by a person licensed and registered by the State of New York to practice engineering or architecture. The Commissioner or his representative may require, when granting this approval, such modifications or conditions as the public health or safety may require.
- (b) Chapter 1, Subpart 6-1 of the New York State Sanitary Code, shall be the basis upon which all plans and specifications for swimming pools shall be reviewed, approved and constructed unless otherwise expressed in this Article.
- (c) Chapter 1, Subpart 6-3 of the New York State Sanitary Code, shall be the basis upon which all plans and specifications for spray grounds shall be reviewed, approved and constructed unless otherwise expressed in this Article.

4.0 Construction Compliance Certification

The operator shall submit, prior to public use of new facilities or equipment certification of construction compliance and "As-Built" plans to the Commissioner or his representative. This certification and "As-Built" plans shall be prepared and signed by a professional engineer or architect licensed and registered to practice in New York State. The certification shall include a statement that the pool and the appurtenances have been constructed in accordance with approved plans and specifications.

5.0 Pool Feature Treatment

This section only applies to new pools approved for construction after the effective date of this Article, and only to preexisting pools where modifications to the recirculation/filtration system are approved for construction after the effective date of this Article.

1. Operation

- (a) Pools with pool features are required to have ultraviolet light disinfection in addition to an approved chemical disinfectant and shall be used as follows:
 - i) Ultraviolet light shall be used to disinfect all filtered water returned to the pool.
 - ii) Ultraviolet light disinfection systems shall have a properly calibrated light intensity meter, automatic system to divert water from or shut off water to the pool features, in the event the ultraviolet light intensity falls below the validated setpoint, and an alarm to advise the attendant of a system malfunction;
 - iii) The ultraviolet light units shall be cleaned in accordance with the manufacturer's recommendations;
 - iv) The ultraviolet light unit's lamp output shall be monitored and recorded at least two times daily. The ultraviolet light lamp(s) shall be replaced when the output intensity

decreases below the setpoint intensity due to lamp failure. Other conditions causing decreased ultraviolet light intensity at the sensor shall be diagnosed and remedied.

Pool Feature Treatment (cont'd.)

- v) An operation log shall be maintained at the facility and entries shall be made for dates and type of maintenance and repair, including cleaning, lamp replacement, etc;
 - vi) Ultraviolet light lamp(s) shall be replaced in accordance with manufacturer's recommendations.
- (b) Turbidity. The turbidity measured in the water supplied to the ultraviolet light reactor shall not exceed 3 nephelometric turbidity units (NTU) at any time during use. If this turbidity level is exceeded;
- the water shall be diverted from or shutoff to the pool features until the value of the turbidity is reduced to less than 3 NTU,
 - and a record of the turbidity level exceedance, duration thereof, and corrective actions taken as a result shall be maintained by the pool operator and owner.

2. Design

- (a) Pools with pool features shall include ultraviolet light disinfection systems. All filtered water returned to the pool shall be treated with ultraviolet light. The ultraviolet light validated setpoint dosage shall be equivalent to $40\text{mJ}/\text{cm}^2$ or greater at the end of lamp life.
- i) All ultraviolet light units must meet testing laboratory standards established for spray ground disinfection in Chapter 1, Subpart 6-3 of the New York State Sanitary Code.
 - ii) For systems utilizing quartz sleeves to separate the water passing through the chamber from the ultraviolet light source, the system shall be designed to permit cleaning of the lamp jackets and the sensor window or lens without mechanical disassembly. For systems utilizing polytetrafluoroethylene (PTFE) surface materials to separate the water that flows through the ultraviolet light chamber from the lamps, the unit shall be designed to be readily accessible to the interior and exterior of the PTFE. The unit shall be designed to permit use of either physical or chemical cleaning methods.
 - iii) An accurately calibrated ultraviolet light intensity meter, properly filtered to restrict its sensitivity to the disinfection spectrum shall be installed in the wall of the disinfection chamber at the point of greatest water depth from the tube or tubes.
 - iv) An automatic system shall be installed to prevent flow to the pool features in the event the ultraviolet light intensity falls below the validated setpoint or in the event the turbidity measured in the water line to the ultraviolet light unit exceeds 3 NTU.
 - v) An automatic, audible alarm shall be installed to warn of malfunction or impending shutdown.
 - vi) The unit shall be designed to protect the operator against electrical shock or excessive radiation.
 - vii) Installation of the unit shall be in a protected enclosure not subject to extremes of temperature.

- viii) A spare ultraviolet lamp and other necessary equipment to affect prompt repair by qualified personnel properly instructed in the operation and maintenance of the equipment shall be provided on site.
- ix) The ultraviolet light unit shall be located on the filtered water return line of the pool recirculation system.
- x) A turbidity meter shall be installed in the water line to the ultraviolet light unit.

6.0 Pool

Feature Posting

Where a pool with pool features is not equipped with ultraviolet light disinfection in addition to an approved chemical disinfectant, a sign shall be conspicuously posted at the enclosure/entrance to the pool stating:

Please do not drink water from the spray or other pool features, as they use re-circulated water not subject to additional disinfection.

7.0 Other Design Requirements

Pools and run-out slides approved for construction prior to the effective date of this Article are exempt from this Section.

- a) Pools with pool features shall provide for a minimum recirculation rate in gallons per minute for filtration/ultraviolet light treatment of the entire volume of pool water in accordance with one of the following formulas, whichever is greater:

$$Q = \frac{(14.8 - \ln(V))V}{12 \times 60}$$

or

$$Q = \frac{V}{T \times 60}$$

where:

Q is the minimum recirculation rate in gallons per minute through the filtration/ultraviolet light treatment system.

V is the pool volume in gallons.

The term $\ln(V)$ is the natural log of the volume.

T is the minimum required turnover time in hours of the entire volume of pool water in accordance with Subpart 6-1, Section 6-1.29(9.0) of the New York State Sanitary Code.

- b) Water supplied to pool features and white-water slides shall be from the pool's main drain system, or from another pool floor or lower wall drain, before combining with water from pool gutters or skimmers.
- c) Every pool, spray ground, and run-out slide shall be provided with its own individual recirculation/ filtration system. Blending or combining water from any pool, spray ground or run-out slide with another pool, spray ground or run-out slide shall not be permitted.

- d) Recirculation system piping design shall not include pipe downsizing to ensure that design flow rates are not exceeded in any piping under all conditions of flow.
- e) Run-Out Slide design shall be consistent with applicable swimming pool design requirements of Subpart 6-1, Section 6-1.29 of the New York State Sanitary Code, and shall conform with the following:
 - i) A pump reservoir shall be provided for run-out slide pump intakes. The minimum reservoir volume shall be equal to twice the combined flow rate in gallons per minute of all filters and slide pumps.

Other Design Requirements (cont'd.)

- ii) Run-Out Slides shall be provided with a recirculation/filtration system and chemical treatment facilities.
- iii) The recirculation/filtration system of run-out slides shall recirculate and filter the entire volume of water in a period of one hour or less.
- iv) Recirculation system piping for run-out slides shall be arranged to ensure that all filtered water is returned to the slide pump intakes.