

CHAPTER 27
BRYAN COUNTY SWIMMING, BATHING AND SPA FACILITY ORDINANCE

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COMMERCIAL, PUBLIC AND SEMI-PUBLIC SWIMMING,
BATHING AND SPA FACILITIES

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PRIVATE SWIMMING, BATHING AND SPA FACILITIES

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**ARTICLE I
COMMERCIAL, PUBLIC AND SEMI-PUBLIC SWIMMING,
BATHING AND SPA FACILITIES**

27-101 Title.

Rules and Regulations Governing Public, Semi-Public Swimming Pools, Spas and Hot Tubs.

27-102 Legal Authority.

Pursuant to the authority vested in the Bryan County Board of Health under O.C.G.A. Section 8-2-25(c) and The Standard Swimming Pool 1994 Edition, Chapter 5, Section 501, the Bryan County Board of Health adopts the following rules and regulations for the purpose set forth in Section 27-103 of these regulations.

27-103 Purpose.

To better safeguard the health of persons using public, semi-public swimming pools, spas and hot tubs. Through the requiring of permits for the construction of public and semi-public swimming pools, spas, and hot tubs, requiring annual permits for the operation of public and semi-public swimming pools, spas, and hot tub facilities, and providing for the enforcement of these rules and the fixing of penalties.

(1) These rules prescribe minimum design construction and operation requirements that are intended to protect the health and safety of the public in pools, spas, and hot tubs to be used for bathing and operated by an owner, licensee or concessionaire, regardless of whether a fee is charged for use.

(2) These rules are intended to cover certain aspects of the design, equipment, operation, installation, new construction and rehabilitation of pools, spas and hot tubs. These rules may be met notwithstanding certain variations in equipment, materials and design. Where adequate standards do not exist and these rules do not provide sufficient guidance for consideration of innovations in design,

the construction, and operation of proposed pools, spas or recreational waters, department will establish requirements necessary to protect the health and safety

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of the pool patrons.

(3) These rules are not meant to cover pools or residential bodies of water, or pools or spas, operated solely for medical treatment or physical therapy.

(4) All pools, existing and newly constructed, shall meet these rules except as allowed for in (27-103(5)) below.

exists at (5) A variance from the requirements of these rules may be requested by the pool owner or his representative, for a public, semi-public pool or spa which at the time of these rules being adopted, only to relieve or prevent undo hardship. Only in cases involving deviations from these rules, where it is shown that a hardship was not caused intentionally by the owner, and where no reasonable alternative exists, will such a variance be approved by the health authority, and only if it can be shown that the health and safety of the pool users will not be put risk. These variances may be granted by the health authority only after supportive materials such as drawings, pictures, or manufacturer’s specifications have been received and accepted as supporting the request for a variance due to hardship.

27-104 Definitions.

The following definitions shall apply in the interpretation of these Rules and Regulations.

1. Alkalinity. The amount of bicarbonate, carbonate or hydroxide compounds present in water solution. See also Total Alkalinity.
2. Above-Ground/On-Ground Pool. See “Swimming Pool”. (R-2/1/05)
3. Barrier. A fence, wall, building wall or combination thereof which completely surrounds the swimming pool and obstructs access to the swimming pool. (R-2/1/05)
4. Bather. Any individual who avails themselves to the use of a swimming pool.
5. Bather Load. The number of persons in the pool/spa at any given moment or during any stated period of time.

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6. Board of Health. The Bryan County Board of Health.
7. Breakpoint Chlorination. The addition of a sufficient amount of chlorine to water to destroy the combined chlorine present. (See Superchlorination).
8. Chemical Feeder. A mechanical device for applying chemicals to pool or spa waters.
9. Chloramine. A compound formed when chlorine combines with nitrogen or ammonia which causes eye and skin irritation and has a strong, objectionable odor.
10. Chlorinator. A device to apply or to deliver a chlorine disinfectant to water at a controlled rate.
11. Circulatory System. An arrangement of mechanical equipment or components, connected by piping to a pool or spa in a closed circuit. The function of a circulatory system is to direct water from a pool or spa, causing it to flow through the various system components for purposes of clarifying, heating, purifying and returning the water back to the original body of water.
12. Cyanuric Acid. Also called Stabilizer, Isocyanuric Acid, Conditioner or Triazinetrione - A chemical that helps reduce the excess loss of chlorine in water due to the Ultraviolet rays of the sun.
13. Deep Areas. Water depths in excess of five feet (5') (1.42 m).
14. Disinfectant. Energy or chemicals to kill undesirable or pathogenic (disease-causing) organisms and having a measurable residual at a level adequate to make the desired kill.
15. Design Professional. An Architect or Engineer registered to practice in the State of Georgia.
16. Free Available Chlorine (FAC). That portion of the total chlorine remaining in chlorinated water that is not combined with ammonia or nitrogen compounds and will react chemically with undesirable or pathogenic organisms.

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- 17. Hardness. The amount of calcium and magnesium dissolved in water, measured by a test kit and expressed as parts per million (ppm) of equivalent calcium carbonate.
- 18. Health Authority. The Georgia Department of Human Resources-Environmental Health Section.
- 19. Hot Tub. See “Swimming Pool”. (R-2/1/05)
- 20. In-Ground Pool. See “Swimming Pool”. (R-2/1/05)
- 21. Non-Swimmer. Any individual who cannot swim and occasionally enters the swimming pool to moisten skin for sunbathing purposes.
- 22. Person. Any individual, partnership, corporation, firm, association, company, governmental agency club or organization of any kind.
- 23. pH. A value expressing the relative acidity or basicity of a substance, such as water, as indicated by the hydrogen ion concentration. pH is expressed as a number on the scale of 0 to 14, 0 being most acidic, 1 to 7 being acidic, 7 being neutral, 7 to 14 being most basic.
- 24. Pools. Any artificial water holding structure with a closed-loop circulation of water through a water treatment system with a return to the pool.
- 25. PPM. An abbreviation for PARTS PER MILLION. The unit of measure used in chemical testing the parts by weight in relation to one million parts of weight of water. It is essentially identical to the term milligrams per liter (mg/L).
- 26. Prime Design Professional. The Design Professional responsible for the entire project.
- 27. Private Residential Swimming Pool. Means a private pool or hot tub serving a single family dwelling and used only by residents of the dwelling and their guests. Any constructed pool, permanent or portable, which is intended for non-commercial use as a swimming pool by the owner family (ies) and its (their) guests.
- 28. Public Swimming Pools. Means any structure, chamber, or tank containing an artificial body of water used for swimming, diving, wading,

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recreation, or therapy, together with buildings, appurtenances, and equipment used in connection with the body of water, regardless of whether a fee is charged for its use. Any swimming pool, other than a private or semi-public swimming pool, for collective use by numbers of persons for swimming or bathing and operated by any person as defined herein, whether he be owner, operator, lessee, licensee, or concessionaire, and regardless of whether a fee is charged for such use. This may include, but not limited to, any municipality, community, public school, athletic club or swimming pool club, or pool for other similar usage and type.

29. Residential. That which is situated on the premises of a detached one- or two-family dwelling or a one-family town-house not more than three stories in height. (R-2/1/05)
30. Semi-Public Swimming Pool. Any pool other than public or private residential swimming pools, which is intended to be used collectively by numbers of persons for swimming or bathing and is operated by any person be he owner, lessee, operator, licensee, or concessionaire, regardless of whether a fee is charged for such use. Semi-public swimming pools may include pools for, but not limited to, the following: hotels, apartments, motels, multiple housing units, condominiums, and rental houses under contract to persons other than owner. Also, treatment pools, therapeutic pools and special pools for water therapy.
31. Shallow Areas. Portions of a pool or spa with water depth five feet (5') or less.
32. Shock Treatment. The practice of adding significant amounts of an oxidizing chemical to water to destroy ammonia and nitrogenous and organic contaminants in water.
33. Sodium Hypochlorite (NaOCl). A clear liquid form of an inorganic chlorine compound obtainable in concentrations of 5 to 16% available chlorine.
34. Spa. Means a hydrotherapy unit of irregular or geometric shell design. (Public and residential spas will be determined the same as for pools. Note that a spa is considered a pool) Private non-portable spas shall be considered pools. Private portable spas are nonpermanent structures

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intended for recreational bathing, in which all controls, water heating and water circulating equipment are integral to the spa unit. (R-2/1/05)

- 35. Special Purpose Pool. Means any pool operated for medical treatment, therapy, recreational play and other special purposes, including, but not limited to, wave or surf action pools, activity pools, splash pools, kiddie pools and play areas.
- 36. Spectator. Any individual in street attire within the fenced area of swimming pool who is there for observation purposes.
- 37. Swimming Pool. Any structure, permanent or portable, containing an artificial body of water together with piping, chemical feeders, pumps, filters, and other mechanical equipment to control the quality, clarity, and flow of the water and used or intended to be used as a place for swimming, diving, bathing, or similar recreational activities. Private Swimming Pools over 24 inches in depth. (R-2/1/05)
- 38. Test Kit. A device used to monitor specific chemical or agent residual or demands in pool or spa water.
- 39. Total Alkalinity. The ability or capability of water to resist change in pH; also known as the buffering capacity of water. Measured with a test kit and expressed in ppm.
- 40. Total Available Chlorine (TAC). The sum of both the free available and combined chlorines.
- 41. Turnover. The ratio of the volume of water circulated to the capacity of the pool.

27-105 Construction and Operating Permits.

1. Construction Permits for Public and Semi-Public Swimming Pools, Spas and Recreational Water Facilities. The management of a public, semi-public pool, spa or recreational water facility shall not begin the construction of a new public, semi-public swimming pool, spa, or recreational water facility or extensively alter an existing public, semi-public pool, spa, or recreational water facility after the effective date of these Rules and Regulations until such person has applied for and

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has been granted a construction permit by the Bryan County Board of Health.

2. Application for a Construction Permit for a Public, Semi-Public Swimming Pool, Spa, or Recreational Water Facility. Application shall be prepared in duplicate, the original shall be forwarded to the Health Authority and copy retained by the management on forms provided by the Bryan County Board of Health, and shall be received by the Bryan County Board of Health at least fourteen (14) days prior to the starting of Construction.

3. Plans. Properly prepared plans and specifications must be submitted to the local Health Authority, in duplicate, for review and approval when a public, semi-public swimming pool, spa, or recreational water facility is constructed or extensively remolded or renovated, or when an existing structure is converted to use as a public, semi-public swimming pool, spa or recreational water facility.

These plans must be prepared by design professionals and shall bear the registration and seal of the prime design professional. Although more information may be required for complete understanding by the Bryan County Board of

Health,
permit

the following information shall accompany the application for construction at a minimum:

all

(a) Complete plans drawn to scale showing sufficient views to determine dimensions of the pool and deck area.

a

(b) A complete piping diagram showing all pipes, pumps, drains, water inlets, outlets and other mechanical devices to be used. Such plans shall indicate and depict elevations in the system with sufficient detail to permit hydraulic analysis of the system.

rate

(c) Complete specifications covering site preparation, construction materials, finishes and workmanship, and capacities and optimum flow of filters, pumps, and other pertinent mechanical equipment.

(d) A site diagram, drawn to scale, depicting surface drainage features and locations of the bath houses, club houses, water founts, fences, and other planned improvements that are adjacent to and a part of or incidental to the construction of the pool.

(e) Recirculation and Treatment Systems and other Components: All

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Recirculation and treatment system equipment and all other components such as filters, recessed automatic surface skimmers, ionizers, ozone generators, heaters, disinfection feeders, and chlorine generators must be tested and approved using the current NSF Standard Number 50, "Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs." If standards do not exist for a specific product, the manufacturer must work with NSF or the American National Standards Institute (ANSI) or other approved agency to develop such standards to the approval of the local health authority. Written evidence shall be provided from the designing engineer that all recirculation and treatment systems and all components used in the installation meet the standards.

4. Operating Permits for Public and Semi-Public Swimming Pools. No person shall operate an existing public or semi-public swimming pool after April 1, 1975 unless he has applied for and has obtained an operating permit from the Bryan County Board of Health. Application shall be made on forms provided by the Health Department and for newly constructed public or semi-public swimming pools and such application shall be made at least fifteen (15) days prior to commencing operation.

ownership
be
shall
Operating permits, once granted, shall not be transferable as to location, or extensive renovation. Permits for pools operated on a yearly basis shall be obtained not later than May 1st of each year and operating permits for pools operated on a seasonal basis shall be obtained prior to opening and all permits shall be valid for one year unless suspended or revoked as set forth in O.C.G.A. Section 8-2-25(c) and The Standard Swimming Pool 1994 Edition, Chapter 5, Section 501.

27-106 Inspections.

All public, semi-public swimming pool, spas and recreational water facilities shall be available for inspection by personnel of the Bryan County Health Department during normal operating hours of the pool, spa or recreational facility. Inspections shall include necessary sampling and tests to determine the safety of the pool and the effectiveness of the filtration and disinfection system or the quality of the water.

27-107 Water Supply.

The water supply for all pools, showers, lavatories, drinking fountains, and any

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other uses in conjunction with the pool shall be adequate in quantity and shall comply with all requirements of the Rules and Regulations for Water Quality Control 391-3-6 of the Georgia Department of Natural Resources, Environmental Protection Division.

1. The water distribution system serving the swimming pool shall be protected against backflow by means of an air gap, not less than two service pipe diameters in width, between the service pipe and the flood rim of the receiving vessel.

27-108

Design Criteria for Public or Semi-Public Swimming Pools.

1. Public or semi-public swimming pools shall be designed constructed to withstand all structural stresses including external hydrostatic pressures and flotation.

(a) Public or semi-public swimming pools shall be constructed of inert and enduring materials, non-toxic to man, which will provide a smooth and easily cleanable surface with no cracks or open joints, and shall be finished in a light color. Interior corners shall be coved with a minimum radius of 6 inches.

2. Dimensional Design

(a) Floor Slopes: Floor slopes in pools shall, as a minimum, be in compliance with the following:

(1) All slopes shall be uniform.

(2) The slope of the floor from the shallow end wall towards the deep end shall not exceed one foot in twelve feet (1' : 12') to the point of the first slope change.

(3) The point of the first slope change shall be defined as the point at which the floor slope exceeds one foot in twelve feet (1' : 12') and shall not occur at a depth greater than five (5) feet.

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(4) The slope of the floor from the point of the first slope change to the deep end shall not exceed one foot in three feet (1' : 3'). Such slopes are not intended to provide any less water depth than those specified if the pool is intended for diving.

3. Water Depths:

must (a) Water depths at the shallow end of the swimming area shall be a maximum of three feet six inches (3'6") except for racing pools, which have a minimum depth of three feet six inches (3'6").

shall (b) Maximum flow rates (in gpm) through various sized inlet branches be not more than as listed below:

Size	1"	1¼"	1½"	2"
GPM	10	20	30	50

individually level to pool (c) All inlets shall be designed as adjustable orifices, or shall be valved, and shall be submerged not less than 24" below overflow reduce the escape of disinfecting agents. Inlets shall be flush with wall.

(d) Two or more outlets shall be provided at the deepest point of the pool to permit the pool to be completely drained. Each low point in the pool shall be covered with gratings or other coverings, which are securely fastened to the bottom of the pool.

(e) Outlets shall be spaced not more than 30 feet apart and not more than 15 feet from the sidewalls.

(f) The area of all outlet openings shall be covered with gratings or other coverings, which are securely fastened to the bottom of the pool.

(g) Net openings in each floor outlet covering or grating shall be at least four times the area of the discharge pipe or shall provide sufficient area so that the maximum velocity of the water passing the grate will not exceed 1½ feet per second. The width of openings in grating shall be not less than

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3/8 inch and not more than 1 inch.

such

(h) Outlets shall not connect directly to sewers but shall be installed in manner that any sewage backing up from the sewer will overflow to waste and cannot reach the pool. Pool drainage, valves and pumps shall be sized to prevent surcharge of the sanitary sewer.

5. Overflow Facilities. Positive means shall be provided for continuous removal of scum, sputum and floating debris from the pool surface. Drainage from overflow facilities shall be discharged to waste or to a make-up or surge tank.

(a) Overflow gutters where used shall meet the following standards:

over

(1) Overflow gutters shall extend completely around the swimming pool except at steps or recessed ladders. The lip of the gutter shall be level and shall be designed to serve as a handhold for bathers.

(2) Overflow gutters shall be smooth finished and of open, roll- or semi-recessed type, except over-flow gutters for water-level deck type public or semi-public swimming pools may be countersunk in a deck sloped to drain from the gutter and such gutters shall be covered by a flush mounted grating.

effective arms or

(3) Overflow gutters shall be designed to permit ready and cleaning and to prevent accidental entrapment of bather's legs.

(4) Overflow gutter and outlet design shall provide for continuous removal of not less than 50% of the recirculated water for return to the filter or to waste.

(5) Overflow gutters shall be provided with drainage outlets of two inches minimum diameter at intervals of not more than 15 feet. Outlets shall be covered by removable gratings.

(b) Skimmers where used shall comply in all respects with appropriate standards of the National Sanitation Foundation regarding materials, design, operation and safety and shall meet the following standards:

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uniform
equivalent to
thick is
above

(1) Skimmers may be used in lieu of overflow gutters provided the circulation system is designed to produce substantial circulatory movement to pool water for promotion of skimming and of disinfectant distribution and provided a handhold bullnose coping with outer 2 inches not over 2½ inches extended around the pool perimeter not more than 9 inches the normal water level.

(2) Skimmers shall be designed for a flow through rate of at least 30 gallons per minute or 3.75 gallons per minute per lineal inch of weir and the total capacity of all skimmers in any pool shall be at least 80 percent of the required filter flow of the recirculation system. Each skimmer shall be provided with a valve for equalization of flow.

(3) Skimmers shall be built into the pool wall and the weir shall be automatically adjustable to water level variations over a range of at least four inches. At least one skimmer shall be located to oppose the prevailing wind.

(4) Skimmers shall be designed and located to effectively remove floating materials from the water surface of the entire pool area. At least one skimmer shall be provided for each 500 sq. ft. of water surface area or fraction thereof.

(5) Skimmers shall be provided with an easily removable and cleanable screen or basket to trap large solids.

at
valves
but

(6) Skimmers shall be designed or equipped to prevent air lock in the suction lines. Equalizer lines, if used, shall be sized to meet capacity requirements of the filter and pump and in no case shall be less than two inches in diameter. Equalizer lines shall be installed at least one foot below the lowest weir level and equipped with or devices to remain closed at normal operating conditions automatically open when water level drops two inches below the lowest weir level.

6. Hose and Connections. Sufficient hose connections, at least 3/4 inch diameter, shall be provided for cleaning the pool, decks, walks, toilets, dressing rooms and other floored areas used in connection with pools and bathhouses.

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7. Steps, Ladders and Handrails. Steps or ladders shall be provided at the shallow end of pools where the vertical distance from pool bottom to deck level is over two feet. Recessed steps or ladders shall be provided at the deep portion of the pool and if the pool is over 30 feet wide, such steps or ladders shall be installed on each side.

slip

(a) Steps shall be on non-slip design with minimum tread of 12 inches and maximum rise of 10 inches. Abrupt drops, or submerged projections into the pool shall be guarded by handrails.

(b) Ladders shall be corrosion-resistant and shall be equipped with non-treads. They shall be designed to provide a handhold and shall be rigidly installed with clearance between the ladder and the pool wall not less than three inches nor more than six inches.

construction,
and five

(c) Steps inserted in the pool wall shall be of easily cleanable construction, designed to drain into the pool, and shall be at least 14 inches wide and five inches deep.

(d) Ladders within the swimming pool shall be equipped with a handrail at the top of both sides thereof, extending not less than 28" above the coping or edge of the deck.

8. Wading Pools. Wading pools for non-swimming children may be independent auxiliary pools or may be restricted areas of a general swimming pool.

finish

every two

(a) Independent wading pools shall have a maximum depth of not more than 18 inches; the bottom shall be non-abrasive, shall have a non-slip finish and shall be sloped toward a drain at not more than 3 inches in 10 feet nor less than 1 inch in 10 feet. Such wading pools shall be served by a swimming pool recirculation system with turnover rates of once every two hours or less.

9. Spray Pools. Spray pools are small independent artificial pools for non-swimming children into which water is sprayed but is not allowed to pond. Spray pools may be served by the swimming pool recirculation system or by water meeting the same quality requirements from other sources.

(a) Spray pool bottoms shall be non-abrasive, shall have a non-slip finish, and shall be sloped toward a drain at not more than 3 inches in 10 feet nor

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less than 1 inch in 10 feet.

10. Deck Areas. A clear and unobstructed paved deck or walkway shall extend completely around the pool; deck width shall be at least five feet measured from the pool side edge, except at the deep end where there is a diving board the width shall be at least 10 feet.

(a) Deck drainage shall be conducted away from the pool area and shall be pitched to drains designed to conduct drainage from the pool to points of disposal in a manner that will not create unsanitary, hazardous, or objectionable conditions.

finish

(b) Decks shall have a non-slip surface and shall be of a material and that can be cleaned by hosing.

(c) An effective fence or barrier, not less than 4' high, shall be provided on the outer side of the walk area to prevent spectators in street attire from traversing the pool walk and prohibit access of unattended children to the pool. Where pools serve restricted clientele only, as guest of motels or hotels, or where pools serve special purposes, as therapeutic pools, waiver of this requirement may be acceptable.

11. Diving Areas and Equipment. The dimensions of the swimming pool in the diving area shall conform to the following table:

Official Height Of Board In Meters	Minimum Water Depth at end of Board and 12 ft. beyond	Minimum Pool Width at end of Board and 12 ft. beyond
0.0-2.0	8½ ft.	20 feet
2.1-3.0	10 ft.	30 feet
Over 3.0	add one foot per meter	30 feet

(a) At least 15 feet of free and unobstructed head room shall be provided above diving boards. A horizontal separation of 10 feet shall be provided between diving boards and side walls except this may be reduced to 8 feet for surface boards.

(b) Diving board steps and ladders shall be of corrosion-resistant material,

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easily cleanable and of non-slip design, and kept in good repair. Handrails shall be provided at all steps and ladders leading to diving boards more than one meter above the water. Platforms and diving boards which are over one meter high shall be protected with guard railings.

12. Lighting and Electrical Requirements

and

(a) Artificial lighting shall be provided for all indoor and outdoor pools spas. Lighting shall be adequate to illuminate the entire swimming pool enclosure without glare. All installations shall comply with local building code requirements. Ground-fault interrupters must be provided. Lighting in dressing rooms, sanitary facilities, equipment rooms and concessions shall comply with local code requirements.

the

area

(b) For outdoor pools used for night swimming and all indoor pools and spas, a minimum of 30 foot candles shall be maintained at the surface of pool and deck area where underwater lighting is utilized. A minimum of 50-foot candles shall be maintained at the surface of the pool and deck where underwater lighting is not utilized. More light may be required as deemed necessary by the Health Authority and/or by other codes that apply.

(c) Where underwater lighting is used, the following rules shall apply:

(1) For pools under 800 sq. ft. of pool surface area, a minimum of 500 watts of underwater lighting is required.

(2) For pools 800 sq. ft. or larger of surface area, at a minimum, one and one half (1.5) watts per sq. ft. of surface area is required. The lighting shall be evenly spaced around the pool to prevent glare.

is

(3) In all diving pools and all pool over 1000 sq. ft. with diving areas to 12 feet in depth, two (2) watts per sq. ft. of surface area are required. In all pools with diving wells deeper than 12 feet, it required to provide three (3) watts per sq. ft. of surface area, within the diving well.

(4) For outdoor pools, when not being used for night swimming or recreation, a minimum of 10-foot candles shall be maintained at

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the

surface of the pool deck areas. Motion detector type lights are acceptable.

(5) No switches, starters, panel boards nor similar electrical equipment shall be located in areas readily accessible to bathers while in the pool or on the designated deck area.

(6) No overhead wiring shall pass within twenty (20) feet (horizontal distance) of the pool enclosure. No electrical outlets shall be located within ten (10) feet of the pool edge, nor shall such wiring be installed above the diving structure, observation stands, towers, or platforms.

13. Recirculation and Filtration System

A circulation system consisting of pumps, piping, return inlets and suction outlets, filters and other necessary equipment shall be provided for complete circulation of water through all parts of the pool.

The equipment for a swimming pool shall be of adequate size to turn over the entire pool water capacity at least once every six (6) hours. The equipment for a spa shall be adequate size to turn over the entire spa water capacity at a minimum of once every thirty (30) minutes. Where separate wading pools are provided for children, the equipment shall be adequate size to turn over the entire wading pool water capacity once every two (2) hours or less. This system shall be designed to give the proper turnover rate based on the manufacturer's recommended pressure flow of the filter in clean media condition of filter. Water clarity shall be maintained. (Clarity is a function of proper filtration and maintenance of chemical operation parameters.) When standing at the pool's edge at the end, the main drain covers or a standard black and white disc shall be clearly visible. When at a spa's edge, the deepest portion of the spa shall be visible in a still condition.

maximum shall be proper deep

NOTE: In pools built prior to the adoption of these "Rules", the turnover rate must be at least once every eight (8) hours. Upon rehabilitation of a pool which includes piping and/or circulation equipment changes, a six (6) hour turnover rate will be met if possible as determined by the Health Authority.

(a) A rate-of-flow indicator, reading in gallons per minute, and a flow-regulating valve shall be installed and located so that the rate of

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recirculation and backwash rate will be indicated and can be controlled.

shall

(b) All recirculation and filtration equipment that requires adjustment and maintenance, and sight-glasses, dials, or meters that must be recorded, be readily accessible and have unobstructed clearance from walls, ceilings and other equipment, and shall be well lighted.

14. Pumping Equipment. Pumps and motors shall have sufficient capacity to provide the required number of turnovers specified in Section 27-108.12 above and for providing adequate flow and head to backwash filters at rates set forth below.

(a) Recirculation pumps shall be located below the pool water level to provide positive pressure on the suction side, or self-priming method shall be provided. A check valve shall be installed on the pump discharge line.

(b) Requirements for filtration shall be based upon the maximum head loss developed immediately prior to backwashing the filters.

size

15. Hair and Lint Strainer. A strainer shall be provided on the suction side of the pump to prevent hair, lint, and other matter from reaching the pump and filters. Strainers shall be corrosion resistant with openings not over one-eighth inch in providing a free flow area at least four times the area of the pump suction line and shall be readily accessible for frequent cleaning.

16. Suction Cleaner. A suction cleaner, either built-in or portable type, shall be provided for removing sediment from the pool floor and shall be capable of reaching all parts of the pool floor. Built-in cleaners shall provide sufficient connections in the pool walls at least eight inches below the water line. Portable or jet-type units shall be provided with back-flow protection from the water system.

17. Piping. Pool piping shall be detailed on the plans as to size and material. Piping shall be of non-toxic material, resistant to corrosion, and able to withstand operating pressures. All piping must meet the standards set forth in the latest edition of the National Plumbing Code.

(a) Pool piping shall be designed to carry the required quantity of water at a maximum velocity not to exceed six feet per second.

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(b) Piping shall be positively supported to prevent settlement, which may cause air pockets or sediment traps or rupture of lines. Piping shall be provided with uniform slope and with positive means of draining water to prevent damage from freezing.

(c) Valves shall be provided to cut off flow during cleaning or inspection of strainers and pumps.

18. Disinfectant Equipment and Chemical Feeders. Equipment and piping used to apply disinfectant chemicals to the water shall be of such size, design and material that they may be cleaned. Feeders shall not be cross connected with potable water systems. Materials used for such equipment and piping shall be resistant to the action of chemicals to be used therein.

simple and chlorine shall be Rule .19 of on the

(a) A mechanical means of disinfecting the pool water, which provides a residual of disinfecting agent in the pool water, shall be used. The disinfecting agent used shall be subject to field-testing that are accurate for determination of concentration. Caseous chlorine, compounds, bromine compounds and other bactericidal agents capable of meeting the disinfectant level parameters outlined in this chapter. Rate of feed shall be adjustable and shall be indicated feeder.

construction disinfectant repeated The

(b) Chlorinators or other disinfectant feeders shall be of sturdy and materials that will withstand wear, corrosion or attack by solutions or vapors and which are not adversely affected by adjustments or other conditions anticipated in the use of the device. Feeder shall be easily disassembled for cleaning and maintenance and shall be designed and constructed to minimize stoppage from chemicals used. Feeder design shall include fail-safe features to prevent the disinfectant feeding directly to the pool or its components under any type of failures of equipment or maintenance.

(c) Disinfectant feeders shall have a graduated and clearly marked dosage adjustment to provide flows from full capacity to 10% of such capacity. The device shall be capable of continuous delivery within 10% of the dosage at any setting.

(d) When the disinfectant is introduced at the suction side of the pump, a device shall be provided to prevent air lock of the pump or recirculation

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system.

(e) Chemical Feeders: The installation and use of chemical feeder shall conform to the following:

be

(1) Chemical feeders must be installed downstream from the filter and heater.

(2) If the chemical feeder is equipped with its own pump, it shall be installed so it introduces the gas or solution downstream from the heater and, if possible, at a position lower than the heater outlet fitting.

be

(3) Chemical feed pumps shall be wired so they cannot operate unless the filter pump is running. If the chlorinator has an independent timer, the filter and chemical feed pump timers shall be interlocked.

(f) Elemental (Gaseous) Chlorine: When chlorine gas is used the following additional features shall be provided:

(1) Users of gas chlorine must be trained as to the proper procedures for handling chlorine and as to appropriate emergency procedures.

(2) Gas chlorination equipment shall be located so that equipment failure or malfunction will have minimum effect on evacuation of pool patrons in an emergency.

(3) A booster pump using recirculating water supplies via recirculation pump system shall activate gas chlorine feeders (chlorinators). The booster pump shall be interlocked to the filter pump to prevent feeding chlorine when the recirculation pump is not running.

(4) The chlorine and chlorinating equipment including scales and one extra chlorine cylinder shall be in a separate well-ventilated

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room. Floors of such rooms shall not be below ground level. The room shall be provided with a motor driven exhaust fan capable of producing at least one air change per minute. This fan must be located at the lower part of the enclosure with separate vents at the floor, which terminate out-of-doors. Louvers shall be provided at the top of the room for admitting fresh air. Warning signs shall be posted on doors.

shall (5) The door of the chlorine and chlorinating equipment rooms not open to the swimming pool and shall open to the outside. A viewing window and exterior-controlled artificial illumination shall be provided so that essential performance of the equipment may be observed without entering the room.

(6) Facilities shall be provided for anchoring chlorine cylinders to a wall or other support to prevent their falling over.

chlorine (7) The chlorinator shall be a solution feed type, capable of delivering chlorine at its maximum rate without releasing gas to the atmosphere.

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

(9) A closed gas mask cabinet, accessible without a key, shall be located outside of the chlorinator room. The cabinet shall be equipped with respirators approved by the National Institute for Occupational Safety and Health (NIOSH) for protection against chlorine. Occupational Safety and Health Administration (OSHA) regulations require training and maintenance programs for respirators.

(10) Containers may be stored indoors or outdoors. Full and empty cylinders shall be segregated and appropriately tagged. Storage conditions shall: (a) minimize external corrosion, (b) be clean and free of trash, (c) not be near an elevator or ventilation system, (d) be away from elevated temperatures or heat sources.

(11) Chlorine cylinders must be handled with care. Valve

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protection caps and valve outlet caps shall be in place at all times except when the cylinder is connected for use. Cylinders must not be dropped and shall be protected from falling objects. Cylinders shall be used on a first-in, first-out basis. New, Approved washers shall be used each time a cylinder is connected.

(12) As soon as a container is empty, the valve shall be closed and the lines disconnected. The outlet cap shall be applied promptly and the valve protection hood attached. The open end of the disconnected line shall be plugged or capped promptly to keep atmospheric moisture out of the system.

telephone.
shown on

(13) A safety wall chart shall be posted in near the chlorine enclosure and a second chart in the pool office near the telephone. The telephone number of the chlorine supplier shall be shown on this chart.

(14) All pool personnel shall be informed about leak control procedures.

(15) Installation of chlorinator equipment, and initial operation thereof, shall be under the supervision of personnel experienced with the installation and operation of such equipment. A specific person shall be made responsible for chlorination operations and shall be trained in the performance of routine operations including emergency procedures, leak control procedures, and maintain current documentation of their training in proper respirator use.

(16) An automatic chlorine leak detector and alarm shall be installed in the chlorinator room.

(g) Training: Personnel responsible for the operation of the disinfection agent equipment shall be properly trained in the operation of that equipment, the procedure for performing and interpreting the necessary chemical field tests and the appropriate emergency procedures.

(h) Test kits: Every pool shall be supplied with an accurate and reliable testing kit capable of measuring any agent that is introduced into the water of the pool, for the determination of pH, free available chlorine (FAC), total available chlorine (TAC), if chlorine is used; bromine or other

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chemical disinfectant residuals, cyanuric acid (if used), total alkalinity, calcium hardness, copper and silver (if a copper/silver ionization unit has been installed). The local health authority shall, upon request, be supplied a field testing kit for agents introduced into the water supply. If a field testing kit is not available, the agent cannot be introduced until standards for testing has been established by, and written approval has been obtained from, the health authority. The Orthotolidine test (OTO) shall be unacceptable since it cannot distinguish FAC and TAC.

(I) Daily Records: A daily record will be kept of all chemical testing and temperatures recorded for all spa and self-inspections performed.

(j) When a hypochlorite solution is to be fed through hypochlorinator equipment, such equipment shall also provide the following additional features:

(a) Feed shall be positive under all conditions of pressure in the circulation system. A method shall be provided for reducing to a minimum the entry into a swimming pool of free calcium released from calcium hypochlorite.

(b) A method shall be provided to prevent siphoning of hypochlorite solution when the recirculation pump and hypochlorinator are both turned off.

pool 19. Filtration Equipment. Filters shall be capable of maintaining water in the which meets physical standards set forth in Section 27-112 herein. Sufficient filtering area shall be provided to meet the design pump capacity as required by paragraph 27-108.13 herein. Filters shall comply in all respects with appropriate standards of the National Sanitation Foundation regarding materials, design, operation and safety.

high pump (a) A sight glass shall be installed on the waste discharge line of pressure filters to observe the progress of filter washing. The filter system shall be provided with influent and effluent pressure, vacuum or compound gauges as are required to indicate the condition of the filter and gauges shall be provided with shut-off cocks. Air relief valves shall be provided at the point of the filter. In vacuum filter installations where the circulating is two horsepower or higher an adjustable high vacuum shut-off shall be provided to prevent damage to the pump by cavitation.

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(b) Rapid sand filters shall be designed for a filter rate to the swimming pool of not more than 3 gallons per minute per square foot of bed area at a time of maximum head loss with sufficient area to meet the design rate of flow required by the prescribed turnover.

be

(1) For standard underdrain systems not less than 20 inches of screened sharp filter sand with the effective size between 0.4 and 0.55 mm., and a uniformity coefficient not exceeding 1.75 supported by at least 10 inches of graded filter gravel shall be provided. A reduction in this depth or elimination of gravel may be permitted where equivalent performance and service are demonstrated.

(2) At least 12 inches of freeboard shall be provided between the upper sand surface and the backwash overflow invert.

(3) Each pressure filter unit shall be provided with an access opening of not less than a standard 11" x 15" manhole and cover.

coagulation

(4) Facilities shall be provided for adding chemicals for and pH control.

(5) Filter piping shall be designed and valved to permit individual backwashing of filters to waste at not less than 15 gallons per minute per square foot of filter area, to permit isolation of individual filters for repairs while keeping others in service, to permit complete drainage, and to permit maintenance, operation and inspection in a convenient manner.

of

(6) Sampling cocks shall be provided to enable sample collection pool water as it leaves the pool and as it leaves the filters.

(c) Diatomaceous earth filters shall be designed for a filter rate to the swimming pool of not more than 2.0 gallons per minute per square foot of effective filtering surface without continuous body feed and not greater than 2.5 gallons per minute per square foot with continuous body feed.

(1) Appurtenances shall be provided for precoating with diatomaceous earth slurry. Provisions for recirculating during the precoating operation shall be made where filters permit passage of

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earth through elements during precoating operations. Sight glass will be required for pressure filters.

capacity

(2) Where body feed is provided, the device shall be accurate ($\pm 10\%$) and shall be capable of continually feeding within a calibrated range, adjustable from 2 to 6 ppm, at the design of the recirculating pump.

as

(3) Filtering area, where fabric is used, shall be determined on the basis of effective filtering surfaces as created by the septum supports with no allowances for areas of impaired filtration, such as broad supports, folds or portions which may bridge.

(4) Filters shall be equipped for cleaning by one or more of the following methods: back washing, air-pump-assist backwashing, spray wash (mechanical or manual), or agitation.

(5) Provision shall be made for completely and rapidly draining the filter.

(d) High rate sand filters designed for a filter rate to the swimming pool of not more than 20 gallons per minute per square foot of filtering surface shall be acceptable provided appropriate tests and investigations by recognized independent testing laboratories indicate that such filters

produce filter cycles, performance, operation, and service equivalent to those produced by filters meeting standards set forth in paragraphs 27-108.18 (a) and 27-108.18 (b) herein.

20. Make-Up Water Facilities. All pools shall be equipped with provisions for adding make-up water to compensate for water loss through evaporation and to waste so that a constant water level is maintained while the pool is in operation to enable continuous flow into skimmers or overflow gutters.

27-109 Dressing Rooms and Showers.

Adequate dressing facilities, for pools, spas, and recreational water places should be provided unless these facilities are provided in connection with the general development for other purposes and are of adequate capacity and number and in

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close proximity to the pool. Handicapped accessible dressing and sanitary facilities shall be designed and provided in accordance with state or local requirements and can be included as part of the total number of water closets, shower heads, lavatories, etc. required herein.

NOTE: Dressing rooms shall not be mandatory for semi-public swimming pools.

1. Dressing facilities, when provided, shall be provided with separations for each sex with no interconnection. The rooms shall be well lighted, drained, ventilated and of good construction with impervious materials. They shall be developed and planned so that good sanitation can be maintained throughout the building at all times.

2. Partitions between portions of the dressing room area, screen partitions, shower, toilet and dressing room booths shall be of durable material not subject to damage by water and shall be designed so that a waterway is provided between partitions and floor to permit thorough cleaning of the walls and floor areas with hoses and brooms.

3. When dressing facilities are provided a minimum of two (2) showerheads shall be provided for the first one hundred (100) bathers of each sex. One (1) additional or showerhead for each sex shall be added for each additional fifty (50) male female users. These showers, when provided, may be used in place of the deck showers. However, the use of deck showers will not be substituted for the above mentioned showers.

4. Floors of the dressing facility shall be free of joints or openings and shall be continuous throughout the areas. Floors shall have a slip-resisting surface that shall be relatively smooth to insure complete and ease in cleaning. Floor drains shall be provided and floors shall be sloped not less than one-fourth inch (1/4") per foot toward the drains to insure positive drainage.

5. An adequate number of three-fourths inch (3/4") hose bibs shall be provided for flushing down the dressing facility interior.

6. Showers should be supplied with warm water and equipped with adjustable temperature controls to prevent scalding.

27-110 Toilet and Lavatory Facilities.

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all Toilet and lavatory facilities shall be provided at all public pools in ratios set forth below except where such facilities are readily available in adjacent structures to persons who may use the swimming pool.

Toilets and lavatory facilities may be waived for semi-public swimming pools.

following Section 27- 1. Toilets and lavatory facilities shall be provided in accordance with the schedule and shall be based on pool capacity computations set forth in 111 herein, or on scheduled use periods as at schools.

	Males	Females
Water Closets	1/50	2/50
Urinals	1/50	
Lavatories	1/50	2/50

One (1) additional water closet, lavatory and urinal shall be provided for each additional one hundred fifty (150) male users or major fractions thereof. One (1) additional water closet and lavatory shall be provided for each additional one hundred (100) female users or major fraction thereof.

2. All spas and special purpose pools, shall provide at least one (1) water closet and lavatory for each sex.

3. Soap dispensers for providing either liquid or powdered soap shall be provided at each lavatory. The dispenser shall be of all metal or plastic type with no glass permitted in these units.

4. At least one (1) paper towel dispenser or hand blow dryer shall be provided for every three lavatories.

5. An unbreakable mirror shall be provided over each lavatory.

6. Toilet paper holders shall be provided at each water closet combination.

7. Soap, paper towels, and toilet tissue shall be provided in all dispensers at all times.

be 8. Fixtures shall be installed in accordance with local plumbing codes and shall properly protected against back-siphonage.

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9. Fixtures shall be designed so that they may be readily and frequently cleaned and disinfected. Frequent cleaning and disinfecting shall not cause damage.
10. At least one (1) trash receptacle will be available in toilet areas.
11. Drinking Fountain - minimum of one to be located in swimming pool area.
12. Toilet room floors shall be constructed of impervious materials with no open cracks or joints, have an easily cleanable, non-slip finish and shall pitch toward a drain. Juncture of walls and floors shall be coved.
13. The location of dressing rooms shall be arranged so that bathers leaving a dressing room must pass the toilets en route to the swimming pool.

27-111 User Load Computation.

in In computing user loading, those portions of the swimming pool five feet or less
feet depth shall be designated as “non-swimmer” areas and those portions over five
 in depth shall be designated as “swimmer” areas.

To compute swimmer and bather capacity, swimming pool areas shall be determined as follows:

1. Ten square feet of pool water surface area shall be provided for each non-swimmer expected at time of maximum load.
2. Twenty-four square feet shall be provided for each swimmer expected at time of maximum load.
3. Three hundred square feet of pool water surface area shall be reserved around each diving board or diving platform and this area shall not be included in computing the area of the swimming section.

27-112 Disinfection and Water Quality.

that The chemical, physical, and bacteriological quality of pool water shall be such
 it is sanitary, clear, and safe for swimming. This chemical operational parameters
or in swimming pool or spa water shall not exceed the maximum level or be lower
 than the minimum level given in the following parameters. Where no minimum
 maximum is given; additional information is within to assist the pool operator.

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	Minimum	Ideal	Maximum	Comments
(1) Disinfectant levels				
Free chlorine, ppm	1.0	Pool 1.0 - 3.0	Pool 5.0	In a pool, hot weather/heavy use may require operation at or near maximum levels. Regular superchlorination is recommended (see Remedial Practices below). In a spa, during hours of operation, test the water hourly, record results, maintain this range continually and shock treat at the end of the daily use period.
Combined chlorine, ppm	None	None	0.2	High combined chlorine results in reduced chemical efficiency. //take remedial action to establish break point chlorination (See Remedial Practices below). Other signs of combined chlorine: <ul style="list-style-type: none"> ■ Sharp Chlorine odor ■ Eye irritation ■ Algae growth
Bromine, ppm	2.0	Pool 3.0 - 5.0 Spa 4.0 - 6.0	Pool 8.0 Spa 10.0	In a spa, during hours of operation, test the water hourly, record results, maintain this range continually and shock treat at the end of the daily use.
(2) Chemical Values				

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pH	7.2	7.4 - 7.6	7.8	<p>If pH is: Too high: Too Low:</p> <ul style="list-style-type: none"> ■Low chlorine ■Rapid dissipation efficiency of disinfectant ■Scale formation ■Plaster and concrete ■Cloudy water etching ■Eye discomfort ■Eye discomfort-Corrosion of metals-Vinyl liner damage
Total Alkalinity (buffering), ppm as CaCO ³	60	<p>80-100 for; calcium hypochlorite, lithium hypochlorite, sodium hypochlorite</p> <p>100-120 for; sodium dichlor, trichlor, chlorine gas, and bromine compounds</p>	180	<p>If total alkalinity is: Too high: Too low:</p> <ul style="list-style-type: none"> ■Cloudy water ■pH bounce ■Increased scaling ■Corrosion tendency potential ■pH tends to be too high

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Total dissolved solids, ppm	300	1000 - 2000	3000	<p>These values offered as guidelines rather than absolute values to indicate concern for accumulation of impurities in the course of operation. Excessive high TDS may lead to hazy water, corrosion of fixtures, etc., and can be reduced by partial draining with addition of fresh water.</p> <p>High initial TDS may indicate poor water quality due to corrosive mineral salts, humus or organic matter. Consul local water authority.</p> <p>Increasing TDS indicates build up of impurities to be controlled by partial drain/refill with fresh water.</p>
Calcium hardness, ppm as CaCO ³	150	200-400 to balance water	500-1000+	<p>Operation of pools, spas and hot tubs at maximum hardness will depend on alkalinity (buffering) requirements of the sanitizer used. Minimum alkalinity and lower pH must be used with maximum hardness (over 50 ppm).</p>
Heavy metals, ppm	None	None	Cooper, 1.0 Silver, 0.1	<p>If heavy metals, such as cooper, iron, manganese, silver are present:</p> <ul style="list-style-type: none"> ■ Staining may occur ■ Water may discolor <ul style="list-style-type: none"> ■ Chlorine dissipates rapidly ■ Filter may plug ■ May indicate pH too low, corrosion, etc.

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(3) Biological Values				
Algae	None	None	None	<p>If algae are observed:</p> <ul style="list-style-type: none"> ■ Shock treat pool (See remedial Practices, Shock treatment) ■ Supplement with brushing and vacuuming ■ Maintain adequate disinfectant residual ■ Use approved algaecide according to label directions (See Remedial Practices)
Bacteria	None	None		<p>If bacteria counts exceeds maximum allowed:</p> <ul style="list-style-type: none"> ■ Superchlorinate and follow proper maintenance procedures ■ Maintain proper disinfectant residual
(4) Stabilizer: (if used)				
Cyanuric acid, ppm	10	30-50	100	<p>If stabilizer is: Too high: Too low:</p> <ul style="list-style-type: none"> ■ Chlorine residual rapidly destroyed by sunlight ■ May reduce chlorine efficiency <p>Note: Stabilizer is not needed in indoor or brominated pools, spas, and hot tubs.</p>
(5) Remedial practices				
Superchlorination frequency	Pool - Monthly	Pool - Every other week Spa - Daily	Pool - Weekly when the temperature is over 85 F	Note: Some high use pools may need Superchlorination three times a week or more as a preventative measure or combined chlorine is over 0.2 ppm.

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Superchlorination to establish break point dosage in ppm				When combined chlorine is over 0.2 ppm, Superchlorinate by adding ten times the combined chlorine ppm. (e.g. If combined chlorine is 0.3 ppm, Superchlorinate by adding 3 ppm chlorine) Applied at the end of daily usage, hold this level for 1-4 hours to clarify the water, remove ammonia (combined chlorine), and to kill any algae present. Can also be applied when no bathers are present and as required to maintain clear water and the required halogen residual.
Shock treatment, dosage in ppm	10	--	---	Nonchlorine oxidizers are not considered ciocidal, but may reduce organic contaminants
Clarify/Flocking frequency	--	When needed	--	Use all clarifiers following manufacturer's directions
Algaecides				Follow manufacturer's directions. Use EPA registered products
Water replacement				Water in spas/hot tubs that have high bather use may require partial or complete replacement of water periodically to dilute dissolved solids, to maintain water clarity and to do necessary routine maintenance.

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Foam	Nil	0	0	Foam may harbor persistent microorganisms. If foaming is not adequately controlled consider daily shock treatment, water replacement or an appropriate antifoam agent. Follow manufacturer's directions.
(6) Temperature				
Temperature, F	--	78-82 F or Bather preference	104 F	<p>If temperature is TOO HIGH:</p> <ul style="list-style-type: none"> • Health hazard • Bather discomfort • Excessive fuel requirement • Increased evaporation • Increased scaling potential • Increased use of disinfectants • Increased potential for corrosion <p>TOO LOW:</p> <ul style="list-style-type: none"> • Bather discomfort • Increased chance of Hypothermia
(7) Water Clarity				

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Water turbidity	Must be able to see main drain covers or a standard black and white disk laying on the bottom of the deepest portion of the pool	--	--	<p>If water is turbid:</p> <ul style="list-style-type: none"> • Disinfectant level may be low • Filtration system may be inoperative • Improper chemical balance <p>Bottom should be clearly visible at the deepest part of the pool, spa or hot tub</p> <ul style="list-style-type: none"> • Consult remedial practices
(8) Oxidizer Reduction Potential				
Ozone, low output generators	--	--	0.1	Serves as oxidizer of water contaminants
Contact concentration mg/L when ozone is injected and not removed prior to entry into pool				
Above pool and spa levels	0	0	0.05	Indoor installation should have adequate ventilation
(9) Oxidizer Reduction Potential				
ORP	650 MV	--	--	<p>When chlorine or bromine is used as the primary disinfectant, ORP can be used as a supplemental measure of proper sanitizer activity. The use of ORP testing does not eliminate or supercede the need for testing the sanitizer level with standard test kits and</p> <p>ORP reading may be effected by a number of factors including (1) pH, (2) probe film and (3) cyanuric acid.</p> <p>Follow manufacturer's recommendations</p>

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- depth 6. No one shall be allowed in pool whose chin height is not at least the same as the shallow end, except those who have demonstrated to the Water Safety Instructor (WSI) or lifeguards that he or she can swim.
- in 7. Lifeguards will approve use of all floatation and/or diving equipment allowed pool.
- 8. Bathers shall take a cleaning shower, using warm water and soap, before entering the pool and before returning to the pool following use of the toilet.
- 9. Persons having an infectious or communicable disease shall be excluded from all public or semi-public swimming pools. Persons with open blisters or cuts shall be excluded from use of the pool.
- conspicuously 10. Suitable placards embodying provisions of this Section shall be posted in the swimming pool room or enclosure and in the dressing rooms and offices at all swimming pools.

11. **Warning/Safety Signs for Spas:** Signs shall be provided as follows:

- (a) Signage which states safety, emergency and operational aspects of the spa, shall be prominently located. As a guide, for language and layout of the safety signs reference ANSI Z 535 series of standards for Safety Signs and Colors and ANSI/UL 1563 1987 "Standards for Electric Hot Tubs, and Associated Equipment".
- (b) Warning/Safety signs for spas/hot tubs shall be in clear view of the spa and prominently displayed. Signs shall state the spa's address, the location of the nearest telephone with reference that emergency telephone numbers are posted at the location. These emergency telephone numbers should include the name and phone number of the nearest available police, fire, ambulance service and/or "911", if available. Signs shall include, but not be limited to the following messages.

(1) Risk of Fetus Damage - Hot water exposure limitations vary from person to person. Pregnant women and small children should not use spa prior to medical consultation.

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(2) Risk of Drowning - Other persons suffering from heart disease, diabetes, high or low blood pressure and other health problems should not enter spa without prior medical consultation and permission from their doctor.

(3) Risk of Drowning - Do not use the spa while under the influence of alcohol, narcotics or other drugs that cause sleepiness, drowsiness or raise/lower blood pressure.

(4) Risk of Child Drowning - Unsupervised use by children is prohibited.

(5) Risk of Injury - Before entering, check spa temperature before each use. The spa temperature should not exceed 104 F.

(6) Risk of Drowning - Use caution when bathing alone. Overexposure to hot water may cause nausea, dizziness and fainting. Lower water temperatures are recommended for extended use (exceeding 10-15 minutes) and for young children.

(7) Risk of Injury - Enter and exit slowly. Keep all breakable objects out of the spa area.

(8) Risk of Shock - Never place electrical appliances (telephone, radio, tv, etc.) within five feet (5') of the spa. The spa shall not be operated during severe weather conditions, i.e. electrical storms, tornadoes, etc.

(9) Risk of Drowning - Do not allow the use of or operate spa if the suction fitting is missing, broken or loose.

(c) Obstructions and entrapment Avoidance: There shall be no obstructions that can cause the user to be entrapped or injured. Types of entrapment can include but not limited to such things as wedge or pinch-type openings and rigid, nongiving cantilevered protrusions.

(d) No less than one (1) drinking fountain shall be provided and available

to

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(e) A minimum of one (1) rinse shower shall be provided on the pool deck of all public pools and spas with bather load of 50 or less. An additional rinse shower shall be provided for each additional one hundred (100) bathers.

27-115 Safety Precautions.

Life saving and emergency first aid equipment and facilities shall be provided at all swimming pools. A telephone and list of emergency numbers including physicians, ambulance and hospital should be provided.

- 1. Every swimming pool shall be equipped for safety and rescue with one or more light but strong poles (bamboo or other), or shepherds' crook, having a blunt end and which is not less than 16 feet of length for making reaching assists or rescues.
- 2. Every pool shall be equipped with one or more throwing buoys of not more than 15 inches in diameter with 1/4" line attached at least equal in length equal to one and one half (1½) times the maximum width of the pool or fifty feet (50'), which every is less.
- 3. A telephone that is hard wired and affixed, with posted names and phone numbers of the nearest available police, fire, ambulance service and/or rescue and/or 911, if available.
- 4. Lifesaving equipment described in paragraphs (1) and (2) above shall be mounted in conspicuous places near the pool edge, ready of access, its function plainly marked, kept in repair and ready condition, and bathers or others shall not be permitted to tamper with it, use it for any purpose other than its intended use, or remove it from its established location.
- 5. Every swimming pool shall be equipped with a first aid kit which shall include the following: wash cloth, germicidal soap or detergent, sterile gauze, absorbent cotton, triangular bandages, scissors, adhesive plaster, bandages of various widths, aromatic spirits of ammonia, blankets, sterile cotton applicators and four splints 1/8" to 1/4" thick, 3 ½" side and 15" to 18" long. The first aid kit shall be kept filled and readily accessible for emergency use. A stretcher or backboard and respirator is advisable for isolated areas and for large pools.

unit,

(a) A noise-making device, such as a horn or whistle, shall be available to lifeguards to warn swimmers of violations. Repeated warnings shall be

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cause for immediate ejection from pool.

(b) Handhold: A public pool shall provide with a suitable handhold around its perimeter in areas where depths exceed three feet six inches (3'6"). Handhold shall be provided no further apart than four feet (4') and shall consist of any one (1) or a combination of the items listed below.

(1) Coping, ledge or deck along the immediate top edge of the pool which provides a slip-resisting surface of at least four inches (4") minimum horizontal width and located at or not more than twelve inches (12") above the water line; or

(2) Ladders, stairs or seat ledges; or

(3) A railing placed at or not more than twelve inches (12") above the water line.

(4) Rope and Float Line: A rope and float line shall be provided within one foot (1') of and on the shallow side of the break in grade between the shallow and deep portions of the swimming pool, with its position marked with visible floats not greater than seven foot (7') intervals.

(5) The rope float line shall be securely fastened to wall anchors of corrosion-resistant materials and of the type which shall be or have no projection that will constitute a hazard when the removed.

recessed
line is

(6) The line shall be of sufficient size and strength to offer good handhold and support loads normally imposed by users.

(c) Depth markers for swimming pools: Depth of water in feet shall be plainly and conspicuously marked at or above the waterline on the vertical pool wall and on top of the coping or edge of the deck or walk next to the pool, the word or abbreviation for "feet" must be specified.

(1) Depth markers on the vertical pool wall shall be positioned to be read from the water side.

(2) Depth markers on the deck shall be within eighteen inches

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(18") of the water edge and positioned to be read while standing on the deck facing the water.

(3) Depth markers shall be slip resistant.

(4) Depth markers shall be installed at the maximum and minimum water depths and at point of slope change.

(5) Depth markers shall be installed at intermediate increments of water depth not to exceed two feet (2'), nor spaced at distances greater than twenty-five foot (25') intervals.

(6) Depth markers shall be arranged uniformly on both sides and both ends of the pool.

(7) Depth markers on irregularly shaped pools shall designate depths at all major deviations in shape as well as conform to the foregoing articles.

(8) Depth markers shall have four inch (4") minimum height. Numbers shall be of contrasting color to the background on which they are applied, and the color shall be of a permanent nature.

(d) Depth markers for spas: Public spas shall have permanent depth markers with the numbers of minimum of four inches (4") high plainly and conspicuously visible from all points of entry and in conformance with (1) through (6) below and be in accordance with ANSI/UL 969 "Marking and Labeling Apparatus".

(1) There shall be a minimum of two depth markers per spa, regardless of spa size or shape.

(2) Depth markers shall be spaced at no more than twenty-five feet (25') intervals and shall be uniformly located around the perimeter of the spa.

the (3) Spas shall have the maximum water depth clearly marked on deck wall.

(4) Depth markers shall be positioned on the deck within eighteen

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inches (18") of the water line.

(5) Depth markers shall be positioned to be read while standing on the deck facing the water.

(6) Depth markers in or on the deck surfaces shall be slip-resisting.

(e) Clock: All public facilities shall have a clock, which is visible to spa users.

(f) Water temperature: The maximum temperature in spa shall not exceed 104 F (40 C).

(1) The spa operator shall provide with an accurate thermometer (+/- 1 F tolerance) and shall periodically check to ensure that the maximum temperature does not exceed 104 F.

(2) A means to determine the spa temperature with a +/- 1 F tolerance shall be provided to the user.

(g) Lifeguards: All owners, managers, or lifeguards, if provided, in charge of, or working at, public swimming pools, spas or recreational water facilities shall be responsible for the supervision and safety of the pool, or recreational facility.

spa

(1) If lifeguards and safety assistants are provided, they shall be qualified as lifeguards by holding current, nationally recognized certifications in Lifeguarding, Adult/Child/Infant CPR and First Aid.

(2) If lifeguards are provided, their lifeguard certification, CPR and first aid certificates or photocopies thereof shall be maintained at the facility and are available to the local health authority for inspection.

(h) Barriers: All outdoor swimming pools and spas shall be provided with barrier.

a

(1) The top of the barrier shall be at least 48 inches above grade measured on the side of the barrier which faces away from the

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swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 4 inches measured on the side of the barrier which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above

ground pool, the barrier may be at ground level, such as the pool structure. Where barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches.

(2) Opening in the barrier shall not allow passage of a 4 inch diameter sphere.

(3) Solid barriers which do not have openings such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

(4) Where the barrier is composed of horizontal and vertical members in less than 45 inches, the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1 1/4 inches in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 1/4 inches in width.

(5) Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, spacing between vertical members shall not exceed 4 inches. Where there are decorative cutouts within the vertical members, spacing shall not exceed 1 1/4 inches in width.

(6) Maximum mesh size for chain link fence shall be a 1 1/4 inch square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to no more than 1 1/4 inches.

(7) Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall be no more than 1 1/4 inches.

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also
Pedestrian
device.
latching

(8) Access gates shall comply with the requirements of Rule 15 and shall be equipped to accommodate a locking device.
access gates shall be self-closing and have a self-latching
Gates other than pedestrian access gates shall have a self-

device. Where the release mechanism of the self-latching device is located less than 54 inches from the bottom of the gate, (a) the release mechanism shall be located on the pool side of the gate at least 3 inches below the top of the gate and (b) the gate and barrier shall have no opening greater than 1/2 inch within 18 inches of the release mechanism.

(9) There shall not be direct access from any dwelling into the pool enclosure.

shall

(10) Where an above ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure and the means of access is a ladder or steps then (a) the ladder or steps be capable of being secured, locked or removed to prevent access or (b) the ladder or steps shall be surrounded by a barrier which meets the requirements of this section. When the ladder or steps are secured, locked or removed any opening created shall not allow the passage of a 4 inch diameter sphere.

(11) Barriers shall be located so as to provide permanent structures, equipment or similar objects from being used to climb the barriers.

(12) A spa with a safety cover which complies with ASTM F1346, new standard performance specification for safety covers and labeling requirements for all covers for swimming pools, spa and hot tubs listed below shall be exempt from the provisions of this section. Swimming pools, with safety covers shall not be exempt from provisions of this document.

27-116 Existing Facilities.

All provisions pertaining to operation and maintenance contained in these Rules and Regulations shall be applicable to existing pools and facilities incident

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thereto. This provision shall include, but not be limited to, the following items of
steps, equipment: flow-rate meters, sight glasses, gauges, disinfectant feeders,
ladders and handrails, and filtration equipment.

27-117 Enforcement and Penalties.

The administration and enforcement of these Rules and Regulations shall be in accordance with O.C.G.A. Section 8-2-25(c) and The Standard Swimming Pool 1994 Edition, Chapter 5, Section 501 as amended, and in accordance with the rules of practice and procedure adopted thereunder.

27-118 Severability.

Should any part of the Rules and Regulations be declared unconstitutional by any Court of Jurisdiction, such ruling shall not apply to other portions of these Rules and Regulations.

27-119 Effective Date.

These rules and regulations shall become effective on the 6th day of February, 2001.

Adopted: _____

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ARTICLE II
PRIVATE SWIMMING, BATHING AND SPA FACILITIES

27-201 **Title.**

Rules and Regulations Governing Private Swimming, Bathing and Spa Facilities. For administration of the installation of residential hot tubs, spas, pools and similar facilities.

27-202 **Purpose.**

To better safeguard the health of persons using private swimming pools, spas and hot tubs, through the requiring of permits for the proper construction and installation of private swimming pools, spas, and hot tubs, and providing for the enforcement of these rules and the fixing of penalties.

1. These rules prescribe minimum design and construction requirements for pools, spas, and hot tubs associated with private residences.
2. These rules are intended to cover certain aspects of the design, equipment, installation, new construction and rehabilitation of pools, spas and hot tubs. These rules may be met notwithstanding certain variations in equipment, materials and design. Where adequate standards do not exist and these rules do not provide sufficient guidance for consideration of innovations in design, construction, and operation of proposed pools, spas or recreational waters, the department will establish requirements necessary to protect the health and safety of the pool users.
3. All newly constructed pools shall meet these rules except as allowed for in 27-202(4)) below.
4. A variance from the requirements of these rules may be requested by the pool owner for a private pool or spa which exists at the time of these rules being

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adopted, only to relieve or prevent undo hardship. Only in cases involving deviations from these rules, where it is shown that a hardship was not caused intentionally by the owner, and where no reasonable alternative exists, will such a variance be approved by the Building Official, and only if it can be shown that the health and safety of the pool users will not be put at risk. These variances may be granted by the Building Official only after supportive materials such as drawings, pictures, or manufacturer's specifications have been received and accepted as supporting the request for a variance due to hardship.

27-203**Construction Permit.**

1. Construction Permits for Private Swimming Pools and Spas. No construction of a pool or spa, or extensive alteration of an existing pool and water facility shall be initiated after the effective date of these Rules and Regulations until a construction permit has been issued by the Bryan County Building Official.

2. Application for a Construction Permit for a Private Swimming Pool or Spa. Application shall be prepared in duplicate, the original shall be forwarded to the Building Official and a copy retained by the applicant on forms provided by the Bryan County Planning and Zoning Department, and shall be received by the Bryan County Building Official at least fourteen (14) days prior to the starting of construction.

3. Plans. Properly prepared plans and specifications must be submitted in duplicate, to Department for review and approval when a private swimming pool or spa is constructed or extensively remodeled or renovated. These plans must be prepared by design professionals and shall bear the registration and seal of the prime design professional. Although more information may be required for complete understanding by the Building Official, the following information shall accompany the application for construction permit at a minimum:

(a) Complete plans drawn to scale showing sufficient views to determine all dimensions of the pool and deck area, and the design of all plumbing and electrical and lighting systems associated with the pool.

(b) A site diagram, drawn to scale, depicting surface drainage features and locations of the pool, fences and other planned improvements that are adjacent to and a part of or incidental to the construction of the pool.

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27-204 Design Criteria for Private Swimming Pools, Spas and Hot Tubs.

1. Private in-ground swimming pools shall be designed and constructed in conformance with ANSI/NSPI-5.
2. Private above-ground and on-ground swimming pools shall be designed in conformance with ANSI/NSPI-4.
3. Permanently installed spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-3.
4. Portable spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-6.

27-205 Barrier Requirements.

1. Application. The provision of this chapter shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near-drownings by restricting access to the pools, spas and hot tubs.
2. Outdoor Swimming Pools. An outdoor swimming pool facility (which includes in-ground, above-ground and on-ground pools, hot tubs and spas) shall include a barrier which shall comply with the following:
 - (a) The top of the barrier shall be at least 48 inches in height above grade measured on the outside of the barrier (the side away from the swimming pool). The maximum vertical clearance between the grade and the bottom of the barrier shall be two inches measured on the outside of the barrier. For above-ground pools and on-ground pools, the barrier may be either on grade or mounted on top of the pool structure. When mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier may be four inches.
 - (b) Openings in the barrier shall not allow the passage of a four-inch sphere.
 - (c) Solid barriers without openings, such as a masonry or concrete wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

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(d) Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches, the horizontal members shall be located on the inside (pool side) of the fence. Spacing between vertical members shall not exceed 1.75 inches. Where there are decorative cutouts in vertical members, the cutouts may not be wider than 1.75 inches.

(e) Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, the spacing between the vertical members shall not exceed 4 inches.

Where there are decorative cutouts in vertical members, the cutouts may not be wider than 1.75 inches.

(f) Maximum mesh size for chain link fences shall be 1.25 inches square, unless the fence is provided with slat-inserts which reduce the mesh opening to less than 1.25 inches.

(g) Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1.75 inches.

(h) Access gates (where included) shall comply with the same requirements for spaces and openings as the fencing (sections a-f above) and shall be equipped to accommodate a locking device. Pedestrian gates shall open outward, away from the pool, and shall be self-closing and have a self-latching device. Other gates shall have self-latching devices only. Where the release mechanism for the latch is less than 54 inches from the bottom of the gate, the release mechanism shall be located on the inside (pool side) of the gate and the gate shall have no opening greater than one-half inch within 18 inches of the release mechanism.

OPTIONAL: In residences where non-swimmers or children under the age of 12 are present, the following standards are recommended:

(i) Where the wall of a dwelling serves as part of the barrier, one of the following conditions should be met:

(1) The pool should be equipped with a secure safety cover; or

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(2) All doors with direct access to the pool should be equipped with an alarm that produces an audible warning for 30 seconds when the door is opened and can be deactivated for 15 seconds with a keypad or similar coded device; or

(3) All doors should be fitted with self-closing, self-latching devices which are approved and acceptable to the Building Official to prevent unsupervised entry to the pool area by non-swimmers and children.

FOR ABOVE-GROUND and ON-GROUND POOLS ONLY

(j) Where a barrier is mounted on top of the pool structure:

(1) The ladder or steps shall be capable of being secured, locked or removed to prevent access; or

(2) The ladder or steps shall be surrounded by a barrier which meets the requirements of sections a-h above.

27-206 For Indoor Swimming Pools.

All walls surrounding an indoor swimming pool should comply with the requirements listed in items i and j above.

27-207 Prohibited Locations.

Barriers shall be located so as to prohibit permanent structures, equipment and installations from being used to climb the barrier.

27-208 Barrier Exceptions.

Spas or hot tubs with a safety cover which complies with ASTM F 1346, as listed below, shall be exempt from the provisions of the barrier requirements above.

27-209 Standards and Abbreviations.

ANSI - American National Standards Institute (11 West 42nd Street, New York,

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NY 10036)

ASTM - American Society for Testing and Materials (1916 Race Street, Philadelphia, PA 19103)

NSPI - National Spa and Pool Institute (2111 Eisenhower Ave., Alexandria, VA 22314)

ANSI/NSPI-3 Standard for Permanently Installed Residential Spas.....AG104.1

ANSI/NSPI-4 Standard for Above-Ground/On-Ground Residential Swimming Pools.....AG103.2

ANSI/NSPI-5 Standard for Residential In-Ground Swimming Pools...AG103.1

ANSI/NSPI-6 Standard for Residential Portable Spas.....AG104.2

ASTM F 1346-91 Standard Performance Specifications for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs.....AG105.2, AG105.5

Adopted: _____

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