

SWIMMING POOL HANDOUT

PERMITS

Every swimming pool with a depth greater than 2 feet must have a permit for installation issued by the Building Commissioner prior to beginning construction.

A permit fee shall be payable upon issuance of said permit.

LOCATION OF POOL

No portion of the pool shall be located in a side yard area, which is the area between the corner side property line and the building corner side property line, and the building corner line and the building setback line as defined in the Orland Hills zoning ordinance for a corner lot, unless the side yard area is fenced with privacy fence as defined in the Village fence ordinance not less than 5 feet in height.

The pool must be located a minimum distance of 6' from the fence line and 3' from any other structure including the house, garage, shed, etc. Pools are not allowed in Public Utility and/or Drainage Easements.

No portion of the pool shall be located closer than 2 feet horizontally to any buried power cable and no closer than 10 feet horizontally to any overhead power line.

ELECTRICAL REQUIREMENTS

All circuits serving the pool are required to be provided with a ground fault circuit interrupter at the outlet located *not closer than 5' and not further than 10'* from the wall of the pool. The outlet box must be firmly secured. Direct buried cable is permitted if located a minimum of 24" below grade. Where the cable exits the ground it must be protected with ridged metallic tubing from not less than 6" below grade. If ridged metallic tubing is used to service the pool, it must be buried a minimum of 6" below grade. The conductors used to carry the current shall be copper and not less than 14 gauge. All metal fences in the pool area shall be effectively grounded. NO ELECTRICAL EXTENSION CORDS ALLOWED.

WATER SUPPLY

The water supply connection shall be equipped with a permanent in line or built in vacuum breaker.

ENCLOSURES

Every outdoor pool shall be completely surrounded by a fence or enclosure of not less than 4 feet in height. The fence or enclosure shall not have openings in excess of 4 inches in length. All gates shall be of the self-closing and self-latching type.

Fences that are part of the pool structure must measure in excess of 5 feet in height as measured from the ground if the pool is not enclosed by a conventional fence as previously described.

Outside ladders are not allowed to be in place when the pool is unattended.

CHAPTER 157: SWIMMING POOLS

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GENERAL PROVISIONS

§157.01 PURPOSE

The Village annexed the provisions of this chapter solely for the purpose of protecting the citizens of the village and for the health, safety, and welfare of its residents.
(Ord. 82-13, passed -82)

§157.02 COMPLIANCE REQUIRED

Every swimming pool constructed, installed, or maintained hereafter, shall comply with all applicable provisions of this chapter. All swimming pool equipment installed hereafter for use in public or private swimming pools shall conform to the applicable National Sanitation Foundation Standards, which are hereby adopted by reference, three copies of said requirements being filed in the office of the Village Clerk.
(Ord. 82-13, passed -82) Penalty, see § 157.99

§157.03 DEFINITIONS.

For the purpose of this chapter, the following definitions shall apply unless the content clearly indicates or requires a different meaning.

PRIVATE POOL. Any swimming pool or wading pool over two feet in depth at a private residence intended only for the use of the individual owner, his family, or friends. This is to include portable or temporary type pools of plastic, rubberized cloth, or similar materials installed or placed above ground elevation.

PUBLIC POOL. All swimming and wading pools other than private residence pools. This is to include park district, association, club and school pools, as well as those for the use of apartment houses, condominiums, motels, and hotels.

SWIMMING POOL. Any artificial basin of water exceeding two feet in depth improved, modified, constructed, or installed for the purpose of swimming or wading.

TEMPORARY POOL. A private pool above ground level that is removable when not in use. (Ord. 82-13 passed – 82)

§ 157.04 PERMIT REQUIRED: FEE.

- (A) Every swimming pool with a depth greater than two feet must have a permit for installation issued by the Building Commissioners prior to beginning construction.
- (B) A permit fee shall be payable upon issuance of said permit. Fee shall be in accordance with "Fee Schedule" posted by Building Commissioner.
(Ord. 88-15, passed 6-2-88) Penalty, see §157.99

§ 157.05 PUBLIC POOLS: REQUIREMENTS ADOPTED BY REFERENCE.

Public pools, their bather preparation facilities, equipment, and operation shall comply with the Illinois Department of Public Health Minimum Sanitary Requirements for Swimming Pools and Bathing Places, which are hereby adopted, be reference. Three copies of said requirement being on file in the office of the Village Clerk.
(Ord. 82-13, passed – 82) Penalty, see § 157.99

§ 157.06 PRIVATE POOLS: REQUIREMENTS.

- (A) The following requirements shall be applicable to all private swimming pools:

- (1) Location.

- (a) No portion of the pool shall be located in the property frontage of a premise.

(b) No portion of the pool shall be located in the side yard area; that is the area between the corner side property line and the building corner side property line, and the building corner line, and the building setback line as defined in the zoning ordinance for a corner lot, unless the side yard area is fenced with a privacy fence as defined in the village fence ordinance not less than five feet in height.

(c) No portion of the pool shall be located closer than two feet horizontally to any buried power cable and no closer than ten feet horizontally to any overhead power line.

(2) Water supply and pH.

(a) Every private pool shall be equipped with suitable facilities for the initial filling of the pool, and for adding make-up water as needed.

(b) The water supply for the private pool shall be secured from water works distribution system servicing the village.

(c) There shall be no physical connection between the water supply line and the pool system.

(d) The fresh water supply point of discharge to the pool, whether through hose or pipe shall be firmly fixed at least six inches above the overflow level of the pool; or if a surge of balancing tank is used, the point of discharge shall be firmly fixed at least six inches above the rim of the tank. When a hose connection from a sill cock or other plumbing fixture is used, and approved vacuum breaker shall be installed between the sill cock or control valve at the fixture and the hose connection. The vacuum breaker shall be installed at a height not less than seven feet six inches above the floor, platform, or ground upon which a person would stand when operating the sill cock or control valve.

(e) The water when in the pool shall be clear and non-turbid with the pH range of 7.2 to 7.6. A standard test kit to determine the pH shall be provided at all private pools, and shall be used to daily check on the adequacy of the pH treatment.

(3) Re-circulation system. Every private pool shall be equipped with a water re-circulation system. The re-circulation system shall consist of pumping equipment; a hair and lit catcher; rapid pressure filter, together with all necessary pipe connections to the pool inlets and outlets and for backwashing the filters and equipment for disinfecting the pool water.

(a) *Pump and filter capacity.* The re-circulation pump and filter tank and surface area shall be sufficient to achieve the minimum turnover filtration, and backwashing rates required by this chapter.

(b) *Turnover period and filtration rate.* There shall be one turnover of the entire contents of the pool every twelve hours or less at a filtration rate of not more than three gallons per square foot of filter area per minute.

(c) *Hair and lint catcher.* A hair and lint catcher shall be installed on the suction side of the re-circulation pump to prevent hair, lint, and other extraneous matter from reaching the pump and filters. The hair and lint catcher shall be designed that it can easily be dismantled for cleaning and inspection.

(d) *Filter backwashing and rate.* The filters shall be backwashed at regular intervals at a minimum rate of ten gallons per square foot of filter area per minute, or at the manufacturer's recommended backwash flow rate, whichever is greater. The backwash cycle shall be continued until the backwash is clear. All backwash water and effluents shall be discharged to the sewer through an indirect connection.

(e) *Filtration equipment.* Every rapid pressure filter shall be equipped with readily accessible air relief valves, loss of head, or pressure gauges on the inlet and outlet pipes to determine frequency of cleaning, and an access head or hole large enough to permit inspection, maintenance, and repair work. A sight glass that can be easily removed for cleaning shall be provided in the effluent line from the filter unit. Operating instructions shall be properly designated with metal tags, indicating purpose.

(f) *Inlets and outlets.* Water circulation systems inlets shall be located to produce uniform circulation of water throughout the pool and to carry pool bottom deposits to the outlet. A minimum of one re-circulation system inlet shall be provided for each 500 square feet of fraction thereof of surface area of the pool. The inlets shall discharge at a minimum of ten inches below the pool overflow level. A main outlet which connects to the re-circulation system shall be placed at the deepest point in the pool and fitted with a safe grating. No direct connection shall be made from the outlet to the sewer.

(g) *Water disinfection equipment.* Equipment shall be provided for the disinfection of the pool water. Any disinfection method using material other than chlorine compounds shall be subject to the written approval of the Public Health Officer. Disinfection equipment installed for the use of chlorine compounds shall have sufficient capacity to maintain a minimum free chlorine residual of 0.5 parts per million. The disinfection shall be introduced into the re-circulation system ahead of the filters. A test kit with permanent color standards shall be provided at every private pool, and be used at frequent intervals to check on the adequacy of the chlorine treatment.

(4) Steps and ladders.

(a) In every pool having a depth of water greater than two feet at least one means of egress in the form of steps or a ladder shall be provided.

(b) In every pool having both a shallow and a deep end, two or more means of egress in the form of steps or ladders shall be provided. One such means of egress shall be at the deep end and at the shallow end of the pool

(c) Treads of steps and ladders shall be constructed of non-slip material at least 2 ½ inches wide for their full length, and shall be equipped with a handrail on both sides.

(d) Electrical requirements. All electrical installations used with the pool shall be in compliance with the village code. All circuits will be with ground-fault circuit type of installation. All metal fences in the pool area shall be effectively grounded.

(e) Lighting. A system of artificial lighting sufficient to light all parts of the pool, the water therein, and the entire pool area shall be permanently installed at all indoor pools and any outdoor pool to be used at night.

(7) Operation and maintenance.

(a) Pool attended. In pools having a water depth of two feet or greater, such pool shall be attended by an adult when pool is in use.

(b) Lifesaving equipment. Every swimming or wading pool having a depth of water two feet or greater shall be equipped with a least one lifesaving device such as a ring or a strong pole with blunt ends not less than 12 feet in length.

(c) Maintenance. All pools and equipment shall be maintained in a clean and sanitary condition.

(d) Nuisance and hazards. No pool shall be used or kept filled if these conditions are not maintained or if the pool or equipment becomes a public health hazard or nuisance.

(8) Authority to close. The President and the Board of Trustees shall designate the person who shall have the authority to close any pool immediately when failure to meet the sanitary and safety requirements of this chapter constitutes an immediate major hazard to health or life.

All permanent private pools shall comply with the additional regulations in §§ 157.20 through 157.25.
(Ord. 82-13, passed – 82; Am. Ord. 88-15, passed 6-22-88) Penalty, see § 157.99.

§ 157.07 ENCLOSURE OF SWIMMING POOL.

(A) Every outdoor swimming pool shall be completely surrounded by a fence or enclosure of not less than four feet in height. The fence or enclosure shall not have opening in excess of four inches in length. All gates shall be of the self-closing and latching type.

(B) Fences that are part of the pool structure must measure in excess of five feet in height as measured from the ground if a conventional fence as previously described does not enclose the pool.

(C) Outside ladders are not allowed to be in place when the pool is unattended.

(D) Any pool owner found filling a pool or with a filled pool prior to installation of a fence as described in this section will be fined as provided in § 157.99 (Ord. 88 -15, passed 6-2-88)

§157.08 LIABILITY MAINTENANCE.

The village disclaims all liability as to pools within the village recognizing that individual property owners must maintain and provide a proper and safe pool. (Ord. 82-13, passed - 82)

ADDITIONAL REQUIREMENTS

§157.20 CONSTRUCTION.

(A) Wall slopes. To a depth of five feet from the top, the wall slope shall not be more than 1- ½ feet horizontal and five feet vertical.

(B) Floor slopes. The slope of the floor in the shallow end shall not exceed one foot vertical to seven feet horizontal. The transition point between shallow and deep water shall not be less than 4 ½ feet deep and not more than five feet deep. (Ord. 82-13, passed - 82 Penalty see §157.99.

§ 157.21 POOL MARKINGS.

The depth of the water at the shallow and deep ends, and at the transition point between shallow and deep water, shall be clearly marked on both sides of the pool. (Ord. 82-13, passed -82) Penalty, see § 157.99

§ 157.22 WALK AREAS AND RINSING UNIT.

Unobstructed walk areas not less than 36 inches wide shall be provided to extend entirely around the pool. The walk area shall be constructed of impervious material, and the surfaces shall be smooth and easily cleaned and of non-slip construction. The slope of the walls shall have a pitch of at least ¼ inch to the foot, designed so as to prevent back drainage from entering the pool. A foot rinse unit or hose shall be available for cleaning the feet before entrance onto pool walks. (Ord. 82 - 13, passed -82) Penalty, see § 157.99

§ 157.23 HOURS OF USE.

It shall be unlawful for any person or any owner or operator to use or allow being used any permanent public swimming pools between the hours of 11:00 p.m. and 7:00 a.m. Saturday, Sunday, and legal holidays, or between the hours of 11:00 p.m. and 7:00 a.m. on any other day of the week. (Ord. 82 - 13, passed -82) Penalty, see § 157.99

§ 157.99 PENALTY

Any person, firm, or corporation violating this chapter shall be fined not more than \$500 for each offense. A separate offense shall be deemed committed for each and every day, which a violation continues or exists. (Ord. 82 – 13, passed –82)

SECTION 623.0 SWIMMING POOLS

623.1 *General:* Pools used for swimming or bathing shall conform to the requirements of this section provided that these regulations shall not be applicable to any such pool less than 24 inches (610 mm) deep or having a surface area less than 250 square feet (23.25 m²), except when such pools are permanently equipped with a water- re-circulating system or involve structural materials. For the purposes of this code, pools are classified as private swimming pools or public swimming pools, as defined in Section 623.2. Materials and constructions used in swimming pools shall comply with the applicable requirements of this code.

623.2 *Classification of pools:* Any constructed pool which is used or intended to be used as a swimming pool in connection with a building of Use Group R-3 and is available only to the family of the householder and private guests, shall be classified as a private swimming pool. Any swimming pool other than a private swimming pool shall be classified as a public swimming pool.

623.3 *Plans and permits:* A swimming pool or appurtenances thereto shall not be constructed, installed, enlarged or altered until plans have been submitted and a permit has been obtained from the code official. The approval of all city, county and state authorities having jurisdiction over swimming pools shall be obtained before applying to the code official for a permit. Certified copies of these approvals shall be filed as part of the supporting data for the permit application.

623.3.1 *Plans:* Plans shall accurately show dimensions and construction of the pool and appurtenances and properly established distances to lot lines, building, walks and fences, as well as details of the water supply system, drainage and water disposal systems, and all appurtenances pertaining to the swimming pool. Detailed plans of structures, vertical elevations and sections through the pool showing depth shall be included.

623.4 *Locations:* Private swimming pools shall not encroach on any front or side yard required by this code or by the governing zoning law, unless in accordance with specific rules of the jurisdiction in which the pool is located. A wall of a swimming pool shall not be located less than 6 feet (1829 mm) from any rear or side property line or 10 feet (3048) from any street property line unless in accordance with specific rules of the jurisdiction in which the pool is located.

623.5 *Structural design:* The pool structure shall be engineered and designed to withstand the expected forces to which the pool will be subjected.

623.5.1 Wall Slopes: To a depth of 2 feet 9 inches (838 mm) from the top, the wall slope shall not be more than one unit horizontal in five units vertical (1:5).

623.5.2 Floor Slopes: The slope of the floor on the shallow side of the transition point shall not exceed one unit vertical to seven units horizontal (1:7). For public pools greater than 1,200 square feet (111.6 m²) the slope of the floor on the shallow side of the transition point shall not exceed one unit vertical in ten units horizontal (1:10). The transition point between shallow and deep water shall not be more than 5 feet (1524 mm) deep.

623.5.3 Surface cleaning: All swimming pools shall be provided with a re-circulating skimming device or overflow gutters to remove scum and foreign matter from the surface of the water. Where skimmers are used for private pools, there shall be at least one skimming device for each 1,000 square feet (93 m²) of surface area or fraction thereof. For public pools where water skimmers are used there shall be at least one skimming device for each 600 square feet (55.3 m²) of surface area or fraction thereof. Overflow gutters shall not be less than 3 inches (76 mm) deep and shall be pitched to a slope of one unit vertical to 48 units horizontal (1:48) toward drains and constructed so that such gutters are safe, cleanable, and that matter entering the gutters will not be washed out by a sudden surge of entering water.

623.5.4 Walkways: All public swimming pools shall have walkways not less than 4 feet (1219 mm) in width extending entirely around the pool. Curbs or sidewalks around any swimming pool shall have a slip-resistant surface for width of not less than 1 foot (305 mm) at the edge of the pool and shall be so arranged as to prevent return of surface water to the pool.

623.5.5 Steps and ladders: At least one means of egress shall be provided from private pools. Public pools shall provide ladders to other means of egress at both sides of the diving section and at least one means of egress at the shallow section, or at least one means of egress in the deep section and the shallow section if diving boards are not provided. Treads of steps and ladders shall have slip-resistant surfaces and handrails on both sides, except that handrails are not required where there are not more than four steps or where the steps extend the full width of the side or end of the pool.

623.6 Water Supply: All swimming pools shall be provided with a potable water supply, free of cross connections with the pool or its equipment.

623.6.1 Water treatment: Public swimming pools shall be designed and installed so that there is a pool water turnover at least once every 8 hours. Filters shall not filter water at a rate in excess of 3 gallons per minute per square foot (0.0020 m³/s m²) of surface area. The treatment system shall be designed and installed so that at all times when the pool is in use, the water is provided with excess chlorine of not less than 0.4 parts per million (ppm) or more than 0.6 ppm, or excess chloramines between 0.7 and 1.0 ppm, or disinfection shall be provided by other approved means. Acidity/alkalinity of the pool water shall not be below 7.0 or more than 7.5. All re-circulating systems shall be provided with an approved hair and lint strainer installed in the system ahead of the pump.

Private swimming pools shall be designed and installed so that there is a pool water turnover at least once every 18 hours. Filters shall not filter water at a rate in excess of 5 gallons per minute per square foot (0.0034 m³/s m²) of surface area. The pool owner shall be instructed in proper care and maintenance of the pool by the supplier of builder, including the use of high-test calcium hypochlorite (dry chlorine), sodium hypochlorite (liquid chlorine) or equally effective germicide and algacide, and the importance of proper pH (alkalinity and acidity) control.

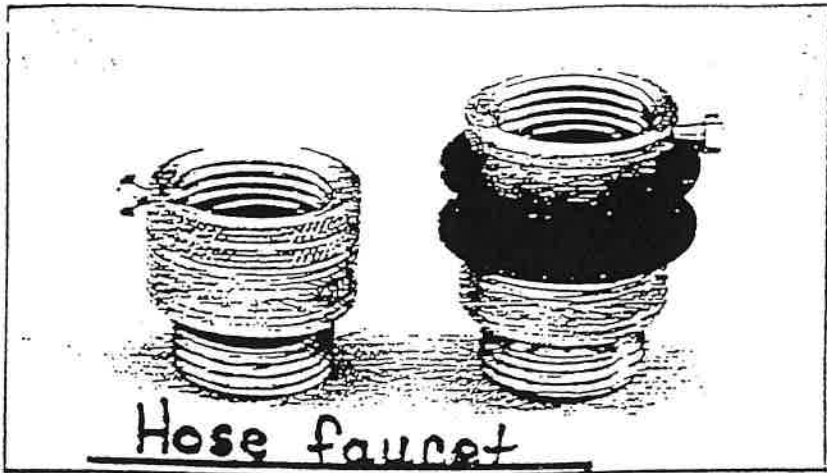
623.6.2 Drainage systems: The swimming pool and equipment shall be equipped to be emptied completely of water and the discharged water shall be disposed of in an approved manner that will not create a nuisance to adjoining property.

623.7 Appurtenant structures: All appurtenant structures, installations and equipment such as showers, dressing rooms, equipment houses or other buildings and structures, including plumbing, heating and air conditioning systems, shall comply with all applicable requirements of this code.

623.7.1 Accessories: All swimming pool accessories shall be designed, constructed and installed so as not to be a safety hazard. Installations or structures for diving purposes shall be properly anchored to insure stability.

623.8 Equipment installations: Pumps, filters and other mechanical and electrical equipment for public swimming pools shall be enclosed in such a manner as to be accessible only to authorized persons and not to bathers. Construction and drainage shall be arranged to avoid the entrance and accumulation of water in the vicinity of electrical equipment.

623.9 Swimming pool safety devices: Every person owning land on which there is situated a swimming pool that contains 24 inches (610 mm) or more of water in depth at any point, shall erect and maintain thereon an adequate enclosure surrounding the pool area.



Hose faucet

Wilkins Models BFP-8 and BFP-8F

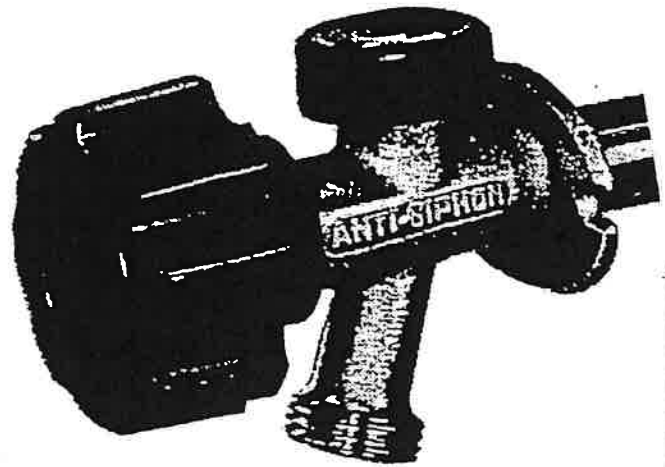
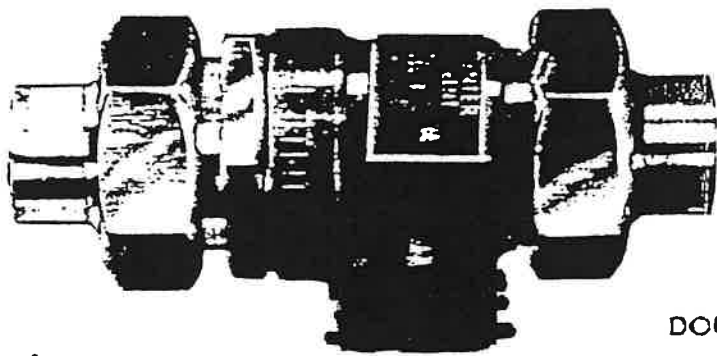


Figure P-1505.8.3c
**HOSE BIBB WITH BUILT-IN
 ATMOSPHERIC VACUUM BREAKER**
 (Courtesy of Mansfield Plumbing Products)



Hot water Boilers

Figure P-1505.8.2a
**DOUBLE CHECK VALVE WITH INTERMEDIATE
 ATMOSPHERIC BREAK**

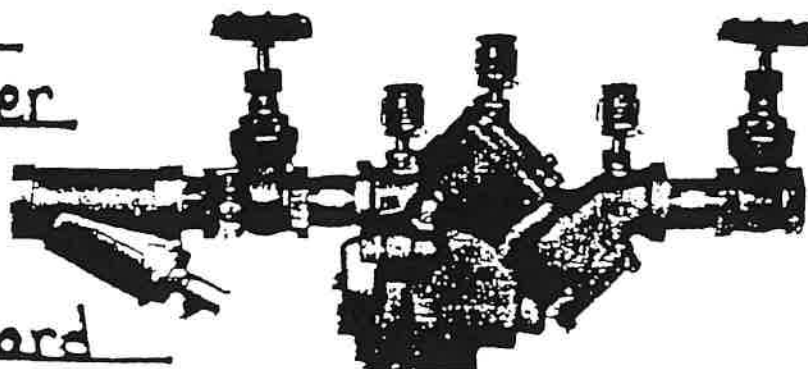
With a flow through valve, primary check (1) opens away from diaphragm seal (2). Atmospheric vent remains closed by deflection of diaphragm seal (2). Secondary check (4) opens away from downstream seal (5) permitting flow of water through valve. (Courtesy of Watts Regulator Company)

Figure P-1505.8.2b
**REDUCED PRESSURE PRINCIPLE
 BACKFLOW PREVENTER**

During a static or no-flow condition (1) both check valves and the relief vent port remain closed. When there is normal flow (2) the two check valves open and the relief vent port remains closed. The supply pressure drops across the valve since the check valve must be held in the open position. If back siphonage (3) occurs, both check valves close and the relief vent port opens discharging the water in the intermediate zone. If both check valves are fouled and held in the open position, and there is either a back siphonage or back pressure condition (4) or both, the relief vent port opens discharging the possibly contaminated water to the atmosphere. (Courtesy of Watts Regulator Company)

Lawn
 Sprinkler

§



high hazard

VILLAGE OF ORLAND HILLS

POOL SAFETY TIPS

It's easy to forget how dangerous swimming pools can be. The Insurance Information Institute reminds us to:

- **Never leave small children unsupervised; even for just a few seconds.**
- **Put fencing around the pool area to keep people from using the pool without your knowledge.**
- **Keep children away from pool filters, as the suction force may injure them or prevent them from surfacing.**
- **Be sure all pool users know how to swim. Learners should be accompanied by a good swimmer.**
- **Don't swim alone or allow others to swim alone; make sure there's somebody nearby who can answer a distress call.**
- **Check the pool area regularly for glasses, bottles, toys or other potential hazards.**
- **Keep electrical devices such as radios away from pools or nearby wet surfaces.**
- **Don't allow anyone who has been drinking alcohol to use the pool.**
- **Stay out of the pool during rainstorms accompanied by thunder or lightening.**
- **Treat diving boards with respect. Never dive into an above-ground pool and check the water depth before plunging into an in-ground pool. Also keep clear of the area near a diving board.**
- **Don't swim if you're tired or have just finished eating.**