

Swimming Pool Guide

Circulation & Filtration

All pools, hot tubs and spas must have systems to assure uniform circulation and uniform disinfectant dispersal. The pump filter must be capable of one complete turnover every 30 minutes for hot tubs, every two hours for wading pools and every eight hours for all other pools.



Disinfection

As chlorine or other disinfectants are added to pool water some is immediately combined with contaminants such as tanning oils or perspiration which are present in the water. This “combined chlorine” is no longer effective as a disinfectant and is the cause of chlorine odors and complaints about eye irritation. Superchlorinating the pool regularly will rid it of combined chlorine and allow the formation of “free chlorine”. Only free chlorine is effective against bacteria. The level of free chlorine is reduced by sunlight and the number of swimmers who use the pool.

Pool Testing Requirements

- **Free Chlorine Residual Test**

Free chlorine serves to destroy harmful germs and bacteria in the water. The ideal quantity of free chlorine is between 1.0 and 3.0 parts per million (ppm) in all parts of the pool. If free chlorine levels fall below 0.4 ppm the pool must be closed. The free chlorine levels must be tested at least twice a day, but testing every two hours is strongly recommended.

- **pH Test**

Pool water at the proper pH level will result in effective chlorination, fewer swimmer complaints and prevent corrosion or mineral deposits that can damage piping, filters and pumps. The pH of pool water must be kept between 7.2 and 8.2 at all times. The ideal pH reading of a pool is between 7.4 and 7.6. If the pH is too high, the effectiveness of the free chlorine will decrease, the water may become cloudy, and it is likely that carbonate scale will form that could damage piping, filters and pumps. If the pH is too low, chlorine will dissipate quickly and corrosion of piping, filters and pumps may occur.

- **Clarity Test**

The pool's water must be clear enough at all times so that a 6" round black disk on the bottom of the deepest part of the pool is visible from the pool edge. The pool must be closed if the water is too cloudy to see the disk.

- **Bacteriological Test**

A weekly bacteriological sample must be taken and tested by a third party certified laboratory. The sample should be taken when the pool is in use, but vary in time of day to get a cross section of the pool's sanitary quality.

- **Documentation**

Pools are required to keep a daily log of chlorine and pH readings onsite and copies of bacteriological sample results dating back two years.

A daily log of chlorine and pH readings must be submitted to the Allentown Health Bureau at the end of each month. The bacteriological sample results must be submitted to the Allentown Health Bureau weekly.

Pool Maintenance

- Vacuum or brush the pools bottom and sides clean of visible dirt and debris every day.
- Clean out skimmer baskets every day.
- Backwash the filters regularly to maintain peak efficiency. The filters must operate 24 hours a day while the pool is in operation.

Safety Requirements

- **Lifeguards**

Properly trained lifeguards, certified in lifesaving, CPR, and first aid are required at all swimming pools that collect a fee for use of the pool. Certifications or copies of certifications must be maintained onsite for review.

- The amount of lifeguards required is based on surface area of the pool, not the amount of bathers.
- Lifeguards must be positioned in lifeguard chairs or be present at the edge of the pool so that visibility is complete.
- Lifeguards can only be assigned to one location at any given time.

- **Life Saving Equipment**

The following lifesaving and first aid equipment shall be provided and readily available for emergency use at each public bathing place:

- One or more reaching poles



- One or more floatation devices that can support an adult in water



- A standard 24-unit first aid kit, fully stocked and readily accessible
- Telephone to contact 9-1-1 if necessary

- **Overcrowding**

Every swimming pool is assigned a maximum capacity of swimmers. It is essential to never exceed the maximum capacity.

Overcrowding may result in any of the following:

- Break the sanitary operation of the pool
- Overload the filter and disinfection system
- Make it impossible to supervise and safeguard swimmers.

- **Electrical Certification**

A copy of a current Electrical Certificate must be posted at the pool. If the certification of the pool has expired, you must contact the Bureau of Building Standards and Safety at 610-437-7592 to apply for a permit and arrange for an inspection.