

TITLE 64
LEGISLATIVE RULE
BUREAU FOR PUBLIC HEALTH

SERIES 16
RECREATIONAL WATER FACILITIES

§64-16-1. General.

1.1. Scope. -- This legislative rule establishes the minimum requirements for the design, construction, management and operation of recreational water facilities. The W. Va. Code is available in public libraries and on the Legislature's web page, <http://www.legis.state.wv.us/>.

1.2. Authority. -- W. Va. Code §§16-1-4, 16-1-6 and 16-1-17.

1.3. Filing Date. -- April 18, 2007.

1.4. Effective Date. -- April 18, 2007.

1.5. Repeal and Replacement of Former Rules. -- This legislative rule repeals and replaces Division of Health rule 64CSR16, "Recreational Water Facilities", effective July 1, 2002.

1.6. Applicability. -- This rule applies to the owners and operators of recreational water facilities.

1.7. Enforcement. -- This rule is enforced by the Commissioner of the Bureau for Public Health.

§64-16-2. Definitions.

2.1. Available Qualified Water Facility Operator - a person who can be reached by telephone within thirty (30) minutes, and can be on site within sixty (60) minutes of notification, and visits the recreational water facility a minimum of one (1) time per week during the period of operation, as this term is used in section 9.1. of this rule.

2.2. Bathing Beach. -- An organized and controlled bathing place located on a natural

stream, pond or lake, or on an artificial pond or lake which is formed by impounding a natural waterway.

2.3. Commissioner -- The Commissioner of the Bureau for Public Health or his or her designee.

2.4. Fecal Accident. -- The release of visible fecal matter into the water of a recreational water facility.

2.5. First Aid Kit. -- A packaged set of materials used for emergency treatment of injured or sick persons before professional medical care is available that includes a minimum of: adhesive compresses or band-aids of various sizes; adhesive tape; eye dressing pads (4" x 4" and 3" x 3"); gauze pads (4" x 4" and 3" x 3"); roller gauze (2", 3" and 4" widths); scissors; tweezers; triangular bandages; cold packs; personal protective equipment, including latex or other impermeable gloves; and resuscitation masks with one-way valves.

2.6. Operator. -- A person responsible for the operation of a recreational water facility.

2.7. Patron. -- A customer, client, or paying or non-paying guest at a recreational water facility.

2.8. Permit. -- A written document issued by the Commissioner giving a designated person permission to establish, construct, renovate, or operate a recreational water facility.

2.9. Person. -- An individual, city, town, partnership, association, company, corporation, government agency, institution, apartment, motel, country club, camp, or any other legal entity.

2.10. Private Residential Swimming Pool --

An indoor or outdoor structure, chamber, or tank containing a body of water for swimming, diving, or bathing located at a single residential dwelling that houses no more than three families and that is used exclusively by the residents and their non-paying guests.

2.11. Qualified Water Facility Operator. -- An individual who has passed a recognized Certified Pool Operator certification course, such as those offered by the National Spa and Pool Institute, the YMCA, or an equivalent course approved by the Commissioner.

2.11a. Recreational Water Facility. -- A body of water, under the control of a person, which has been modified, improved, constructed or installed for the purpose of public swimming or bathing. It includes, but is not limited to, bathing beaches; swimming, wading, and diving pools; water slides, spray pools, lazy rivers, and wave pools; spas, hot tubs, therapeutic pools, hydrotherapy pools, and whirlpools; facilities operated by communities, subdivisions, apartment complexes, condominiums, clubs, camps, schools, institutions, parks, mobile home parks, hotels, and similar recreational and public facilities. A recreational water facility does not include a private residential swimming pool as defined in this rule.

2.12. Shallow End. -- The part of a recreational water facility that has a depth of five (5) feet or less.

2.13. Spa. -- A unit designed for recreational use, including a hot tub, that is not drained, cleaned, or refilled for each user, and that may include hydrojet circulation, hot water, or air induction bubbles.

2.14. Swimming Pool. -- An artificial basin, chamber, or tank intended to be used for swimming, diving, therapy, competition, instruction, or recreational type bathing. The term does not include residential or individual therapeutic tubs or tanks.

2.15. Wading Pool. -- A small, shallow swimming pool not more than twenty-four (24) inches deep intended to be used for wading.

2.16. Wave Pool. -- A swimming pool designed for the purpose of producing wave action in the water.

§64-16-3. Construction Permit.

3.1. A person shall not establish, construct or renovate a recreational water facility without first obtaining a construction permit from the Commissioner.

3.2. The applicant shall submit four (4) sets of completed applications, plans and specifications to the Commissioner for review and approval at least forty-five (45) days prior to the date on which he or she requests that the construction permit takes effect.

3.3. The applicant shall submit a written permit application on a form obtained from the Commissioner. The application, plans, and specifications shall include, but not be limited to:

3.3.a. Vicinity and site plans;

3.3.b. Detailed construction drawings;

3.3.c. Water source and treatment detail; and

3.3.d. Specifications for filtration, chlorination, testing equipment and other pertinent factors necessary for a complete operative system.

3.4. The Commissioner may suspend or revoke a construction permit if a person fails to comply with the provisions of the permit or this rule.

3.5. The Commissioner shall deny a construction permit if the information on the application form is incomplete, inaccurate, false or misleading, or indicates that the applicable provisions of this rule cannot be met.

3.6. A person whose application for a construction permit has been denied, or whose permit has been suspended or revoked, may submit a written petition to the Commissioner requesting a hearing on the matter, and the

Commissioner shall grant a hearing on the matter within ten (10) days after he or she has received the petition.

3.7. The recreational water facility shall be constructed or renovated in accordance with the plans and specifications approved by the Commissioner, unless the Commissioner grants written approval for a deviation from the approved plans and specifications.

§64-16-4. Operating Permit.

4.1. A person shall not in any manner conduct, control, manage, maintain, or operate a recreational water facility without obtaining an operating permit from the Commissioner.

4.2. The applicant shall submit to the Commissioner a written operating permit application on a form obtained from the Commissioner and signed by the applicant.

4.3. The applicant shall submit to the Commissioner an application for an operating permit at least fifteen (15) days before the operation of the recreational water facility is scheduled to begin.

4.4. The Commissioner shall deny a permit if the information on the application form is incomplete, inaccurate, false, or misleading, or indicates that the applicable provisions of this rule cannot be met.

4.5. A person shall comply with the applicable provisions of this rule in order to receive and retain an operating permit.

4.6. Recreational water facilities that are in operation on the date this rule becomes effective, and that meet all applicable prior rules, are eligible for a permit to operate. Construction, modification, installation, or renovations proposed for a recreational water facility after the effective date of this rule shall comply with all applicable provisions of this rule.

4.7. Permits are not transferable and become invalid immediately upon a change of ownership, suspension or revocation.

4.8. In the event of a proposed or an actual change in ownership of a recreational water facility, an applicant shall submit an application for an operating permit to the Commissioner at least fifteen (15) days prior to the date of the proposed or actual change.

4.9. The Commissioner may suspend or revoke a permit if he or she finds that the recreational water facility is in violation of this rule.

4.10. The Commissioner shall not reinstate an operating permit until he or she determines by an inspection that the recreational water facility is in compliance with all applicable provisions of this rule.

4.11. The operator shall prominently display the operational permit in a conspicuous place at the recreational water facility.

4.12. A person whose application for an operating permit has been denied, or whose permit has been suspended or revoked, may submit a written petition to the Commissioner requesting a hearing on the matter, and the Commissioner shall grant a hearing on the matter within ten (10) days after he or she has received the petition.

§64-16-5. Inspections, Closure Orders.

5.1. The Commissioner shall inspect each recreational water facility not less than two (2) times per year.

5.2. The owner, operator, or person in charge of a recreational water facility shall provide the Commissioner immediate access to the premises for the purpose of inspection, and shall provide requested information for the inspection.

5.3. When the Commissioner inspects a facility and finds that the recreational water facility is not in compliance with any of the provisions of this rule, he or she shall provide the operator with a written inspection report noting the violations. The operator shall correct the violations within the time frame specified in the inspection report.

5.4. The Commissioner may order the immediate closure of a recreational water facility when he or she finds:

5.4.a. A condition at the recreational water facility that endangers the life, health, or safety of the patrons or employees;

5.4.b. Excessive turbidity as determined by a standard clarity sight disk; or

5.4.c. A disinfectant residual that is less than that permitted under the provisions in subdivisions 7.1.d. and 7.1.e. of this rule.

5.5. An issued closure order shall remain in effect until the Commissioner determines that necessary corrections have been made.

§64-16-6. Design, Construction.

6.1. A recreational water facility that is designed, constructed, or renovated after the effective date of this rule shall comply with the National Spa and Pool Institute ANSI/NSPI-1 2003 Standard for Public Swimming Pools, ANSI/NSPI-2 1999 Standard for Public Spas, ANSI/IAF-9 2005 Standard for Public Water Parks and ANSI/APSP-7 2006 National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spa, Hot Tubs, and Catch Basins. These standards are available through the internet at: <http://www.nspi.org/home>.

§64-16-7. Water Quality.

7.1. Disinfection.

7.1.a. A recreational water facility, with the exception of bathing beaches, shall be disinfected continuously by the use of chemical feed equipment.

7.1.b. A recreational water facility may not use hand batch feeding of disinfecting chemicals except when performing super-chlorination or shocking.

7.1.c. Disinfecting materials and methods shall:

7.1.c.1. Be used only with the approval of the Commissioner.

7.1.c.2. Not create an undue safety hazard;

7.1.c.3. Be handled, stored, and used according to directions;

7.1.c.4. Be compatible for use with other chemicals commonly used in pool water treatment, or be clearly identified as having a use limitation;

7.1.c.5. Not impart toxic properties to the water when used according to directions; and

7.1.c.6. Provide an effective residual which can be easily and accurately measured by a field test procedure.

7.1.d. When chlorine is used as the disinfectant, the recreational water facility shall maintain a free chlorine residual of at least one (1) milligram per liter (mg/l) to a maximum of five (5) milligrams per liter (mg/l) throughout.

7.1.e. When bromine is used as the disinfectant, the recreational water facility shall maintain a residual of at least two (2) milligrams per liter (mg/l) to a maximum of five (5) milligrams per liter (mg/l) throughout.

7.1.f. Disinfecting materials or methods other than chlorine and bromine:

7.1.f.1. Shall be approved by the Commissioner prior to being used;

7.1.f.2. Shall be registered as a bactericidal agent by the U.S. Environmental Protection Agency; and

7.1.f.3. May be used if they provide a satisfactory residual which is easily measured and is as effective under conditions of use as the chlorine concentrations required in this rule.

7.1.g. When cyanuric acid is used as a stabilizer, it must be maintained at a level

between ten (10) and one hundred (100) milligrams per liter (mg/l).

7.2. Chemical Requirements.

7.2.a. The water in a recreational water facility, except for bathing beaches, shall conform to the chemical limits specified in Division of Health rule, "Public Water Systems," 64CSR3.

7.2.b. Bathing beach water shall conform to the standards prescribed for Category A in Appendix E of the Environmental Quality Board's rule, "Requirements Governing Water Quality Standards," 46CSR1.

7.3. Bacteriological Requirements.

7.3.a. The Commissioner shall collect a series of water samples for bacteriological analysis from each recreational water facility. A series shall consist of one (1) water sample each from the deep end, the shallow end, and the wading pool, if applicable, or two (2) water samples from different locations of a bathing beach.

7.3.b. Within thirty (30) days of the opening of seasonal recreational water facilities, the Commissioner shall collect not less than one (1) series of samples, and during the same season of operation, he or she shall collect not less than one (1) additional series of samples. For indoor recreational water facilities, the Commissioner shall collect not less than one (1) complete series of samples every six (6) months.

7.3.c. A laboratory approved by the Commissioner shall examine water samples after the residual disinfectant in the samples is deactivated.

7.3.d. The Commissioner shall collect water samples while the recreational water facility is in use.

7.3.e. If laboratory results of a water sample from a recreational water facility, except for bathing beaches, indicate the presence of coliform organisms:

7.3.e.1. The operator shall super-chlorinate the recreational water facility, and the water shall be retested immediately; and

7.3.e.2. The operator shall investigate the cause of the unsatisfactory sample and initiate, or cause to be initiated, corrective action.

7.3.f. If laboratory results of a water sample from a bathing beach indicate that e. coli exceeds two hundred thirty-five (235) per one hundred (100) milliliters in any single sample:

7.3.f.1. The bathing beach shall cease operation and the water shall be retested immediately;

7.3.f.2. The operator shall investigate the cause of the unsatisfactory sample and initiate, or cause to be initiated, corrective action.

7.4. pH and Alkalinity Control.

7.4.a. A recreational water facility, except for bathing beaches, shall maintain the pH of the water in an alkaline condition of not less than seven point two (7.2) nor greater than seven point eight (7.8) at any time the facility is in use.

7.4.b. A recreational water facility that is equipped with gaseous chlorination feeders shall provide a mechanical chemical feeder to continuously control the pH. Hand batch feeding of chemicals to control pH is prohibited.

7.4.c. A recreational water facility, except for bathing beaches, shall maintain the total alkalinity at a level between sixty (60) and one hundred eighty (180) milligrams per liter (mg/l) as calcium carbonate.

7.5. Water Clarity.

7.5.a. A recreational water facility, except for bathing beaches, shall maintain sufficient water clarity to allow the main drain or a six (6) inch black disk on the bottom of the deepest part of the recreational water facility to be readily visible when viewed from the

recreational water facility deck.

7.5.b. The operator shall use Table 64-15 C at the end of this rule as a guideline to assist him or her in maintaining optimum water quality at the recreational water facility.

§64-16-8. Control Tests and Operation Records.

8.1. Except for bathing beaches, recreational water facilities shall have available at all times approved testing equipment for determining pH, free chlorine, total chlorine, total alkalinity, and other tests required by the Commissioner.

8.2. Equipment used for testing free or total chlorine shall use the DPD (N, N-Diethyl-P-Phenylenediamine) method. Test strips or Oxidation Reduction Potential (ORP) may be used as a measuring parameter, but shall not be used when registering required readings on daily operational reports required by the Commissioner.

8.3. The operator shall maintain for a minimum of one (1) year written results of required tests, attendance data, number of hours of equipment operation, and any other information required by the Commissioner.

8.4. The operator shall submit on forms obtained from the Commissioner a weekly summary of operation and tests to the Commissioner.

8.5. Except for bathing beaches, the operator shall conduct tests to determine the pH and free chlorine residual of the water not less than twice daily, and record the results on the weekly summary required under subsection 8.4 of this section.

8.6. The operator shall properly maintain test kits in good condition. All test reagents must be replaced at the beginning of a new testing season for a seasonal facility, as required by the test kit manufacturer, and whenever any reagent is found to be defective, but in no case may a reagent be used over one (1) year from the date of purchase. Only those reagents

manufactured for the test kit in use shall be used.

8.7. Except for bathing beaches, when a control test indicates that the free chlorine residual is less than one (1) milligram per liter (mg/l), the recreational water facility shall cease operations until the free chlorine level is one (1) milligram per liter (mg/l) or above.

8.8. Except for bathing beaches, when a control test indicates that the free bromine residual is less than two (2) milligrams per liter (mg/l), the recreational water facility shall cease operations until the free bromine level is two (2) milligrams per liter (mg/l) or above.

§64-16-9. Supervision of Patrons.

9.1. Except for bathing beaches, a qualified water facility operator shall be available for consultation at all times the recreational water facility is open for use.

9.2. The operator shall have the authority to:

9.2.a. Exclude from the premises any patron who does not follow the safety and sanitation rules; and

9.2.b. Evacuate the facility as needed to protect the health and safety of the employees.

9.3. The operator shall supervise the patrons and enforce the following rules:

9.3.a. An individual shall not urinate, defecate, spit, spout water, or blow his or her nose in the water.

9.3.b. Patrons who have open sores, or an infectious disease that is transmissible by water may not use the recreational water facility.

9.3.c. Patrons and the apparel they wear in the water shall be visibly clean.

9.3.d. Children who are not toilet trained shall wear tight fitting plastic underwear that will prevent leakage, or use other appropriate apparel approved by the Commissioner.

9.3.e. Patrons under the influence of drugs or alcohol or exhibiting disruptive behavior are not permitted in the recreational water facility.

9.3.f. Except for service animals, animals shall not be allowed in the recreational water facility.

9.3.g. Food, drink, gum, and tobacco may be used only in designated and controlled areas.

9.3.h. Glass containers or other materials that might create hazardous conditions or interfere with efficient operation of the facility are not allowed.

9.3.i. Diving from the deck shall be permitted only in designated areas where the water is more than five (5) feet in depth.

9.4. The recreational water facility shall prominently post the rules applicable to patron behavior so as to be readily visible to the patrons.

§64-16-10. Safety Requirements.

10.1. A recreational water facility shall have a Shepherd's crook and reach pole available for use.

10.2. At recreational water facilities with lifeguards, the facility shall provide one (1) rescue tube for each lifeguard on duty that is readily accessible for emergency use.

10.3. At recreational water facilities without lifeguards, the facility shall provide a minimum of one (1) unit of life saving equipment available for patron use as approved by the Commissioner.

10.4. A recreational water facility shall maintain all equipment in good repair.

10.5. A recreational water facility shall be equipped with a readily available, fully stocked first aid kit according to the provisions in subsection 2.5 of this rule.

10.6. Operators shall not permit employees who have open sores or an infectious disease that is transmissible by water in the water or to serve as lifeguards.

10.7. Each lifeguard on duty shall have immediate access to personal protective equipment including, but not limited to, a resuscitation mask and latex or other impermeable gloves.

10.8. Except for spas, hot tubs, and whirlpools, if a recreational water facility requires an admission fee such as a gate receipt, annual pass, or membership dues, or is used by an organized camp or a child care center, the facility shall provide certified lifeguards on duty at all times the facility is open according to the following:

10.8.a. The number of lifeguards required shall be determined by the size of the recreational water facility and the number of patrons as described in Table 64-16 B at the end of this rule. The operator may request in writing from the Commissioner a variance in the number of lifeguards required.

10.8.b. A lifeguard shall have a current life guarding certificate from the American Red Cross, Ellis and Associates, the YMCA, or an equivalent organization approved by the Commissioner.

10.8.c. A lifeguard shall have a current cardiopulmonary resuscitation (CPR) certificate from the American Red Cross, the American Heart Association, the National Safety Council, or an equivalent organization approved by the Commissioner.

10.8.d. A lifeguard shall have a current first aid certificate, equal to or better than the American Red Cross Standard First Aid or National Safety Council First Aid Certification or an equivalent organization approved by the Commissioner.

10.8.e. Parents or accompanying adults shall not leave children unattended in a wading pool.

10.8.f. The employment of lifeguards is recommended, but not mandatory at:

10.8.f.1. Mobile home parks, travel trailer camps, hotels, motels, apartment complexes, condominiums or private residential communities that have recreational water facilities that are available for use only to the residents; or

10.8.f.2. Mobile home parks, travel trailer camps, hotels, motels, apartment complexes, condominiums or private residential communities that have recreational water facilities with a depth of five (5) feet or less.

10.8.g. If the facility employs no lifeguards, the management shall post a sign in a prominent location near the recreational water facility stating "Warning: No lifeguard on duty – All persons under the age of fourteen (14) must be accompanied by an adult".

10.9. Each recreational water facility shall have a blood-borne pathogen plan based on the Occupational Safety and Health Administration's standards.

10.10. Telephone service shall be available within one hundred (100) feet of the recreational water facility, and emergency phone numbers for rescue agencies shall be posted.

10.11. Each recreational water facility shall have a written emergency action plan that includes all life-threatening emergencies, non-life-threatening emergencies, chemical spills, and environmental emergencies.

10.12. The recreational water facility shall take appropriate measures to avoid entrapment of patrons on drains.

10.12.a. Pools with single suction outlets must meet National Spa and Pool Institute ANSI/NSPI-1 2003 Standard for Public Swimming Pools, public spa suction outlets must meet ANSI/NSPI-2 1999 Standard for Public Spas, and Public Water Park suction outlets must meet ANSI/IAF-9 2005 Standard for Public Water Parks and ANSI/APSP-7 2006 National Standards for Suction Entrapment

Avoidance in Swimming Pools, Wading Pools, Spa, Hot Tubs, and Catch Basins. These standards are available through the internet at: <http://www.nspi.org/home>.

10.12.b. Spas constructed, installed, or modified after July 1, 2002 shall provide an emergency shut-off switch and an audible alarm placed within twenty (20) feet of the spa.

10.13. Recreational water facilities shall comply with applicable provisions of the State Fire Commission's rule, "Fire Code," 87CSR1.

10.14. The patron load shall be determined by the National Spa and Pool Institute ANSI/NSPI-1 2003 Standard for Public Swimming Pools or the most current design standard.

§64-16-11. Routine Maintenance and Operation.

11.1. The following requirement applies to all recreational water facilities:

11.1.a. A recreational water facility shall keep deck areas, sidewalks and other areas around the recreational water facility and bath house clean.

11.2. The following requirements apply to all recreational water facilities except bathing beaches:

11.2.a. The operator shall remove visible debris from the bottom of the recreational water facility every twelve (12) hours or as often as necessary to maintain visibility and maximize safety.

11.2.b. The operator shall maintain the water surface of a recreational water facility free of visible scum and floating matter.

11.2.c. The operator shall drain the recreational water facility as necessary for inspection, cleaning, or repair.

11.2.d. The operator shall ensure that the recreational water facility operates the water treatment equipment twenty-four (24) hours per

day.

11.3. A recreational water facility shall ensure that ventilation for indoor recreational water facilities meets ANSI/ASHRAE Standard 62.1-2004 Ventilation for Acceptable Indoor Air Quality or the most current design standard. This standard is available through the internet at: <http://www.ashrae.org>.

§64-16-12. Bathhouses, Concessions, and Other Appurtenant Facilities.

12.1. A recreational water facility shall provide toilets, lavatories, showers and drinking fountains as required by the State Fire Commission rule, "State Building Code," 87CSR4.

12.2. A recreational water facility shall keep bathhouses, clothing storage facilities, toilet facilities, shower facilities and other appurtenant facilities in good repair and in a clean, sanitary condition.

12.3. A recreational water facility shall ensure that a supply of toilet tissue is available at each toilet.

12.4. A recreational water facility shall provide hand cleanser and an approved hand drying device at each lavatory or group of adjacent lavatories.

12.5. A recreational water facility shall ensure that hot and cold running water is supplied from mixing faucets for showers and lavatories, or that tempered water is provided in lieu of hot and cold running water supplied from mixing faucets.

12.6. A recreational water facility that provides a concession stand shall operate the concession stand in accordance with Division of Health rule, "Food Establishments," 64CSR17.

12.7. A recreational water facility shall provide a placard in the filter room that lists the water volume and gallons per minute of water needed for the pool's turnover rate.

§64-16-13. Compliance.

13.1. Except for bathing beaches, if any of the following events described in subdivisions 13.1.a through 13.1.i of this section occur while a recreational water facility is in use, the operator shall close the recreational water facility and take the corrective action specified in Table 64-16 A at the end of this rule before reopening the facility:

13.1.a. The free chlorine residual of water is less than one (1) milligram per liter (mg/l).

13.1.b. The pH of water is greater than seven point eight (7.8).

13.1.c. The pH of water is less than seven point two (7.2).

13.1.d. An inadequate number of lifeguards or lifesaving equipment is provided as required under this rule.

13.1.e. An accident occurs that causes a lifeguard to leave his or her station or results in the discharge of body fluids into the water.

13.1.f. The free bromine residual is less than two (2) milligrams per liter (mg/l).

13.1.g. A failure of the circulation pump or disinfectant feed equipment occurs.

13.1.h. A fecal accident occurs or blood or vomitus is released into the water.

13.2. Except for bathing beaches, the operator shall close only the affected area of the recreational water facility if the water clarity is not in compliance with subsection 7.5 of this rule.

13.3. At a bathing beach, if an inadequate number of lifeguards or lifesaving equipment is provided or an accident occurs that causes a lifeguard to leave his or her station, the operator shall close the bathing beach immediately and not reopen the facility until it is in compliance.

13.4. The operator shall maintain a written record of each event, including the date the

event occurred, a description of the event, and the corrective action taken.

§64-16-14. Penalties.

14.1. Any person who violates any provision of this rule or orders issued pursuant to this rule is subject to a fine of not more than five hundred dollars (\$500), as provided under W. Va. Code §16-1-18.

§64-16-15. Administrative Due Process.

15.1. Those persons adversely affected by the enforcement of this rule desiring a contested case hearing to determine any rights, duties, interests or privileges shall do so in a manner prescribed in the Division of Health's rule, "Rules of Procedure for Contested Case Hearings and Declaratory Rulings, 64CSR1."

TABLE 64-16 A - CLOSURE REQUIREMENTS

CLOSURE EVENT	CORRECTIVE ACTION REQUIRED
A. Free Chlorine = less than 1.0 ppm	Close the facility. Determine the cause. Make repairs or corrections.
B. pH of water = greater than 7.8	Close the facility. Determine the cause. Make repairs or corrections.
C. pH of water = less than 7.2	Close the facility. Determine the cause. Make repairs or corrections.
D. Inadequate lifeguards or lifesaving equipment	Close the facility until the required number of lifeguards and lifesaving equipment are provided.
E. Accident Resulting In: Lifeguard leaving station OR Body fluids discharged into water	Close facility until lifeguard returns to station. Follow fecal accident cleanup procedures outlined below in item I if blood or feces are discharged into the water.
F. Water Clarity Unsatisfactory (Main drain or 6 inch black disk in the deepest water on the bottom of a pool or spa not visible from the adjacent deck)	Close the affected area until the main drain or a six (6) inch black disk in the deepest water on the bottom of a pool or spa is visible from the adjacent deck. Determine cause. Make repairs or corrections.
G. Free bromine = less than 2.0 ppm	Close the facility. Determine the cause. Make repairs or corrections.
H. Equipment Failure - Main pump, disinfectant feed equipment, or main drain covers.	Close the facility immediately upon main pump failure. Close the facility when disinfectant feed equipment fails and free chlorine falls below 1.0 ppm or free bromine falls below 2.0 ppm. Repair equipment. Test and balance chemical parameters prior to re-opening the recreational water facility. Close facility if main drain covers are missing, loose, or broken. Replace, secure, or repair as required.

TABLE 64-16 A - CLOSURE REQUIREMENTS

CLOSURE EVENT	CORRECTIVE ACTION REQUIRED
<p>I. Fecal Accident or Release of Blood or Vomitus into Water *</p> <p>Follow Cleanup Procedure A if: A formed stool, visible blood, or vomit is discharged into the water.</p> <p>Follow Cleanup Procedure B if: A loose stool (e.g. diarrheal fecal accident) is discharged into the water.</p>	<p>Evacuate patrons from all water contaminated with fecal material. Do not let anyone back into the water until all decontamination procedures are completed.</p> <p>Remove as much fecal material as possible using a net or scoop and dispose of in a sanitary manner. Clean and disinfect the net or scoop (e.g. after cleaning, leave the net or scoop immersed in the pool during disinfection).</p> <p>VACUUMING STOOL AND VOMITUS FROM THE WATER IS NOT RECOMMENDED.</p> <p><u>Proceed to procedure A or B as required.</u></p> <p><u>Cleanup Procedure A</u></p> <ol style="list-style-type: none"> 1. Raise free chlorine to 2 ppm, adjust pH to between 7.2-7.5, and maintain for at least 25 minutes before letting anyone back into the water. 2. Ensure that the filtration system is operating during this entire process. <p><u>Cleanup Procedure B</u></p> <ol style="list-style-type: none"> 1. Raise chlorine to one of the following concentrations, maintain for the corresponding time, and adjust pH to between 7.2-7.5: <ol style="list-style-type: none"> a. 5ppm free chlorine for 32 hours; b. 10 ppm free chlorine for 16 hours; c. 15 ppm free chlorine for 12 hours; d. 20 ppm free chlorine for 8 hours. 2. Ensure that the filtration system is operating during the entire process. 3. Backwash the filter thoroughly or clean the filter media after maintaining the required free chlorine concentration and time. 4. Adjust free chlorine concentration to less than 5 ppm before letting anyone back into water. <p><u>Cleanup Procedures A & B</u></p> <p>Establish a fecal accident log. Document each fecal accident by recording date and time of event, note whether formed stool or diarrhea, and note the chlorine levels at the time or observation of the event. Before allowing anyone back into the water, record the pH, the procedures followed in response to the fecal accident (including the process used to increase chlorine levels if necessary), and the contact time.</p> <p>* Current CDC guidelines</p>

TABLE 64-16 B - LIFEGUARD REQUIREMENTS

<u>NUMBER OF PATRONS IN WATER</u>	<u>WATER SURFACE AREA IN SQUARE FEET</u>					
	<u>UP TO 2000</u>	<u>2001-4000</u>	<u>4001-6000</u>	<u>6001-8000</u>	<u>8001-10,000</u>	<u>10,000 +</u>
<u>1-30</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>3</u>
<u>31-60</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>4</u>
<u>61-90</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>4</u>
<u>91-120</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>4</u>
<u>121-150</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>
<u>151+</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>5</u>

TABLE 64-16 C - WATER QUALITY GUIDELINES

TABLE 64-16 C - WATER QUALITY GUIDELINES				
A. DISINFECTANT LEVELS	MINIMUM	IDEAL	MAXIMUM	COMMENTS
1. FREE CHLORINE MG/L (PPM)	1.0	2.0-3.0	5.0	CHLORINE SHOULD BE MAINTAINED AT THIS LEVEL CONTINUOUSLY. SUPER-CHLORINATE REGULARLY. SEE B-1 BELOW.
2. COMBINED CHLORINE MG/L (PPM)	NONE	NONE	0.5	ELIMINATED BY SUPER-CHLORINATION. IF TOO HIGH, YOU MAY HAVE: SHARP CHLORINOUS ODORS EYE BURN ALGAE GROWTH BACTERIA GROWTH
3. BROMINE MG/L (PPM)	2.0	2.0-3.0	5.0	CONSULT HEALTH DEPT. OFFICIALS BEFORE USE.
B. CHEMICAL VALUES	MINIMUM	IDEAL	MAXIMUM	COMMENTS
1. PH	7.2	7.5	7.8	<p>TOO HIGH LOW CHLORINE EFFICIENCY INCREASED CHEMICAL DEMAND EYE DISCOMFORT SCALE FORMATION CLOUDY WATER</p> <p>TOO LOW RAPID DISSIPATION OF CHLORINE PLASTER/CONCRETE ETCHING EYE DISCOMFORT CORROSION OF METALS</p>
2. TOTAL ALKALINITY AS CaCO_3 MG/L (PPM)	60	80-100 OR 120	180	<p>TOO HIGH INCREASED SCALING POTENTIAL PH MAINTAINED TOO HIGH CLOUDY WATER</p> <p>TOO LOW CORROSION TENDENCY PH BOUNCE</p>
3. UNDISSOLVED SOLIDS MG/L (PPM) (TURBIDITY)	NONE	NONE	NONE	<p>TOO HIGH CHLORINE LEVEL MAY BE TOO LOW FILTRATION SYSTEM MAY BE INOPERATIVE MAY LEAD TO DROWNING DUE TO DECREASED VISIBILITY</p>
4. DISSOLVED SOLIDS MG/L (PPM)	300	...	2000	<p>TOO HIGH CHLORINE MAY BE LESS EFFECTIVE ADD FRESH WATER TO REDUCE SOLIDS CHEMICAL BALANCE DIFFICULT TO MAINTAIN SALTY TASTE DULL WATER SCALING MAY OCCUR</p> <p>TOO LOW TOTAL ALKALINITY MAY BE TOO LOW AGGRESSIVE WATER</p>

B. CHEMICAL VALUES (CONT'D)		MINIMUM	IDEAL	MAXIMUM	COMMENTS
5.	HARDNESS, AS CaCO_3 MG/L	50	125	800	<p>TOO HIGH SCALING MAY OCCUR SHORT FILTER RUNS</p> <p>TOO LOW PLASTER OR CONCRETE ETCHING</p> <p>WATER HAS BAD "FEEL" CORROSION MAY OCCUR</p>
6.	COPPER MG/L (PPM)	NONE	NONE	0.3	<p>TOO HIGH STAINING MAY OCCUR CHLORINE DISSIPATES RAPIDLY MAY INDICATE PH TOO LOW</p> <p>WATER MAY DISCOLOR FILTER MAY PLUG CORROSION MAY OCCUR</p>
7.	IRON MG/L (PPM)	NONE	NONE	0.2	<p>TOO HIGH STAINING MAY OCCUR CHLORINE DISSIPATES RAPIDLY</p> <p>WASTE MAY DISCOLOR FILTER MAY PLUG</p>
8.	MANGANESE MG/L (PPM)	NONE	NONE	0.05	<p>TOO HIGH STAINING MAY OCCUR</p>
C. BIOLOGICAL VALUES		MINIMUM	IDEAL	MAXIMUM	COMMENTS
1.	ALGAE	NONE	NONE	NONE	<p>SUPER-CHLORINATE OR SHOCK TREAT FACILITY SUPPLEMENT WITH BRUSHING AND VACUUMING MAINTAIN ADEQUATE FREE CHLORINE RESIDUAL USE APPROVED ALGAECIDE ACCORDING TO LABEL DIRECTION</p>
2.	BACTERIA	NONE	NONE	REFER TO 64CSR3	<p>IF BACTERIA COUNT EXCEEDS HEALTH DEPT. REQUIREMENTS: SUPER-CHLORINATE RECREATIONAL WATER FACILITY FOLLOW PROPER MAINTENANCE PROCEDURES MAINTAIN PROPER FREE CHLORINE RESIDUAL</p>
D. STABILIZER		MINIMUM	IDEAL	MAXIMUM	COMMENTS
1.	CYANURIC ACID MG/L (PPM)	10	30-50	100	<p>TOO HIGH MAY EXCEED HEALTH DEPARTMENT REGULATIONS</p> <p>TOO LOW CHLORINE RESIDUAL RAPIDLY DESTROYED BY SUNLIGHT</p> <p>NOTE STABILIZER IS NOT NEEDED FOR INDOOR FACILITIES AND SHOULD NOT BE USED IN HOT WATER FACILITIES. CYANURIC ACID MAY TITRATE AS ALKALINITY.</p>
E. ALGAECIDES		MINIMUM	IDEAL	MAXIMUM	COMMENTS
1.	QUATERNARY MG/L (PPM)	NOT PERMITTED IN PUBLIC RECREATIONAL WATER FACILITIES.
E. ALGAECIDES (CONT'D)		MINIMUM	IDEAL	MAXIMUM	COMMENTS
2.	COPPER BASED (NONCHELATED) MG/L (PPM)	0.1	0.2	0.3	<p>INEFFECTIVE AGAINST SOME ALGAE. CONSULT HEALTH DEPT. OFFICIALS BEFORE USING. MAY CONTRIBUTE TO STAINING.</p>
3.	COPPER BASED (CHELATED) MG/L (PPM)	0.1	1.0	3.0	<p>INEFFECTIVE AGAINST SOME ALGAE. CONSULT HEALTH DEPT. OFFICIALS BEFORE USING. MAY CONTRIBUTE TO STAINING.</p>
4.	SILVER BASED MG/L (PPM)	0.5	1.5	3.0	<p>PRECIPITATES WITH CYANURIC ACID. INEFFECTIVE AGAINST SOME ALGAE. CONSULT HEALTH DEPT. OFFICIALS BEFORE USE.</p>
F. REMEDIAL PRACTICES		MINIMUM	IDEAL	MAXIMUM	COMMENTS
1.	SUPER-CHLORINATION	WHEN COMBINED CHLORINE IS 0.2 MG/L (PPM) OR MORE			* AS NEEDED
2.	REQUIRED SUPER-CHLORINATION /SHOCK CHLORINE	10*			<p>*10 TIMES COMBINED CHLORINE READING. MUST BE DONE WHEN THE FACILITY IS NOT IN USE. MAY REOPEN WHEN FREE CHLORINE IS BELOW 5.0 PPM.</p>

E. ALGAEICIDES (CONT'D)		MINIMUM	IDEAL	MAXIMUM	COMMENTS
3.	FLOCCING	NOT RECOMMENDED			CONSULT HEALTH DEPT. OFFICIALS BEFORE USING.
4.	WATER REPLACEMENT - HOT WATER FACILITY	CHANGE WATER AND CLEAN MONTHLY AS A MINIMUM, MORE FREQUENTLY WHEN HEAVY USE AND CHEMICAL TREATMENT DIFFICULTIES ARE EXPERIENCED.
G. TEMPERATURE		MINIMUM	IDEAL	MAXIMUM	COMMENTS
1.	WATER TEMPERATURE - HOT WATER FACILITY	PATRON PREFERENCE	...	104EF	TOO HIGH EXCESSIVE FUEL REQUIREMENT INCREASED CHLORINE USE INCREASED SCALING POTENTIAL PATRON DISCOMFORT HEALTH THREAT TO THOSE WITH HIGH BLOOD PRESSURE TOO LOW - PATRON DISCOMFORT
2.	WATER TEMP. - ARTIFICIALLY HEATED	75 EF	...	90 EF	
3.	AIR TEMPERATURE INDOOR FACILITIES	WATER TEMP. MINUS 2EF	...	WATER TEMP. PLUS 8 EF	EXCLUDING HOT WATER FACILITIES.
H. WATER CLARITY		MINIMUM	IDEAL	MAXIMUM	COMMENTS
1.	TURBIDITY	MUST BE ABLE TO SEE MAIN DRAIN OR SIX INCH BLACK DISK ON BOTTOM OF DEEPEST PART FROM THE SIDEWALL.			TOO HIGH CHLORINE LEVEL MAY BE TOO LOW FILTRATION LEVEL MAY BE INOPERATIVE MAY LEAD TO DROWNING DUE TO DECREASED VISIBILITY