

MECKLENBURG COUNTY HEALTH DEPARTMENT

RULES GOVERNING RECREATIONAL WHITEWATER SYSTEMS

Be it ordained by the Mecklenburg County Board of Commissioners (while exercising the powers of a Board of Health, which powers it has assumed and conferred upon itself by action pursuant to G.S. 153A-77) that the following regulations governing the permitting, operation, maintenance, and abandonment of Recreational Whitewater Systems in Mecklenburg County, for the protection of the public health, are hereby adopted pursuant to Chapter 130A-39(a) of the General Statutes of North Carolina. These regulations shall apply throughout Mecklenburg County, North Carolina, including, but not limited to all cities and towns, whether incorporated or unincorporated.

SECTION 1: PURPOSE

The following rules are enacted for the purpose of creating an environment that is not hospitable to potentially pathogenic microorganisms to protect the health and safety of members of the public utilizing a Recreational Whitewater System in Mecklenburg County. Recreational Whitewater Systems incorporate inherently dangerous activities that may present a risk to the public. These rules are also to set in place a framework for the collection of fees to offset the cost of performing inspections, and allow County Staff to investigate and abate Imminent Hazard and nuisance conditions created by improper operation of a Recreational Whitewater System.

SECTION 2: DEFINITIONS

The following definitions shall apply throughout this Rule:

- (a) “Board of Health” or “Board” means the Mecklenburg County Board of County Commissioners acting as a Board of Health pursuant to North Carolina General Statute 153A-77.
- (b) “Department” means the Mecklenburg County Health Department.
- (c) “Director” means the Health Director for Mecklenburg County. The term also means the authorized representative of the Director.
- (d) “Imminent Hazard” means a situation that is likely to cause an immediate threat to human life, an immediate threat of serious physical injury, an immediate threat of serious adverse health effects, or a serious risk of irreparable damage to the environment if no immediate action is taken.
- (e) “Recreational Whitewater System” or “System” means an artificial recirculated body of water primarily used for interactive outdoor activities including but not limited to whitewater rafting, kayaking, and paddle boarding where recreational swimming does not occur, and where the System is not regulated by the NC Department of Labor as an amusement ride or by the NC Department of Health and Human Services as a public swimming pool.
- (f) “Permit” means a paper, sign, placard, certificate, or other official document indicating permission has been granted pursuant to these Rules for the operation of a Recreational Whitewater System for a specified period of time.
- (g) “Person” means an individual, firm, partnership, association, public or private institution, municipality, political subdivision of the State of North Carolina, governmental agency, public or private corporation, or any combination thereof.
- (h) “Public Nuisance” means a situation which creates a continuing and unreasonable

interference with the use and enjoyment of property and may cause injury to another if not corrected.

(i) “Recreational System Operator” or “Operator” means a person or persons who is responsible for the operation, maintenance, system safety and record keeping. The Recreational System Operator shall be responsible for operating the System and shall be trained on all operating equipment, disease and injury prevention, water chemistry and regulatory requirements. The Recreational System Operator shall be required to receive training and certification from the National Swimming Pool Foundation or other organization that provides training on the above listed subjects.

(j) “Wastewater” means the liquid waste generated by water-using fixtures and appliances. The term includes water generated during backwash, drainage, and maintenance activities.

Section 3: WATER QUALITY

(a) The chemical quality of the water in the System must be maintained in an alkaline condition at all times with the pH between 7.0 and 7.8.

(b) Disinfection must be provided in accordance with manufacturers' instructions by a chemical or other process that meets the criteria listed as follows:

- (a) Chlorine is an approved method of disinfection.
- (b) Other methods of disinfection must be approved by the Director and must be:
 - i. registered with the U.S. Environmental Protection Agency for pool water or potable water;
 - ii. provide a residual effect in the water that can be measured by portable field test equipment;
 - iii. must not impart any immediate or cumulative adverse physiological effects to the public when used as directed;
 - iv. must not produce any safety hazard when stored or used as directed;
 - v. must not damage the System components or equipment;
 - vi. must demonstrate a substantial kill of potentially pathogenic microorganisms (*Naegleria fowleri*) at least equivalent to free chlorine at a level of 0.5 part per million in the same body of water when a secondary disinfection method such as ozone or ultraviolet light is active; and
 - vii. must demonstrate reduction of total coliform and fecal coliform to a level at least equivalent to free chlorine at a level of 0.5 part per million in the same body of water when a secondary disinfection method such as ozone or ultraviolet light is active.

(c) When chlorine is used as the disinfectant, a free chlorine residual of at least 0.5 parts per million (ppm) must be maintained and a secondary disinfection method such as ozone or ultraviolet light must be active throughout the Recreational Whitewater System whenever it is open or in use. Recreational Whitewater Systems that use chlorine as the disinfectant may use a stabilizer. The stabilizer must be used per the manufacturer's instructions and have no adverse impact to the members of the public using the System when used as directed.

(d) When chlorine is used as the disinfectant, automatic chemical feeders must be used. Automatic chemical feeders must be manufactured and installed in accordance with NSF/ANSI Standard number 50.

(e) The use of chlorine in its elemental (gaseous) form for disinfection of Systems is prohibited.

(f) The broadcasting of granular chlorine into the water is prohibited.

(g) When liquid chlorine is not being distributed to the System through an automatic chemical feeder in order to rapidly bring the free chlorine levels up to 0.5 ppm, a log must be kept including the date, time, location of chlorine addition, and active amounts of free and total chlorine. Rafters, kayakers and paddle boarders must not utilize the area where the liquid chlorine is being added until the free chlorine at the discharge point is less than 10 ppm.

(h) Test kits or equipment capable of measuring disinfectant level, pH, and total alkalinity must be maintained at the Recreational Whitewater System. Recreational Whitewater Systems using a stabilizer must have a test kit capable of measuring the chemical levels.

(i) The Recreational System Operator shall inspect the water system at least 2 times a day and maintain written records of the operating conditions of each of the established sampling points of the System. The inspection must be conducted prior to members of the public entering the System and 4-6 hours after members of the public have had access the System. Records must be maintained at the Recreational Whitewater System for a period of not less than 12 months. Records must include the following:

- (a) daily recording of the disinfectant residual throughout the Recreational Whitewater System;
- (b) daily recording of pH throughout the Recreational Whitewater System;
- (c) daily recording of water temperature; recording of activities pertaining to water maintenance including chemical additions and filter backwash cycles;
- (d) weekly recording of total alkalinity and stabilizer (if used) or equivalent levels; and
- (e) daily recording of the location of organic accumulation throughout the Recreational Whitewater System;
- (f) a record of the date, the volume and location of organic accumulations that are being removed and the method of removal.

(j) The Recreational System Operator shall submit to the Director plans and specifications required for the construction, alteration or remodeling of the water treatment system (disinfection and filtration) for the Recreational Whitewater System.

SECTION 4: RECREATIONAL WHITEWATER SYSTEM OPERATION PERMITS

(a) No Recreational Whitewater System shall be operated without having been issued a valid operating permit by the Mecklenburg County Health Department.

(b) A permit for the operation shall be valid for a period of up to 12 consecutive months beginning January 1. All permits shall expire on December 31.

(c) Whenever, upon inspection of the System, equipment, or operating methods of any System covered by this Rule, the Director finds conditions or practices exist which represent an imminent hazard, the Director shall notify the Recreational System Operator in writing or verbally followed by a written notice to immediately abate the Imminent Hazard. Upon receipt of such notice the Recreational System Operator shall immediately abate the Imminent Hazard, or shall cease operation of the System until the Imminent Hazard has been abated. The operation Permit shall be immediately suspended for failure to maintain minimum water quality or safety standards creating an

Imminent Hazard. The Recreational Whitewater System must remain closed until an inspection by the Director reveals the Imminent Hazard has been abated.

(d) Whenever, upon inspection of the facilities, equipment, or operating methods of any System covered by this Rule, the Director finds conditions or practices exist which represent a Public Nuisance, the Director shall notify the Operator in writing or verbally followed by a written notice to abate the Public Nuisance within a reasonable period of time, not to exceed 30 days. The Operator shall abate the Public Nuisance within the period of time allotted. If the Public Nuisance is not abated within the time allotted, the Recreational System Operator shall cease operation of the Recreational Whitewater System. The operation Permit shall be immediately suspended for failure to maintain minimum water quality or safety standards creating a Public Nuisance. Once closed, the System must remain closed until an inspection by the Director reveals the Public Nuisance has been abated.

SECTION 5: FEES

(a) A Permit fee, in an amount approved by the Board, must be submitted with each application for a Recreational Whitewater System Permit or the annual renewal of Recreational Whitewater System Permit.

(b) Application for renewal of a Recreational Whitewater System Permit must be completed during the month of December. Applications not received by the close of business on the last work day of December shall be assessed a late penalty in an amount approved by the Board. An application shall not be deemed to have been received until an application made available to the owner or his agent is reviewed, updated, signed, returned, and received by the Department along with the appropriate payment.

SECTION 6: APPEALS

(a) Any owner may appeal a decision made by the Director in the application of this Rule. Appeals shall be conducted in accordance with North Carolina General Statutes 130A-24(b) through (d).

(b) No person shall take any action prohibited by the Director until there is a final resolution of the grievance.

SECTION 7: INSPECTION AND REPORTS

(a) The Director shall make such inspections, surveys, and investigations, collect samples of water and other substances found on the premises of Recreational Whitewater System, and make or cause to be made such laboratory analyses as may be necessary to determine that every Recreational Whitewater System complies with the standards and requirements set forth in this Rule. The Director is authorized and empowered to enter upon and make inspections of the premises of any Recreational Whitewater System while it is in operation or in use and at any other reasonable time. The Operator must assist in any reasonable way with such inspections.

(b) It shall be the duty of every Recreational Whitewater System owner or Recreational System Operator to maintain and furnish the Director such records and information as may be required for ascertaining compliance with this Rule.

SECTION 8: CLOSURE/ABANDONMENT OF MANMADE RECIRCULATING WATER SYSTEM

(a) Recreational Whitewater Systems not open to members of the public must treat, alter or maintain the water, structure, or chamber so as to prevent the development of insanitary conditions.

(b) Recreational Whitewater Systems under construction or which are no longer being operated must be maintained in a manner so as to prevent the development of insanitary conditions, potential injury, or possible drowning.

SECTION 9: WASTEWATER DISPOSAL STANDARDS

(a) Wastewater from the Recreational Whitewater System, including backwash water and water resulting from periodic drainage of the Recreational Whitewater System, must acquire all necessary permits and be discharged according to the Permit. There must be no direct physical connection between the sewer system and any drain from the Recreational Whitewater System.

(b) Alternate equivalent methods of wastewater disposal may be approved by the Director. No method of wastewater disposal is permissible which would create an Imminent Hazard or Public Nuisance.

SECTION 10: PENALTIES AND REMEDIES

(a) Any person who violates any provision of this Rule shall be guilty of a misdemeanor in accordance with NCGS 14-4 and punished by a fine not to exceed five hundred dollars (\$500.00).

(b) The Director may bring a civil proceeding in the Mecklenburg County Superior Court to enforce the provisions of this Rule in accordance with Article 1 Part 2 of Chapter 130A of the General Statutes of the State of North Carolina.

SECTION 11: SEVERABILITY/CONFLICT

(a) If any provision or clause of this Rule shall be declared invalid, such declaration shall not invalidate any other provisions or clause of this Rule.

(b) If any provision contained in this Rule conflicts with any State rule governing the construction, remodeling, or operation of a Recreational Whitewater System, the more stringent rule, as determined by the Director, shall apply.

SECTION 12: EFFECTIVE DATE

This Rule shall be in full force and effective from and after January 1, 2017