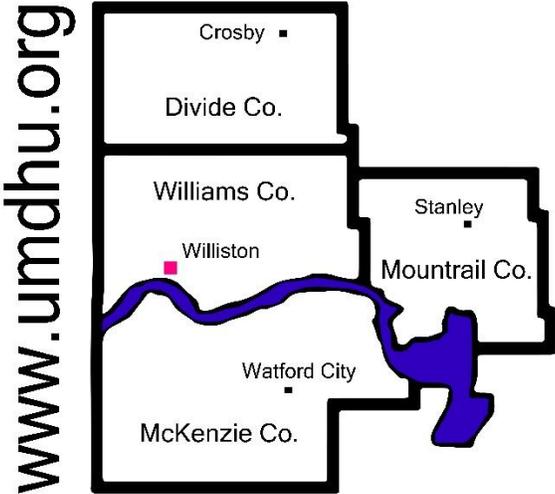


# SWIMMING POOL/SPA RULES AND REGULATIONS

UPPER MISSOURI DISTRICT HEALTH UNIT



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## Requirements for Aquatic Facilities

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### Section I Purpose

The purpose of this regulation is to protect the health, safety, and welfare of the public and environment in North Dakota through the establishment of minimum requirements for the regulation of aquatic facilities with the intent to protect ground and surface water quality and prevent recreational water illness outbreaks. The improper design, operation, and maintenance of aquatic facilities can adversely affect public health and safety. Proper aquatic facility operation protects against the spread of recreational water illness, provides chemical safety, and safety from physical injury within the aquatic facility.

### Section II Authority

This regulation is adopted in accordance with the authority granted in North Dakota Century Code Chapter 23-35-08.

### **Section III Scope and Jurisdiction**

This regulation regulates the design, installation, operation, maintenance, and management of aquatic facilities within the applicable jurisdiction. This regulation shall apply in Divide, McKenzie, Mountrail and Williams counties.

### **Section IV Minimum Standards**

The requirements and standards adopted by this regulation are intended to be minimum standards for the design, installation, operation, maintenance, and management of aquatic facilities. Nothing contained herein shall be construed to prevent the adopting authority from requiring compliance with greater requirements than those contained herein where such requirements are necessary to maintain safe and sanitary conditions.

### **Section V Definitions**

As used in this regulation, the following words, and terms, unless the context clearly requires otherwise, shall have the following meanings:

**“Aquatic Facility”** means a physical place that contains one or more aquatic venues and support infrastructure. This includes any aquatic facility usually open to any member of the public. (May be referred to as “Public/Semi-Public Facility”) This includes but is not limited to municipal, apartment, lodging facilities, and recreational facilities.

**“Aquatic Feature”** means an individual component within an aquatic venue. Examples include slides, structures designed to be climbed or walked across, and structures that create falling or shooting water.

**"Aquatic Venue"** means an artificially constructed structure or modified natural structure where the general public is exposed to water intended for recreational or therapeutic purposes and where the primary intended use is not watering livestock, irrigation, water storage, fishing, or habitat for aquatic life. Such structures do not necessarily contain standing water, so water exposure may occur via contact, ingestion, or aerosolization. Examples include swimming pools, wave pools, lazy rivers, surf pools, spas (including spa pools and hot tubs), therapy pools, waterslide landing pools, spray pads, and other interactive water venues.

1. **"Increased Risk Aquatic Venue"** means an aquatic venue which, due to its intrinsic characteristics and intended users, has a greater likelihood of affecting the health of the bathers of that venue by being at increased risk for microbial contamination (e.g., by children less than 5 years old) or being used by people that may be more susceptible to infection (e.g., therapy patients with open wounds). Examples of increased-risk aquatic venues include spray pads, wading pools, and other aquatic venues designed for children less than 5 years old and therapy pools.
2. **“Lazy River”** means a channeled flow of water of near-constant depth in which the water is moved by pumps or other means of propulsion to provide a river-like flow that transports bathers over a defined path. A lazy river may include play features and devices. A lazy river may also be referred to as a tubing pool, leisure river, leisure pool, or a current channel.

3. **“Spa”** means a structure intended for either warm or cold water where prolonged exposure is not intended. Spa structures are intended to be used for bathing or other recreational uses and are not usually drained and refilled after each use. It may include, but is not limited to, hydrotherapy, air induction bubbles, and recirculation.
4. **“Special Use Aquatic Venue”** means aquatic venues that do not meet the intended use and design features of any other aquatic venue or pool listed/identified in this Code.

**“Adopting Authority”** shall mean the Health Officer or the appointed representative from Upper Missouri District Health Unit.

**“Automated Controller”** means a system of at least one chemical probe, a controller, and auxiliary or integrated component that senses the level of one or more water parameters and provides a signal to other equipment to maintain the parameters within a user-established range.

**“Bather”** means a person at an aquatic venue who has contact with water either through spray or partial or total immersion. The term bather as defined, also includes staff members and refers to those users who can be exposed to contaminated water as well as potentially contaminate the water.

**“Bromine”** means a generic term used to describe a chemical that releases hypobromous acid when dissolved in water.

**“Calcium Hardness”** (CH) means the calcium portion of total hardness.

**“Certified, Listed, and Labeled”** means equipment, materials, products, or services included in a list published by an ANSI-accredited certification organization where said equipment, material, product, or service is evaluated against specific criteria and whose listing either states that it meets identified standards or has been tested and found suitable for a specified purpose. In sections of this Code where equipment, materials, products, or services are referred to with terms such as "approved," "verified," or similar terms to a referenced standard, these terms also mean "certified, listed, and labeled."

**“Chlorine”** means a general term which refers to HOCl and hypochlorite ion in an aqueous solution derived from chlorine gas or a variety of chlorine-based disinfecting agents. Chlorine products are EPA-Registered for use as sanitizers or disinfectants in aquatic venues or spas in the United States are permitted. Chlorine in water is normally reported as mg/L (ppm).

1. **“Free chlorine”** (FAC) means the portion of the total available chlorine present in the as HOCl or hypochlorite ion (OCl<sup>-</sup>). Free chlorine residual shall be maintained for adequate disinfection.
2. **“Combined chlorine”** (CAC) means the concentration of chlorine combined with organic and inorganic nitrogen compounds in the water to form chloramines. Combined chlorine is not as effective for disinfection and can cause irritation to the patron.

3. **“Total chlorine”** means the total amount of chlorine in the water. Total chlorine = free chlorine (FAC) + combined chlorine (CAC).
4. **“Breakpoint Chlorination”** means the conversion of inorganic chloramine compounds to nitrogen gas by reaction with Free Available Chlorine. When enough chlorine is added to water containing ammonia, the apparent residual chlorine decreases since it is partially reduced to hydrochloric acid. The point at which the drop occurs is referred to as the "breakpoint." The amount of free chlorine that shall be added to the water to achieve breakpoint chlorination is approximately 10 times the amount of combined chlorine in the water. Breakpoint chlorination refers to a method used specifically for the purpose of breaking apart and removing combined chlorine or chloramines.
5. **“Hyperchlorination”** means the intentional and specific raising of chlorine levels for a prolonged period of time to inactivate pathogens following a fecal or vomit release in an aquatic venue as outlined in contamination response in which the chlorine level is raised to 20 to 40 ppm.
6. **“Superchlorination”** means the addition of large quantities of chlorine-based chemicals to kill algae, destroy odors, or improve the ability to maintain a disinfectant residual. This process is different from hyperchlorination, which is a prescribed amount to achieve a specific CT inactivation value, whereas superchlorination is the raising of free chlorine levels for water quality maintenance. When superchlorinating, chlorine is added to raise the measured free chlorine level to 10 to 20 ppm.

**“Cyanuric Acid”** (CYA) means a chemical (C<sub>3</sub>N<sub>3</sub>O<sub>3</sub>H<sub>3</sub>) that reduces the loss of chlorine due to the ultraviolet rays from sunlight.

**“EPA Registered”** means all products regulated and registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) by the EPA. Products used for sanitizing and disinfection shall utilize EPA-registered products.

**“Floatation Tank”** (a.k.a. Float Tank, Float Room/Pod/Spa/Chamber, Isolation Tank, or Sensory Deprivation Tank) means a tub that contains a saturated solution of magnesium sulfate having a specific gravity of 1.23 to 1.3, provides a light and sound reduced environment, and is maintained at a temperature of approximately 92-96°F.

**“Hygiene Facility”** means a structure or part of a structure that contains a toilet, shower, diaper-changing unit, hand wash station, and dressing capabilities serving bathers and patrons at an aquatic facility.

**“Imminent Health Hazard”** means a significant threat or danger to health that is considered to exist when there is evidence sufficient to show that a product, practice, circumstance, or event creates a situation that requires immediate correction or cessation of operation to prevent injury based on the number of potential injuries and the nature, severity, and duration of the anticipated injury or illness.

**“Interactive Water Play Aquatic Venue”** means any indoor or outdoor installation that includes sprayed, jetted, or other water sources contacting bathers and not incorporating standing or captured water as part of the bather activity area. These aquatic venues are also known as splash pads, spray pads, and wet decks.

**“Model Aquatic Health Code”** (MAHC) means the CDC guidance document based on the latest science and best practices to help ensure healthy and safe experiences in aquatic facilities.

**“NDCC”** means the North Dakota Century Code.

**“Patron”** means a bather or other person or occupant at an aquatic facility who may or may not have contact with aquatic venue water either through partial or total immersion. Patrons may not have contact with aquatic venue water but could still be exposed to potential contamination from the aquatic facility air, surfaces, or aerosols.

**“pH”** means the hydrogen-ion concentration of a water solution. This determines the degree of acidity or alkalinity.

**“Pool”** means a subset of aquatic venues designed to have standing water for total or partial bather immersion. This does not include spas.

1. **“Activity Pool”** means a water attraction designed primarily for play activity that uses constructed features and devices including pad walks, flotation devices, and similar attractions.
2. **“Diving Pool”** means a pool used exclusively for diving.
3. **“Landing Pool”** means an aquatic venue or designated section of an aquatic venue located at the exit of one or more waterslide flumes. The body of water is intended and designed to receive a bather emerging from the flume for the purpose of terminating the slide action and providing a means of exit to a deck or walkway area.
4. **“Skimmer Pool”** means a pool using a skimmer system.
5. **“Surf Pool”** means any pool designed to generate waves dedicated to the activity of surfing on a surfboard or analogous surfing device commonly used in the ocean and intended for sport as opposed to general play intent for wave pools.
6. **“Therapy Pool”** means a pool used exclusively for aquatic therapy, physical therapy, and/or rehabilitation to treat a diagnosed injury, illness, or medical condition, wherein the therapy is provided under the direct supervision of a licensed physical therapist, occupational therapist, or athletic trainer. This could include wound patients or immunocompromised patients whose health could be impacted if there is no additional water quality protection.
7. **“Wading Pool”** means any pool used exclusively for wading and intended for use by young children where the depth does not exceed 2 feet.
8. **“Wave Pools”** means any pool designed to simulate breaking or cyclic waves for purposes of general play. A wave pool is not the same as a surf pool, which generates waves dedicated to the activity of surfing on a surfboard or analogous surfing device

commonly used in the ocean and intended for sport as opposed to general play intent for wave pools.

**“ppm”** parts per million and is the equivalent to milligrams per liter mg/L.

**“Recirculation System”** means the combination of the main drain, gutter or skimmer, inlets, piping, pumps, controls, surge tank, or balance tank to provide pool water recirculation to and from the pool and the treatment systems.

**“Slide”** means an aquatic feature where users slide down from an elevated height into water.

1. **“Drop Slide”** means a slide that drops bathers into the water from a height above the water versus delivering the bather to the water entry point.
2. **“Pool Slide”** means a slide having a configuration as defined in The Code of Federal Regulations (CFR) Ch. II, Title 16 Part 1207 by CSPC, or is similar in construction to a playground slide used to allow users to slide from an elevated height to a pool. They shall include children’s (tot) slides and all other non-flume slides that are mounted on the pool deck or within the basin of a public swimming pool.
3. **“Waterslide”** means a slide that runs into a landing pool or runout through a fabricated channel with flowing water.

**"Theoretical Peak Occupancy"** means the anticipated peak number of bathers in an aquatic venue or the anticipated peak number of occupants of the decks of an aquatic facility. For aquatic venues, the theoretical peak occupancy is calculated around the type of water use or space:

1. Theoretical peak occupancy = Aquatic Venue Surface Area / Density Factor (D) Surface area and density are in feet squared. The density factors (D) are: Water/bather-related:
  - a. Flat water density factor = 20 ft<sup>2</sup> per bather.
  - b. Agitated water density factor = 15 ft<sup>2</sup> per bather.
  - c. Hot water density factor = 10 ft<sup>2</sup> per bather.
  - d. Waterslide landing pool density factor = manufacturer-established capacity at any given time.
  - e. Interactive water play water density factor = 10 ft<sup>2</sup> per bather on the surface.
  - f. Surf pool density factor = manufacturer-established capacity at any given time.
  - g. Non-water/patron-related
    - i. Deck density factor = 50 ft<sup>2</sup> per bather.
    - ii. Stadium seating density factor = 6.6 ft<sup>2</sup> per bather

**"Total Alkalinity" (TA)** means ability of water to maintain a desirable pH when acid is added to the water. Total alkalinity is expressed in calcium carbonate (CaCO<sub>3</sub>) equivalent amount and is normally reported as mg/L (ppm).

**"Turnover" or "Turnover Rate" or “Turnover Time”** means the period of time, usually expressed in hours, required to circulate a volume of water equal to the capacity of the aquatic venue.

**"Water Quality Testing Device"** (WQTD) means a product designed to measure the level of a parameter in water. A WQTD includes a device or method to provide a visual indication of a parameter level and may include one or more reagents and accessory items.

**Section VI Licensing of Aquatic Facilities** -No person, firm, or corporation shall engage in the operation of an aquatic facility without first obtaining an annual license from the adopting authority. The annual license fee shall be set by the adopting authority, and applications for the aquatic facility license shall be made annually on a form provided by the adopting authority. The license shall be posted in a location in the aquatic facility that is conspicuous to patrons.

### **Section VII Construction**

1. Plans and specifications are required. No person shall begin to construct a new aquatic facility or shall substantially alter more than 50% of an existing aquatic facility without first having the construction plans detailing the construction or substantial alteration submitted to and approved by the adopting authority.
2. It is required that plans and specifications be prepared for all water works systems, sewerage works systems, and aquatic venues contemplated for use by the general public.
3. Aquatic facility construction plans shall be designed to provide sufficient clarity to indicate the location, nature, and extent of the work proposed.
4. Aquatic Facility construction plans shall show in detail that they will conform to the current Model Aquatic Health Code and relevant laws, ordinances, rules, and regulations to protect the health and safety of the facility's bathers and patrons. Aquatic facilities shall also comply with any federal, state, and/or local requirements affecting aquatic facilities, including but not limited to the following:
  - a. All aquatic facilities serving the public shall meet the requirements of the Americans with Disabilities Act.
  - b. All aquatic facility and venue equipment shall be installed and valved in accordance with the North Dakota State Plumbing Code.
  - c. Aquatic facility wastewater, including aquatic venue wastewater such as backwash water, shall be disposed of in accordance with local requirements.
  - d. Electrical wiring and systems, electrical equipment, and associated equipment shall preserve compliance with the National Electric Code or with applicable local codes.
5. All plans shall be prepared by a design professional who is registered or licensed to practice their respective design profession as defined by the state or local laws governing professional practice within the jurisdiction in which the project is to be constructed.
6. All plans shall be signed by the design professional and include a statement of design compliance with this regulation. All construction plans shall include the following statements:

- a. "The proposed aquatic facility and all equipment shall be constructed and installed in conformity with the approved plans and specifications or approved amendments," and
  - b. "No substantial alteration, changes, additions, or equipment not specified in the approved plans can be made or added until the plans for such substantial alteration, changes, additions, or equipment are submitted to and approved by the adopting authority."
7. Plans, along with the aquatic facility application and any other pertinent information required, shall be submitted to the adopting authority for review prior to construction, alteration, or reconstruction of the aquatic facility or aquatic venue for review.
  8. The approval by the adopting authority is independent of all other required approvals such as Building, Zoning, Fire, Electrical, Structural, and any other approvals as required by local or state law, and the applicant must separately obtain all other required approvals and permits.

Prior to replacing equipment, the aquatic facility shall submit technical verification to the adopting authority that all replacement equipment is equal to that which was originally approved and installed.

### **Section VIII Inspection of Aquatic Facilities**

The adopting authority may inspect or cause to be inspected all aquatic facilities within their jurisdiction at such times as it may deem necessary to carry out the intent of this regulation. The regulation requires that all aquatic facilities be regularly inspected by the adopting authority and provide regulations and standards necessary to make these swimming pools safe and healthful. The results of the most recent inspection of the aquatic facility shall be available at the aquatic facility.

### **Section IX General Provisions**

1. **Administration** -The adopting authority or its designee shall administrate and enforce the provisions of these regulations.
2. **Suspension Revocation** -Any license issued by the adopting authority pursuant to these regulations shall be subject to action taken by the adopting authority to suspend or revoke any such license upon a finding of noncompliance with these regulations, a material misrepresentation in any application, or materials presented in support of any license; any willful noncompliance with these regulations; nonpayment of any fees or costs imposed pursuant to these regulations.
3. **Regulation Enforcement**
  - a. Improperly designed, operated, and maintained aquatic facilities are a menace to the health and general welfare of the public and are hereby declared a nuisance; and are subject to the requirements specified under NDCC Section 23-35-08 and Section 23-35-09.
  - b. The adopting authority may temporarily close any aquatic facility that has been determined to have an imminent health hazard or in the event of a failure to

comply with any of the requirements of this chapter. The adopting authority may abate or cause the suspension of the use of such an aquatic facility until such time as the aquatic facility is no longer deemed a health or safety hazard.

4. **Penalties** -All licensed aquatic facilities shall meet the minimum standards set forth in this regulation. Any person who violates or refuses to comply with any provisions of these regulations is guilty of a Class B Misdemeanor as specified under NDCC Section 23-35-13.
5. **Fees** -The adopting authority is hereby authorized to establish and impose reasonable fees associated with aquatic facilities, including plan reviews, licensing, reinspection, and failure to monitor.
6. **Severability** -If any section, subsection, sentence, clause, phrase, or portion of these regulations is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this regulation.

### **Section X Aquatic Facility Information**

1. **Facility Information** -The aquatic facility shall keep records pertaining to the operation, maintenance, and management of the aquatic facility on-site. Records shall be kept for a minimum of 3 years. Records shall include the following information:
  - a. Equipment name and model number, manufacturer and contact information.
  - b. Manufacturers equipment/operator manual and any service-related materials.
  - c. Inspection, maintenance, and date of services records regarding equipment.
  - d. Local vendor/supplier and technical representative contact information.
  - c. Maintenance replacement or service dates and details.
2. **Employee Illness and Injury Policy** -Aquatic facilities requiring lifeguards shall have a policy relating to employee illness and injuries. The policy, at a minimum, shall include the following:
  - a. Prohibiting employees who are ill with diarrhea from entering the water or performing in a lifeguard role.
  - b. Allowing employees with open wounds in the water or in a lifeguard role only if they have healthcare provider approval or wear a waterproof, occlusive bandage to cover the wound.
3. **Emergency Response Plans** -The aquatic facility shall develop and maintain the following plans. These plans shall be reviewed with facility staff at least annually or when changes are made to the plan. Plans shall be kept at the aquatic facility and available on-site.
  - a. Emergency Response Plan, at a minimum, shall include:
    - i. A diagram of the aquatic facility, including emergency exit routes
    - ii. A list of emergency telephone numbers
    - iii. The location of the first aid kit and other rescue equipment (AED, if provided, backboard, etc.)
    - iv. Outline types of emergencies and imminent health hazards and staff response.

1. Actions to be taken in cases of drowning, serious illness or injury, and other serious incidents,
2. Emergency closure requirements, including the following instances, and
  1. Inclement weather,
  2. Accidental chemical release,
    1. Listing of chemicals located on-site, and
    2. Location of safety data sheets.
  3. Determining when it is acceptable to reopen for operation.
- b. Contamination Response Plan includes procedures for responding to formed-stool contamination, diarrheal-stool contamination, vomit contamination, contamination involving blood, and legionella contamination. See Appendix A, Body Fluid Contamination Response, and Appendix B, Legionella Contamination Response. This plan shall include the following:
  - i. The aquatic facility's standard operating procedures for responding to contamination incidents in Appendices.
  - ii. A Body Fluid Contamination Response Log shall be maintained to document each occurrence of contamination of the water or its immediately adjacent areas by formed or diarrheal fecal material, whole stomach discharge of vomit, and blood. See Appendix C, Body Fluid Contamination Response Log.
  - iii. The log shall include the following information recorded at the time of the incident:
    1. Person conducting response.
    2. Supervisor staff on duty.
    3. Date and time of incident response.
    4. Specific area, if not in the water, contaminated by the incident.
    5. Bather count or a reasonable approximation of the number of bathers in the aquatic venue at the time of the incident (if applicable).
    6. Type and form of body fluid observed (for example, diarrheal or formed stool, vomit, or blood).
    7. Date and time when the area was closed.
    8. Whether the aquatic venue uses chlorine stabilizer and concentration at the time of the incident.
    9. Free residual disinfectant and pH levels at the time of the incident.
    10. Remediation procedures used after the incident, including contact time, if applicable.
    11. Free residual disinfectant and pH level at the time of reopening the aquatic venue to the public.
    12. Stabilizer concentration, if used.

#### **4. Reports**

- a. **Illness and Injury Incident Reports** -The aquatic facility shall ensure that a record is made of all injuries and illness incidents at the aquatic facility, which:
  - i. Results in deaths.
  - ii. Requires resuscitation, CPR, oxygen, or AED use.
  - iii. Requires transportation of the PATRON to a medical facility.
  - iv. A patron illness or disease outbreak associated with water quality.
  - v. Lifeguard Rescue Records -Aquatic facilities requiring lifeguards shall also record all lifeguard rescues where the lifeguard enters the water and activates the aquatic Emergency Response Plan.
- b. Illness and injury incident reports and lifeguard rescue records shall include the following information: See Appendix D Illness Injury Rescue Reporting Form
  - i. Date
  - ii. Time
  - iii. Location
  - iv. Incident including the type of illness or injury and cause or mechanism.
  - v. Names and addresses of the individuals involved, designation of lifeguard/patron.
  - vi. Actions taken.
  - vii. Equipment used.
  - viii. Outcome of the incident.
- c. The aquatic facility shall ensure that the adopting authority is notified within 24 hours of the occurrence of an incident recorded.

### **Section XI Aquatic Facility Personnel**

1. **Certification** -The operation of all aquatic facilities shall be monitored by an employee, board member, or contractor who has completed an operator training course that is recognized by the adopting authority. A current certificate or written documentation showing completion of an operator training course shall be provided to the adopting authority and available on-site.
2. **Lifeguard** -Aquatic facilities requiring lifeguards shall have completed a lifeguard training course that is recognized by the adopting authority. Lifeguard training shall include CPR, First Aid, and AED use. Current certificates showing completion of lifeguard training shall be provided to the adopting authority and available on-site.

### **Section XII Aquatic Facility**

1. **Telephone** -A telephone shall be provided adjacent to the aquatic venue for emergency use. A sign shall be posted at the telephone providing dialing instructions, the address and location of the aquatic venue location, and the telephone number.
2. **First Aid Equipment** -The aquatic facility shall have designated locations for emergency and first aid equipment. An adequate supply of first aid supplies shall be continuously stocked and include, at a minimum, as follows:
  - a. A First Aid Guide
  - b. Absorbent compress
  - c. Adhesive bandages

- d. Adhesive tape
  - e. Sterile pads
  - f. Disposable gloves
  - g. Scissors
  - h. Elastic wrap
  - i. Emergency blanket
  - j. Resuscitation mask with one-way valve
  - k. Blood-borne pathogen spill kit.
3. **CPR Posters** -CPR posters that are up to date with the latest CPR programs and protocols shall be posted conspicuously at all times.
  4. **Drinking Fountains** -A drinking fountain shall be provided inside an aquatic facility and comply with the following requirements:
    - a. Water shall be provided by an approved potable water supply.
    - b. The drinking fountain shall be an angle jet type.
    - c. The wastewater discharged from a drinking fountain shall be routed to an approved sanitary sewer system or other approved disposal area.
    - d. The drinking fountain shall be located where it is readily accessible and not a hazard to bathers.
    - e. Drinking fountains shall be maintained in good repair and clean condition.
  5. **Food and Beverage** -The aquatic facility shall comply with the adopting authority's requirements concerning food and beverage. Bathers and patrons shall consume food and beverages in designated areas.
  6. **Waste Receptacles** -A sufficient number of receptacles shall be provided within an aquatic facility to ensure that garbage and refuse can be disposed of properly to maintain safe and sanitary conditions. Waste receptacles, including recycling, shall be maintained in good repair and clean condition.
  7. **Materials** -Aquatic facility doors, windows fixtures, etc., shall be constructed of suitable materials or shall have a suitable covering or coating to withstand the expected atmosphere. Construction shall be of materials that:
    - a. Do not contribute to the growth of biological contaminants.
    - b. Shall either be constructed of corrosion-resistant materials or have a covering or coating to withstand humid and corrosive environments.
  8. **Indoor Aquatic Facility Ventilation** -Indoor aquatic facility air handling systems shall be designed, constructed, installed, and maintained to support the health and safety of the building's patrons. Air handling systems shall operate continuously.
  9. **Facility Heating** -Indoor aquatic facility heating equipment shall be maintained in good repair.
  10. **Temporary Cords** -Temporary extension cords and power connectors shall not be used as a substitute for permanent wiring. All parts of the extension cord shall be a minimum

of 6 feet away when measured along the shortest path possible from a body of water during times when the aquatic facility is open.

11. **Shared Equipment** -Shared equipment shall be maintained in good repair.
  - a. Equipment provided by the aquatic facility that comes into contact with the bather's eyes, nose, ears, and mouth (including but not limited to snorkels, nose clips, and goggles) shall be cleaned and sanitized between uses and stored in a manner to prevent biological growth. Used and unsanitized shared equipment shall be kept separate from cleaned and sanitized shared equipment.
  - b. Other Equipment -Other shared equipment provided by the aquatic facility, including but not limited to fins, kickboards, tubes, lifejackets, and noodles, shall be kept clean and stored in a manner to prevent mold and other biological growth.

### **Section XIII Hygiene Facility**

1. **Floors** -The floors shall have a smooth, easy-to-clean, impervious-to-water, slip-resistant surface. Floor drains shall be installed in areas subject to standing water.
2. **Space** -Sufficient space shall be allowed for dressing and clothing storage.
3. **Design** -The hygiene facilities and furnishings shall be of simple design and shall have a smooth, easy-to-clean, impervious surface that will permit proper cleaning and disinfection.
4. **Floor Covering** -Rubber, nonslip matting may be used if it is disinfected daily. Carpet, floor matting, wooden walkways, or other porous materials which interfere with cleaning or provide a place for bacteria and fungi to multiply are prohibited.
5. **Showers** -Showers shall be provided with hot and cold running water. All shower heads shall be provided with sufficient floor drains to handle the wastewater.
6. **Hygiene Fixtures** -All hygiene fixtures shall have a smooth, hard, easy-to-clean, impervious-to-water surface and be installed to permit thorough cleaning and disinfection.
  - a. Hand sinks shall be provided with hot and cold running water.
  - b. Soap dispensers, single-use hand towels, or mechanical dryers shall be provided at each hand sink.
  - c. A minimum of one hands-free waste receptacle shall be provided in areas adjacent to handwashing sinks.
  - d. Toilet paper dispensers shall be securely attached to a wall or partition adjacent to each toilet.
  - e. In female hygiene facilities, covered receptacles adjacent to each toilet shall be provided for the disposal of used feminine hygiene products.
7. **Diaper Changing Station** -All aquatic facilities allowing use by diaper-aged bathers shall have at least one diaper changing station in each male and female hygiene facility or make available a unisex diaper changing station.
  - a. Diaper changing station(s) shall have access to a hand sink.
  - b. Diaper changing stations shall conform to either of the following standards:

- i. ASTM Standard F2285-04: Consumer Performance Standards for Commercial Diaper-Changing Stations; or
  - ii. The standards for diaper-changing surfaces in the most current version of Caring for Our Children: National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs.
- c. A covered hands-free, plastic-lined trash receptacle or diaper pail shall be located directly adjacent to the diaper changing station.
- 8. **Ventilation** -Ventilation shall be provided to eliminate excessive humidity that may cause damage or encourage mold and bacteria growth.
- 9. **Lighting** -Lighting shall be at least 10-foot candles at the floor surface and shall be available during all hours of operation. Light fixtures shall be UL approved.
- 10. **Signage** -Signage shall be posted at the hygiene facility exit used to access aquatic venues stating or containing information or text complying with the intent of the information:
  - a. Do not swim when ill with diarrhea.
  - b. Do not swim with open wounds and sores.
  - c. Shower before entering the water.
  - d. Check your child’s swim diapers/rubber pants regularly.
  - e. Diaper changing on the DECK is prohibited.
  - f. Do not poop or pee in the water.
  - g. Do not swallow or spit water.
  - h. Wash hands before returning to the deck.
- 11. **Maintenance** -Hygiene facilities shall be maintained in good repair, cleaned, and disinfected daily and more often if necessary to provide a clean and sanitary environment.

#### Section XIV Aquatic Venue

- 1. **Materials** -Materials for the aquatic venue basin shall be non-toxic, durable, waterproof, and easily cleanable. The color of the basin shall be either white or light in color.
- 2. **Condition** -The basin shall be of a sound shape, free of cracks, leaks, and protrusions. The paint shall be in good condition to protect the basin material from cracks or spalling.
- 3. **Depth Markers** -The depth of water in the pool shall be plainly marked at the points of maximum and minimum depths, at the break between the deep and shallow areas, and at intermediate depths spaced at not more than 25-foot intervals. Additionally, markers shall be located on both sides and both ends of the pool. The markers shall be placed on the pool wall at or above the water level and on the top edge of the deck. The markers shall be at least 4 inches in height and of contrasting color.
  - a. Non-traditional aquatic venues with controlled access (such as activity pools, lazy rivers, and other aquatic venues with limited access) shall only require depth markers on a sign at points of entry.
  - b. Aquatic venues with movable floors shall have a sign posted to inform the public that the aquatic venue has a varied depth and refer to a sign showing the current depth.

- c. Interactive water play venues shall not require depth markers.
- 4. **No Diving Markers** -For pool water depths 5 feet or shallower, all deck depth markers required above shall be provided with “NO DIVING” warning signs along with the universal international symbol for “NO DIVING.”
  - a. Aquatic venues where the maximum water depth is 6 inches of water or less (such as wading pools and activity pools) shall not be required to have depth markings or “NO DIVING” signage.
- 5. **Steps, Stairs, Exit Ladders, Guard, and Handrails** -All steps or stairs entering a public pool shall be constructed with slip-resistant materials. They shall have sturdy and easily visible handrails on either side and at the top leading out over the water. Handrails, guardrails, and exit ladders shall be constructed of corrosion-resistant materials and securely anchored.
- 6. **Diving Bay Separation** -A floating lifeline shall be provided at or near the break in grade between the shallow and deep portions of the pool. Pools constructed with a continuous bottom slope where no distinct break exists shall place a lifeline at a location where the depth is 5 feet. The lifeline shall be at least three-fourths inch in diameter, supported by floats, and shall be securely fastened to both sides of the pool with noncorrosive recessed connectors.
- 7. **Diving Area** -The diving area shall have adequate depth and clearance for safe diving.
- 8. **Maintenance** -The aquatic venues shall be maintained in good repair and cleaned to prevent injury from physical objects as well as contaminated surfaces.

**Section XV Aquatic Venue Features and Specific Venues**

- 1. **Diving Boards** -All diving boards shall be in good physical shape with no cracking and a nonslip surface. Board standards shall be secure to the deck.
- 2. **Slides** -All slides shall be in good physical shape with no cracking. Slides without a lifeguard on duty shall have measures in place to alert patrons when they can enter the slide. Waterslides without lifeguard supervision shall post signs indicating riding instructions, warnings, and requirements in accordance with manufacturer recommendations shall be posted at the waterslide entry.
- 3. **Other Aquatic Features** -Other aquatic features not otherwise addressed in this regulation, including but not limited to climbing walls, inflatables, and play structures, shall not be installed unless designed and operated in accordance with all manufacturer’s installation and operations recommendations.
- 4. **Maintenance** -The aquatic venue features shall be maintained and operated to the manufacturer's/designer's specifications. Aquatic venue features shall be cleaned to prevent injury from physical objects as well as contaminated surfaces.
- 5. **Interactive Water Play Venues** -In addition to the general aquatic venue requirements stated in this regulation, interactive water play venues shall comply with the additional provisions:
  - a. Surfaces shall be slip-resistant and easily cleanable.
  - b. Shall be properly sloped so that only water from the aquatic features flows back to the collection tank.

- c. Measures shall be taken to prevent standing water from collecting on the pad and adjacent areas.
  - d. Grating shall not be removable without the use of tools.
  - e. The collection tank shall be designed to provide access for cleaning and inspection. The hatch or lid shall be locked or require a tool to open.
6. **Moveable Floors** -In addition to the general aquatic venue requirements stated in this regulation, moveable floors shall comply with the additional provisions:
- a. The design shall not impede the effectiveness of the water treatment system.
  - b. Shall allow for inspection, cleaning, and maintenance of the area underneath.
  - c. The surface shall be slip resistant if it is intended for installation in water depths less than 5 feet.
  - d. A strategy for preventing bathers from transitioning to deeper water when a moveable floor is not continuous over the entire surface area of the aquatic venue shall be provided.
  - e. The underside shall not be accessible to bathers.
  - f. The design shall protect against bather entrapment between the moveable floor and the pool walls and floors.
  - g. If operated using hydraulics, the hydraulic compounds shall be listed as safe for use in pool water in case there is a hydraulic leak.
  - h. The speed shall be less than or equal to 1.5 feet per minute.
  - i. Use of the moveable floor portion of the pool shall not be open to bathers when the floor is being raised or lowered. The moveable floor shall only be used for accessibility purposes under direct supervision.
  - j. A floor depth indicator shall be provided that displays the current pool water depth.
  - k. Warning markings stating "Moveable Floor" shall be provided at 25-foot intervals around the perimeter.
  - l. The use of starting platforms in the area of a moveable floor shall be prohibited when the water depth is shallower than the minimum required water depth of 4 feet.
7. **Spa** -In addition to the general aquatic venue requirements stated in this regulation, spas shall comply with the additional provisions:
- a. The agitation system shall be connected to a minute timer that does not exceed 15 minutes.
  - b. The agitation system shall be connected to a minute timer located out of reach of a bather in the spa.
  - c. A clearly labeled emergency shutoff or control switch for the purpose of stopping the motor(s) that provide power to the recirculation system and hydrotherapy or agitation system. The emergency shutoff or control switch shall be installed and be readily accessible to the bathers.

## Section XVI Decking/Aquatic Venue Area

1. **Enclosure**- All aquatic venues shall be enclosed to prevent unauthorized entry. Barriers, fencing, gates, and enclosures shall be maintained in good repair. Enclosures shall not block or encumber a required emergency egress path from other structures.
  - a. Outdoor Aquatic Venues -shall have a fence or equivalent barrier at least 6 feet high, shall completely encircle the aquatic venue and deck area, and shall be secured when unattended.
  - b. Indoor Aquatic Venues -shall be securable from unauthorized entry from other building areas or the exterior and secured when not operating.
  - c. Wading Pool and Interactive Water Play Venues -A barrier shall be provided to separate a wading pool from other pools unless the wading pool is separated by a distance of 15 feet from other bodies of water.
  - d. Spa Venues
    - i. Recessed Spas may be located adjacent to other aquatic venues as long as they are recessed in the deck.
    - ii. Elevated Spas may be located adjacent to another aquatic as long as there is an effective barrier between the spa and the adjacent aquatic or a minimum distance of 4 feet between the aquatic and spa is required.
2. **Emergency Exit** –Gates and/or doors that will allow egress without a key shall be clearly and conspicuously labeled in letters at least 4 inches high "EMERGENCY EXIT."
3. **Exit Routes** –Emergency exit routes shall be established in aquatic facilities and be maintained so they are well-lit, unobstructed, and accessible at all times.
4. **Lighting** -Lenses that are physically intact on lights shall be replaced when cracked.
  - a. Water surface and deck light levels shall meet the following minimum maintained light levels:
    - i. Indoor Water Surface: 30 horizontal footcandles (323 lux).
    - ii. Outdoor Water Surface: 10 horizontal footcandles (108 lux).
    - iii. Deck: 10 horizontal footcandles (108 lux).
5. **Night Swimming** -Night Swimming shall be prohibited unless required light levels meet the above requirements. Night swimming shall be considered one-half hour before sunset to one-half hour after sunrise.
  - a. Where outdoor aquatic venues are open for use from 30 minutes before sunset to 30 minutes after sunrise or during periods of low illumination, underwater lighting may be excluded where:
    - i. Maintained water surface lighting levels are a minimum of 15 horizontal footcandles (161 lux).
    - ii. All portions of the aquatic venue, including the bottom and drain(s), are readily visible.
6. **Emergency Lighting** -Emergency lighting shall be tested and maintained in accordance with the manufacturer's recommendations.
7. **Decking** - Decks shall have a minimum of 4 feet of clearance from the aquatic venue edge to fencing, barrier, or other obstruction and extend entirely around the aquatic venue. All decks shall have a uniform slope to drains or unobstructed flow to points of collection away from the aquatic venue and the gutter system. Deck drains shall not be connected to the recirculation systems. Standing ponded water shall be removed to

prevent algae and fungal growth. Deck areas are free of open cracks and/or broken areas.

- a. Interactive Water Play Venues -shall provide one of the following:
    - i. 8 feet of deck area
    - ii. Raised curbs,
    - iii. Raised planters.
  - b. Spa Venues -A 4-foot wide, continuous, unobstructed perimeter deck shall be provided on two consecutive or adjacent sides or fifty percent or more of the spa perimeter.
8. **Decking Material** -Finish materials for the deck shall be suitable for the aquatic environment, non-toxic, and substantially impervious. The deck shall be constructed with a uniform and easily cleaned surface such as concrete, tile, manufactured, or acrylic surfaces. All decks shall have slip-resistant, textured finishes, which are not conducive to slipping under the contact of bare feet in wet or dry conditions. Carpet, floor matting, wooden walkways, or other porous materials which interfere with cleaning or provide a place for bacteria and fungi to multiply are prohibited.
9. **Deck Maintenance** -Deck areas shall be cleaned daily and kept free of debris, vermin, and vermin harborage. Deck areas shall be free from standing water. Deck drains shall be cleaned and maintained to prevent blockage and pooling of water. Deck surfaces shall be maintained to their original design slope and integrity. Cracks in the deck shall be repaired when they change sufficiently to increase the potential for:
- a. Trips or falls,
  - b. Lacerations or
  - c. Impacting the ability to properly clean and maintain the deck area.
10. **Aquatic Facility Rules** -The operator shall post and enforce the aquatic facility rules governing health, safety, and sanitation. The lettering shall be legible and at least 1 inch high, with a contrasting background. Signage shall be placed in a conspicuous place communicating expected and prohibited behaviors and other information using text that complies with the intent of the following information:
- i. In case of an emergency, dial 911 or other emergency instructions.
  - ii. Hours of operation.
  - iii. Pollution of aquatic venue prohibited.
  - iv. Do not swim if you have open wounds.
  - v. Do not swim if you are ill with diarrhea or have had diarrhea within the past two weeks.
  - vi. Shower before entering the water.
  - vii. No glass items in the aquatic venue or on the deck.
  - viii. Do not swallow or spit water.
  - ix. Swim diapers shall be worn by all infants and children entering the water that are not potty-trained.
  - x. Diaper changing on the deck is prohibited.
  - xi. No Diving in prohibited areas.
  - xii. Intentional hyperventilation or extended breath-holding activities are dangerous and prohibited.

- xiii. No animals in the aquatic venue and no animals on the deck, except service animals, if applicable.
- xiv. No rough play.
- xv. Children must be supervised by a responsible adult up to the minimum age established by the aquatic facility.

In addition to the signage messages above, unstaffed aquatic facilities shall also include signage messages covering the following:

- i. No Lifeguard on Duty: Children under 14 years of age must have adult supervision.
- ii. Hours of operation; Aquatic facility use prohibited at any other time.
- iii. A sign shall be posted outlining the immediate health hazards in Section XVIX Operation, which require aquatic venue and/or aquatic facility closure, and how to immediately report problems to the owner/operator.

Movable Floor -In addition to the rules above, aquatic venues with moveable bottom floors shall also have the following information or text complying with the intent of the following information:

- i. A sign for the aquatic venue water depth in use shall be provided and clearly visible.
- ii. A "NO DIVING" sign shall be provided.
- iii. The floor is movable, and the AQUATIC VENUE depth varies.

Spas- In addition to the rules above, SPAS shall also have the following information or text complying with the intent of the following information:

- i. Maximum water temperature is 104° F (40°C).
- ii. Children under age five and people using alcohol or drugs that cause drowsiness shall not use spas.
- iii. Pregnant women and people with heart disease, high blood pressure, or other health problems should not use spas without prior consultation with a healthcare provider.
- iv. Children under 14 years of age shall be supervised by an adult.

**12. Lifesaving Equipment** -Aquatic venues exceeding 2 feet of standing water shall provide and maintain the following devices. Devices shall be located within the immediate vicinity and accessible to bathers and patrons. At least one set of lifesaving equipment shall be provided consisting of the following:

- a. Reaching pole of 12 foot to 16 feet in length, non-telescopic, light in weight, and with a securely attached Shepherd's Crook with an aperture of at least 18 inches; and
- b. A U.S. Coast Guard-approved aquatic rescue throwing device with at least a quarter-inch thick rope whose length is 50 feet or 1.5 times the width of the pool, whichever is less.

Additionally, for aquatic venues with lifeguards:

- a. At least one backboard constructed of material easily disinfected shall be provided and located 2-minute response time to the location of the incident. The backboard shall be equipped with a head immobilizer and sufficient straps to immobilize a person to the backboard; and
  - b. Each lifeguard conducting patron surveillance with the responsibility of in-water rescue in less than 3 feet of water shall have a rescue tube immediately available for use.
  - c. A Rescue Tube on a lifeguard conducting patron surveillance in a water depth of 3 feet or greater shall have a rescue tube on his/her person in a rescue-ready position.
13. **Lifeguard Chair and Stand** -Where lifeguard chair/stands are available, the chair/stand shall be designed:
- a. With no sharp edges or protrusions.
  - b. With sturdy, durable, and UV-resistant materials.
  - c. To provide enough height to elevate the lifeguard to an eye level above the heads of the BATHERS; and
  - d. To provide safe access and egress for the lifeguard.
14. **Maintenance** -The aquatic venue areas and equipment shall be kept in good repair, cleaned, and disinfected to prevent injury from physical objects as well as contaminated surfaces.

## Section XVII Aquatic Venue Water Quality

1. **Water Supply** -The water supply serving the aquatic venue shall meet the requirements of the North Dakota Department of Environmental Quality for potable water.
2. **Temperature** -Water temperatures shall be considered and planned for based on risk, safety, priority facility usage, and age of participants while managing water quality concerns. A thermostatic control device shall be installed to prevent the temperature from exceeding the maximum.
  - a. Spa water shall not exceed one hundred-four degrees Fahrenheit.
  - b. Therapy pool temperatures may exceed one hundred four degrees Fahrenheit with the approval of the adopting authority.
3. **pH** -A pH level between 7.2 and 7.8 shall be maintained. Approved substances for pH adjustment shall include but not be limited to muriatic (hydrochloric) acid, sodium bisulfate, carbon dioxide, sulfuric acid, sodium bicarbonate, and soda ash.
4. **Disinfection** -Aquatic venues utilizing disinfectants other than those outlined below shall submit the design for approval to adopting authority prior to installation. Disinfectants other than those outlined below shall comply with the relevant sections of the current Model Aquatic Health Code.
  - a. **Aquatic Venues Using Chlorine** -Only chlorine products that are EPA-registered for use as sanitizer or disinfectant in aquatic venues or spas in the United States are permitted. Minimum free available chlorine concentrations shall be maintained at all times in all areas according to the following table values:

Table I: Chlorine Concentrations

<b>Aquatic Venues <u>Not Using</u> Cyanuric Acid</b>	<b>Aquatic Venues <u>Using</u> Cyanuric Acid</b>	<b>Spas</b>
1.0-10.0 ppm	2.0-10.0 ppm	3.0-10.0ppm

The operator shall ensure the aquatic venue takes action to reduce the level of combined chlorine (chloramines) in the water when the level exceeds 0.4 ppm.

- b. **Aquatic Venues Using Bromine** -Only bromine products that are EPA-registered for use as sanitizer or disinfectants in aquatic venues or spas in the United States are permitted. Minimum bromine concentrations shall be maintained at all times in all areas according to the following table values:

Table II: Bromine Concentrations

<b>Aquatic Venues</b>	<b>Spas</b>
3.0-8.0 ppm	4.0-8.0 ppm

- 5. **Cyanuric Acid** – The cyanuric acid (CYA) or stabilized chlorine products shall be certified, listed, and labeled to either NSF ANSI Standard 50 or NSF/ANSI Standard 60 by an ANSI-accredited certification. The CYA level at all aquatic venues shall remain at or below 90 ppm. CYA or stabilized CHLORINE products shall not be used at the following venues:
  - a. any indoor venues
  - b. spas
  - c. therapy pools
- 6. **Microbiological Test** -The aquatic facility shall submit a water sample from each aquatic venue to a laboratory certified by the North Dakota Department of Environmental Quality for bacteriological analysis.
  - a. Sampling is required under the following circumstances:
    - i. Prior to opening an aquatic venue after extended closure beyond operating hours, such as extensive repair work and seasonal closure.
    - ii. During each month of operation.
  - b. The water shall meet the same standards (maximum contaminant level, MCL) as drinking water for bacteria content. Unsatisfactory results shall follow the steps outlined below:
    - i. Heterotrophic/standard plate count above 200 CFU/ml
      - a. The facility shall close the aquatic venue immediately.
      - b. The aquatic venue shall be superchlorinated for the appropriate amount of time.
      - c. The free chlorine shall then be reduced to the correct level prior to reopening the aquatic.
      - d. A new water sample shall be taken and submitted for the month.
    - ii. Coliform/E-coli present
      - a. The facility shall close the aquatic venue immediately.

- b. The aquatic venue shall be superchlorinated for the appropriate amount of time.
  - c. A new water sample shall be taken and submitted for the month, and the aquatic venue shall not reopen until satisfactory results are obtained. Any water body not sampled during the month shall follow the procedures for unsatisfactory results for Coliform/E-coli.
7. **Recordkeeping** -A daily operation record shall be kept. Records shall include testing results and any chemicals that have been added. For heated aquatic venues, water temperature shall be recorded at the same time the disinfectant and pH tests are performed. Copies of the microbiological test results shall also be kept with the daily records. All records mentioned shall be retained for a minimum of 3 years. The following table provides the minimum testing frequency:

Table III: Testing Frequency

Water Quality Chemical	Minimum Testing Frequency
pH Water Temperature In-line ORP readings, Disinfectant <ul style="list-style-type: none"> <li>▪ Free chlorine (FAC) and Combined Chlorine (CAC)</li> <li>▪ Total Bromine (TB)</li> </ul>	Prior to opening; and Every 4 hours while operation (for automatic disinfectant feed system); or
Total Alkalinity (TA)	Weekly
Calcium Hardness	Monthly
Cyanuric Acid (CYA)	24 hours after the addition of CYA to the aquatic venue; and <ul style="list-style-type: none"> <li>▪ Every 2 weeks (if chlorine is the primary disinfectant)</li> <li>▪ Monthly (if chlorine is the supplemental disinfectant)</li> </ul>
Salt levels	Weekly or per manufacturer’s instructions
Copper/Silver systems	Daily

8. **Test Kit** -Water quality testing devices and kits shall be certified, listed, and labeled to NSF/ANSI 50 by an ANSI-accredited certification organization. Every aquatic venue shall be provided with testing equipment for the determination of disinfectant residuals, pH concentration, alkalinity, calcium hardness, and CyA (if used) at a minimum. The disinfectant residual tester shall have a minimum range of 0.0 to 10.0 ppm. The pH tester shall be able to indicate a pH between 6.0 and 8.0. Testing reagents shall be replaced according to the manufacturer's recommendations. Testing reagents shall be stored in accordance with the manufacturer's recommendations.
9. **Chemicals** -Treatment chemicals shall be certified, listed, and labeled to either NSF/ANSI Standard 50 or NSF/ANSI Standard 60 by an ANSI-accredited certification organization

and/or have an EPA FIFRA registration and be used only in accordance with the manufacturer's instructions.

10. **Chemical Records** -A chemical inventory log shall be maintained on-site to provide a list of chemicals used in the aquatic facility. Safety Data Sheets shall be available on-site.
11. **Chemical Storage** –Aquatic chemicals, acids, fertilizers, salt, de-icing chemicals, oxidizing cleaning materials, other corrosive or oxidizing chemicals, and pesticides shall be stored in a well-ventilated protective enclosure. Chemical storage shall comply with the following requirements:
  - a. All doors opening into chemical storage spaces shall be equipped with permanent signage:
    1. Warning against unauthorized entry.
    2. Specifying the expected hazards.
    3. Specifying the location of the associated SDS forms; and
    4. Product chemical hazard NFPA chart.
  - b. Lighting shall be at minimum 30 footcandles (323 lux)
  - c. Chemicals incompatible with the storage of other chemicals present shall be stored in other chemical storage space(s).
  - d. Chemicals shall be stored away from direct sunlight, temperature extremes, and high humidity.
  - e. Chemicals shall be stored so that they are protected from getting wet.
  - f. Chemicals shall be stored so that if the packages were to leak, no mixing of incompatible materials would occur.
  - g. Containers shall be labeled.
  - h. The chemical storage area shall be maintained for safety purposes.
  - i. Chemical storage areas shall be secured to prevent unauthorized access.
  - j. Chemical storage space shall be separate from the equipment room. If the chemicals are protected from exposure to heat and moisture and no imminent health or safety threats are identified, this may be waived with review by adopting authority.
12. **Chlorine Room** -When gas chlorine is used, a separate enclosure is needed that is reasonably gas-tight, corrosion-resistant, fire-resistant, and mechanically vented. The enclosure shall meet the following requirements:
  - a. Be at ground level.
  - b. The door shall open to the outside and shall not open into the aquatic venue area. The door shall be locked at all times except during servicing by approved personnel. The door shall have an inspection window.
  - c. Chlorine cylinders shall be secured from falling.
  - d. In use cylinders in use shall be secured on a suitable platform scale.
  - e. A cylinder wrench for turning off the cylinder should be attached to the top of each cylinder being used.
  - f. A separate vent opening to the exterior shall be provided.
  - g. An electric motor-driven fan shall take suction from near the floor level of the enclosure and discharge at a suitable point to the exterior above the ground level. The fan switch shall be able to be operated from outside of the enclosure.

13. **Chemical Addition Methods** -Automatically introduced disinfection and pH control chemicals shall be automatically introduced through the recirculation system. Superchlorination or shock chemicals and other aquatic venue chemicals other than disinfection and pH control may be added manually to the pool in compliance with the following:
- a. Chemicals added manually directly into the aquatic venue shall only be introduced in the absence of bathers.
  - b. Treatment chemicals shall be added in strict adherence to the manufacturer's use instructions to ensure levels in the water are safe for human exposure.
  - c. Whenever required by the manufacturer, chemicals shall be diluted (or mixed with water) prior to application and as per the manufacturer's directions.
    - i. Chemicals shall be added to water when diluting as opposed to adding water to a concentrated chemical.
    - ii. Two or more chemicals shall never be mixed in the same dilution of water.
  - d. Each chemical shall be mixed in a separate, labeled container.
  - e. Chemicals shall be measured using a dedicated measuring device where applicable. Measuring devices shall be clean, dry, and constructed of material compatible with the chemical to be measured to prevent the introduction of incompatible chemicals.
14. **Automatic Feeders and Controllers** - All chemical feed equipment such as flow-through chemical feeders, electrolytic chemical generators, mechanical chemical feeders, chemical feed pumps, and automated chemical controllers for pH and disinfectant monitoring/control shall be certified, listed, and labeled to NSF/ANSI 50 by an ANSI-accredited certification organization. All aquatic venues shall be equipped with automatic chemical feeding equipment for controlling disinfectants and pH. All aquatic venues shall have automated controllers installed for monitoring and turning on or off chemical feeders used for disinfectants and pH.
15. **Interlock Controls** -Chemical feed system components shall be installed and interlocked so the chemical feeder cannot operate when the recirculation system is in low or no flow circumstances.
16. **Water Clarity** - The water in an aquatic venue shall be sufficiently clear such that the bottom is visible while the water is static. The main drain shall be visible at all times at any point on the deck.
17. **Dirt & Debris** -The aquatic venue shall be kept clean of debris, organic materials, and slime/biofilm inaccessible areas in the water and on the surface.
18. **Algae** -Algae shall be taken care of immediately before staining occurs. Algaecides may be used in an aquatic venue provided:
- a. The product is labeled as an algaecide for an aquatic venue use.
  - b. The product is used in strict compliance with label instructions.
  - c. The product is registered with the EPA and applicable state agencies.
19. **Aquatic Venue Cleaning Systems** -The cleaning system provided shall not create an entanglement or suction entrapment hazard or interfere with the operation or use of the aquatic venue.

20. **Maintenance** -All mechanical equipment shall be maintained and operated in accordance with the manufacturer's/designer's specifications. Rooms shall be maintained for safety purposes.

**Section XVIII Mechanical Equipment**

1. **Access** -Aquatic venue equipment rooms shall be secured to prevent access by unauthorized individuals.
2. **Use** -The installation of the recirculation and the filtration system components shall be performed in accordance with the designer's and manufacturer's instructions.
3. **Continuous Operation** -All components of the filtration and recirculation system shall be kept in continuous operation 24 hours per day.
4. **Virginia Graeme Baker Pool and Spa Safety Act** -All drains will have entrapment prevention that adheres to the requirements of the Virginia Graeme Baker Pool and Spa Safety Act (VGB Act). In the event a main-drain cover is broken or not in place, the pool facility will be immediately closed until the cover is replaced.
5. **Water Height** -Water height must allow for skimmers and gutters to function properly. Baskets must be kept clean. Inlets must be kept operational.
6. **Hydraulically Balanced** -The recirculation system shall be hydraulically balanced to ensure the effective distribution of treated water.
7. **Piping** -Piping and piping system component materials shall be suitable for potable water contact. Piping system components in contact with aquatic venue water shall be of non-toxic material, resistant to corrosion, and able to withstand operating pressures, chemicals, and temperatures.
8. **Recirculation Pump** -Adequate pumping equipment shall be provided. The pumps shall have sufficient capacity to:
  - a. Provide for the maximum turnover of the pool.
  - b. Provide adequate pressure for backwashing of filters.
  - c. Develop the necessary suction required for cleaning when a suction-type bottom vacuum is used.
9. **Turnover** -The recirculation system for an aquatic venue must have adequate filtration and pumping capacity to provide turnover listed in the table below. The main drain and skimmers must function in accordance with the pool's design standards.

Table IV: Aquatic Venue Maximum Allowable Turnover Times

<b>Pool Type</b>	<b>Turnover Maximum</b>
Activity Pool Wave Pool	2 hours or less
Diving Pool	8 hours or less
Interactive Water Play, Spa	0.5 hours or less
Lazy River	2 hours or less
Plunge Pool, Runout Slide, Wading Pools	1 hour or less

Other Pools	6 hours or less
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Table V: Aquatic Venue Maximum Allowable Turnover Times for Spa, Therapy, & Exercise Pools

Temperatures	Load Turnover	Turnover Maximum
≤ 72°-93°F (22°-34°C)	> 2500 gals/person (9.46 m <sup>3</sup> )	4 hours or less
≤ 72°-93°F (22°-34°C)	> 450 gals/person (1.7 m <sup>3</sup> )	2 hours or less
≤ 72°-93°F (22°-34°C)	≤ 450 gals/person (1.7 m <sup>3</sup> )	1 hour or less
≥ 93-104°F (34°-40°C)	All	0.5 hours or less

10. **Filtration** -Filtration shall be required for all aquatic venues that recirculate water. All filters shall be certified, listed, and labeled to NSF/ANSI 50 by an ANSI-accredited certification organization. All filter media, including alternative filter media, shall be certified, listed, and labeled to NSF/ANSI Standard 50 by an ANSI-accredited certification organization and within the size specifications provided by the filter manufacturer and NSF/ANSI 50.
11. **Gauges** -Pressure gauges are required on granular media filter systems. Gauges shall be installed so they can be easily read.
12. **Maintenance** -All mechanical equipment, plumbing, filtration equipment, etc., must be maintained and operated in accordance with the manufacturer's/designer's specifications. Rooms shall be maintained for safety purposes.

### Section XVIX Operation

1. **Operation Sign** - A sign shall be posted stating the following:
  - a. The operating hours of the aquatic facility; and
  - b. Unauthorized use of the aquatic facility outside of these hours is prohibited.
2. **Opening** -Prior to opening, a licensed aquatic facility shall verify that the aquatic venue meets all applicable criteria of this regulation before opening the aquatic venue.
3. **Daily Checklist** -The aquatic facility shall ensure that a daily preventive maintenance inspection is completed before opening and that it shall include the following:
  - a. Walkways/decks and exits are clear, clean, and free of debris.
  - b. Drain covers, vacuum fitting covers, skimmers, equalizer covers, and any other suction outlet covers are in place, secure, and unbroken.
  - c. Skimmer baskets, weirs, lids, flow adjusters, and suction outlets are free of any blockage.
  - d. Inlet and return covers and any other fittings are in place, secure, and unbroken.
  - e. Safety warning signs and other signage are in place and in good repair.
  - f. Safety equipment, as required by this regulation, is in place and in good repair, including emergency instructions and phone numbers.
  - g. Entrapment prevention systems are operational.

- h. Recirculation, disinfection (primary, secondary, and/or supplemental) systems, controller(s), and probes are operating as required.
  - i. Underwater lights and other lighting are intact with no exposed wires or water in lights.
  - j. Slime/biofilm has been removed from accessible surfaces of Flotation tanks, aquatic venues, slides, and other aquatic features.
  - k. Doors to nonpublic areas (chemical storage space, offices, etc.) are locked.
  - l. First aid supplies are stocked.
  - m. Emergency communication equipment and systems are operational.
  - n. Fecal/vomit/blood incident contamination response protocols, materials, and equipment are available.
  - o. Water features and amenities are functioning in accordance with the manufacturer's recommendations.
  - p. Fencing/barriers, gates, and self-latching or other locks are tested and are intact and functioning properly, and barriers do not have nearby furniture to encourage climbing.
  - q. Drinking fountains are clean and in functional condition.
  - r. Alarms, if required, are tested and functioning properly.
  - s. Assessing water clarity such that the bottom and objects in the aquatic venue and/or floatation tank are clearly visible.
4. **Imminent Health Hazards** - Any of the following violations are an imminent health hazard that shall require immediate correction or immediate closure of the aquatic venue:
- a. Disinfectant and/or pH outside of operating range.
  - b. Use of unapproved chemicals or the application of chemicals by unapproved methods to the aquatic venue water.
  - c. Failure to continuously operate the aquatic filtration and disinfection equipment.
  - d. Electrical hazards within 20 feet of the inside wall of the aquatic venue.
  - e. Failure to maintain emergency lighting source.
  - f. Failure to provide and maintain an enclosure or barrier to inhibit unauthorized access to the aquatic facility or aquatic venue when required.
  - g. Absence of all required lifesaving equipment on deck.
  - h. Broken, unsecured, or missing main drain grate or any submerged suction outlet grate in the aquatic venue.
  - i. The aquatic venue bottom is not visible.
  - j. Broken glass or sharp objects in the aquatic venue or on the deck area.
  - k. The total absence of or improper depth markings at the aquatic venue.
  - l. Plumbing cross-connections between the drinking water supply and aquatic venue water or between the sewage system and the aquatic venue, including filter backwash facilities.
  - m. Use of an unapproved or contaminated water supply source for potable water use.
  - n. The number of bathers/patrons exceeds the theoretical peak occupancy.

- o. Failure to monitor as required by this regulation (preoperational inspection, testing frequency, etc.).
  - p. When evacuation is deemed by emergency plans.
  - q. Any other item determined to be a public health hazard by the adopting authority.
5. **Reopening After Imminent Health Hazard** -Prior to reopening an aquatic venue after closure due to circumstances requiring immediate closure, a licensed aquatic facility shall verify the item(s) have been corrected and that the aquatic venue meets the applicable criteria of the regulation.
6. **Closed Facility** -If an aquatic venue is not open to the public, the following conditions shall be met to protect health and safety:
- a. For an aquatic venue that has a barrier enclosing it:
    - i. The water shall be recirculated and treated to meet the criteria of this regulation or
    - ii. The water shall be drained or
    - iii. An approved safety cover that is certified, listed, and labeled to ASTM F1346-91 by an ANSI-accredited certification organization shall be installed or
    - iv. Where a safety cover is not used or not practical, access to the aquatic venue shall be restricted, and routine checks of the integrity of the aquatic venue enclosure shall be made.
  - b. For an aquatic venue without a barrier and other parts of the aquatic facility are open to the public:
    - i. The water shall be recirculated and treated to meet the criteria of this regulation, and the aquatic venue shall be staffed to keep bathers out or
    - ii. The water shall be drained, and the aquatic shall be staffed to keep bathers out or
    - iii. A temporary barrier enclosing the aquatic venue shall be installed to keep bathers out, and routine checks of the integrity of the temporary aquatic venue barrier shall be made or
    - iv. An approved safety cover that is certified, listed, and labeled to ASTM F1346-91 by an ANSI-accredited certification organization shall be installed.

**Penalty**

A person may be charged with a misdemeanor under Section 23-35-13 of the North Dakota Century Code (NDCC) if they:

- 1. Violate this ordinance
- 2. Permit a violation to exist on the premises under their control.
- 3. Fail to take action to abate the existence of the violation(s) of this code within a specified time period when notified to do so by UMDHU.

Violations of this code may also be prosecuted under 23-09-19 of the NDCC.

## **Appendix A**

### **Bodily Fluid Contamination Response**

#### **Aquatic Venue Water Contamination Response**

In the event of fecal or vomit contamination in an aquatic venue, the aquatic venue shall be immediately closed to bathers until remediation procedures are complete.

- This closure shall include the affected aquatic venue and other aquatic venues that share the same recirculation system.
- Contaminating material shall be removed (e.g., using a net, scoop, or bucket) and disposed of in a sanitary manner.
- Fecal or vomit contamination of the item used to remove the contamination (e.g., the net or bucket) shall be removed by thorough cleaning followed by disinfection (e.g., after cleaning, leave the net, scoop, or bucket immersed in the POOL during the disinfection procedure prescribed for formed-stool, diarrheal-stool, or vomit contamination, as appropriate).
- Aquatic vacuum cleaners shall not be used for removal of contamination from the water or adjacent surfaces unless vacuum waste is discharged to a sanitary sewer and the vacuum equipment can be adequately disinfected.
- Brominated aquatic venues with formed-stool, diarrheal-stool, or vomit-contamination shall have chlorine added to the aquatic venue in an amount that will increase the free chlorine residual to the level specified for the specific type of contamination for the specified time. The bromine residual shall be adjusted if necessary before reopening the aquatic venue.

#### **Aquatic Venue Water Contamination:**

Aquatic venue water that has been contaminated by feces or vomit shall be treated as follows:

1. Check to ensure that the water's pH is 7.5 or lower and adjust if necessary.
2. Verify and maintain water temperature at 77°F or higher.
3. Operate the filtration/recirculation system while the aquatic venue reaches and maintains the proper free chlorine concentration during the remediation process.
4. Test the chlorine residual at multiple sampling points to ensure the proper free chlorine concentration is achieved throughout the aquatic venue for the entire disinfection time.
5. Use only non-stabilized chlorine products to raise the free chlorine levels during the remediation.
6. Follow the appropriate contamination steps listed below.

#### **Formed-stool Contamination:**

1. Check the free chlorine residual, and then the free chlorine residual shall be raised to 2.0 ppm (if less than 2.0 ppm) and maintained for at least 25 minutes (or an equivalent

time and concentration to reach the CT inactivation value) before reopening the aquatic venue.

In aquatic venue water that contains CYA or a stabilized chlorine product, water shall be treated by doubling the inactivation time above.

Time Measurement of the inactivation time required shall start when the aquatic venue reaches the intended free chlorine level.

**Diarrheal-stool Contamination:**

1. Check the free chlorine residual, and then the free chlorine residual hyperchlorinate shall be raised to 20.0 ppm and maintained for at least 12.75 hours (or an equivalent time and concentration to reach the CT inactivation value) before reopening the aquatic venue.
2. Circulate the water through a secondary disinfection system to theoretically reduce the number of Cryptosporidium oocysts in the aquatic venue below one oocyst/100 mL.

In aquatic venue water that contains CYA or a stabilized chlorine product, water shall be treated by:

1. Hyperchlorination is accomplished by:
  - a. Lowering the CYA concentration to less than or equal to 15 ppm by draining, if necessary.
  - b. Raising the free chlorine residual to 20 ppm for at least 28 hours; 30 ppm for at least 18 hours; or 40 ppm for at least 8.5 hours, which is needed to reach the CT inactivation value.
  - c. Measuring the inactivation time required, which shall start when the aquatic venue reaches the intended free chlorine residual level or
2. Circulating the water through a secondary disinfection system to theoretically reduce the number of Cryptosporidium oocysts in the aquatic venue below one oocyst/100 mL or
3. draining the aquatic venue completely.

**Vomit Contamination:**

1. Check the free chlorine residual, and then the free chlorine residual shall be raised to 2.0 ppm (if less than 2.0 ppm) and maintained for at least 25 minutes (or an equivalent time and concentration to reach the CT inactivation value) before reopening the aquatic venue.

In aquatic venue water that contains CYA or a stabilized chlorine product, water shall be treated by doubling the inactivation time above.

Time Measurement of the inactivation time required shall start when the aquatic venue reaches the intended free chlorine level.

### **Blood Contamination**

Blood contamination of a properly maintained aquatic venue's water does not pose a public health risk to swimmers.

Operators may choose whether or not to close the aquatic venue and treat it as a formed stool contamination to satisfy PATRON concerns.

### **Aquatic Facility Surface Contamination:**

If a bodily fluid, such as feces, vomit, or blood, has contaminated a surface in an aquatic facility, facility staff shall limit access to the affected area until remediation procedures have been completed.

1. Clean the surface before disinfection; all visible contaminants shall be cleaned and removed with disposable cleaning products effective with regard to the type of contaminant present, the type of surface to be cleaned, and the location within the facility.
  - a. Contaminants removed by cleaning shall be disposed of in a sanitary manner or as required by law.
2. Contaminated surfaces shall be disinfected with one of the following disinfection solutions:
  - a. A 1:10 dilution of fresh household bleach with water; or
  - b. An equivalent EPA-registered disinfectant that has been approved for body fluids disinfection.
3. The disinfectant shall be left to soak on the affected area for a minimum of 20 minutes or as otherwise indicated on the disinfectant label directions.
4. Disinfectants shall be removed by cleaning and shall be disposed of in a sanitary manner or as required by local regulation.

## Appendix B

### Legionella Contamination Response

For remediation and testing of aquatic venues suspected of being contaminated with Legionella, the following steps shall be taken:

1. Close the spa tub to bathers immediately, and shut down the hydrotherapy jets and circulation pumps, but do not drain the water.
2. Contact the state or local public health agency having jurisdiction for information about laboratory testing for Legionella. If the health department determines that laboratory testing is needed, water and biofilm samples should be taken from the spa tub, hydrotherapy jets, drain, and filters/filter media to test for Legionella by culture before taking the steps below. Sampling and laboratory testing are complicated and should always be done in collaboration with state or local public health agency and a laboratory with Legionella testing expertise.
3. Proceed as directed below after samples have been taken; it is not necessary to wait for laboratory test results. However, the spa should not be reopened to bathers until all test results are negative for Legionella.
4. Scrub vigorously all spa surfaces, skimming devices, and circulation components with free chlorine at a minimum concentration of 5 ppm to remove any biofilm or slime. After scrubbing, rinse the spa with clean water and flush to waste.
5. Drain all water from the spa. Dispose of the water to waste or as directed by the local regulatory authority.
6. Replace filters (for cartridge or DE filters) or filter media (for sand filters). Bag these filters and dispose of as normal solid waste.
7. Inspect the spa thoroughly for any broken or poorly functioning components such as valves, sensors, tubing, or disinfectant feeders. Make any needed repairs.
8. Refill the spa with clean water.
9. Hyperchlorinate using 20 ppm free chlorine.
  - a. Keep the hydrotherapy jets off and let the hyperchlorinated water circulate for 1 hour in all of the components of the spa, including the compensation/surge tank, filter housing, and piping.
  - b. Turn on the hydrotherapy jets to circulate the hyperchlorinated water for 9 additional hours. Ensure that 20 ppm of free chlorine is maintained in the system for the entire 10 hours.
10. Flush the entire system to remove the hyperchlorinated water from all equipment prior to repeat sampling.
11. Take repeat samples for culture-based laboratory testing to confirm that Legionella has been eliminated. Water and biofilm samples should be taken from the spa tub, hydrotherapy jets, drain, filters/filter media, and any part of the spa that originally tested positive for Legionella.

12. Keep the spa closed to the bather until this repeat testing has confirmed the elimination of Legionella.

- a. If laboratory testing is positive for Legionella, repeat steps 4–11 until all testing is negative for Legionella. When all tests are negative, the spa can be reopened to bathers.

13. Ensure that halogen (chlorine or bromine) and pH levels meet local requirements before opening the spa to bathers. Maintain water quality according to local requirements.

If the spa is associated with an outbreak, the following continued laboratory testing schedule shall be conducted: conduct culture-based testing every 2 weeks for 3 months, then every month for 3 months to ensure complete elimination of Legionella. If at any time during this laboratory testing schedule, Legionella is found, disinfect again and start the testing schedule over. For aquatic venues that continue to grow Legionella, consider hiring a consultant with expertise in Legionella.

**Appendix C**

## Body Fluid Contamination Response Log

<b>Person Carrying out Contamination Response</b>		Supervisor on Duty				
Date (mm/dd/yyyy) of Incident Response		Time of Incident Response		Number of People in Water		
Water Feature or Area Contaminated						
Specify Type/Form of Contamination	Formed stool    Diarrhea    Vomit    Blood					
Stabilizer Used in Water?	_____ YES          _____ NO					
<b>Water Quality Measurements</b>	<i>Taken 6 times during DISINFECTION (once every _____ minutes)</i>					
	Closure	1	2	3	4	Prior to Reopening
Time at Measurements						
Free Residual CHLORINE						
PH						
<b>Date (mm/dd/yyyy) that Water Feature was Reopened</b>			Time that Water Feature was Reopened			
Total Contact Time <small>(Time from when disinfectant reached target level to when disinfectant levels were reduced prior to opening)</small>	<b>From _____ To _____</b> <b>Total Time Lapse _____</b>					
<b>Remediation Procedure(s) Used and Comments/Notes</b>						

## Appendix D

**Illness Injury and Lifeguard Rescue Incident Reports** -The aquatic facility shall ensure that a record is made of all injuries, illness incidents and lifeguard rescues at the aquatic facility, which:

1. Results in deaths.
2. Requires resuscitation, CPR, oxygen, or AED use.
3. Requires transportation of the patron to a medical facility.
4. Is a patron illness or disease outbreak associated with water quality.
5. Aquatic facilities requiring lifeguards shall also record all lifeguard rescues where the lifeguard enters the water and activates the aquatic Emergency Response Plan.

Should a reportable incident occur, complete the form, attach any additional documentation, and submit it within 24 hours of the occurrence of an incident recorded to Upper Missouri District Health Unit. Environmental Health Department, by:

Mail: 110 W Brdwy Ste 101, Williston ND 58801

Please use one form for each injured party.

Questions should be directed to Upper Missouri District Health Unit, Environmental Health Department 701-774-6400

FACILITY INFORMATION			
Facility Name:	Facility Address:		
City:	State:	ZIP:	Facility Phone:
DESCRIPTION OF RESCUED?ILL/INJURED PERSON			
Name:		Address:	
Designation of person: <input type="checkbox"/> Employee <input type="checkbox"/> Patron <input type="checkbox"/> Other- Specify: _____			
DESCRIPTION OF INCIDENT			
Incident Date: (mm/dd/yyyy)	Time of Day: _ : _ : _ <input type="checkbox"/> AM <input type="checkbox"/> PM	Location of Incident (pool, spa, deck etc.)	
How did the Incident Occur? (Attach additional sheets if needed):			
Actions Taken and Equipment Used: (Attach additional sheets if needed):			
Result of Incident: <input type="checkbox"/> No treatment necessary <input type="checkbox"/> Emergency Personnel Contacted			
DESCRIPTION OF INJURY			
If Injury Includes Submersion: <input type="checkbox"/> Suffocation/Drowning <input type="checkbox"/> Near Drowning <input type="checkbox"/> Water Rescue <input type="checkbox"/> Other- Specify: _____			
Type of Injury: <input type="checkbox"/> Burn <input type="checkbox"/> Concussion <input type="checkbox"/> Cut/Puncture <input type="checkbox"/> Sprain <input type="checkbox"/> Fracture <input type="checkbox"/> Spinal <input type="checkbox"/> Other- Specify: _____			
Area injured: <input type="checkbox"/> Arm/Shoulder <input type="checkbox"/> Back <input type="checkbox"/> Face/Eyes <input type="checkbox"/> Foot/Ankle <input type="checkbox"/> Hand/Wrist <input type="checkbox"/> Head/Neck <input type="checkbox"/> Leg/Hip/Knee <input type="checkbox"/> Respiratory System <input type="checkbox"/> Trunk/Torso <input type="checkbox"/> Other- Specify: _____			
DESCRIPTION OF ILLNESS			
Date of Onset of Symptoms (mm/dd/yyyy):		Date Visited Aquatic Facility (mm/dd/yyyy):	
Symptoms (check all that apply): <input type="checkbox"/> Cramps <input type="checkbox"/> Diarrhea ( ≥ 3 stools/Day) <input type="checkbox"/> Visible Blood in Stool <input type="checkbox"/> Ear Infection <input type="checkbox"/> Fever <input type="checkbox"/> Nausea <input type="checkbox"/> Respiratory Symptoms <input type="checkbox"/> Strep Throat <input type="checkbox"/> Rash <input type="checkbox"/> Vomiting <input type="checkbox"/> Other- Specify: _____			
STAFF RESPONDING TO THE INCIDENT (Attach additional sheets if needed):			

Name:	Position:
Name:	Position:

Appendix E

<p><b>EMERGENCY CONTACT PHONE NUMBERS</b></p>	<p>Emergency Response: <b>911</b></p>	<p>Fire Department:</p>	<p>Police Department:</p>	<p>Additional Numbers:</p>
<p><b>LOCATION OF RESCUE EQUIPMENT</b></p>	<p>First Aid Kit:</p> <p>Reaching Pole:</p> <p>Aquatic Rescue Throwing Device:</p> <p>Backboard:</p> <p>AED:</p>			
<p><b>IMMINENT HEALTH HAZARDS:</b></p> <ul style="list-style-type: none"> <li>• Disinfectant and/or pH outside of operating range.</li> <li>• Use of unapproved chemicals or the application of chemicals by unapproved methods to the aquatic venue water.</li> <li>• Failure to continuously operate the aquatic filtration and disinfection equipment.</li> <li>• Electrical hazards within 20 feet of the inside wall of the aquatic venue.</li> <li>• Failure to maintain emergency lighting source.</li> <li>• Failure to provide and maintain an enclosure or barrier to inhibit unauthorized access to the aquatic facility or aquatic venue when required.</li> <li>• Absence of all required lifesaving equipment on deck.</li> <li>• Broken, unsecured, or missing main drain grate or any submerged suction outlet grate in the aquatic venue.</li> <li>• Aquatic venue bottom not visible.</li> <li>• Broken glass or sharp objects in the aquatic venue or on the deck area.</li> <li>• Total absence of or improper depth markings at the aquatic venue.</li> <li>• Plumbing cross-connections between the drinking water supply and aquatic venue water or between the sewage system and the aquatic venue, including filter backwash facilities.</li> <li>• Use of an unapproved or contaminated water supply source for potable water use.</li> <li>• Number of bathers/patrons exceeds the theoretical peak occupancy.</li> <li>• Failure to monitor as required by this regulation (preoperational inspection, testing frequency, etc.).</li> <li>• When evacuation is deemed by emergency plans.</li> <li>• Any other item determined to be a public health hazard by the adopting authority</li> </ul>				

**ACTIONS TAKEN IN CASE OF (Including Facility Closure and Evacuation)**

\*Attach additional sheet(s) if needed\*

- Drowning:
  
  
  
  
  
  
  
  
  
  
- Serious Illness/Injury:
  
  
  
  
  
  
  
  
  
  
- Inclement/Dangerous Weather
  
  
  
  
  
  
  
  
  
  
- Accidental Chemical Release
  
  
  
  
  
  
  
  
  
  
- Other Serious Incidents/Conditions:

**CHEMICAL SAFETY**

List of chemicals and location:

Location of Chemical Safety Data Sheets:

**REOPENING AFTER EMERGENCY CLOSURE:**

- Prior to reopening an aquatic venue after closure due to circumstances requiring facility closure, a licensed aquatic facility shall verify that the item(s) have been corrected and that the aquatic venue meets the applicable criteria of the regulation

**\*ATTACH DIAGRAM OF FACILITY WITH EMERGENCY EXITS MARKED\***

## **Appendix F**

### **BREAKPOINT CHLORINATION**

STEP 1: TOTAL CHLORINE – FREE CHLORINE = COMBINED CHLORINE

STEP 2: COMBINED CHLORINE X 10 = AMOUNT NEEDED TO REACH  
BREAKPOINT

STEP 3: USE THE FORMULA:

Amount of chemical Your pool volume (gallons) Desired change Total  
(See Appendix D)  
/ 10,000 =  
(amnt) x x (ppm) = Amnt

Go to appendix D and find the type of chemical that you are using. From the chart, get the number used to treat 10,000 gallons of water. Enter this number in the spot for amount of chemical.

Divide the total number of gallons of your pool by 10,000. This number goes in the spot for your pool volume.

Multiply the combined chlorine number times 10. This number goes into the spot for desired change.

Multiply the numbers you got for amount of chemical times your pool volume times desired change to get the amount of chemical that you need to add to your pool to achieve breakpoint chlorination.

## **Appendix G**

### **WATER BALANCE RANGES**

**TOTAL ALKALINITY:** a measure of resistance to change in pH

Acceptable range: 60-150 ppm

Ideal range: 80-120 ppm

If using calcium hypochlorite, sodium hypochlorite or lithium hypochlorite-alkalinity should be 80-100ppm

If using gas chlorine, dichlor or trichlor- alkalinity should be 100-120 ppm

**pH:** a measure of acidity

Acceptable range: 7.0-7.8

Ideal range: 7.4-7.6

**CALCIUM HARDNESS:** a measure of calcium ions in water

Acceptable range: 150-1000 ppm

Ideal range: 200-400 ppm

### **TEMPERATURE:**

Pools: Competition: 78-80

Recreation: 82-84

Special Populations: 86-88

Spas: Not to exceed 105

**TOTAL DISSOLVED SOLIDS:** a measure of all minerals dissolved in the water.

Not adjustable, other than by draining off water and adding fresh water.

## Appendix H

### AMOUNT OF CHEMICAL NEEDED TO TREAT 10,000 GALLONS OF WATER

#### TO INCREASE FREE AVAILABLE CHLORINE 1 PPM:

Chlorine gas 1.3 oz  
Calcium hypochlorite 2 oz  
Sodium hypochlorite 13 fl oz  
Lithium hypochlorite 10.5 oz  
Dichlor 2.5 oz  
Trichlor 1.5 oz

#### TO INCREASE TOTAL ALKALINITY 10 PPM:

Sodium bicarbonate 1.5 lbs

#### TO DECREASE TOTAL ALKALINITY 10 PPM:

Muriatic acid 21.12 fl oz (2/3 qt)  
Dry acid (sodium bisulfate) 1.5 lbs

#### TO INCREASE pH FROM 7.2-7.4:

Soda ash 6 oz

#### TO DECREASE pH FROM 7.8-7.6:

Muriatic acid 12 fl oz

#### TO INCREASE CALCIUM HARDNESS 10 PPM:

Calcium chloride (100%) 1 lb  
Calcium chloride (77%) 1.25 lb

#### TO NEUTRALIZE 1 PPM OF FREE AVAILABLE CHLORINE:

Sodium thiosulfate 1 oz  
Sodium sulfate 3.25 oz

**MODEL DIVING BOARD RULES:**

1. USE THE DIVING BOARD ONLY UNDER THE DIRECT SUPERVISION OF A COACH OR LIFEGUARD.
2. DIVE OR JUMP ONLY IN A STRAIGHT LINE FROM THE END OF THE EQUIPMENT.
3. SWIM TO THE CLOSEST POOL EXIT OR WALL IMMEDIATELY AFTER COMPLETION OF THE DIVE.
4. LOOK BEFORE DIVING TO ENSURE THAT THE AREA IS CLEAR.
5. ONLY ONE PERSON ON THE DIVING BOARD AT A TIME.
6. NO MULTIPLE BOUNCES ALLOWED.
7. THE LADDER IS THE ONLY MEANS ALLOWED FOR MOUNTING THE EQUIPMENT.

**MODEL SPA WARNING SIGN:**

1. ELDERLY PERSONS, AND THOSE SUFFERING FROM HEART DISEASE, DIABETES, HIGH OR LOW BLOOD PRESSURE ARE PROHIBITED FROM USING THIS SPA.
2. UNSUPERVISED USE BY CHILDREN IS PROHIBITED.
3. DO NOT USE SPA WHILE UNDER THE INFLUENCE OF ALCOHOL, ANTICOAGULANTS, ANTIHISTAMINES, VASOCONSTRICTORS, VASODILATORS, STIMULANTS, HYPNOTICS, NARCOTICS OR TRANQUILIZERS.
4. DO NOT USE ALONE.
5. DO NOT USE FOR LONGER THAN 15 MINUTES AT A TIME.

**MODEL POOL RULES:**

1. NO FOOD, DRUGS OR ALCOHOLIC BEVERAGES ALLOWED.
2. NO GLASS CONTAINERS.
3. NO DIVING OR JUMPING FROM DECK INTO DIVING AREA (IF DIVING BOARDS PRESENT).
4. DIVING ALLOWED ONLY IN DESIGNATED AREAS.
5. NO HORSEPLAY, RUNNING, SHOVING, OR DUNKING.
6. NO ELECTRICAL APPLIANCES ALLOWED.
7. NO SWIMMING IF YOU HAVE ANY COMMUNICABLE ILLNESS, DIARRHEA (in the last 14 days), VOMITING, NASAL OR ORAL DISCHARGES OR SKIN

RASHES.

8. ALL BATHERS MUST SHOWER BEFORE ENTERING POOL.

9. SWIM DIAPERS REQUIRED FOR ALL CHILDREN THAT ARE NOT POTTY TRAINED AND FOR ANY OTHER INDIVIDUALS THAT MAY BE INCONTINENT.

10. ENCOURAGE CHILDREN TO TAKE REGULAR BATHROOM BREAKS.

11. NO CHANGING DIAPERS IN POOL AREA.

### **GUIDELINES FOR POOL CLOSURE:**

It should be understood that pool closure is not solely the responsibility of the regulatory authority. Pool operators need to be aware of an unsafe environment and take necessary measures to ensure swimmer safety. It is more appropriate for the pool operator to close the pool themselves (and inform the Upper Missouri District Health Unit) than for the health inspector to receive a complaint or find serious violations during a routine inspection. Pool closure is required if:

1. There is no circulation or filtration
2. There is insufficient/excessive disinfectant or the pool fails to meet other chemical standards.
3. Water clarity is lacking and the pool bottom is not visible from the pool deck.
4. The bottom drain plate/grate is not in place, secure, or is broken.
5. An unsafe condition is present, such as a broken/exposed electrical pool light, fecal release in the water, or a temporary chlorine leak.
6. Water temperature is over 104 F
7. If the bacteriological sample is unsatisfactory.

### **QUESTIONS?**

**Feel free to call the Environmental Health Practitioner with your questions.**

**Upper Missouri District Health Unit  
110 West Broadway, Suite 101  
Williston, ND 58801  
(701) 774-6400  
(toll free) 877-572-3763**



