CHAPTER 19

Bungee Jumping

**SECTION 52‑19‑10.** Intent of act.

 This chapter is intended to specify and give guidance as to the site and site approval, testing of equipment, the management of the operation, the operating procedures, and the provisions and emergency procedures relating to bungee operations in this State.

HISTORY: 1994 Act No. 408, Section 1, eff 60 days after May 24, 1994.

**SECTION 52‑19‑20.** “Bungee jumping” defined; each bungee operation considered a new device.

 (A) For purposes of this chapter, the term “ bungee jumping” includes and refers to the sport, activity, or practice of jumping, stepping out, dropping, or otherwise being released into the air while attached or fastened to a cord made of rubber, latex, or other elastic‑type material, whether natural or synthetic, whereby the cord, stops the fall, lengthens and shortens, allows the person to bounce up and down, and is intended to finally bring the person to a stop at a point above the surface.

 (B) Each bungee operation must be considered a new device.

HISTORY: 1994 Act No. 408, Section 2, eff 60 days after May 24, 1994; 2001 Act No. 36, Section 1, eff May 29, 2001; 2005 Act No. 60, Section 3, eff upon approval (became law without the Governor’s signature on May 18, 2005).

Effect of Amendment

The 2001 amendment in subsection (A), inserted references to “wire rope or cable or springs or other devices similar in design or use” in two places.

The 2005 amendment, in subsection (A), deleted “or wire rope or cable or springs or other devices similar in design or use,” preceding and following “whereby the cord”.

**SECTION 52‑19‑30.** Prohibited acts.

 (A) The practice of bungee jumping from a device other than a fixed platform is prohibited in this State.

 (B) The practice of bungee jumping using an ankle harness is prohibited in this State.

 (C) The practice of pre‑stretching and releasing bungee cords for the purpose of catapulting jumpers is prohibited in this State.

 (D) The practice of bungee jumping over water, sand, or any surface other than a safety air bag is prohibited in this State.

 (E) The practice of tandem or multiple bungee jumping is prohibited in this State.

 (F) The practice of sandbagging is prohibited in this State. For purposes of this chapter, “sandbagging” means the practice of holding onto any object (including another person) while bungee jumping, for the purpose of exerting more force on the bungee cord in order to stretch it further, and then releasing the object during the jump causing the jumper to rebound with more force than could be created by the jumper’s weight alone.

 (G) The use of any mechanical lifting device in conjunction with bungee jumping is prohibited.

HISTORY: 1994 Act No. 408, Section 3, eff 60 days after May 24, 1994.

**SECTION 52‑19‑40.** Fines and penalties; operation after permit suspended or revoked, or after stop operation order or imminent danger order issued, prohibited.

 (A) Upon violation of any provision of this chapter, the department, as defined in this chapter, may, in its discretion, impose fines and penalties on the owner or may suspend, revoke, or otherwise restrict the operation’s permit.

 (B) No person may operate a bungee jump operation in this State if the department has suspended or revoked the operation’s permit. No person may operate a bungee jump operation in this State if the department has issued a stop operation order or imminent danger order prohibiting the operation of that bungee operation. Any person who violates this section is subject to the penalties and remedies provided by law.

HISTORY: 1994 Act No. 408, Section 4, eff 60 days after May 24, 1994.

**SECTION 52‑19‑50.** Definitions.

 The following definitions are applicable for the purposes of this chapter:

 (1) “Air bag” means a device which cradles the body and which uses an air release breather system to dissipate the energy due to a fall, thereby allowing the person to land without an abrupt stop or bounce.

 (2) “Binding of cord” means material used to hold the cord threads in place and which can also protect the cord threads from damage.

 (3) “Breaking load” means the stress or tension steadily applied and just sufficient to break or rupture.

 (4) “Bumper” means a padded sleeve or covering on the bungee cord and connecting straps or devices to prevent the jumper from contacting or becoming entangled in the bungee cord or connecting straps or devices.

 (5) “Bungee catapulting” or “reverse bungee jumping” means the sport, activity, or practice whereby a person or safety car is either attached to a single bungee cord or to more than one bungee cord, or to a wire rope or cable or spring that is in any manner attached to a bungee cord whereby the bungee cord is stretched and then released, thus catapulting or otherwise launching the jumper or passenger into the air from a fixed position. Bungee catapulting is prohibited in this State.

 (6) “Bungee cord” means the elastic cord made of rubber, latex, or other elastic‑type materials, whether natural or synthetic, to which the jumper is attached. Such cord lengthens and shortens and thus produces a bouncing action.

 (7) “Bungee jumping” means the sport, activity, or other practice of jumping, diving, stepping out, dropping, or otherwise being released into the air while attached or fastened to a bungee cord or wire rope or cable or springs or other devices similar in design or use, whereby the cord, wire rope, cable, spring, or other devices similar in design or use stops the fall, lengthens and shortens, allows the person to bounce or jump up and down, and is intended to finally bring the person to a stop at a point above the landing surface.

 (8) “Carabineer” means a shaped metal or alloy device used to connect sections of the jump, equipment, or safety gear.

 (9) “Cord” means the same as “bungee cord”.

 (10) “Dynamic loading” means the load placed on the attachments by the initial free fall of the jumper and the bouncing movements of the jumper.

 (11) “Equipment” means each component which is utilized in a bungee jump operation, including power or manually operated devices to raise, lower, and hold loads.

 (12) “Fence” means a permanent or temporary structure designed and constructed to restrict people, animals, and objects from entering the designated bungee jumping area.

 (13) “Incident” means an event that could or does result in:

 (a) injury to a person,

 (b) damage to equipment, or

 (c) the interruption or stopping of bungee jumping operations.

 (14) “Jump area” means the maximum area in all directions designed for the movement of the jumper.

 (15) “Jump crew” means all personnel who assist the jump master in preparing a jumper for jumping.

 (16) “Jump direction” means the direction in which a jumper is aimed when jumping from the jump point.

 (17) “Jump height” means the distance from where the jumper begins to fall to the bottom of the jump zone.

 (18) “Jump master” means a person who has responsibility for the bungee jumping operation, and including a person who takes a jumper through the final stages to the actual jump and who operates the lowering system whereby the jumper is lowered to the landing pad.

 (19) “Jump operator” means a person who assists the jump master in preparing a jumper for jumping.

 (20) “Jump point” means the position from which the jumper falls or begins to fall.

 (21) “Jump space” means the jump zone plus the safety space.

 (22) “Jump zone” means the space bounded by the maximum designed movements of the jumper or any part of the jumper.

 (23) “Jumper” means the person who falls from a height attached to a bungee cord.

 (24) “Jumper harness” means an assembly to be worn by a jumper and to be attached to a bungee cord. Such harness is designed to prevent the jumper from becoming detached from the bungee cord.

 (25) “Jumper weight” means the weight of the jumper only.

 (26) “Landing area” means the surface area directly under the jump space.

 (27) “Landing pad” means the padded area on which the jumper is off‑loaded after jumping by means of the lowering appliance or equipment.

 (28) “Lateral direction” means the movement of the jumper measured at 90 degrees to the designed jump direction.

 (29) “Loaded length” means the length of the bungee cord when extended to its fullest designed length when jumping.

 (30) “Lowering system” means the lowering system is a combination of components that connects the jumper through the bungee cord to an attachment point on the structure. The system includes, but is not limited to, ropes, cables, pulleys, carabineers, shackles, and lowering equipment.

 (31) “Operating system” means the system of processing a jumper through the jump methods used on a particular site, including registration, preparation, getting to the jump point, methods of attachment, jumping, lowering system, and the landing recovery method.

 (32) “Operations manual” means the document that contains the procedures and forms for the operation of the bungee jumping activity and equipment on the stated site.

 (33) “Owner” means the person who owns or operates or both owns and operates, a bungee jumping operation, or the lessee if a bungee jumping operation or any of its component parts are leased.

 (34) “Permanent platform” means the apparatus attached to a fixed structure from which the jumper falls or jumps.

 (35) “Preparation area” means the area where the jumper is prepared for jumping. It is a separate area on the ground, the support structure, or part of the platform.

 (36) “Professional mechanical engineer” means a person who holds a valid license as a professional engineer.

 (37) “Recovery area” means an area adjacent to the landing area where the jumper may recover from the jump before returning to the public area.

 (38) “Safe working load” (SWL) means the maximum rated load which can be safely handled under specified conditions by a machine, equipment, or component of the rigging.

 (39) “Safety factor” means the ratio obtained by dividing the breaking load of any piece of equipment by its safe working load.

 (40) “Safety harness” means an assembly to be worn by a staff member or jumper. It is designed to be attached to a safety line and to prevent the wearer from becoming detached from the safety line.

 (41) “Safety line” means a line used to connect the safety harness or belt to an anchorage point or rail in situations where there is a risk of free fall.

 (42) “Safety space” means the space extending beyond the jump zone as a safety factor, that is, the space beyond the maximum designed movements of the jumper.

 (43) “Structure” means a permanent tower or similar erection that is used, or proposed to be used, for bungee jumping.

 (44) “Testing authority” means an organization acceptable to the department for the purpose of testing the performance of bungee cords, equipment, and structure.

 (45) “Thread” means a single strand of material used in a bungee cord which is constructed of a varying number of threads.

 (46) “Unloaded length” means the length of the bungee cord lying on a horizontal flat surface without load or stress applied.

 (47) “Department” means the Department of Labor, Licensing, and Regulation of the State of South Carolina.

 (48) “Director” means the director of the Department of Labor, Licensing, and Regulation or the director’s designee.

 (49) “Bungee jumping facility” means an establishment where bungee jumping is performed.

 (50) “Webbing” means a flat, tubular, mountaineering material sewn into double or triple loops used as an attachment on bungee cords.

 (51) “Tape knot” means a knot designed for attachment.

 (52) “Serious injury” means an injury that requires medical treatment, other than first aid, by a physician. “First aid” means the one‑time treatment or subsequent observation of scratches, cuts not requiring stitches, minor burns, splinters, and contusions or a diagnostic procedure, including examinations and x‑rays, which do not ordinarily require medical treatment even though provided by a physician or other licensed professional personnel.

HISTORY: 1994 Act No. 408, Section 5, eff 60 days after May 24, 1994; 2001 Act No. 36, Sections 2, eff May 29, 2001; 2005 Act No. 60, Section 4, eff upon approval (became law without the Governor’s signature on May 18, 2005).

Effect of Amendment

The 2001 amendment inserted references to “wire rope or cable or springs or other devices similar in design or use” in paragraphs (5) and (7), and in paragraph (7) inserted “or fastened” and inserted “or jump” preceding “up and down”.

The 2005 amendment rewrote item (5) defining bungee catapulting or reverse bungee jumping.

**SECTION 52‑19‑60.** Permit required; requirements for ownership, operation; applications; reports; fees; periodic inspections.

 (A) It is unlawful for any person to own or operate a bungee jump facility in this State without first having obtained a permit from the department.

 (B) Any person desiring to own or operate a bungee jump facility in this State shall file with the department an application in writing on a form approved by the department accompanied by the appropriate fee. Such application shall also include the following:

 (1) a site operation manual which includes criteria for planned inspections by the operator;

 (2) a report which contains site plans, drawings, specifications of equipment and structures, equipment locations, safety zones, safety space, fences, jump zones, and jump space;

 (3) proof of insurance coverage meeting the requirements set forth in this chapter;

 (4) a licensed mechanical engineer’s report certifying that the design and construction of the structures, equipment, access ways, and operating areas meet the requirements of:

 (a) regulations promulgated pursuant to this chapter,

 (b) any applicable local laws, codes, or ordinances,

 (c) the American Society of Testing and Materials (ASTM) Committee F‑24 Standards on Amusement Rides and Devices, fourth edition, 1992 (which is adopted and incorporated in this chapter by reference and copies of which may be obtained from ASTM, 1916 Race Street, Philadelphia, PA 19103), and

 (d) other applicable government codes, which are certified by the engineer to be suitable for a bungee jumping operation.

 (C) An owner or operator must also submit a revised report to the department for approval prior to substantially rebuilding, or substantially modifying, a bungee jump facility.

 (D) The department is authorized to charge the following temporary fees until permanent fees are established by regulation:

 (1) an initial permit fee of seven hundred dollars;

 (2) an annual renewal fee of four hundred fifty dollars;

 (3) a report revision fee of two hundred fifty dollars.

 (E) In order to carry out the provisions of this chapter, the department shall retain such fees and other funds as may come into its possession pursuant to this chapter.

 (F) The department must conduct on‑site inspections of each permitted bungee jump facility at least once annually and must also conduct at least two unannounced on‑site inspections per year. The inspections may be conducted by department personnel or by independent engineers on an independent contractor basis.

HISTORY: 1994 Act No. 408, Section 6, eff 60 days after May 24, 1994.

NOTES OF DECISIONS

In general 1

1. In general

Amusement Rides Safety Code created “special duty” on part of state Department of Labor, Licensing, and Regulation, and thus, survivors and estates of bungee jumpers who were killed when steel cage in which they were riding fell had private cause of action against Department for failing to investigate bungee device or to suspend its license after receiving troubling reports; essential purpose of Code was to protect against harm caused by poorly designed, constructed, or maintained amusement rides, Code directly imposed on Department duty to guard against or not cause harm to amusement park visitors and workers, riders and workers at specific hazardous amusement ride were readily identifiable before fact of injury, victims were within protected class, Department officials testified that they would have shut down device if they had known about substantial modifications made by its owner, and Department had sufficient authority to act in circumstances presented. Steinke v. South Carolina Dept. of Labor, Licensing and Regulation (S.C. 1999) 336 S.C. 373, 520 S.E.2d 142, rehearing denied. States 112.2(2)

Even though statutes regulating bungee jumping became effective after fatal accident involving mechanical device used to lift bungee jumpers, state Department of Labor, Licensing, and Regulation could be liable under licensing powers exception to the state Tort Claims Act for failing to investigate after receiving three credible post‑licensing reports of suspected problem with or modifications to that device; action pertained to modifications of device—which Department had licensed as amusement device—not to actual jumps that were made. Steinke v. South Carolina Dept. of Labor, Licensing and Regulation (S.C. 1999) 336 S.C. 373, 520 S.E.2d 142, rehearing denied. States 112.2(2)

**SECTION 52‑19‑70.** Insurance; proof of insurance.

 Before the department may issue a permit to the owner or lessee of a bungee jumping facility, the owner or lessee of the facility shall furnish the department with proof that he has purchased insurance from an acceptable insurer in an amount of not less than one million dollars per occurrence against liability for injury to persons arising out of the use of the facility and that the policy of liability is in effect. The amount of the deductible provision in the policy of insurance is dependent upon the owner’s or the lessee’s proof of financial responsibility and must be established on a case‑by‑case basis. For purposes of this section, an acceptable insurer for a facility is an insurer which is either licensed and in good standing by the Chief Insurance Commissioner of South Carolina or approved by the Chief Insurance Commissioner as an eligible surplus lines insurer for risks located in this State. Each policy, by its original terms or an endorsement, shall obligate the insurer to give the department thirty days written notice of any proposed cancellation, suspension, or nonrenewal and a complete report of the reasons for the cancellation, suspension, or nonrenewal. In the event the liability insurance is canceled, suspended, or nonrenewed, the insurer shall give immediate written notice to the department. This section may not be construed to expand any of the rights granted the employees of the owners, operators, or lessees under the workers’ compensation laws of this State.

HISTORY: 1994 Act No. 408, Section 7, eff 60 days after May 24, 1994.

**SECTION 52‑19‑80.** Jump master required; adjustments for each jumper’s weight.

 (A) The owner must allow bungee jumps to be conducted only under the direct control of a jump master.

 (B) Adjustments for the weight of each jumper must be made by the jump master’s selection of bungee cords and setting on the lowering equipment.

HISTORY: 1994 Act No. 408, Section 8, eff 60 days after May 24, 1994.

**SECTION 52‑19‑90.** Consent of parent, guardian; disclosure of medical conditions; intoxicated jumper or jumper who poses danger.

 (A) The owner must secure the consent of a parent or guardian for any jumper who is under the age of sixteen. The parent or guardian must be over eighteen years old and must sign an authorization stating he or she is the jumper’s parent or guardian and is consenting to the bungee jump. The authorization must be permanently retained by the owner with the daily log.

 (B) The owner must disclose to each jumper all medical conditions which may be adversely affected by jumping. The owner must make disclosure, at a minimum, with respect to the following medical conditions:

 (1) pregnancy;

 (2) back or neck injury;

 (3) heart condition;

 (4) broken bone.

 (C) Any jumper who, in the opinion of the bungee staff, represents a danger to himself or others shall not be allowed to jump.

 (D) Jumpers in an intoxicated state shall not be allowed to jump.

HISTORY: 1994 Act No. 408, Section 9, eff 60 days after May 24, 1994.

**SECTION 52‑19‑100.** Platform; preparation place; gate; cord connections; indication of maximum platform capacity.

 (A) The permanent platform must be operated with a minimum safe working load (SWL) reflecting a safety factor of not less than 5, as determined by the maximum load for which the platform is designed and constructed. If the jump equipment is attached to the platform as distinct from the structure, the dynamic load factor must be added to the platform load factor.

 (B) Where the platform is not an integral part of the structure, the attachment devices and the part of the structure to which they are attached must have a minimum safety factor of at least 5 over the total design load.

 (C) The platform must have a slip resistant floor surface.

 (D) The platform must have sufficient working space for a minimum of three people.

 (E) The platform must have anchor points or rails for safety harnesses which are designed and positioned so as not to impede the jump operator’s movements.

 (F) The platform must be fitted with a permanent enclosure to contain the jumper during preparation.

 (G) The jumpers must be prepared for jumping in a place separated from the jump point.

 (H) There must be a gate across the jump point to prevent accidental opening when there is not a jumper present on the jump point.

 (I) The top of all bungee cords on the platform must be securely attached to the lowering system before each jumper is prepared for jumping and before jumping occurs. All cord connections must be visible to the jump master and checked before each jump.

 (J) There must be a plate or permanent marking on each platform indicating the maximum capacity of the platform.

HISTORY: 1994 Act No. 408, Section 10, eff 60 days after May 24, 1994.

**SECTION 52‑19‑110.** Jump point, maximum eighty foot drop.

 The jump point shall be no higher than eighty feet above the landing area.

HISTORY: 1994 Act No. 408, Section 11, eff 60 days after May 24, 1994.

**SECTION 52‑19‑120.** Safety air bag.

 (A) The owner must provide a safety air bag for each bungee jump. The safety air bag must cover the entire surface area of the jump space. A professional mechanical engineer must certify the height, width, and length of the safety air bag for the height of each bungee jump.

 (B) The safety air bag height must be certified or rated by the air bag manufacturer for the height of the bungee jump.

HISTORY: 1994 Act No. 408, Section 12, eff 60 days after May 24, 1994.

**SECTION 52‑19‑130.** Landing area; recovery area; jump space; landing pad.

 The owner must comply with the following as to the landing area, recovery area, and jump space:

 (1) these areas must be free of spectators at all times;

 (2) these areas must be free of any equipment or staff when a jumper is being prepared on the jump point and until the bungee cord is at its static extended state;

 (3) the off‑loading landing pad or air bag must be positioned before jumper preparation commences on the platform;

 (4) the landing pad must be a clean, smooth, padded surface.

HISTORY: 1994 Act No. 408, Section 13, eff 60 days after May 24, 1994.

**SECTION 52‑19‑140.** System for lowering jumper to landing pad; person to monitor lowering.

 The owner must provide a system for lowering the jumper to the landing pad which must be a mechanically powered system not capable of free fall and operated by the jump master. The owner must also provide a second person to monitor the lowering of all jumpers who must be capable of stopping the process if necessary to avoid injuries to the jumper.

HISTORY: 1994 Act No. 408, Section 14, eff 60 days after May 24, 1994.

**SECTION 52‑19‑150.** Bungee cord.

 (A) The bungee cord must be designed and tested to perform within prescribed limits of stretch and load as stated in this chapter.

 (B) The cord must be made from natural or synthetic rubber or blends thereof that may be of various dimensions.

 (C) The materials used in the construction of the cord must be such that the stretched length is consistent each time the same loading is applied.

 (D) For cord binding the following requirements apply:

 (1) the binding must hold the cord threads together in their designed positions;

 (2) the binding material must have characteristics or specifications similar to those of the bungee cord material;

 (3) the cord bindings must be intact;

 (4) where bindings break during a day’s operation, the cord must be withdrawn from use until the bindings are replaced.

 (E) The following requirements apply to bungee cords:

 (1) the cord must stretch in the jump to at least 2.5 times its unloaded length in its designed jumper weight range;

 (2) the unloaded length of the system must be less than half the designed extended length;

 (3) with respect to maximum loaded length, the operating length of a bungee cord at its maximum designed dynamic load must not exceed four times its unloaded length.

 (F) With respect to bungee cord end attachment, each end of the cord must have an end attachment to connect the cord to the lowering system and the jumper. The end attachments must be certified by the manufacturer to be of sufficient size and shape to allow easy attachment to the jumper harness and to the lowering system and have a minimum breaking load of at least four thousand four hundred pounds.

 (G) With respect to “maximum cord life”, the maximum allowable life of the cord must not exceed one‑fourth the tested number of extensions or three hundred jumps, whichever is lower.

 (H) A cord and its nonmetallic connectors must be immediately withdrawn from use when any of the following occurs:

 (1) the cord reaches its maximum cord life as defined in subsection (F) of this section;

 (2) exposure to daylight exceeds two hundred fifty hours;

 (3) the cord has been in existence for a period of six months from the date of manufacture;

 (4) the cord material reaches the manufacturer’s recommended life span or two hundred days, whichever is less;

 (5) notwithstanding the cord manufacturer’s stated maximum cord life, whenever there is evidence of threads exhibiting wear, such as bunched threads, uneven tension between threads, or thread bands;

 (6) when the cord comes into contact with solvents or corrosive or abrasive substances.

 (I) A cord withdrawn from use must be destroyed. The bungee cord is considered to be destroyed when it is cut into lengths of less than three feet.

 (J) The owner must ensure that a bumper is used to cover the end of the bungee cord and all connecting straps and devices where attached to the jumper. The bumper must be at least six inches in diameter and five feet in length. The bumper must be fastened in such a manner so as to prevent its slipping up and down the bungee cord.

 (K) All bungee cords used in bungee jumping operations must be designed as to thickness and length for the height of the jump so as to prevent the looping of the cord around any part of the jumper’s body during a jump.

 (L) Each cord must have a permanent serial number. A record detailing the serial number of the cord used for each jumper must be retained by the owner for a period of at least three years.

 (M)(1) Each manufacturer desiring to utilize a new design of bungee cord must submit to a professional mechanical engineer for testing one bungee cord which has been constructed using the standard method of manufacture, including the bungee and all attachments, and two three‑foot lengths of bungee cord with end attachments to the same specification. Specifications for each cord must also be submitted to the engineer and shall include:

 (a) the type of material used in the manufacture of the cord;

 (b) thread specifications, including three hundred percent elongation, tensile strength, and elongation at breaking point;

 (c) dimensions and number of threads in a cross section of the cord;

 (d) method of construction;

 (e) method of binding;

 (f) jumper weight range for size of cord submitted for testing to produce the extension from 2.5 times to a maximum of four times the unloaded length of the cord;

 (g) operational range of dynamic loadings.

 (2) The engineer must test the bungee cord and certify that the cord meets the cord specifications as submitted. The full length cord must be subjected to at least three repeat tests for loading versus extension in order to establish consistency of extension within the cord range of loading. The full length cord must be subjected to a loading of five times the maximum weight of jumper on that particular cord for a period greater than five minutes and then checked for signs of thread breakage or other deterioration. This procedure must establish a minimum safety factor of 5.

 (3) The engineer must carry out a cycle frequency test until the load at three hundred percent extension or four times unloaded length reduces to less than the maximum load.

 (4) Upon completion of this required testing, the engineer must destroy the full length cord.

 (5) For purposes of this section, a new design means:

 (a) a change in bungee thread specifications that affects the performance of the bungee threads or cord;

 (b) a change in the manufacturing methods or equipment.

HISTORY: 1994 Act No. 408, Section 15, eff 60 days after May 24, 1994.

**SECTION 52‑19‑160.** Jumper harness; requirements; ankle strap or harness prohibited.

 No bungee jump shall be operated unless the owner provides and requires each jumper to use a jumper harness that meets the following requirements:

 (1) A jumper harness must be full‑body, designed either as a full‑body harness or a sit harness with shoulder straps and must be certified by a professional mechanical engineer as being in accordance with the requirements of one of the following:

 (a) Chapters A, B, C, and E, General Regulations for the UIAA Label, Ropes for Mountaineering, Carabineers, and Harnesses, respectively, from The Union Internationale Des Associations D’Alpinisme (adopted and incorporated by reference), 1380 Fairfield Woods Road, Fairfield, Connecticut 06430; or

 (b) the National Fire Protection Association (NFPA) 1983 Fire Service Life Safety Rope, Harness, and Hardware, 1990 Edition (adopted and incorporated by reference), copies of which may be obtained from NFPA, Post Office Box 9101, Quincy, Massachusetts 02269‑9101; or

 (c) the American National Standards for Construction and Demolition Operations‑Requirements for Safety Belts, Harnesses, Lanyards and Lifelines for Construction and Demolition Use approved on July 31, 1991, by the American National Standards Institute, Inc., and published by the National Safety Council, (adopted and incorporated by reference), copies of which may be obtained from National Safety Council, 1121 Spring Lake Drive, Itasca, Illinois 60143‑3201.

 (2) A jumper harness must be available to fit jumpers ranging from forty pounds to two hundred and fifty pounds and must be properly adjusted and fitted on each jumper.

 (3) The jumper harness must be certified by a professional mechanical engineer as appropriate for use in bungee jumping and must have a safety factor of not less than 5.

 (4) A professional mechanical engineer must certify that the method of attachment and location of attachment for the jumper harness is the safest available.

 (5) The use of an ankle strapping or ankle harness in bungee jumping operations is prohibited in this State.

HISTORY: 1994 Act No. 408, Section 16, eff 60 days after May 24, 1994.

**SECTION 52‑19‑170.** Ropes.

 All ropes for holding or lowering the jumper must have a breaking load of at least four thousand nine hundred pounds and must be certified by a professional mechanical engineer as being in accordance with the requirements of one of the following:

 (1) Chapters A, B, C, and E General Regulations for the UIAA Label, Ropes for Mountaineering, Carabineers, and Harnesses, respectively, from The Union Internationale Des Associations D’Alpinisme; or

 (2) The National Fire Protection Association (NFPA) 1983 Fire Service Life Safety Rope, Harness, and Hardware, 1990 Edition; or

 (3) The American National Standards for Construction and Demolition Operations‑Requirements for Safety Belts, Harnesses, Lanyards and Lifelines for Construction and Demolition Use, approved on July 31, 1991, by the American National Standards Institute, Inc., and Published by the National Safety Council.

HISTORY: 1994 Act No. 408, Section 17, eff 60 days after May 24, 1994.

**SECTION 52‑19‑180.** Carabineers; pulleys, shackles; webbing; tape knots.

 (A) Carabineers must be of the steel screw gate type with a breaking load of at least four thousand four hundred pounds and must be certified by a professional mechanical engineer as being in accordance with requirements of one of the following:

 (1) Chapters A, B, C, and E, General Regulations for the UIAA Label, Ropes for Mountaineering, Carabineers, and Harnesses, respectively, from The Union Internationale Des Associations D’Alpinisme; or

 (2) The National Fire Protection Association (NFPA) 1983 Fire Service Life Safety Rope, Harness, and Hardware, 1990 Edition; or

 (3) The American National Standards for Construction and Demolition Operations‑Requirements for Safety Belts, Harnesses, Lanyards and Lifelines for Construction and Demolition Use, approved on July 31, 1991, by the American National Standards Institute, Inc., and published by the National Safety Council.

 (B) Pulleys and shackles must have a minimum breaking load of at least four thousand four hundred pounds and must be certified by a professional mechanical engineer as being in accordance with the requirements of one of the following:

 (1) Chapters A, B, C, and E, General Regulations for the UIAA Label, Ropes for Mountaineering, Carabineers, and Harnesses, respectively, from The Union Internationale Des Associations D’Alpinisme; or

 (2) the National Fire Protection Association (NFPA) 1983 Fire Service Life Safety Rope, Harness, and Hardware, 1990 Edition; or

 (3) the American National Standards for Construction and Demolition Operations‑Requirements for Safety Belts, Harnesses, Lanyards and Lifelines for Construction and Demolition Use, approved on July 31, 1991, by the American National Standards Institute, Inc., and published by the National Safety Council.

 (C) The pulleys must be compatible with the rope size.

 (D) Webbing must be of flat, tubular, mountaineering webbing, or the equivalent, with a minimum breaking load of at least four thousand four hundred pounds.

 (E) Tape knots must be used on all webbing and the ends must be either stitched down or must be greater than twice the width of the tape.

HISTORY: 1994 Act No. 408, Section 18, eff 60 days after May 24, 1994.

NOTES OF DECISIONS

In general 1

1. In general

Amusement Rides Safety Code created “special duty” on part of state Department of Labor, Licensing, and Regulation, and thus, survivors and estates of bungee jumpers who were killed when steel cage in which they were riding fell had private cause of action against Department for failing to investigate bungee device or to suspend its license after receiving troubling reports; essential purpose of Code was to protect against harm caused by poorly designed, constructed, or maintained amusement rides, Code directly imposed on Department duty to guard against or not cause harm to amusement park visitors and workers, riders and workers at specific hazardous amusement ride were readily identifiable before fact of injury, victims were within protected class, Department officials testified that they would have shut down device if they had known about substantial modifications made by its owner, and Department had sufficient authority to act in circumstances presented. Steinke v. South Carolina Dept. of Labor, Licensing and Regulation (S.C. 1999) 336 S.C. 373, 520 S.E.2d 142, rehearing denied. States 112.2(2)

Even though statutes regulating bungee jumping became effective after fatal accident involving mechanical device used to lift bungee jumpers, state Department of Labor, Licensing, and Regulation could be liable under licensing powers exception to the state Tort Claims Act for failing to investigate after receiving three credible post‑licensing reports of suspected problem with or modifications to that device; action pertained to modifications of device—which Department had licensed as amusement device—not to actual jumps that were made. Steinke v. South Carolina Dept. of Labor, Licensing and Regulation (S.C. 1999) 336 S.C. 373, 520 S.E.2d 142, rehearing denied. States 112.2(2)

**SECTION 52‑19‑190.** Lifelines; safety harness for jumper, persons on platform.

 (A) Lifelines must be attached to all bungee personnel while on the working platform. Lifelines must have a minimum breaking load of at least four thousand nine hundred pounds.

 (B) Whenever exposed to a fall hazard, the jumper must be attached to a safety harness or bungee cord.

 (C) A safety harness and lifeline attached to the platform must be worn by all bungee personnel while on the working platform. The harness must be either a lower harness or a full‑body harness.

HISTORY: 1994 Act No. 408, Section 19, eff 60 days after May 24, 1994.

**SECTION 52‑19‑200.** Owner’s duties; testing, inspection, replacement, correction; records; operations manual; weight classes; color codes for cords.

 (A) The owner must ensure that:

 (1) all bungee cords, carabineers, carabineer straps, safety foam, harnesses, lowering or braking systems, and safety gear are regularly inspected and tested as set out in the operations manual and in this chapter. The owner must maintain detailed written inspection records which indicate the date of inspection, name of the inspector, list of items inspected, deficiencies found during the inspection, actions taken to correct the deficiencies found, and certification that all deficiencies have been corrected before further bungee jumping operations are conducted;

 (2) all jump rigging, harnesses, lowering or braking systems, and safety gear are of a load rating at least equal to the standards stated in this chapter.

 (B) The owner must replace any equipment or hardware which has become damaged.

 (C) The owner must replace any ropes which have become damaged.

 (D) All ropes, webbing, and bindings must be inspected visually for signs of wear, fraying, or corrosive or damaging substances. Criteria for the planned inspection must be included in the operations manual.

 (E) Criteria for the periodic replacement of ropes, webbing, harnesses, and hardware must be included in the operations manual.

 (F) The owner must ensure that the bungee jump operation has a current certificate to operate issued by the department.

 (G) Any items of equipment or personal protective equipment found to be substandard must be replaced immediately.

 (H) Jumping must cease immediately when a substandard item cannot be replaced.

 (I) The owner must provide in the operations manual the color codes for the bungee cords used at the bungee site which correspond to different weight classes. There must be a minimum of four weight classes or progressions at each bungee site.

HISTORY: 1994 Act No. 408, Section 20, eff 60 days after May 24, 1994.

**SECTION 52‑19‑210.** Storage of equipment.

 The owner must provide storage to protect equipment from physical, chemical, and ultraviolet ray damage. The storage must be provided for current, replacement, and emergency equipment, organized for easy and orderly access, and secured against unauthorized entry.

HISTORY: 1994 Act No. 408, Section 21, eff 60 days after May 24, 1994.

**SECTION 52‑19‑220.** Fence.

 The owner must maintain a fence designed and constructed to restrict people, animals, and objects from entering the tower area, the preparation area, the surface area of the jump space, and all areas specified by the local building code or the mechanical engineer who certifies the bungee operation.

HISTORY: 1994 Act No. 408, Section 22, eff 60 days after May 24, 1994.

**SECTION 52‑19‑230.** Public address system; radio or telephone link to platform; clothing to indicate staff status.

 The owner must provide and maintain or ensure at each bungee site, at a minimum, the following:

 (1) there must be a public address system;

 (2) there must be a radio communication link or closed telephone circuit on permanent platform sites between the platform and the landing and recovery areas;

 (3) bungee jump personnel must be easily identified by other staff and the public. A uniform, or similar clothing, must be worn by bungee staff.

HISTORY: 1994 Act No. 408, Section 23, eff 60 days after May 24, 1994.

**SECTION 52‑19‑240.** Sign specifying medical, weight, and age restrictions.

 A sign must be erected at each bungee jumping site reflecting the following: the medical, weight, and age restrictions for jumpers.

HISTORY: 1994 Act No. 408, Section 24, eff 60 days after May 24, 1994.

**SECTION 52‑19‑250.** Telephone link to 911 or similar service.

 The owner must provide and maintain a telephone communication link to 911, or similar emergency service, within two hundred feet of the bungee operation.

HISTORY: 1994 Act No. 408, Section 25, eff 60 days after May 24, 1994.

**SECTION 52‑19‑260.** Emergency and medical precautions and training.

 The owner must provide for, maintain, and ensure the following:

 (1) at least one jump master must be designated “Safety, Health, and Loss Control Coordinator” and must be certified in CPR and standard first aid;

 (2) a comprehensive emergency plan must be developed, practiced, maintained, posted at each bungee jump site, and is included in the operating manual;

 (3) training must be provided to all bungee staff relative to emergency procedures, and a record of the training must be kept.

HISTORY: 1994 Act No. 408, Section 26, eff 60 days after May 24, 1994.

**SECTION 52‑19‑270.** Required emergency procedures, equipment, and plan; agreement with emergency response system.

 The owner must provide and maintain emergency procedures for each bungee facility that meet at least the following:

 (1) each facility must have an emergency plan contained in the operating manual;

 (2) a medium first aid kit must be held on site;

 (3) all jump masters must have first aid certificates;

 (4) the operations manual must specify the rescue training and qualifications required for all staff on the site;

 (5) adequate lighting must be provided at all jump sites that operate after sunset. The lighting system must illuminate the jump point, the jump space, and the landing area;

 (6) emergency phone numbers must be posted in a conspicuous place; and

 (7) a letter of agreement between the facility and all area emergency response systems whereby the emergency response systems agree to respond to emergency calls from the facility.

HISTORY: 1994 Act No. 408, Section 27, eff 60 days after May 24, 1994.

**SECTION 52‑19‑280.** Reporting deaths, serious injury, accidents; closing operation until authorized to resume.

 (A) If an accident involving a bungee jump results in death or serious injury, the owner must immediately report the accident to the department and close the bungee jump operation until authorization to resume operations is received from the department.

 (B) All accidents relating to a bungee jump operation must be reported to the department within twenty‑four hours.

HISTORY: 1994 Act No. 408, Section 28, eff 60 days after May 24, 1994.

**SECTION 52‑19‑290.** Required staff, personal.

 The owner must maintain at least the following staff at each bungee jump:

 (A) Jump master. To be qualified as a jump master, a person must be at least eighteen years of age, and must have had a minimum of two hundred hours, and two hundred and fifty jumps, of incident‑free experience as a jump operator under the supervision of a qualified jump master at a bungee jumping operation. The owner or lessee is responsible for maintaining records documenting hours logged

 (1) and jumps taken. A jump master is responsible for the following: selecting the bungee cord and adjusting the rigging appropriately for each jumper;

 (2) taking the jumper through the final stages to the jump take‑off. The jump master must be present at the jump point during each jump;

 (3) training of the other bungee staff. All training must be conducted by or under the direct supervision of a jump master;

 (4) ensuring that the number of jumps being conducted at a site does not prohibit the bungee staff from carrying out all procedures and duties for each job as set out in the manual;

 (5) supervising all staff who are in training.

 (B) Registration clerk. The owner or jump master must designate a registration clerk at each bungee site with at least the following duties:

 (1) registering the jumper;

 (2) weighing and marking of weight of the jumper;

 (3) controlling movement of jumpers to jump platform.

 (C) Operating team. The owner must provide and maintain an operating team for each bungee jump operation. Each operating team must have a minimum of three staff members involved in the oversight of the jump, one of whom must be a jump master and one of whom must be a jump operator.

HISTORY: 1994 Act No. 408, Section 29, eff 60 days after May 24, 1994.

**SECTION 52‑19‑300.** Staff breaks; backup staff.

 It is the owner’s responsibility to ensure that staff take regular breaks to ensure that fatigue does not downgrade their ability to operate an incident‑free operation. If continuous operation is planned, then backup staff must be available to allow adequate breaks to occur.

HISTORY: 1994 Act No. 408, Section 30, eff 60 days after May 24, 1994.

**SECTION 52‑19‑310.** Operations manual; revisions.

 The owner must provide and maintain an operations manual at each bungee site in accordance with the ASTM‑Committee F‑24 standards and the following requirements:

 (1) For each bungee site, there must be an operations manual which describes the system of operation to be used and which addresses, but is not limited to, the following elements:

 (a) complete description of all components in the system which must include manufacturers’ specifications;

 (b) site plan showing a profile of the site defining the jump platform and its supporting structure, the jump area, the jump zone, and the safety space;

 (c) complete description of all bungee staff, jumper, and passenger safety equipment with instructions for proper usage;

 (d) complete description of all rescue equipment;

 (e) complete job description of all personnel employed on the site with the minimum qualifications of each person and complete detail of work periods required;

 (f) complete description of emergency procedures to be taken in all possible scenarios which may occur;

 (g) complete description of standard operating procedures of every person employed in the processing of the bungee jumper;

 (h) complete description of the reporting to authorities of incidents resulting in injury or death;

 (i) complete description of equipment inspection procedures and the recording of those inspections;

 (j) complete description of maintenance procedures;

 (k) complete description of the method of recording verified qualifications of jump masters employed on the site;

 (l) complete description of the criteria for the periodic replacement of hardware, bungee cords, harnesses, and lifelines.

 (2) A copy of the operations manual must be maintained at all times on the bungee site during operating hours.

 (3) A copy of the operations manual must be submitted to the department. The copy on file at the department must be supplemented when the owner makes revisions to the manual.

HISTORY: 1994 Act No. 408, Section 31, eff 60 days after May 24, 1994.

**SECTION 52‑19‑320.** Written checklist for daily operating procedures; permanent log of daily activities.

 (A) The owner must provide and maintain a written checklist for the daily operating procedures which shall include at least the following:

 (1) setting up the site equipment and public amenities;

 (2) inspecting and testing of all equipment before beginning daily operations;

 (3) inspecting and testing the communication system for proper operation;

 (4) inspecting and testing of the jump equipment;

 (5) review of the jump procedures with all bungee staff;

 (6) review of all emergency procedures with all bungee staff;

 (7) conducting test jumps on all bungee cords to be used that day.

 (B) The owner must maintain a permanent log of the following daily activities for each bungee site:

 (1) confirmation that daily operating procedures were performed and compilation of the corresponding checklist;

 (2) compilation of the checklists on jump procedures;

 (3) the number of jumps made on each bungee cord which must be done by referencing the permanent identification number of each cord used.

HISTORY: 1994 Act No. 408, Section 32, eff 60 days after May 24, 1994.

**SECTION 52‑19‑330.** Written jump procedures.

 The owner must provide and maintain written jump procedures which must include at least the following procedures:

 (1) exclusion of all unauthorized persons from the operating area;

 (2) registration of jumpers, to include:

 (a) name;

 (b) age;

 (c) weight;

 (3) jumper briefing;

 (4) removal of loose objects from the jumper;

 (5) preparation of the jumper which shall include:

 (a) harness;

 (b) instructions to the jumper;

 (c) selection and adjustment of the bungee cord;

 (d) connection of the jumper to the lowering system;

 (e) recheck of all connection and harness attachments;

 (f) final inspection by jump master;

 (g) final inspection of jumper;

 (h) countdown to jump;

 (i) observation of jump;

 (6) landing and recovery of jumper;

 (7) off‑loading of jumper;

 (8) return of jumper to the public area;

 (9) retrieval of the bungee cord to the platform.

HISTORY: 1994 Act No. 408, Section 33, eff 60 days after May 24, 1994.

**SECTION 52‑19‑340.** Written check list for close down procedures; violation of act.

 (A) The owner must provide and maintain a written check list for the close down procedures which shall include at least the following:

 (1) equipment cleaning and inspection including corrective actions, if necessary;

 (2) completion of written records as required under this chapter;

 (3) the necessary daily maintenance of equipment, structures, and facilities.

 (B) Failure to complete each procedure outlined in this section constitutes a violation of this chapter.

HISTORY: 1994 Act No. 408, Section 34, eff 60 days after May 24, 1994.

**SECTION 52‑19‑350.** Documents to be filed with department.

 The following documents must be filed with the department by the owner:

 (1) site plan;

 (2) initial engineer’s certification of site and structure;

 (3) initial engineer’s certification of equipment;

 (4) copy of permit;

 (5) proof of insurance;

 (6) copy of operations manual;

 (7) first aid certificates;

 (8) reports of annual inspections by the department or engineer;

 (9) permit renewals.

HISTORY: 1994 Act No. 408, Section 35, eff 60 days after May 24, 1994.

**SECTION 52‑19‑360.** Revocation of permit, fine, for violation; notice, hearing, and procedure; reinstatement of permit.

 (A) The department may revoke any permit issued pursuant to this chapter if it is determined that a bungee jumping facility is:

 (1) being operated without the insurance requirements set forth in this chapter;

 (2) being operated with a mechanical, electrical, structural, design, or other defect which presents an excessive risk of serious injury to jumpers, bystanders, operators, or attendants;

 (3) being operated without the required documentation or paperwork; or

 (4) being operated in a manner not consistent with the operations manual.

 (B) Any other violation of the provisions of this chapter may result in a revocation and/or a fine, if written notice of noncompliance is served upon the owner or lessee specifying any violation of the provisions of this chapter and directing the owner or lessee to correct the violations within the period specified by the department. In the event the owner or lessee and the department fail to agree that the violations referred to herein have in fact been corrected, then the department shall give notice of and provide a hearing for the owner or lessee to determine whether compliance has in fact been met. The Administrative Procedures Act shall govern contested cases of this nature and any other contested cases arising under the provisions of this chapter.

 (C) Nothing in this chapter prevents an owner or lessee whose permit to operate a bungee jump facility has been revoked pursuant to this section from reapplying for a permit in accordance with this chapter, except as otherwise specifically provided in this chapter. Upon application to have a revoked permit reinstated under this section, the department shall inspect the facility in question as promptly as practical, but in no case more than seventy‑two hours after the submission of the application.

HISTORY: 1994 Act No. 408, Section 36, eff 60 days after May 24, 1994.

**SECTION 52‑19‑370.** Civil penalties.

 (A) Any person who knowingly and wilfully operates a bungee jumping facility in violation of any of the provisions of this chapter is subject to a civil penalty not to exceed two thousand dollars for each facility for each day the violation continues.

 (B) Any person who operates a bungee jumping facility in violation of any of the provisions of this chapter is subject to a civil penalty not to exceed two thousand dollars.

HISTORY: 1994 Act No. 408, Section 37, eff 60 days after May 24, 1994.

**SECTION 52‑19‑380.** Cease and desist order; injunction; no bond required.

 Whenever the department has sufficient evidence that any person is violating any provision of this chapter, it may, in addition to all other remedies, order such person to immediately desist and refrain from such conduct. The department may apply to an administrative law judge as provided under Article 5 of Chapter 23 of Title 1 for an injunction restraining the person from such conduct. An administrative law judge as provided under Article 5 of Chapter 23 of Title 1 may issue a temporary injunction ex parte, and upon notice and full hearing may issue any other order in the matter it deems proper. No bond shall be required of the department by an administrative law judge as provided under Article 5 of Chapter 23 of Title 1 as a condition to the issuance of any injunction or order contemplated by the provisions of this section.

HISTORY: 1994 Act No. 408, Section 38, eff 60 days after May 24, 1994.