



Department of Early Education and Care

THE COMMONWEALTH OF MASSACHUSETTS

Small Group, Large Group and School Age Child Care Licensing

POLICY STATEMENT: Playground Safety

6.06 CMR 7.07(7); 7.07(16)(e); 7.07(13); 7.10(10)

According to the U. S. Consumer Product Safety Commission's (CPSC) Public Playground Safety Handbook, there are 200,000 injuries on playgrounds annually in the United States that results in children needing emergency room treatment. The majority of those injuries are the result of falls from equipment. The CPSC Handbook provides guidelines for impact absorbing materials, fall zones and equipment. The Department of Early Education and Care (EEC) recommends that programs follow the CPSC Handbook as a way to reduce the number of these injuries. EEC has developed this policy based on the recommendations of the CPSC and the requirements of 606 CMR Standards for Licensure so that children in care will be provided an outdoor environment that is safe, age appropriate, challenging and promotes healthy growth and development.

The regulations that impact outdoor space, surfacing, fall zones, equipment, entrapments, hazards and supervision are:

6.06 CMR 7.07(7) Outdoor Space *The licensee must maintain, or have access to, an outdoor play area of at least 75 square feet per child who is outside at any one time.*

(a) The play area must be accessible to children with disabilities.

(b) The outdoor play space must be appropriate for each age group served.

(c) The outdoor play area must provide for both direct sunlight and shade.

(d) The outdoor play area must be free from hazards including but not limited to: a busy street, a parking lot, poisonous plants, water hazards, debris, broken glass, chipping, peeling or flaking paint, dangerous machinery or tools, and weather related and environmental hazards or small objects that could present a choking hazard to young children. Any such hazard must be removed or fenced by a sturdy, permanently installed barrier which is at least four feet high or otherwise protected or removed, as appropriate.

(e) If the outdoor play space is located on a roof, it must be protected by a barrier at least seven feet high, which cannot be climbed by children.

(f) The outdoor play space must not be covered with a dangerously harsh, abrasive, or toxic material.

(h) Suitable barriers, including but not limited to bulkhead doors, must be installed to prevent falls into outdoor stair or window wells.

6.06 CMR 7.07(16)(e) Playground Safety *The use zones under and around swings, slides, and climbing structures must be covered with an adequate depth of an impact absorbing material, in accordance with EEC policy. Pea gravel and wood chip nuggets must not be used in areas used by infants and toddlers.*

6.06 CMR 7.07(13) Safety Requirements for Equipment, Material and Furnishings – *The licensee must only use indoor and outdoor equipment, materials, furnishings, toys, and games that are appropriate to the ages, needs and developmental level of the children enrolled. They must be sturdy, safely constructed and installed, non-tippable, flame retardant, easily cleaned, and free from lead paint, protruding nails, rust, and other hazards that may be dangerous to children.*

- a. The licensee must not use any equipment, materials, furnishings, toys, or games identified by the U.S. Consumer Product Safety Commission as being hazardous.*
- b. The licensee must keep all equipment, materials, furnishings, toys, and games clean and in a safe, secure, and workable condition.*
- d. All play equipment, fences and structures must be free of entrapment hazards.*

7.10(5) Supervision- *All licensees and educators must exercise appropriate supervision of the children in their care in order to ensure their health and safety at all times. Such supervision must include, but not be limited to, indoor and outdoor activities, mealtimes, naptime, transportation, field trips and transitions between activities.*

Definitions:

- Consumer Product Safety Commission (CPSC) - The federal agency charged with protecting the public from unreasonable risks of injury or death from consumer products under the agency's jurisdiction including all aspects of playground safety.
- American Society for Testing Materials (ASTM) - An organization that develops safety standards for consumer products including public playground equipment and surfacing.
- ASTM F1292 test data - Identifies the amounts of a surfacing material needed to lessen the impact of falls in the use zones of playground equipment.
- Unitary materials - Manufactured materials such as rubber mats or tiles that are held in place by a binder to form a unitary shock absorbing surface that has ASTM F1292 test data from the manufacturer documenting critical height information.
- Loose fill materials- Shredded/recycled rubber, pea gravel, wood mulch, and wood chips that are used in accordance with CPSC guidelines (see chart below) and manufactured loose fill products such as engineered wood fiber that have ASTM F1292 test data from the manufacturer documenting critical height information.
- Fall height- The distance between the highest designated play surface of the equipment and the protective surfacing under it.
- Fall zones- The surface under and around equipment where impact absorbing surfacing is required. It is the area where children are predicted to land when falling or exiting from the equipment. In general, the fall zone for each piece of equipment must extend a minimum of 6 feet in all directions from the perimeter of the equipment.

- Entrapment - Any opening that is greater than 3 1/2 inches but less than 9 inches that can entrap a child's head creating risk for serious injury or death.
- Entanglement - Any area on playground equipment that can "catch children's clothing including bolts that are exposed more than two threads, open "s" hooks and spaces on equipment especially at the tops of slides.
- CCA - Chromate copper arsenate used to treat wood prior to 2003 that has been found to cause certain types of cancer.

Based on the requirements of the regulations, this policy will focus on five areas of concern: playground equipment, surfacing, fall zones, hazards including entrapments and supervision.

Playground Equipment

Playground equipment should be chosen based on the age group and the abilities of the children who will be using it. Most manufacturers provide information that includes the age range of the children that the equipment had been designed for by attaching a sign or tag with the details onto the equipment. Since developmental appropriateness is an important element to consider in preventing injuries, if there is a question about the age range using the equipment, the provider must be able to provide evidence to show that the equipment is designed for the ages of the children using it. Children who are not within the age ranges for the equipment should not be allowed to use it.

The Department suggests that programs review the list entitled "Age Appropriate Equipment" found in the Public Playground Safety Handbook. The list includes the types of equipment that are developmentally appropriate for the different age groups and can be a helpful tool in making the decision about what equipment to purchase for your playground.

Other considerations to take into account include that the equipment is designed for commercial rather than residential use; that the equipment either donated or purchased second hand is structurally sound and checked for recalls and that equipment designed and built by the program complies with the CPSC's guidelines. In the event there is a question about the construction and soundness of equipment, the program may be requested to submit an inspection report from a certified playground inspector.

Equipment that has been identified by CPSC as being unsafe and not to be used by any age group due to the numbers of serious injuries, some fatal, includes: trampolines (except for therapeutic reasons), climbing ropes that are not secured at both ends, rope swings, heavy metal swings, multiple occupancy swings with the exception of tire swings, and swinging dual exercise rings and trapeze bars on long chains.

Surfacing

All playground equipment must have a protective surfacing with the exception of any equipment that children use with their feet on the ground such as sand boxes, activity walls at ground level, and play houses.

Minimum compressed loose-fill surfacing depths

Inches of	Loose-Fill Materials	Protects to	Fall Height (feet)
6 ¹	Shredded/recycled rubber		10
9	Sand		4
9	Pea Gravel		5
9	Wood mulch (non-CCA)		7
9	Wood chips		10

Important points to remember when making the decision of what material(s) to use for surfacing on your playground:

- Different loose-fill materials have different impact absorbing capability. For example, wood chips have an impact absorbing capability for a fall height of up to 10 feet while sand has an impact absorbing capability for a fall height of up to 4 feet.
- There must be the minimum depth of surfacing even if the fall height of the equipment is less than the fall height shown on the chart: i.e. if a program is using woodchips they must still have 9 inches for a climber with a fall height of 2 feet.
- Sand cannot be used for any climber with a fall height greater than 4 feet.
- Loose fill surfacing compresses over time and requires periodic replenishment.
- Loose fill material requires continuous maintenance such as leveling, grading, and raking to maintain the appropriate depth.
- Loose fill materials may need a method of containment.
- Pea gravel and wood chip nuggets must not be used in areas used by infants and toddlers.
- Wood mulch must not be sharp or splintered.
- All surfacing may be affected by the drainage and standing water that may result from poor drainage.
- Asphalt, concrete, grass, and hard-packed dirt and frozen surfaces are not considered acceptable impact absorbing surfacing.
- Protective surfacing installed over asphalt and concrete must be installed professionally according to the guidelines recommended by CPSC. Evidence of professional installation complying with the recommendations of CPSC must be on file at the program and a copy submitted to EEC.
- If using a unitary material the ASTM F1292 test data from the manufacturer documenting critical height information must be on file at the program and a copy submitted to EEC.

¹ Shredded/recycles rubber loose-filling surfaces does not compress in the same way as other surfacing materials.

Determining Fall Height

Fall height must be taken into consideration when choosing a surfacing material. Each material has a different protective factor as determined by the chart for loose fill surfacing materials and by ASTM for manufactured unitary surfaces. In order to choose a proper surfacing the fall height of each piece of equipment must be determined.

In order to determine the fall height of your equipment, measure the distance from the highest designated play surface to the protective surface beneath it. The Public Playground Safety Handbook can also be used as a guide in determining the fall heights for each piece of equipment. In general the fall height of play surfaces on equipment intended for toddlers should not be higher than 32 inches.

Fall Zones

In general, the fall zone for each piece of equipment must extend a minimum of 6 feet in all directions from the perimeter of equipment. In order to determine the fall zone for your equipment, the Public Playground Safety Handbook can be used as a guide especially as it relates to determining fall zones for all types of swings.

Fall zones must be free of obstacles such as fences, buildings or other structures, other play equipment and tripping hazards such as tree roots.

Two pieces of stationary equipment (not swings) that are located near one another can have overlapping fall zones, if the fall height of the equipment is 30 inches or less and the equipment is at least 6 feet apart. If the fall height is greater than 30 inches, there must be at least 9 feet between the two pieces of equipment.

Hazards

Routine inspection and maintenance of a playground is an important part of providing a safe outdoor environment for children. Maintaining adequate fall zones with appropriate amounts of a surfacing material must be combined with regular, systematic inspection of the space and equipment to identify potential hazards that may lead to injury. Staff should be trained on how to monitor the playground looking for broken equipment and other hazards such as glass, debris, loose branches, etc.

Providers must be aware of hazards related to seasonal changes when designing and maintaining an outdoor space. During summer months, exposure to the sun can heat surfaces such as slides, platforms and steps creating hazards for burns. In the winter, surfacing materials freeze and lose their impact absorbing ability. In the spring and other times of the year, standing water and poor drainage may impact the usability of the play space. At all times of the year, the play environment should be monitored for hazardous plants such as poison ivy and mushrooms.

Entanglements and entrapments are hazards that contribute to the number of serious injuries and deaths that occur on public playgrounds. While playing on equipment, children should not be wearing jewelry or clothing that has drawstrings or other entanglements. Children should not be allowed to use ropes, scarves or other similar objects that have the potential to become entangled creating a strangulation hazard. Refer to EEC's policy, Entrapments, for specific information related to entrapments.

Supervision

Supervision of the outdoor play space is key to minimizing injuries to children. A program's approach to playground safety issues should include how staff will supervise children as they use the space and also how a safe playground environment will be maintained. Playground space should be organized in such a way as to allow staff to be able to see, access and supervise children and the use of all equipment. Barriers within the playground space should be kept to a minimum so that supervision of each child can occur. All educators must be trained on supervision of the outdoor play space to ensure that they follow practices that lessen the injuries to children.

Supervision should also include effective ways to respond to inappropriate play, aggression and bullying that may occur as children interact on the playground. Educators should be trained on how to transition children to and from the playground including the importance of doing name-to-face attendance to account for all children. Training should also include ways to be actively involved in children's play and ways to use the outdoor space as an extension of the classroom including a curriculum with planned activities that support children's development.

Conclusion

Programs are responsible for providing daily indoor and outdoor activities with at least 60 minutes of physical activity required for full day programs. Providing access to a safe, outdoor environment is the first step in meeting this requirement for outdoor physical activity. Programs that rely on public playgrounds such parks or public schools must inspect the space and equipment to make sure that they are safe for children. In some cases, the equipment or parts of the equipment may not meet the requirements of this Policy and therefore, should not be used by the program. Alternate activities that do not rely on climbing structures or other playground equipment should be developed so that children have opportunities to participate in gross motor activities. It is important that any play area utilized by the program be accessible to children with disabilities and that there are activities that encourage integration with their peers.