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#54

Tri-County Health Department

Serving Adams, Arapahoe and Douglas Counties

Hugh Rohrer, M.D., M.P.H.
Director

June 30, 1997

John Preston, P.E.
Directorate for Engineering Sciences
U.S. Consumer Product Safety Commission
Room 500, West Bard Avenue
Washington, D.C. 20207

Dear John,

Enclosed are my suggestions for additions to the proposed revisions of the **Handbook for Public Playground Safety**. I would like you to consider adding the following to clarify the individual items:

* Pages 6 and 7 - since the use of shredded tires is mentioned on page 6, it would seem useful to include some corresponding information on Table 1 to match. Enclosed is a copy of a brochure of a Colorado manufacturer of "Megaflex," a loose rubber product marketed for playgrounds by Meggison Enterprises, Arvada, CO if you would like material for testing or their documentation.

* Page 16 - Inclusion of the same or similar statement from section 12.4.4 regarding the orientation of slides to the sun should also be included under Metal Surfaces to emphasize the risk.

* Page 17 and Figure 5 - a three-dimensional picture similar to Figure 7 would be helpful in conceptualizing how these gauges are used.

* Page 38/Appendix A - the negative approach to maintenance inspection is discouraging to the user. Enclosed is a copy of a Playground Safety Checklist developed by the Colorado Safe Kids Coalition which is used here.

* Page 44/Appendix C - Please add "splinters" under the Disadvantages of Organic Loose Material.

Page 45/Inorganic Loose Material - Please add to "may be blown or thrown into children's eyes **or become lodged in noses or ears.**

In general, the revisions and additions add a great deal to the Handbook. I recommend it frequently when I present public programs on playground safety and I am looking forward to the newest version. Due to the effects of weathering here in Colorado, playgrounds are repaired and replaced frequently so the new information present will be helpful in the future.

I would appreciate receiving notification of any public meetings (hopefully here in the West) as well as a camera-ready copy of the final document.

Sincerely,

Susan Salyards

Susan Salyards, REHS
Environmental Health Services

cc: Chris Wiant, Tri-County Health Department

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Mr. John D. Preston, P.E.
Directorate for Engineering Sciences
U. S. Consumer Product Safety Commissions
4330 East West Highway, Suite 611
Bethesda, MC 20814-4408

Dear Mr. Preston,

I have recently been informed by our local park and recreation director that you are considering making what I think of as terrible changes in the CPSC guidelines. It is my understanding that you are considering limiting the height of play systems to a height of 8'. Mr. Preston, I am a mother of three school age children. I am also the president of the PTO at their school. We have, over the last 3 years purchased new playground equipment for our school. I have set on the committee for this two years and chaired this committee for one year. I tell you this because I don't want you to think I am just on over reacting housewife. Our committee did extensive research into playground equipment and what would best suite our children's needs. Though safety was our first consideration, play value ran a very close second. We took our kids to numerous playgrounds to see how they like and used the systems. In our research we found that the lower the system the less our kids were interested in playing on it.

Sir, I hope that I can make you understand how important it is to keep school age children interested in the playground systems. It is hard enough to keep them from sitting at home watching television or playing video games. It is the tall slides and climbers on our systems that make my kids want to go play on them. We have had no injuries due to falls from any of these components. Our biggest problem has been keeping the kids from climbing on top of our horizontal ladder. Now I am told that you are also considering requiring that these be lowered another 6". If you do this my 12 year old son will be too tall to use it. I also understand that you might make us remove our end climber off of our horizontal ladder. If you do this my 6 year old daughter won't be able to use it. Only my 10 year old will be able to use this climber if you make these changes and then she will only be able to use it for a year at best.

Please Sir. Reconsider these changes. Help us keep our kids interested in going to our local parks and school playgrounds instead of Sega and Rug Rats.

Most Sincerely

Rebecca M. Smith

Ms. Rebecca M. Smith
36724 Meadow Drive
Oconomowoc, WI 53066

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Consumer Federation of America

Comments of

Consumer Federation of America

on the

Consumer Product Safety Commission's

May 1997 Draft Revised

Handbook for Public Playground Safety

Submitted by:

Mary Ellen R. Fise

and

Melanie Morrison

July 8, 1997

1424 16th Street, N.W., Suite 604 • Washington, D.C. 20036 • (202) 387-6121

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Consumer Federation of America (CFA) is pleased to submit the following comments regarding the Consumer Product Safety Commission's draft revised *Handbook for Public Playground Safety*. We sincerely appreciate the agency's effort to improve and strengthen the *Handbook*, and we applaud the Commission for its commitment to reducing child injuries on public play equipment.

The detailed comments offered below support many of the proposed changes. In other comments, we raise a question or concern or suggest something additional or different. Because many of our comments refer to portions of the CFA *Report and Model Law on Public Play Equipment and Areas*, we have included a copy of this document.

CFA's comments below follow the organization and numbering system of the draft revised *Handbook*.

1. Introduction

CFA strongly opposes the proposed change to the age groups.

Many of the recommendations throughout the *Handbook* are based on the anthropometrics of the original age groups: 2 through 5 and 5 through 12. For preschool-age children, the minimum user for anthropometric rationales was a 5th percentile 2-year-old and the maximum user was a 95th percentile 5-year-old. For school-age children, the minimum user for anthropometric rationales was a 5th percentile 5-year-old and the maximum user was a 95th percentile 12-year-old. By changing the definitions of the age groups (to now read "from 2 up to 5" and "over 5 up to 12" -- or effectively 2 through 5 and 6 through 12), various recommendations may no longer be accurate with respect to their anthropometric rationales.

In addition, the sentence slated for deletion provides additional rationale for the original age groups: "The overlap between these groups is realistic in terms of playground equipment use and provides for a margin of safety." Nothing has changed since the original publication to make this rationale obselete -- it remains an important, true statement in favor of overlapping age groups.

Consider a typcial elementary school, with kindergarten through 5th grade age children. In many cases, such schools have only one playground for children at all grade levels. Many children starting kindergarten are just 5 years old. Therefore, with the proposed change to the age groups, the school's playground would have to meet the safety requirements for preschool-age children, and this would likely compromise the developmental needs of older children at the school. Under the original age group definition, a playground serving kindergarten through 5th grade can meet the guidelines for school-age children -- safely providing a better range of developmental challenges for all of the children. It is unrealistic to believe that 5-year-olds in a kindergarten program won't use an elementary school playground. Similarly, it would be unrealistic to force the design of an elementary school playground to meet preschool-age safety requirements so that the 5-year-olds can use it.

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2. Playground Injuries

As previously noted in our comments following the Chairman's Roundtable, CFA believes that this section would be more helpful to *Handbook* users if it contained more detailed information about the known play and injury patterns of preschool-age and school-age children (such as that contained in the Tinsworth and Kramer analysis of playground injuries) -- rather than just listing the hazard patterns.

3. Definitions

CFA reiterates its objections to the new proposed age group definitions (as described above in the Introduction section).

4. Surfacing

CFA was extremely pleased to see that "Surfacing" was moved from the back of the *Handbook* to the front. As the most critical safety measure on any playground, surfacing should be addressed first.

4.3.1 Recommended Maximum Accessible Heights

CFA strongly supports the addition of maximum height recommendations. We offer the following additional specific comments:

For preschool-age children: CFA strongly supports the following proposed recommendations.

- 4' maximum for climbing equipment and slides
- 8' maximum for swings
- 60" maximum for overhead horizontal ladders

For school-age children: CFA strongly supports the following proposed recommendations.

- 8' maximum for swings
- 78" maximum for overhead horizontal ladders

However, CFA strongly opposes the proposed 8' maximum height for all equipment for school-age children. CFA believes that a 6' maximum is more appropriate since the definitions of the "highest accessible part" allow the measurement of height to be taken from the platform level when protective barriers are used (see CFA Section 4.1.5.1 and 4.1.5.2). When equipment does not require protective barriers, such as some independent climbers, the proposed recommendation would allow an unprotected fall height of 8' -- which is excessive. Reducing the maximum recommended height to 6' provides an important measure of safety -- since fall height is related to the seriousness of injuries incurred-- without a significant negative effect on developmental challenge.

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CFA opposes the proposed maximum attainable seat height for seesaws of 60". CFA believes that a maximum 48" is more appropriate (see CFA Section 4.1.5.7), given the severe impact injuries that can occur when seesaws drop from their maximum attainable seat height to the ground below.

Note: because there are exceptions to the 8' maximum for school-age children, these should be noted in this section (similar to the noting of exceptions for preschool-age children).

Additional Recommendations: In addition to the comments above regarding the proposed new recommendations, CFA urges the Commission to consider the following maximum height recommendations.

For all ages:
- Merry-go-rounds (see CFA Section 4.1.5.6)
- Spring Rocking Equipment (see CFA Sections 4.1.5.8 and 4.1.5.9)

For preschool-age children:
- Arch Ladders (max. 3'; see CFA Section 5.1.5.3)
- Climbing Events with Flexible Components (max. 3'; see CFA Section 5.1.6.3)
- Turning or Chinning Bars (min. 3', max. 4'; see CFA Section 5.1.8.3)

For school-age children:
- Arch Ladders (max. 4'; see CFA Section 6.1.5.2)
- Climbing Events with Flexible Components (max. 4'; see CFA Section 6.1.6.2)
- Turning or Chinning Bars (min. 4', max. 6'; see CFA Section 6.1.8.3)
- Parallel Bars (max. 3'; see CFA Section 6.1.9.3)

Additional Comments: CFA does not understand the proposed exclusion to the maximum height recommendations for equipment that is "totally enclosed." The definitions for the "highest accessible part" of equipment already take into account protective barriers, which also deals with the question of roofs (since they are not considered an accessible play surface). So what does this exclusion address? What is the intent? If a platform is really totally enclosed -- no openings large enough for the small torso template to freely pass through -- then there would not be an entrance/exit. If there is an entrance/exit on a platform in accordance with the proposed protective barrier recommendations (i.e., maximum opening width of 15"), then the maximum height recommendations of 4' and 8' (preferably 6') should apply. Some might read this exclusion to allow a deck of any height provided that there are protective barriers or a roof. Protective barriers and roofs do not provide enough protection against fall injuries to allow unrestricted heights. CFA urges careful review of this proposed exclusion. As written, CFA strongly opposes it.

4.4 Equipment to which Protective Surfacing Requirements Do Not Apply

CFA supports this proposed change to exclude equipment that has no elevated playing surface from protective surfacing recommendations.

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4.5 Acceptability of Various Surfacing Materials

CFA strongly supports the proposed addition of "and maintained" to the sentence introducing loose-fill materials. Maintaining adequate depth is obviously critical to achieving adequate fall protection with loose-fill materials.

CFA strongly opposes the proposed exception allowing installation of loose-fill materials over hard surfaces given daily inspection. It is unrealistic to believe that daily inspection can be "guaranteed" even if a playground maintenance policy calls for it. CFA is unaware of any impact attenuation testing to determine whether the same depths of various materials meet the same critical height requirements when installed over hard surfaces Without such data, adding this exception cannot be justified. Moreover, this exception reduces the margin of safety, moving the *Handbook's* guidelines in the wrong direction.

CFA strongly supports the proposed new recommendation regarding containment of loose-fill materials.

CFA supports the proposed recommendation regarding maintenance of loose-fill materials. However, CFA believes this recommendation should be stronger. As written, the recommendation suggests that frequent inspection and maintenance is not always important for loose-fill materials -- only that it "may be necessary." CFA believes that frequent inspections and maintenance are always important for loose-fill materials. Also, the reference to Section 7.2 does not make sense, since that section does not address surfacing at all -- although it should. A more appropriate reference would be directly to the checklist in Appendix A, which does address surfacing and loose-fill materials specifically.

4.6 Accessibility to the Disabled

CFA believes that this section is more appropriate on its own or as part of the introduction -- rather than in the middle of the surfacing section. The ADA addresses much more than just surfacing, and when specific Federal requirements for playground accessibility are published they will certainly affect more than just surfacing.

CFA opposes the proposed statement that forthcoming Federal accessibility requirements may prohibit the use of many loose-fill surfacing materials. It is unlikely that the use of loose-fill surfacing materials will banned in total. Even if certain materials are deemed unacceptable for accessibility, presumably it will not prevent their use on parts of a playground provided that some accessible surfaces are also used. But until there are any such restrictions, it is irresponsible to make note of it. As it reads, this statement appears to be an endorsement for rubber surfacing -- an endorsement which is not appropriate in the *Handbook*. Moreover, it also appears that the Commission is taking a position against the use of loose-fill surfaces even though detailed information about such materials is included in the *Handbook*.

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5. Fall Zones

CFA supports the proposed changes to fall zones recommendations in general. However, several points of clarification are noted below that will be important to ensure that the changes are understood by *Handbook* users as CPSC intended. CFA also believes that the Commission should consider not deleting all references to no-encroachment or buffer zones. Given the reduced fall zones, some buffer of physical space (not necessarily requiring protective surfacing) for moving equipment and slides facilitates positive play and traffic patterns, thus helping prevent injuries.

OK

5.1.1 Stationary Equipment (excluding slides)

CFA suggests a section heading of "Stationary Climbing Equipment" for clarification (which would allow deletion of the awkward exclusion).

CFA supports the proposed change to allow overlap of fall zones for stationary climbing equipment with adjacent play events no higher than 30". However, CFA suggests adding clarification that when fall zones do overlap, the minimum distance between the structures should be 6' (similar to the proposed recommendation of a minimum 9' separation when fall zones overlap for structures higher than 30"). Without this clarification, readers might misunderstand the recommendations and think that fall zones can overlap almost entirely -- leaving only 2' between adjacent climbers, for example.

OK

5.1.2 Slides

OK

CFA suggests repeating here the proposed recommendation from Section 6.2 stating that fall zones at slide exits should never overlap with the fall zones of any other equipment, regardless of height. Since this proposed recommendation is specifically about fall zones, it should be stated first in Section 5.1.2 on fall zones for slides. Repetition in the layout section then reinforces this important detail.

5.1.3 Swings

OK

CFA suggests repeating here the proposed recommendations from Section 6.2 and Section 12.6.2 that fall zones in front of and behind swings should never overlap with the fall zones of any other equipment. Since this proposed recommendation is specifically about fall zones, it should be stated first in Section 5.1.3 on fall zones for swings. Repetition in the layout and swing sections then reinforces this important detail.

OK

This addition is also needed to clarify current statements that fall zones on the sides of swing structures may overlap. The recommendations should specify exactly where overlap is and is not permitted.

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Without clarification, many questions and confusion may result. For example, does the overlap allowed on the sides apply only to adjacent swing structures or to any adjacent equipment? Also, what overlap is allowed, if any, for tot swings?

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Although CFA supports the proposed fall zone distances for swings, the wording that defines how to take proper measurements for conventional single-axis and tot swings is confusing. CFA recommends simplifying this language. Further, CFA recommends adding a figure for tot swings, similar to those for conventional and tire swings.

OK

5.1.4 Multi-Axis Swings

OK

CFA suggests clarification here -- as above for other swings-- regarding where overlap is and is not allowed for tire swings.

5.1.5 Merry-Go-Rounds

?

CFA suggests repeating here the proposed recommendation from Section 6.2 stating that fall zones for moving equipment should never overlap with the fall zones of any other equipment, regardless of height. Since this proposed recommendation is specifically about fall zones, it should be stated first in Section 5.1.5 on fall zones for merry-go-rounds. Repetition in the layout section then reinforces this important detail.

5.1.6 Spring Rockers

24" or 30" ?

CFA supports the concept of shared fall zones for spring rockers but believes that the maximum recommended seat height should be only 24" (see CFA Section 4.1.5.8).

5.1.7 Composite Play Structures

I agree, but what should it be?

CFA reiterates previous comments about the need for more specific guidance on fall zones for composite play structures. In particular, *Handbook* users need guidance about appropriate minimum spacing between adjacent play events on composite structures. As written, this draft refers only to establishing a fall zone around the perimeter of the structure as a whole.

6. Layout and Design of Playgrounds

CFA strongly supports the proposed list of equipment not recommended for preschool-age children. The references to other sections with specific recommendations for preschool-age children will also help *Handbook* users pay closer attention to important age-related differences. However, CFA still believes that including more detailed information about children's skill levels and play patterns is needed to better promote the design of safe, developmentally appropriate playgrounds for different age groups.

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ok?

CFA opposes the proposed recommendation for "benches for supervisors." Benches on a playground are a nice amenity -- but the *Handbook* should support a more active approach to supervision. CFA suggests deleting "for supervisors."

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8. Materials of Manufacture and Construction

CFA strongly supports the proposed changes and additions regarding lead paint on playground equipment.

9. General Hazards

CFA strongly supports the proposed changes and additions regarding protrusion and projections.

10. Stairways, Ladders, and Handrails

CFA supports the proposed change for the diameter of rungs, other handgripping components, and handrails to 0.95" to 1.55".

Take another look at this.

CFA questions the deletion of the recommendation that rungs and other handgripping components be generally round when intended to support a child's body weight. What is the rationale for eliminating this important recommendation?

CFA strongly supports the proposed changes to provide age-related recommendations for handrail height.

11. Platforms, Guardrails and Protective Barriers

CFA strongly supports the proposed recommendations in Section 11.6 regarding entrances and exits in guardrails and protective barriers.

12.1 Climbing Equipment

12.1.2 Design Considerations

OK

CFA strongly opposes the deletion of the recommendation that climbers not have rungs and structural components on the interior of the structure. Eliminating this recommendation will allow some of the old-fashioned and generally dangerous jungle gyms to meet the revised *Handbook's* guidelines -- reversing several years of Commission recommendations against such equipment through this particular specification. Because children can suffer severe impact injuries when falls onto interior climbing rungs occur, the *Handbook* should provide design recommendations to minimize this risk. If any change is made, CFA believes that this recommendation should be made stronger, by deleting the 18" allowance (see CFA Sections 5.1.1.4 and 6.1.1.4).

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12.1.5 Horizontal Ladders and Overhead Rings

CFA strongly supports the proposed changes to provide age-related recommendations for horizontal ladders.

CFA strongly supports the proposed recommendation against the use of rungs for take-off and landing. Clarification is needed, however, as to whether this includes rungs under a platform (especially since Figure 14 shows this design).

12.1.7 Climbing Ropes

CFA strongly supports the proposed recommendation against the use of climbing ropes.

12.3 Seesaws

CFA strongly supports the proposed recommendations for a maximum attainable angle and seat height for seesaws. However, CFA suggests a maximum attainable seat height of only 4' (see CFA Section 4.1.5.7).

12.4 Slides

12.4.4 Sliding Section of Straight Slides

CFA supports the proposed recommendations regarding the height of sides on circular, semicircular or curved slide chutes.

12.4.7 Spiral Slides

CFA strongly supports the proposed clarification of "short spiral slides" for preschool-age children to mean "one turn or less."

12.4.9 Roller Slides

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CFA opposes deleting the recommendation against the use of roller slides. What is the rationale for this reversal? CFA strongly supports CPSC's previous position -- particularily due to the risk of clothing entanglement on these slides. However, if the *Handbook* is now going to allow roller slides, additional, more stringent safety precautions need to be detailed.

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12.6 Swings

12.6.1 General

CFA strongly supports the proposed recommendation against the use of ropes to suspend swings.

12.6.2 Single-Axis Swings

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CFA supports the proposed recommendations for minimum swing seat heights. However, CFA still believes that a maximum should be considered, at least for preschool-age children (see CFA Section 5.5.2.1.7).

CFA supports the proposed recommendation for a minimum distance of 20" between swing hangers.

12.6.3 Tot Swings

CFA supports the proposed changes for tot swings, including the minimum swing seat height.

12.6.4 Multi-Axis Swings

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CFA suggests adding a range of appropriate heights for multi-axis swings, given the proposed recommendations for seat heights for single-axis swings (see CFA Sections 5.5.3.1.3 and 6.5.3.1.3).

References

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The "References" section is somewhat limited and would be more helpful if expanded to include broader listings for both references and resources. If NRPA is going to be listed, other organizations that address playground safety should be listed as well – such as CFA, ASTM, the National Program for Playground Safety, and others. (see CFA Section 9).

Rubbermaid

#57

little tikes

Rubbermaid Juvenile Products

commercial play systems

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June 26, 1997

John D. Preston, P.E.
Directorate for Engineering Sciences
U.S. Consumer Product Safety Commission
Washington, DC 20207

Re: Comments on Handbook For Public Playground Safety

Dear Mr. Preston:

We appreciate efforts of the CPSC staff to revise the CPSC Handbook For Public Playground Safety, and your stated goal of attempting to harmonize its recommendations with provisions in ASTM Standard Consumer Safety Performance Specification for Playground Equipment for Public Use, ASTM F 1487.

We write to identify several areas where we believe further discussion and work is needed in order to avoid confusion.

1. Reading in conjunction Handbook Sections 4.3.1 (Maximum Accessable Heights) and 11.3 (Minimum Elevation Requiring Guardrails) and 11.4 (Minimum Height of Guardrails), we believe there is substantial confusion. For example, for school age children an elevated surface could be 30 inches above the underlying surface (Section 11.3), and would need a guardrail 29 inches high above the platform (Section 11.4). In such an instance the top of the guardrail would be up to 59 inches above the underlying surface, conflicting with the newly added 48 inch (4 feet) height specified in Section 4.3.1. Indeed even with a 20 inch platform the top of a 29 inch high guardrail would by over 48 inches above the underlying surface. Thus the Handbook text is internally inconsistent. We believe ASTM F 1487 Section 7.4 is well written and should be used as a model.

2. Handbook Section 12.1.5 has a new 78 inch maximum height for upper body equipment for school age children, conflicting with the 84 inches provided in Section 8.3.4 of ASTM F 1487. We believe 84 inches is a safe and appropriate distance, and lowering horizontal ladders or other upper body equipment to 78 inches would cause many children to drag their feet, defeating the practical utility of the equipment.

3. Handbook Section 12.4.7 on Spiral Slides is unclear when it states that for preschool children only short spiral slides are recommended, "one turn or less." We don't know if this means 360° or something else.

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Little Tikes Commercial Play Systems would welcome an opportunity to meet with you and CPSC staff in July or August to further discuss these or other issues which may be raised by the comments you receive.

In our view more work on harmonization is needed, because we are concerned about the differences that remain between the CPSC Handbook and ASTM F 1487. These documents should be consistent.

Very truly yours,

James R. King

James R. King
Associate Counsel

JRK/st

Joseph M. Denzak, Jr.
208 Overlook Drive
Syracuse, New York 13207

#58

June 28, 1997

Mr. John D. Preston, P.E.
Directorate for Engineering Sciences
U.S. Consumer Product Safety Commission
4330 East West Highway Suite 611
Bethesda, MD 20814-4408

Dear Mr. Preston:

This letter is in response to the proposed revisions of the CPSC Handbook for Public Playground Safety.

I feel that it is unnecessary to arbitrarily limit heights as there are a number of protective surfacing materials available for heights that are over twelve feet and these materials meet the CPSC's cushioning requirements. Lowering the heights of equipment is not the real issue. The real issue is one of what protective surfacing will do the most toward reducing the severity of injuries from accidents.

It is also important to realize that limiting the height to 8' will significantly reduce the play value of the equipment, especially for the older children. In fact, the unintended consequences of such an action may be that the older children will misuse the smaller, less challenging equipment, putting themselves at greater risk for injury.

It should be further noted that neither the ASTM F 1487 nor the ASTM F1292 standard place limits on the height of play equipment. I feel that the CPSC should adopt these standards so as to create continuity with ASTM.

Thank you for your time and attention to this matter.

Sincerely,

Joseph M. Denzak, Jr.

Fxd 6-26-97

#59

JERRY ROBISON
President

JERRY ROBISON AND ASSOCIATES

June 26, 1997

Mr. John D. Preston, P.E.
Directorate for Engineering Sciences
U.S. Consumer Product Safety Commission
4330 East West Highway, Suite 611
Bethesda, MD 20814-4408

RE: Response to Proposed Revisions the CPSC Handbook for Public Playground Safety

Dear Mr. Preston,

I would like to take a moment to comment on the proposed changes to the CPSC playground guidelines. As manufacturer's representatives in the playground industry we involve ourselves with the play habits of school age children on a daily basis. We make a study in watching children of all ages on playgrounds, are proud of the challenges and enjoyment our equipment provides, and are proud of our safety record as an industry. Limiting the challenges to children on playgrounds will only drive them to seek alternate challenges away from the playground where no controls whatsoever can be imposed and the incidence of risk, physical and social, is much greater.

Section 4.3.1: Height Limitations for School Age Children

Why is the CPSC proposing an arbitrary limit of 8' for play equipment? If injury danger is a function of the surfacing material and your own present guidelines allow for fall heights in excess of 12' why limit the play value with an arbitrary height limit of 8'. Eight feet is simply not high enough to challenge older children looking for a sense of excitement and accomplishment.

ASTM F1487 and ASTM F1292 standards do not limit the height of play equipment To suggest a CPSC standard that further conflicts with their guidelines only serves to confuse the playground consumer. Injury data from the legions of slides and equipment over 8' in height that have been in the field for decades do not support your proposed position on the 8' height.

Section 7.1.1: Stability

We have no experience to suggest that factory specified footings are insufficient or cause any risks to children. We use licensed contractors that are factory certified. The Miracle Recreation installation instructions are specific to footing detail and footing detail is necessary in order to make any of our products perform and fit.

P.O.Box 17509 • Fountain Hills, AZ 85269 • (602) 816-1775 • Fax (602) 816-1918 • 1-800-905-1411

Speaking form our experience, our footing requirements would likely exceed any you may propose and the industry would be subjected to the review of overworked and unqualified building inspectors. Safety is already a greater concern to the industry as a whole than to the persons that would be enlisted to police it.

Section 12.1.7: Climbing Ropes

ASTM's position on climbing ropes is such that they must be anchored at both ends and that there be insufficient slack to allow a loop to wrap around a child's neck. This is a sufficient safeguard and should be adopted by CPSC, again to build harmony between the two standards.

Section 12.1.5: Horizontal Ladders and Overhead Rings

Lowering ladders to 78" would make the devices too low to be used by the older, 4th-6th grade children -- the target users for these upper-body strengthening devices. Their feet would drag, period. Remember too, that by lowering the ladders, the invitation to climb atop the structure will further present itself, leading to an inverse safety effect; less intended usage, more unintended usage.

Eliminating the access and egress rungs would leave the overhead climber useful only to the tallest children -- those that would drag their feet. I watched a 6-year-old negotiate rings just two days ago without incident. In speaking to his mother she said that overhead climbers were his favorite and that they can't go to parks that lack these devices because he gets bored with the little slides. This young man could not have reached the rings without access rungs. Imagine the impact your proposed regulation will have on the older children!

Physical education and academic education share the common thread of challenge. Just as we cannot expect academic excellence and success without far-reaching goals, we must offer similar levels of physical challenge to our young people. To address the least common denominator, physically or academically, is a self-defeating proposition ensuring mediocre performance, lowered confidence levels, and lack of self-esteem among young people.

I urge you to act with the best interests of America's children in mind, not America's underwriters.

Respectfully Submitted,

James E. Drake

#60

L.A. STEELCRAFT PRODUCTS, INC.
P.O. Box 5491
Fresno, CA 93755
209-437-0267
Fax: 209-437-0268

June 23, 1997

Mr. John Preston
USCPSC
4330 East West Highway
Washington, DC 20207

RE: May 1997 DRAFT of Handbook for Public Playground Safety

We are concerned about the proposed changes as described in 12.1.5 Horizontal Ladders and Overhead Rings in the subject document.

- The spacing of rungs of an overhead ladder are shown for Preschool-Age Children and School Age Children. The draft indicates that this distance does not apply to "overhead rings" and perhaps should say "overhead swinging rings" as stated in Section 3 and describing Upper Body Equipment. The proposed wording assumes that the rings are not fixed.

- A distance based upon rationale should be stated for overhead swinging rings. I recommend that the distance be the same as for fixed rings. It is understood that the ring does swing in an arc about the pivot point. However, under the full weight of a child, the degree of movement is not sufficient enough to assume that the next ring is static and therefore closer. In fact, if the apparatus is in use, the adjacent unoccupied ring could very well be swinging and the reach distance could be equal or greater than fixed handholds of horizontal ladders or fixed overhead rings.

- The maximum height of upper body grasping device for School-Age Children should not be reduced to 78 inches from the present 84 inches. In the Introduction of this document it states that "a playground should

allow children to develop progressively and test their skills by providing a series of graduated challenges". Our company has offered horizontal ladders since 1952 (or earlier but this is what we can document) and users have always complained when the height of the grasping device does not allow for the free swing of the children.

The overhead reach of the 95th percentile twelve year old is 78 inches and therefore this height is not a challenge and will not be used by this group. There does not seem to be rationale to make this change.

- In over 45 years of selling this product, we have not one single recorded accident that would preclude the use of rungs for the take-off and landing of an overhead device. The main use of the rungs are for take-off and seldom does the child use the rungs for landing. There seems to be no rationale for adding this sentence to the document.

We are concerned about playground saftey and have made changes in certain instances that were retroactive to the guidelines being adopted. However, we run the danger of making equipment so sterile to the user that the purpose of the equipment is defeated and the user takes the attitude that they are not getting any benefit from the investment. We will never eliminate injury from the use of playground equipment. We should not eliminate the challenge and fun in the use of playground equipment.

Thank you for considering these items. Please contact us if there are any questions.

Respectfully yours,

Thomas I. Williams, PE
Regional Manager

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GameTime

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June 27, 1997

US Consumer Product Safety Commission
Attn: Mr. John D. Preston, P.E.
Directorate for Engineering Sciences
Washington, D.C. 20207

Re: Revisions to CPSC Handbook for Public Playground Safety dated May 13, 1997

Dear Mr. Preston:

The greatest problem we have with the proposed changes is that CPSC is moving off on its own regarding public playground safety recommendations. Upon republishing the CPSC guidelines with some or all of the proposed changes, US public play proponents will have two somewhat different safety documents from which to choose .... CPSC and ASTM F1487.

The intent of revising the CPSC guideline is certainly to reduce the risk of injury for users of play equipment. We have no disagreement with the purpose of the proposed changes. However, the distribution of two somewhat different safety documents creates confusion for equipment owner/operators, members of legislative bodies who pass laws regulating playground equipment and the public in general.

During the 1970's and 1980's, CPSC published public play equipment safety guidelines because this information was not otherwise available in the US. In 1993, with the valuable assistance of you and other CPSC staff, consensus ASTM Standard F1487 was published. We ask you to consider harmonizing the CPSC guideline with the ASTM standard prior to any published changes to the current CPSC document.

Our comments regarding the changes to the CPSC public playground guidelines follow. Thank you for your consideration.

Yours truly,

Kert E. Artwick

Kert E. Artwick, P.E.
Manager - Compliance

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June 27, 1997

Changes Proposed to CPSC Handbook for Public Safety
Stairway Recommendations, Table 1

Currently, CPSC Guidelines restrict stairway slopes to 35 degrees maximum (Table 1, page 9). ASTM Standard F1487-95 permits a 50 degree slope. We recommend that CPSC increase the permissible stairway slope to 50 degrees to harmonize with ASTM. The rationale for this change follows.

A stairway provides a very low degree of challenge when accessing public play equipment. Typical construction of public playground stairways in recent years have slopes ranging from 40 to 50 degrees. We are not aware of these products being involved in any injuries to equipment users.

Model US building codes permit a 38 degree (approximate) stairway slope in residential construction. Besides providing access between floors having a nine to fifteen foot height differential, the residential stairway must also provide a means of transporting furniture and other household objects between floors. In contrast, the playground stairway is generally limited to a four foot height differential and has no such requirement for transporting heavy or bulky items thereon.

To summarize, existing playground stairways have not been involved in injuries to users. CPSC and ASTM need to harmonize their stairway requirements and eliminate the confusion to owner/operators. The existing ASTM stairway slope of 50 degrees is reasonable given the current construction of stairways in the residential and public playground environments and the use to which each is subjected.

Gametime, Inc.
Kert E. Artwick, P.E.

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June 27, 1997

Changes Proposed to CPSC Handbook for Public Safety
Introduction, Section 1

We do not agree with the wording of the second paragraph of the introduction. This paragraph describes the intended use of the ASTM standard and the CPSC guideline. It implies that the ASTM standard is for use only by equipment manufacturers while the CPSC guideline should be used by everyone else associated with public playground safety.

In fact, the ASTM document closely resembles the CPSC document in content. Also, the ASTM standard must be at least partially utilized by manufacturers since the CPSC guideline gives no guidance relating to the structural integrity requirements appropriate for various types of play equipment. We suggest that the true intent of this paragraph is more closely embodied within the following rewritten second and third sentences:

"A voluntary consensus standard for public playground equipment, ASTM F-1487 [2], contains similar recommendations as found in the handbook. ASTM F-1487 contains more technical requirements than found in this handbook, including structural integrity testing intended to be conducted by manufacturers."

We recommend that you replace the existing last two sentences in the second paragraph of Section 1 with those shown above.

Gametime, Inc.
Kert E. Artwick, P.E.

Changes proposed to CPSC Handbook for Public Safety

Section 12.1.5. Horizontal Ladders

Vertical Height - During the development of the ASTM Standard F1487-93, the committee spent a great deal of time addressing vertical height of overhead ladders. The 84" maximum height matched the anthropometric data for the 95th percentile twelve-year-old. The chairperson of the group which developed this requirement was a CPSC staff member. When ASTM 1487-93 was published, most manufacturers had already reduced their overhead ladder heights to accommodate the standard.

Subsequently, Montgomery County (MD) Schools requested that GameTime build special overhead ladders to a 78" height. We did so and later learned that this had eliminated use by the fourth, fifth, and sixth graders for which the equipment was intended. Ms. Susan Antle will be supplying CPSC with the full details of these findings.

Rung Ladders - Eliminating a rung ladder at the end of an overhead ladder (not attached to a deck) is a mistake. We believe that the owner/operator should be able to choose whether or not a rung ladder is used. GameTime has used rung ladders for access to and egress from horizontal ladders and overhead rings from the very first design. Our experience shows us that the injuries have occurred from falls to a hard or poorly maintained surface on older equipment having a height greater than 84", not from falls while accessing a rung ladder.

We have observed children bringing bicycles, chairs, cement blocks, rocks, and other materials into other manufacturers play environments. This gives them the "step-up" to reach overhead events and is not desirable. Further, with the coming of firm, stable and slip resistant surfacing materials, which will often be a rubber matting, we foresee many problems by mandating that the child use the overhead event and then drop to the surface. We believe the elimination of the rung ladder is a mistake. Moreover, this change would eliminate the traditional freestanding overhead ladders from the marketplace.

User Age - We understand the desire not to eliminate the 4-year-old from starting to utilize overhead type events. We caution CPSC to not suddenly interject a new age grouping of 4-12 when the traditional ASTM and CPSC age definition has been preschool children, 2-5 year olds, and school age children 5-12 year olds. We feel it would be much better to recommend that if a 4-year-old user wishes to utilize a piece of overhead equipment that supervision should be provided and that equipment design should have lower decks, with lower overhead events for this age group. As it stands today, the proposed CPSC Guideline would allow a 4-year-old user to fall or drop from the 78" high beam and we do not feel this is a good recommendation for the Consumer Product Safety Commission to make. The 4-year-old would be falling more than 30" onto a surface that we hope is maintained to be resilient.

In conclusion, we recommend that the CPSC not contradict ASTM 1487-95 with regards to horizontal ladders and overhead rings. We recommend that the school age children height be 54", the use of rung ladders be a choice made by the owner/operator and that the age group for overhead events remain 5-12 years of age.

GameTime, Inc
Kent E. Artwick, P.E.
Enclosure Pages 3 & 4