Maintaining Safe Play Environments
AASB/APEI Maintenance Employees
About me...

- Degree in Architectural Drafting
  Degree in Construction Technology

- 21 year Air Force career Construction Management

- Has been with Exerplay since 2007

- Covers all of Alaska

- 15 year CPSI (Certified Playground Safety Inspector)
THE BENEFITS OF PLAY.

Play allows children to use their creativity while developing their imagination, dexterity, and physical, cognitive, and emotional strength. Play is important to healthy brain development. It is through play that children at a very early age engage and interact in the world around them.

http://pediatrics.aappublications.org

Kenneth R. Ginsburg and the Committee on Communications, and the Committee on Psychosocial Aspects of Child and Family Health
WHAT DID YOUR GRANDPARENTS PLAY ON?
WHAT DID YOU PLAY ON AS A KID?
TODAY’S PLAYGROUNDS ARE SAFER THAN EVER...THEN WHY PLAYGROUND SAFETY?
Each year it is estimated that 200,000 playground related injuries are serious enough to require emergency room treatment.

Fifteen of these injuries will result in death.
INJURIES ON A PLAYGROUND

THE LEADING CAUSE OF INJURY ARE FALLS TO THE SURFACE.

THE LEADING CAUSE OF DEATH IS STRANGULATION.

**Dangers of “hoodies”**

Strings and cords in hooded sweatshirts and jackets, popularly known as “hoodies,” should be removed when worn by young children because of the risk of getting caught on playground equipment, toy doors or cribs, according to the U.S. Consumer Product Safety Commission, which prohibits the sale of such children’s clothing.

*The possible hazards of long drawstrings*:

- They can get caught in doors.
- They could pose a strangulation hazard.
- Waist drawstrings should not extend more than three inches.

Injuries on Playground Equipment by percentage:

- Falls to Surface
- Falls to Equipment
- Impact with Stationary Equipment
- Impact with Moving Equipment
- Crush points, sharp edges, entanglement, head or neck entrapment

Source: Playground Inspection Professionals, CPSI Inspectors
Playgroundinspectionpros.com
How Kids Get Hurt:

- Poor Maintenance: 40%
- Improper Use/ Poor Supervision: 44%
- Inappropriate design: 7%
- Installation Issues: 6%
- Site Planning Issues: 3%

Source: Playground Inspection Professionals, CPSI Inspectors
Playgroundinspectionpros.com
Current Regulatory Environment

AMERICAN STANDARD FOR TESTING AND MATERIALS (ASTM)


CONSUMER PRODUCT SAFETY COMMISSION (CPSC)

Current Regulatory Environment

INTERNATIONAL PLAY EQUIPMENT MANUFACTURERS ASSOCIATION

To establish procedures for a third party certification program in which a designated independent laboratory validates a manufacturer’s certification of conformance to the CSA Z614, ASTM F1487 (Play Equipment) or F1292 (Surfacing) Standard.

These procedures require the inspection and validation of a manufacturer’s personnel, facilities, methods and documentation as well as the testing of specific products.
Current Regulatory Environment

NATIONAL PLAYGROUND SAFETY INSTITUTE (NPSI)

To train and educate those involved in the design, management, installation or maintenance about the safety hazards associated with public playgrounds.

To be a CPSI, an individual must be able to test and identify, as well as prioritize remedial efforts of potential safety hazards as identified in the CPSC Guidelines and the ASTM Standards.
## The Dirty Dozen: 12 Playground Hazards

<table>
<thead>
<tr>
<th>Number</th>
<th>Hazard Description</th>
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<tr>
<td>1.</td>
<td>Improper Surfacing</td>
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<td>2.</td>
<td>Inadequate Use Zones</td>
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<td>3.</td>
<td>Entrapment in Openings</td>
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<td>4.</td>
<td>Protrusions and Entanglement Hazards</td>
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<td>5.</td>
<td>Platforms with no Guardrails or Barriers</td>
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<td>6.</td>
<td>Crush and Shear Points</td>
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<td>7.</td>
<td>Insufficient Equipment Spacing</td>
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<td>8.</td>
<td>Trip Hazards</td>
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<td>9.</td>
<td>Age-Inappropriate Activities</td>
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<td>10.</td>
<td>Lack of Maintenance</td>
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<td>11.</td>
<td>Lack of Supervision</td>
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<tr>
<td>12.</td>
<td>Equipment not recommended for playground use</td>
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</tbody>
</table>
#1. Improper Surfacing
#1. Improper Surfacing
POURED-IN-PLACE
ARTIFICIAL TURF
PLAYGROUND TILE
RUBBER MULCH
ENGINEERED WOOD FIBER
PLAYGROUND SAND
IMPACT ATTENUATION – SURFACING TESTING METHODS
#2. INADEQUATE USE ZONES
Figure 21. Use zone for stand-alone slides
Single Axis Swings

NOTE: H for tot swings measured to bottom of seat.

Figure 25. Use Zone for Single-Axis Belt Swings
Multi Axis Swings

Figure 27. Use Zone for Multi-Axis Swings
#3. ENTRAPMENT IN OPENINGS
Head Entrapment Test Probes

Figure B7. Preschool- and school-age small torso probe

Figure B8. Large head probe
#4. PROTRUSIONS AND ENTANGLEMENT HAZARDS
Examples of protrusion and entanglement hazards include:

- Bolt ends that extend more than two threads beyond the face of the nut
- Hardware configurations that form a hook or leave a gap or space between components
- Open “S” type hooks
- Rungs or handholds that protrude outward from a support structure capable of penetrating the eye socket

Pay Special Attention to:

- The area at the top of slides and sliding devices.
- Protruding hardware and gaps that may hook and catch clothing.
- Ropes should be anchored securely at both ends, and incapable of forming a loop or a noose.
#5. PLATFORMS WITH NO GUARDRAILS OR BARRIERS
#6. CRUSH AND SHEAR POINTS
#7. INSUFFICIENT EQUIPMENT SPACING
#8. TRIP HAZARDS
#9. AGE-INAPPROPRIATE ACTIVITIES
#10. LACK OF MAINTENANCE
LACK OF MAINTENANCE
LACK OF MAINTENANCE
#11. LACK OF SUPERVISION
#12. EQUIPMENT NOT RECOMMENDED FOR PUBLIC PLAYGROUNDS
International Playground Equipment Manufacturers Association (IPEMA)  
The Dirty Dozen is presented in partnership with IPEMA  
www.ipema.org

American Society for Testing and Materials International (ASTM)  
www.astm.org

U.S. Consumer Product Safety Commission (CPSC)  
For a free copy of the Consumer Product Safety Commission's Handbook for Public Playground Safety (No. 325), contact: 800.638.2772  
www.cpsc.gov
TOOLS AND RESOURCES
PLAYGROUND MAINTENANCE CHECKLIST

**Instructions:** Check the entire playground at least once each month. Train all staff to be alert to playground hazards and report them promptly. Avoid the use of the hazardous equipment until repaired.

<table>
<thead>
<tr>
<th>Item</th>
<th>Identify Repair Needed</th>
<th>Date Repaired</th>
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<tbody>
<tr>
<td>1. Is there 8 inches of resilient ground cover under all swings, slides and climbing equipment? Is it compacted or out of place? (yes, no, reinstalled)</td>
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<td>2. Are there foreign objects or obstructions in the fall zone under or around fixed equipment?</td>
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<td>3. Are there obstructions to interfere with normal play activity?</td>
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<td>4. Are there climbing areas that would allow children to fall more than their reaching height when they became excited?</td>
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<td>5. Are concrete supports sinking above the ground? Are they secure?</td>
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<td>6. Are there sharp edges, broken parts, pinching actions or loose bolts?</td>
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<td>7. Are there openings that could trap a child’s head?</td>
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<tr>
<td>8. Are there frayed cables, worn ropes, open hooks or chains that could pinch?</td>
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<tr>
<td>9. Are timbers rotting, splitting, termite infested, or excessively worn?</td>
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<tr>
<td>10. Are portable toys such as tripods and wagons in good repair?</td>
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<tr>
<td>11. Are there projections that could catch clothing?</td>
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</tbody>
</table>
| 12. Are there crush points or shearing actions such as hinges or 
measures and undercarriages of climbing equipment? | | |
| 13. Are swinging seats loose, worn or excessively heavy? | | |
| 14. Is the fence in good repair and at least 4 feet high in all places? Can gates be secured so that children cannot open them? | | |
| 15. Are there electrical hazards on the playground that children can gain access to? (air conditioners, switch boxes, power lines) | | |
| 16. Is there anywhere that water stands or collects? | | |
| 17. Are there toxic materials on the playground? | | |
| 18. Do the grass, trees or shrubs need care? | | |
| 19. Is there any other hazard that needs to be corrected? | Please describe: | |
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THANK YOU!