

# Playground Inspection & Maintenance: Preserve, Promote, Protect

Presented by:



The session is scheduled to begin at 2:00 p.m. Eastern Time. Audio and visuals are provided through the online webinar system. This webinar includes real-time captioning.



**Lloyd Reese**  
Vice President Technical Product Management  
*PlayCore*

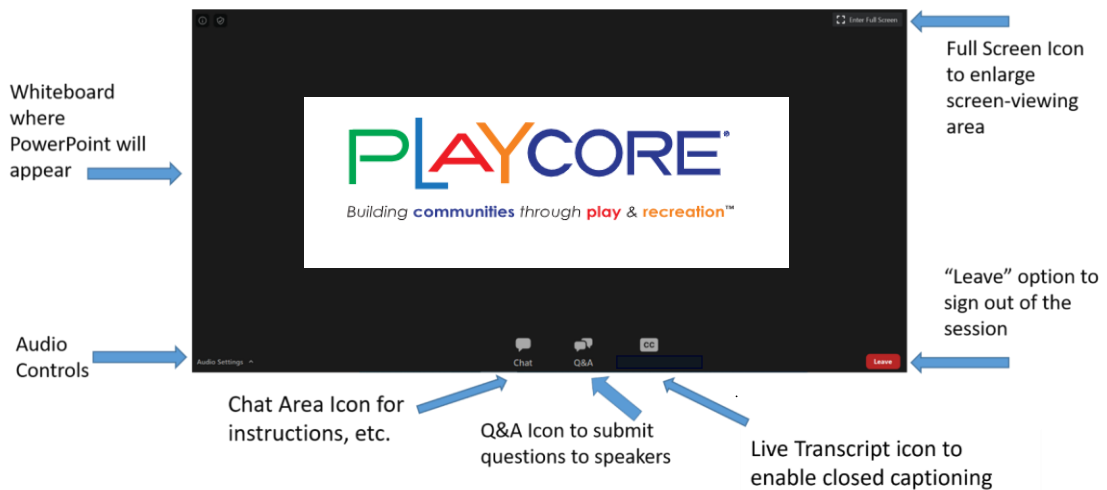


**Anthony Iracki**  
Professional Development Manager  
*PlayCore*  
(Moderator)



1

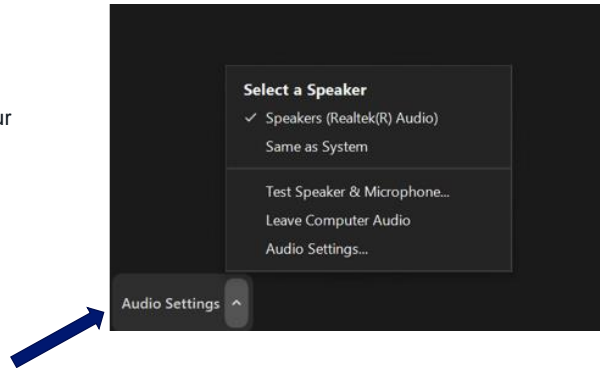
## ZOOM Webinar Interface



2

## Listening to the Webinar via Your Computer

- The audio for today's webinar is being broadcast through your computer speakers
- Please make sure your speakers are turned on or your headphones are plugged in.
- You can verify your audio settings using the Audio Settings Option in the lower left corner of the screen.



## Listening to the Audio via Telephone

If you do not have sound capabilities on your computer or prefer to listen by phone, please refer to the Zoom information that you received which listed various telephone options.



# Captioning

- Real-time captioning is provided within Zoom. Use the **CC** icon to turn captioning on/off.
- Zoom allows you to mouse over and “Move” the captioning box anywhere on your screen that you desire it to be.
- Zoom Captioning has options to enlarge the font or adjust the display area size within the Subtitle Settings.
- You can choose to view the full transcript by mousing over the **CC** icon and selecting “View Full Transcript” option.



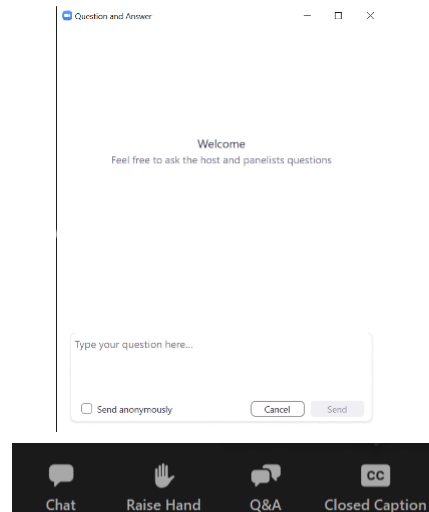
5

# Submitting Questions

- Questions should be submitted via the **QUESTION AREA (ICON)**. You will have the option to submit your question “anonymously.”
- **Please DO NOT** submit questions in the Chat Area. We will not be monitoring it for questions.

**Please refrain from submitting any commentary, responses, etc. via the chat area.**

*Please note: This webinar is being recorded. The video recording and the transcript will be available on the learning system. Go to event details to access the recording. Go to the handouts tab to access the transcript.*



6

# Technical Assistance

If you experience any technical difficulties during the webinar:

1. Send a private chat message to the Host in the Chat Area. You can select via the drop-down menu in the Chat Area.

OR

2. Email: [core@playcore.com](mailto:core@playcore.com)



To: All panelists ▾

Your text can only be seen by panelists



7



## OUR MISSION & VALUES

We are a purpose-driven company that develops leading research and a complete portfolio of innovative products, programs, and services to build healthy communities through play, recreation, and open spaces.

<b>PLAY &amp; RECREATION</b>	We believe that various forms of play, recreation, and physical activity are essential throughout life as they provide a healthy life balance and greatly enrich people of all ages and abilities.
<b>LEADERSHIP</b>	We believe in profitably growing the company through innovation and by taking informed, entrepreneurial risks that advance play, recreation, and physical activity.
<b>TEAMWORK</b>	We believe our employees are our most valuable assets. We strive to instill a sense of teamwork and pride by providing a safe and productive work environment in which employees are treated with fairness and respect.
<b>RESPONSIBILITY</b>	We believe in demonstrating leadership through research and a beyond-compliant attitude in every aspect of our business including safety, inclusion, and sound environmental practices.
<b>PARTNERSHIPS</b>	We believe in mutually beneficial relationships with our customers, representatives, suppliers, and industry affiliates.
<b>COMMUNITY</b>	We believe in enhancing the quality of life in the communities where we live, work, and play.

8

**CORE**  
Center for Outreach, Research & Education  
*Turning research into practice.®*

**CORE**  
PLAYCORE

Research Institute  
Resource Library  
Professional Development Hub  
Data Service Lab

PLAYCORE

9

Shawn Blair, PhD University of South Carolina	Nancy D. Bostromy, PhD, MCHD, MPH Georgia Tech University	Edwin Bristol, PhD Utah State University	Shawn Brown, MD The National Institute for Play	Timothy A. Brannen, Ph.D. University of Utah	Kathleen C. Burns, EdD Middle Tennessee State University
Paul Charlier, PhD West Virginia University	Keith Christensen, PhD Utah State University	Terry Conway, PhD San Diego State University	Nikola Coussis, PhD NC State University	Brian Deanehouse, Ph.D. University of Northern Colorado	Heather Evans, PhD University of Kentucky
Myron Floyd, PhD NC State University	Aaron Hagg, PhD NC State University	Melissa Hughes, PhD The French Group	Tim-Min Lau, EdS Autism University	Gary Liguori, PhD University of West Florida	Marybeth Linn, PhD Louisiana State University
Tyron McArthur, PhD San Diego University	H. Renee Umpstead-Hager Boyon University	Martinez Monsal, PhD Texas Tech University	Robin Moore, PhD Digi Arch, MCHD, EdS NC State University	Elizabeth "Betty" Neuge University of Pittsburgh	Jacquelyn Neuge-Zinn, PhD John Carroll University
Ge Perreave, PhD, EdS, CCFP 8-to-80c, World Urban Parks	Kristina Peltola-Parkar, PhD, MPH Indiana Hopkins-Bowling Green School of Public Health	Allison Phillips, PhD Arizona State University	Stefanie S. Rosenberger, PhD Professor of Applied Economics Drexel State University	Jim Sallis, PhD University of California San Diego	Michael S.A., PhD, EdS, MPH, FACS Geisinger Health System
John Suterby, PhD University of Texas San Antonio	Heidi and Tanya, PhD University of Texas at Austin	Joseph Thompson, PhD, EdS Assistant Research Professor, LC Samueli School of Public Health	Colin A. Webster, PhD University of South Carolina		

## CORE | RESEARCH INSTITUTE

Our Research Institute is comprised of leading experts, universities, and research centers who are committed to helping us investigate, discover, and translate information that informs our services.

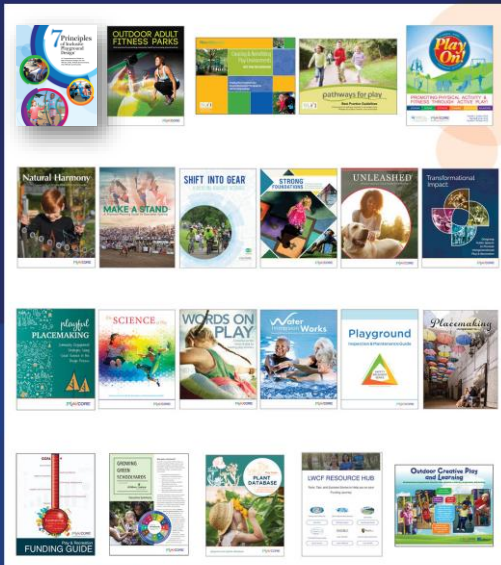
Through our trusted partnerships, we publish field-tested best practices across a variety of play and recreation disciplines.

**Connect & Collaborate: [playcore.com/research](https://playcore.com/research)**



10

## CORE | RESOURCE LIBRARY

[www.playcore.com/resources](http://www.playcore.com/resources)

## CORE | RESOURCE LIBRARY

CORE's Resource Library is a collection of evidence-based publications including best-practice design guides, planning tools, advocacy tools, case studies, and standards-based curriculum. Every resource is fueled by the research from our Research Institute, time-tested, and put into practice by organizations around the world.

Explore the Resources: [playcore.com/resources](http://playcore.com/resources)



11

SEMINARS &amp; WORKSHOPS

CONFERENCES

LUNCH &amp; LEARN EVENTS

VIRTUAL LEARNING EVENTS



## CORE | PROFESSIONAL DEVELOPMENT HUB

CORE's Professional Development Hub combines research and resources to offer world-class learning opportunities where professionals can share learnings and earn Continuing Education Units (CEUs) through a variety of tailored events and diverse topics.

Learn & Earn: [education.playcore.com](http://education.playcore.com)



12



## CORE | DATA SERVICE LAB

We are passionate about raising national awareness and helping local communities share the positive impact they're making on health and wellness and measuring their impact on the community's vitality.

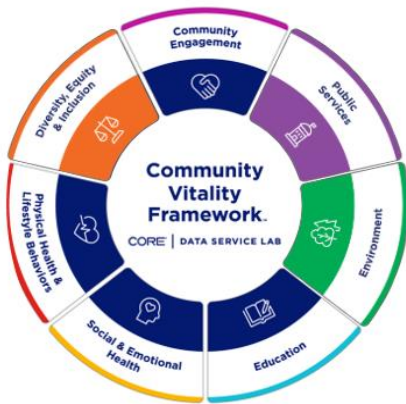
**Demonstrate Community Impact:** [playcore.com/nds](https://playcore.com/nds)



13

# Telling Your Impact Story: Community Vitality

*What are your community's priorities?*



**Public Services**

---

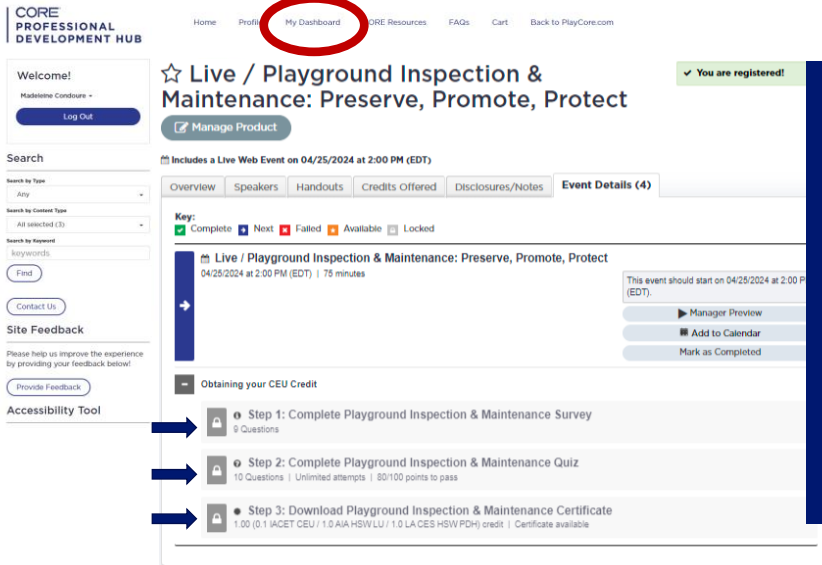
- Healthcare
- Public Transportation
- Economic Development
- Public Spaces
- Perceptions of Public Services/Agencies

CORE | DATA SERVICE LAB



14

# Steps to Receive Continuing Education Credit



1. education.playcore.com
  2. Go to My Dashboard
  3. Complete Survey  
Complete Quiz
  4. Obtain CEU Certificate
- Open Until May 5<sup>th</sup>*



15

## Playground Inspection & Maintenance: Preserve, Promote, Protect

Presented by:



The session is scheduled to begin at 2:00 p.m. Eastern Time. Audio and visuals are provided through the online webinar system. This webinar includes real-time captioning.



**Lloyd Reese**  
Vice President Technical Product Management  
*PlayCore*



**Anthony Iracki**  
Professional Development Manager  
*PlayCore*  
(Moderator)



16



## Learning Objectives



1. Summarize safety considerations when conducting a visual inspection of playground equipment, surfacing, and the general area.
2. Identify at least 5 potential hazards that can occur during playground inspections and effective corrective actions.
3. Outline the key aspects of a successful, sustainable maintenance program and the significance of comprehensive documentation for accountability and follow-up.
4. Identify two resources for developing inspection protocols based on industry standards and best practices.

17

## Why is Inspection and Maintenance Important?



### Did You Know?

It has been estimated that at least 33% of playground accidents could be avoided with a planned maintenance program.

(National Recreation and Park Association's CPSI Course)

- Protect your investment
- Manage risk
- Improve children's play experiences
- Promote community values
- Control expenses

18

## ASTM F1487

### 13. Maintenance

13.1 *Public Use Playground Equipment*—The **designer or manufacturer** of each play structure shall provide to the owner/operator clear and concise inspection, maintenance, and repair instructions, including, but not limited to, what, when, and how to inspect, maintain, and repair.

13.1.1 The **owner/operator** shall maintain and repair each play structure within the playground in accordance with designer/manufacturer's installation and maintenance instructions and in compliance with Specification F1487, and where applicable, addresses the intent of the DOJ 2010 Standard for Accessible Design.

13.1.2 The **owner/operator** shall make periodic inspections of each play structure and remove extraneous materials that could cause injury, infection, or disease.



19

## ASTM F1487

### 13. Maintenance

13.2 *Impact Attenuating Surfacing:*

13.2.1 The **owner/operator** shall maintain and repair the impact attenuating surfacing within the use zone of each play structure in accordance with designer/manufacturer's installation and maintenance instructions and in compliance with Specifications F1487 and F1292 appropriate for the fall height of each play structure and, where applicable, maintains the surfacing to address the intent of the DOJ 2010 Standard for Accessible Design.

13.2.2 The **owner/operator** shall make periodic inspections of the impact attenuating surfacing within the use zone of each play structure and remove extraneous materials that could cause injury, infection, or disease.



20

# ASTM F1487

## 13. Maintenance

13.3 *Records*—The **owner/operator** shall establish and maintain detailed installation, assembly, inspection, maintenance, and repair records for each public-use playground equipment area.

21



# Maintenance Inspections

22

## Maintenance Inspection

- Inspection Frequency
  - Low frequency (quarterly/semi-annually)
  - High frequency (daily/weekly)
- Inspection Process
  - Audit by Certified Playground Safety Inspector (CPSI)
  - File regular inspection forms for safekeeping



23

## What Variables Affect Inspection Frequency?

### Use Factors:

- *Extent of playground use*
- *Ages of children using playground*
- *Vandalism patterns*

### Development Factors:

- *Type of surfacing materials*
- *Materials used to manufacture*
- *Age and type of equipment*

### Environmental Factors:

- *Soil/drainage conditions*
- *Climatic/Atmospheric conditions*



24

# Establishing Frequency

Factors can be assigned a numerical rating  
The numerical ratings are summed up and compared against key

Playground Name/ID Number \_\_\_\_\_ Date \_\_\_\_\_

Form Completed By \_\_\_\_\_

Factors	Possible Points	Points Given
<b>A. Use Factors</b>		
1. Ventilation (Hours)		
High	10	
Moderate	5	
Low	2	
2. Use Level (Community Use, Little, etc.)		
High	10	
Moderate	5	
Low	2	
3. Age Design		
Preschool age (2-5 years)	10	
School age (6-12 years)	5	
All ages (0-12 years)	2	
<b>Use Factors Total</b>		
<b>B. Materials</b>		
1. Resident Surfacing		
Luxury Materials	10	
Specialty Materials	5	
Wood, Painted Wood	2	
2. Material Debris Core		
Stabilized Plastic	10	
Stainless Steel	5	
Equipment	2	
Moving steel	10	
Static steel	5	
Both	30	

Wk (month) Adjustment

Possible Points	Points Given
0	
3	
6	
9	
12	
34	
0	
4	
8	
0	
4	

**Inspection Frequency Summary Form for All Owner's Sites**

Key to Inspection Frequency Chart		
Points	Routine Visual Inspections	Operational Inspections
71 or more	2 or more times per week	2-3 times per month
56-70	Weekly	Monthly
41-55	Biweekly	Bimonthly
40 and below	Monthly	Seasonal

**Inspection Frequency Summary Form (Sample)**

Playground Site Name	Factors Evaluated					
	Use Factors	Material	Environmental	Points Given	Routine Visual Inspection	Operational Inspection
1.						
2.						

## Low Frequency Inspection

### Playground Inspection & Maintenance Guide Page 25

- Quarterly, semi-annual maintenance tasks
- Not an instrument for a playground audit
- Playground was in compliance at time of installation
- Knowledgeable staff member to perform inspection
- Preventive maintenance and repairs

**Low Frequency Inspection (Quarterly/Semi-annual)**

Page \_\_\_\_\_ of \_\_\_\_\_

Inspector \_\_\_\_\_ Date \_\_\_\_\_

Site Name \_\_\_\_\_

**GENERAL SAFETY**

1. Inspect for any sharp edges or protrusions  
2. Inspect for any loose or broken hardware  
3. Inspect for any damaged or missing safety surfacing  
4. Inspect for any damaged or missing safety surfacing  
5. Inspect for any damaged or missing safety surfacing  
6. Inspect for any damaged or missing safety surfacing  
7. Inspect for any damaged or missing safety surfacing  
8. Inspect for any damaged or missing safety surfacing

**ENTRANCE & MATERIAL CONDITIONS**

1. Inspect for any damaged or missing safety surfacing  
2. Inspect for any damaged or missing safety surfacing  
3. Inspect for any damaged or missing safety surfacing  
4. Inspect for any damaged or missing safety surfacing  
5. Inspect for any damaged or missing safety surfacing  
6. Inspect for any damaged or missing safety surfacing  
7. Inspect for any damaged or missing safety surfacing  
8. Inspect for any damaged or missing safety surfacing

**FAULTS**

1. Inspect for any damaged or missing safety surfacing  
2. Inspect for any damaged or missing safety surfacing  
3. Inspect for any damaged or missing safety surfacing  
4. Inspect for any damaged or missing safety surfacing  
5. Inspect for any damaged or missing safety surfacing  
6. Inspect for any damaged or missing safety surfacing  
7. Inspect for any damaged or missing safety surfacing  
8. Inspect for any damaged or missing safety surfacing

**STRUCTURAL MEMBERS**

1. Inspect for any damaged or missing safety surfacing  
2. Inspect for any damaged or missing safety surfacing  
3. Inspect for any damaged or missing safety surfacing  
4. Inspect for any damaged or missing safety surfacing  
5. Inspect for any damaged or missing safety surfacing  
6. Inspect for any damaged or missing safety surfacing  
7. Inspect for any damaged or missing safety surfacing  
8. Inspect for any damaged or missing safety surfacing

**OPERATIONAL & MAINTENANCE**

1. Inspect for any damaged or missing safety surfacing  
2. Inspect for any damaged or missing safety surfacing  
3. Inspect for any damaged or missing safety surfacing  
4. Inspect for any damaged or missing safety surfacing  
5. Inspect for any damaged or missing safety surfacing  
6. Inspect for any damaged or missing safety surfacing  
7. Inspect for any damaged or missing safety surfacing  
8. Inspect for any damaged or missing safety surfacing

**OTHER**

1. Inspect for any damaged or missing safety surfacing  
2. Inspect for any damaged or missing safety surfacing  
3. Inspect for any damaged or missing safety surfacing  
4. Inspect for any damaged or missing safety surfacing  
5. Inspect for any damaged or missing safety surfacing  
6. Inspect for any damaged or missing safety surfacing  
7. Inspect for any damaged or missing safety surfacing  
8. Inspect for any damaged or missing safety surfacing

Reviewed By \_\_\_\_\_ Date \_\_\_\_\_



## Record Keeping

- ✓ Original sales documents with list of purchased models, top view layout and IPEMA certificate for both equipment and surfacing
- ✓ Manufacturer's installation and maintenance instructions
- ✓ Copy of prior to use Inspection Audit and any actions taken
- ✓ High and Low Frequency Inspections reports including all follow up actions



29



## Management and Staffing Priorities

- Inspections routine, timely, and followed up with action
- Have a system in place that ensures an appropriate response to hazards
- Success = Comprehensive commitment
- Continually educate staff
- Bring in outside vendors when necessary
- Practice complete documentation



*Design the program to be consistent with the manufacturer's instructions when available and take into account environmental conditions.*

30



# General Safety Considerations of Protective Surfacing

31

## Protective Surfacing

### Acceptable Surfacing

#### Loose-fill

- Engineered wood fiber (EWF)
- Loose-fill rubber – **Does NOT meet ADA**
- Sand and pea gravel – **Does NOT meet ADA**

#### Unitary

- Poured-In-Place (PIP) rubber
- Bonded rubber
- Tile
- Synthetic grass



32



# Unacceptable Surfacing



- Grass surfaces
- Packed Earth
- Concrete or Asphalt
- Other Hard Surfaces

33

# Routine Visual Playground Inspections

## Surfacing

**Inspect for foreign materials especially within equipment use zones.**



**Benchmark finished grade for all loose-fill surfacing material.**



CPSC says falls on improper impact attenuating surfacing accounts for over 70% of all serious playground injuries and are the 2<sup>nd</sup> leading cause of death.

34

# Routine Playground Inspections

## Surfacing

Inspect for unstable equipment and loose footings.

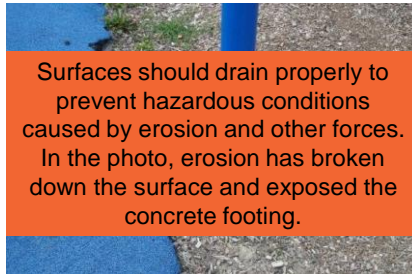


35

# Routine Surfacing Inspection Items



Uprights usually have markers to indicate proper surfacing depth.



Surfaces should drain properly to prevent hazardous conditions caused by erosion and other forces. In the photo, erosion has broken down the surface and exposed the concrete footing.



The bench is improperly placed in the use zone.



The concrete edge of the is exposed.



The pour-in-place surfacing requires repairs.

36

## Protective Surfacing

## Loose-fill Acceptable Surfacing

- Must have proper impact attenuating (protective) surfacing
- Proper maintenance is essential



37

## Loose-fill Surfacing Materials

- Require ongoing raking and replenishment
  - Containment like curbs
  - Wear mats help keep in place
- Organic
  - Engineered wood fiber
  - Recycled wood pallets
    - Natural decomposition
- Inorganic
  - Shredded rubber
  - Sand, pea stone, gravel
    - Less frequent replacement
    - Hardpan (gravel)


## Protective Surfacing



38

# Routine Playground Inspections

## *Unitary Surfaces*

Types of Unitary Surfacing Materials			
Rubber Tiles	Poured-in-Place	Bonded Rubber	Synthetic Turf
			

- May require sanitation
- May require maintenance due to surface debris, vandalism, movement of tiles, erosion, poor drainage, or worn areas
- Consult manufacturer before applying chemicals or pressure washing

39

### Protective Surfacing

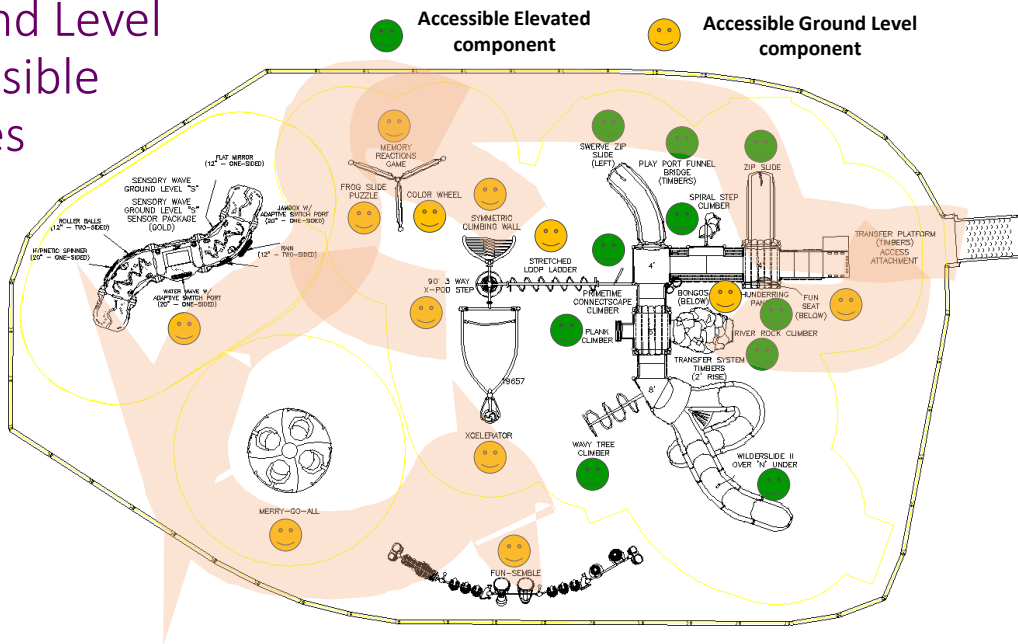
## Making a Purchasing Decision

- Consider maintenance costs in the purchasing decision
- Maintaining loose-fill materials requirements
- Benefits of unitary materials
- Disadvantages of unitary materials



40

## Ground Level Accessible Routes



41

### Protective Surfacing

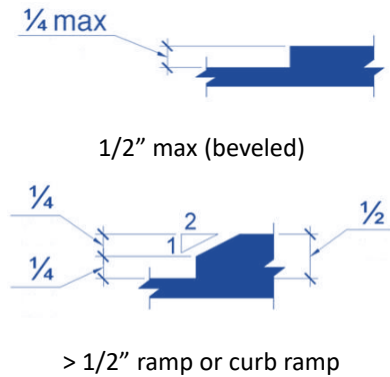
## Maintaining Accessibility of Surfacing

- Accessible routes in the play are use zone are 60" wide minimum.
- Vertical change of elevation does not exceed  $\frac{1}{2}$ "
- There is not a gap between the surfaces greater than  $\frac{1}{2}$ " measured horizontally
- A cross slope of no more than 1:48 and a running slope that does not exceed 1:16
- Accessible routes must meet ASTM F1292 and be firm and stable



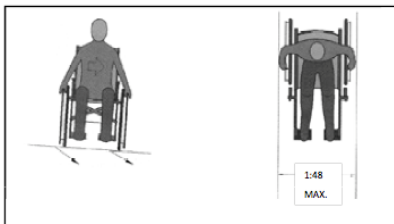
42

## Changes in Level of an Accessible Route

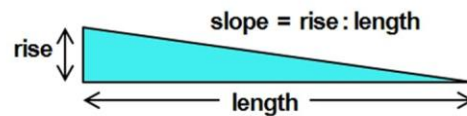


43

## Accessible Route Slope



- Cross slope no steeper than 1:48
- Slope perpendicular to the direction of travel



- Less than 5% = Walking surface
- Greater than 5% = Ramp
- Running Slope can be no steeper than 1:16 in the direction of travel

44

## Firm and Stable

- Field testing with an instrumented surface indenter
- Portable precision instrument for measuring surface firmness and stability



45

# Polling Question

46



## General Safety Considerations of Playground Environments

47

### Inspect Equipment, Amenities & Surrounding Area



- ✓ No damaged, loose, vandalized, or missing parts
- ✓ Stable and not bent
- ✓ Moving parts in good repair
- ✓ Free from user modifications or foreign objects/hazardous materials



48



## Routine Visual Inspection Items

### *General Safety*

- Remove trash, broken glass, storm remnants, etc.
- Empty trash cans
- Ensure entries and walkways are free from ice, trip hazards, sand or gravel
- Site amenities outside of use zones, equipment free from alterations



49

## Routine Visual Inspection Items

### *General Safety*

Play areas should be free from:

- Pests, like insects and vermin
- Nests of these pests
- Animal feces, bodily fluids, bird droppings
- Other materials that may be unsanitary



50

## Materials Conditions

- Wood surfaces should be free from rot, splinters, warping, and severe cracking
- No damaged, bent, broken or missing parts
- Plastic components should be free from cracks, holes, and burns



*When possible, obtain replacement wood from the manufacturer of the wooden play equipment.*



51

## Materials Conditions



Surfaces are free of mold, mildew, graffiti, and vandalism

Metal surfaces are free from rust and chipping paint



52

## Materials Conditions



No welded joints are broken, rusting, or rough



PVC coated components do not show signs of wear and tear

53

## Routine Visual Inspection Items

### *General Safety: Fasteners*

- Identify missing parts, fasteners, or structural components (repair or remove-from-service).
- Use manufacturer's parts unless otherwise directed by manufacturer in writing.



54

# Routine Visual Inspection Items

## General Safety: Footings

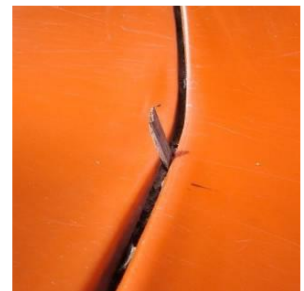
- Footings and other forms of anchoring devices should be stable and should not be exposed
- Springs and rocking components should be in good repair



55

## Slides

- Slide bedways and side walls are smooth and free from debris
- Slide bedway and the attachment point of the slide to the platform show no conditions that might entangle clothing or body parts




General Safety

56

## Swings & Moving Components

- Swing chains or cables are not twisted and are free from excessive wear
- Swing seats are smooth, in good condition, and free from cuts or tears
- “S” hooks are closed and free from excessive wear
- Swing hangers are free from excessive wear and bushings are lubricated

 *Purchase swing chain from a playground equipment manufacturer. Chain purchased from a hardware store can have a different hardness that is not suitable for playground use.*



57

## Swings & Moving Components

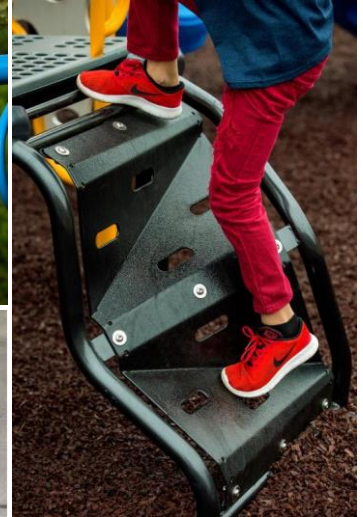
- Tire swing seats should be less than 35 lbs., smooth and rounded, and in good condition
- Tire swing assemblies, including swivels and/or bearings, should remain properly greased and in good condition
- Ensure that moving components (spinning, swinging, rocking, etc.) are in good condition, secure, and lubricated



58

## Gripping and Stepping Components

- Handholds/grips are tight, in good condition, and do not rotate
- Surfaces are level, stable, and clean
- All foot rungs/holds are tight, secure, and are in good condition



59

## Routine Visual Inspection Items

### General Safety: Signs

Verify required signs are present/legible

Intended user, age-supervision statement, hot equipment/surface or other potential warnings, identify manufacturer

Signs must send appropriate, concise, and understandable messages

Pictures or universally accepted symbols work best



60

# Polling Question

61

## Required Maintenance

### *Closing the Play Environment or Equipment*

- Construction fencing may be used temporarily to close the play area for repairs.
- Caution tape should only be used for a very short time and while maintenance staff is onsite



Not an  
Appropriate  
Fix

62

## Playground Equipment



- Free from user modifications, foreign objects
- Moving parts are in good repair
- Hazardous Materials



*Check inside tunnels and tube slides as well as between the sections of slides to make certain there are no hidden dangerous materials.*

63



## Other Potential Hazards

64



## Projection Gauges



**Projection gauges are an important part of an inspection tool kit**

65

## Crush and Shear Hazards

- May crush a child's finger or cause amputation
- Could occur on heavy moving components  
(Examples: see-saws & bridges)

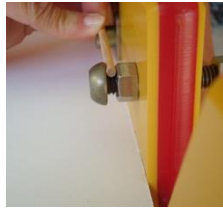


**Test:** Place a 5/8" dowel in the opening. If it could close down on the dowel, hazard is present and should be corrected.

66

## Entanglement and Protrusion Hazards

No more than two threads exposed on a bolt end



Hardware should not increase in diameter from the initial surface



Gaps in the "S" hook should not be greater than .04 inches

No gaps at the entrance to a slide at the point of attachment



- Caused by hardware or small diameter components that project out from a surface
- May entangle clothing resulting in strangulation, laceration, contusion, or other soft tissue damage

67

## Vertical Entanglement Hazards

Hardware and small components do not project vertically above a horizontal unless the projection is less than 1/8" or is rounded



Less than 3" diameter

Projects vertically, is perpendicular



Taller than 1/8"



Not rounded



> 1/8"

68

## Protrusion Hazards



Place each gauges over all projections



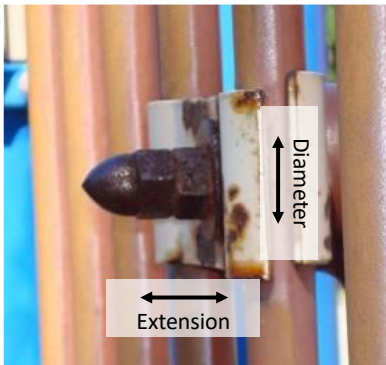
Extends past the gauge



For suspended components use 1 ¼" diameter, 1/8" extension gauge

69

## Other Potential Hazards



Check for sharp points and edges



Check that bold ends show less than 2 threads and are rounded and smooth

70

# Polling Question

71

## Head Entrapment Hazards



General Safety

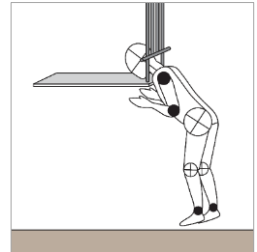
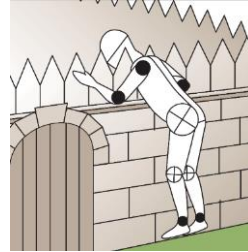
- Test all completely bound openings that measure between 3 ½" and 9"
- An opening where safety surfacing is the lowest boundary is not considered a hazard and is not tested

72

## Head Entrapment Hazards

- Can occur when children enter an opening feet first with only the legs and torso passing through the opening
- Bound openings between 3 ½" and 9" must be considered for head entrapment

Examples:



73

## Test for Head Entrapment Hazards

Test completely bound openings measuring 3 ½" to 9"



### Torso Probe

✓ Does not enter, opening is compliant

✗ Enters to depth of 4", test using head probe



### Head Probe

✓ Enters and exits freely, opening is compliant

✗ Does not, opening is a hazard and should be corrected immediately

74

## Potential Hazards

### *Fasteners*

Inspect and replace worn fasteners, fastening connectors, and connectors (max 30% rule)



75



## Fasteners

- Hardware is present, tight, and fully engaged
- Caps and plugs are present on the ends of all pipes and tubes

76



## Fasteners

- Turnbuckles are fully engaged and properly adjusted
- Fittings and bearings are functional, lubricated, and squeak free
- Cables and ropes are securely fastened

77



Required  
Maintenance

78

## General Areas

## Required Maintenance

- Remove trash, broken glass, storm remnants, etc.
- Empty trash cans
- Ensure entries and walkways are free from ice, trip hazards, sand or gravel
- Site furnishings outside of use zones, equipment free from alterations



79

## Closing the Play Environment

## Required Maintenance

- Construction fencing may be used temporarily to close the play area for repairs
- Caution tape should only be used for a very short time and while maintenance staff is onsite



80



## Required Maintenance

- If a damaged component needs to be removed, but the structure/playground will remain open, block the entrance to the component
- Areas should be free from standing water
- Proper and timely playground maintenance helps ensure children are playing on a compliant structure

### General Areas



81

### General Safety

## Cleanliness and Sanitation of the Play Equipment



- Play areas should be free from:
  - Pests, like insects and vermin
  - Nests of these pests
  - Animal feces, bodily fluids, bird droppings
  - Other materials that may be unsanitary

82

## Potential Hazards

### *Landscaping*

- Look for dead limbs in striking distance of the play area
- Dead trees and/or tree limbs and other landscape materials in and around the playground that could cause serious harm.
- Inspectors should evaluate the situation and immediately report dead plant material to proper authorities responsible for addressing the situation.



83

## A Final Thought...

*Not all playground accidents “just happen”.*

They may occur because the proper actions that could have minimized the user’s exposure to the unsafe condition were ignored and resulted in an accident.

*Who* failed in their responsibility to properly maintain the playground on behalf of the children?

**Don’t let this be you.**

**And remember...**

**“Maintenance, like a fine art is  
90% knowing how,  
8% preparation,  
and 2% execution.”**

Monty Christiansen 2010 Forward to Maintaining Child’s Play ©PDRMA 85/165.046

84



# Outdoor Adult Fitness Equipment

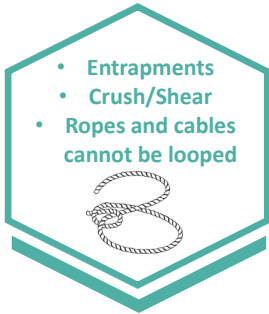
85

## Outdoor Adult Fitness Equipment



86

## Observe Standards



**ASTM F3101**  
**CSA Z614-20 (Canada)**  
 Standard Specification for  
 Unsupervised Public Use  
 Outdoor Fitness Equipment



**ASTM F3021 and F3022**  
 Standard Specification  
 (and test method) for  
 Universal Design of  
 Fitness Equipment for  
 Inclusive Use

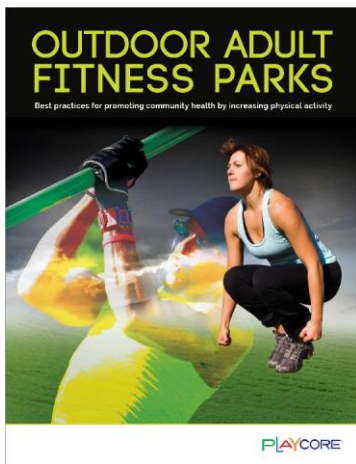


**Surfacing**  
 Also covered in CSA Z614-20

87

Resources

## Outdoor Adult Fitness Parks Guidebook



**For more information**  
[www.playcore.com/programs/outdoor-adult-fitness](http://www.playcore.com/programs/outdoor-adult-fitness)

88



## Nature Play Areas

89

Nature Play Areas

### Nature Play

- **Intentionally designing nature** into the everyday spaces of childhood is a growing trend for schools and parks
- A comprehensive program of playground safety **should also include inspection and management** of natural play areas



90

## Undeveloped Natural Environments



- These are specific environments where **nature is simply there** for the child to discover and explore
- These areas might be a **meadow, waterway, and woods** that are designated for natural play
- It might be a section of the **woods off of a trail** that is set aside for children to interact with

91

## Manufactured Nature Environments

- One where the owner has taken **natural elements** such as boulders and tree sections and placed them in an area **with the intention that children interact with the materials** in an unstructured manner
- **Surfacing is required** in areas intended to climb, balance, etc.
- Rich in **diverse plant materials, loose parts** and may include **natural or man-made water** areas



92

# NatureGrounds Guidebook



**For more information**  
[www.playcore.com/programs/naturegrounds](http://www.playcore.com/programs/naturegrounds)



# Dog Parks

**Dog Parks**

- Protect your investment with proactive planning
- Equipment inspection and maintenance
- Surfacing maintenance and replenishment
- Weed control

*Additional maintenance may be needed or required depending on the site, its amenities and surfacing, and usage.*

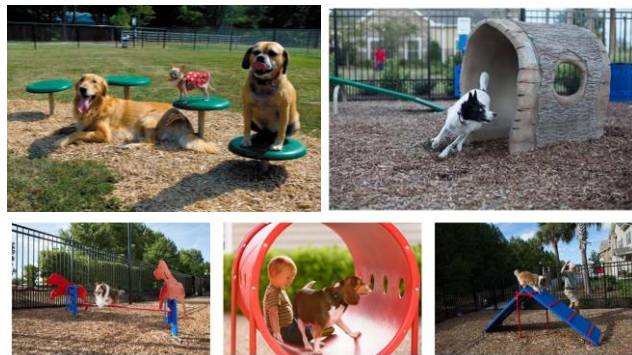
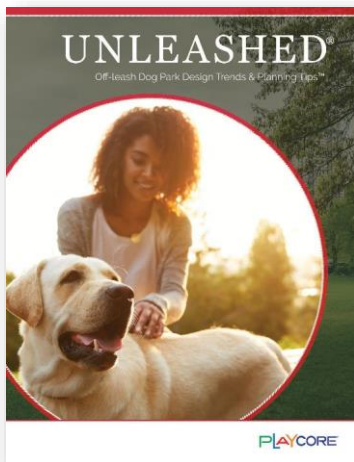
- Tending to surfacing – filling holes and/or re-seeding
- Mowing grass
- Hand weeding/tending to landscaping (do not use toxic weed spray)
- Removing dog waste
- Spraying/hosing down equipment, furnishings, trash receptacles
- Refilling disposable waste bags and hand sanitizer
- Emptying trash receptacles
- Inspecting fencing for damage
- Tending to bacterial growth on fencing
- Inspecting gates and locking mechanisms
- Inspecting equipment and amenities



95

**Resources**

**Unleashed Guidebook**



**For more information**  
[www.playcore.com/programs/unleashed](http://www.playcore.com/programs/unleashed)

96











# Music Parks

97

## Inspection, Maintenance, and Care of Your Music Parks

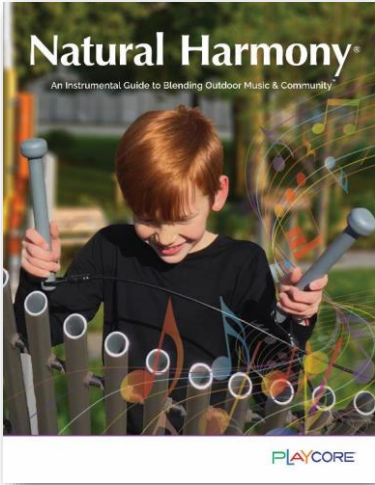
-  Check for sound and function
-  Clean with soap and water
-  Check mallets for condition and proper attachment
-  Inspect surfacing
-  Residue remover could be used – check manufacturer specifications
-  Vandalism

### Music Parks



98

# Natural Harmony Guidebook



**For more information**  
[www.playcore.com/programs/natural-harmony](http://www.playcore.com/programs/natural-harmony)



# Site Amenities

## Site Amenities

- Always follow installation instructions closely
- Check for wear, loose hardware, or vandalism at least every 6 months – dependent on location
- Free of rust and repaired whenever needed to deter further rusting or damage
- Tighten bolts, nuts and setscrews
- Wipe down with mild cleaner. Graffiti can be removed using cleaner



101

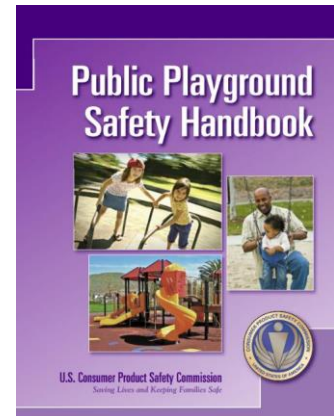
## Resources

- NRPA – National Recreation and Park Association ([www.nrpa.org/playgroundsafety](http://www.nrpa.org/playgroundsafety); 800-626-6772)
- NRPA is dedicated to educating professionals and the public on the essential nature of parks and recreation.
- IPEMA – International Play Equipment Manufacturers Association ([www.ipema.com](http://www.ipema.com); 888-944-7362)
- IPEMA is a non-profit, membership, trade association that represents and promotes an open market for manufacturers of playground equipment and surfacing.
- NPPS – National Program for Playground Safety ([www.uni.edu/playground](http://www.uni.edu/playground); 800-554-7529)
- NPPS is the premier non-profit organization in the United States delivering training and services about outdoor play and safety.
- ASTM – ASTM International ([www.astm.org](http://www.astm.org); 610-832-9500)
- ASTM, formerly the American Society for Testing and Materials, is an independent and renowned developer of technical standards utilized in testing a multitude of products, including playground equipment and related products.
- CPSC – Consumer Product Safety Commission ([www.cpsc.gov](http://www.cpsc.gov); 800-638-2772)
- The CPSC regulates many products, including playground equipment and related products, to help ensure consumers/users safety.
- Access Board – U.S. Architectural and Transportation Barriers Compliance Board ([www.access-board.gov](http://www.access-board.gov); 800-872-2253)

102

## Consumer Product Safety Commission (CPSC)

- Consumer Product Safety Commission (CPSC) Publication 325 Public Playground Safety Handbook
  - Presents safety information for public playground equipment in the form of guidelines to promote greater safety awareness among those who purchase, install, and maintain public playground equipment.



**For more information**  
[www.cpsc.gov](http://www.cpsc.gov), publication #325

103

## 2010 Americans with Disabilities Act (ADA) Standards for Accessible Design

- Mandate establishes **enforceable minimum design standards** for public playground and maintenance requirements for the **accessible route to accessible play components**
- The accessible **route should be a minimum of 60 inches wide** and have **minimum 80 inches overhead clearance**
- Must be **compliant through installation** throughout lifetime of playground



**For more information**  
<https://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/ada-standards>

104

## Strong Foundations: Planning, Purchasing & Protecting Play and Recreational Surfaces



- Features and benefits of various surfacing options
- Best practices, considerations, and strategies when planning, purchasing, and protecting your surfacing investment
- How surfacing can be utilized to increase the overall play value and recreation
- Standards, criteria, inspection tools, and other resources

For more information  
[www.playcore.com/strongfoundations](http://www.playcore.com/strongfoundations)

105

## Steps to Receive Continuing Education Credit

1. [education.playcore.com](http://education.playcore.com)

2. Go to My Dashboard

3. Complete Survey  
Complete Quiz

4. Obtain CEU Certificate

Open Until May 5<sup>th</sup>

**PLAYCORE**  
 Building communities through play & recreation™

106



## Upcoming Webinars

- May 30: Navigating Municipal Funding
- June 20: Alternative Funding
- July 17: Nature Play

Register at [education.playcore.com](https://education.playcore.com)



107



## 2024 BEYOND THE MINIMUMS

### Accessibility Series

Presented by:



**Bill Botten**  
 Accessibility Specialist  
 PlayCore  
[bill.botten@playcore.com](mailto:bill.botten@playcore.com)

LIVE WEBINAR  
 ACCESSIBILITY SERIES (PART 2) CORE

**Splish Splash!  
 Dive into Creating Accessible Aquatic Facilities**

📅 May 8, 2024  
 🕒 2:00 - 3:15 p.m. EST

Register:  
[education.playcore.com](https://education.playcore.com)

LIVE WEBINAR  
 ACCESSIBILITY SERIES (PART 3) CORE

**Disability Park Awareness Panel**

📅 August 7, 2024  
 🕒 2:00 - 3:15 p.m. EST

Register:  
[education.playcore.com](https://education.playcore.com)

LIVE WEBINAR  
 ACCESSIBILITY SERIES (PART 4) CORE

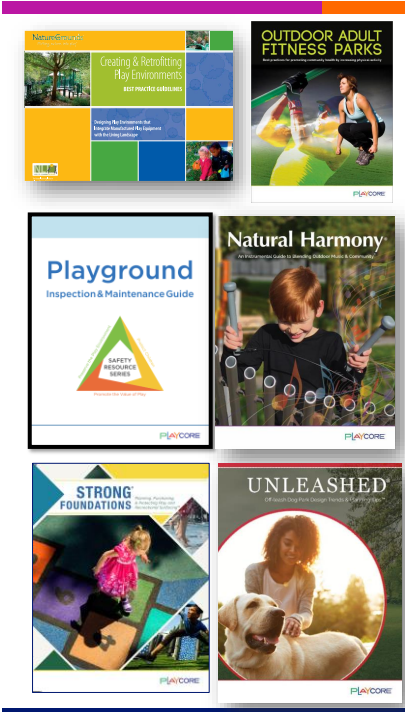
**The Critical Role Accessible Site Amenities Play in Creating Outdoor Environments Where EveryBODY Feels Welcome**

📅 November 6, 2024  
 🕒 2:00 - 3:15 p.m. EST

Register:  
[education.playcore.com](https://education.playcore.com)



108



# Handouts & Resources

☆ Live / Playground Inspection & Maintenance: Preserve, Promote, Protect

✓ You are registered!

Manage Product

Includes a Live Web Event on 04/25/2024 at 2:00 PM (EDT)

Overview Speakers **Handouts** Credits Offered Disclosures/Notes Event Details (4)

- NatureGrounds Publication
- Natural Harmony Publication
- Playground Maintenance Guidebook
- Public Playground Safety Handbook
- Strong Foundations Publication
- Unleashed Publication
- Outdoor Adult Fitness Parks Publication



109



# Resources

- Questions? [core@playcore.com](mailto:core@playcore.com)
- Education [education.playcore.com](http://education.playcore.com)
- Resources [playcore.com/resources](http://playcore.com/resources)
- Newsletter [playcore.com/newsletter](http://playcore.com/newsletter)
- Funding Tool [playcore.com/funding](http://playcore.com/funding)



110

CORE

# Thank You!

**CORE**  
Center for Outreach, Research & Education  
*Turning research into practice.\**