



Nature PlaySpace, Cincinnati Nature Center. Image: NLI

Nature Play Strategies:

PROACTIVE RISK MANAGEMENT

“The desire for safety stands against every great and noble enterprise.”

–Cornelius Tacitus, Roman historian (55-120 AD)

Provision of nature play and learning places is a compelling candidate for developing proactive risk management protocols because nature offers such varied, challenging, and stimulating play opportunities, with a broader range of play value available to serve a greater diversity of children, compared to places containing solely manufactured equipment. An appropriate and valuable “risk-benefit approach” to risk management, developed by the UK Play Safety Forum (PSF), is available in a highly recommended, substantial online publication. Nature play providers as others want to “achieve two objectives fundamental to in any play provision: to offer children and young people challenging, exciting, engaging play opportunities, while ensuring that they are not exposed to unacceptable risk of harm” (PSF p. 7).

APPLYING RISK MANAGEMENT TO NATURE PLAY

Risk management is not a simple task. One rule does not fit every setting or organization. Each provider must decide what level of challenge is appropriate for their particular situation—depending on age, level of supervision, regulatory context, type of access, degree of environmental modification, and level of management. Nature play spaces range from patches of native woodland, with trails added to improve access for informal nature play, to barren urban spaces redesigned, “renatured,” and

intentionally managed for nature play—and many in-between conditions, each with its own nature play potential. For example, a controlled-access, managed nature play space with trained play professionals may offer a broad range of risk-taking opportunities relative to children’s maturity levels than a nature play space in a public park freely open to the public without professional supervision. Regardless of context, a responsible risk-benefit management goal should be to “create an ongoing balance between developmental benefits and potential risk of harm” (PSF p. 45).



What if they drop the log? Is it an acceptable hazard? How does it balance with the opportunity for these two children to play together, to collaborate in achieving a shared goal and gaining agency.—Blanchie Carter Discovery Park, Southern Pines, North Carolina. Image: NLI.



What about tree-climbing in a designated nature play space? Did you climb trees as a child? Any mishaps? Is tree climbing an acceptable hazard? How does it balance with the physical fitness and social-emotional development benefits?— Bright Horizons-Harrison Park, school-age area. Image: NLI.

In nature, children seek play and learning opportunities to engage with malleable natural materials, to challenge themselves, to motivate their curiosity, that offer risk-taking appropriate to individual skills and developmental levels. Children normally recognize risks, make judgments, and respond within the limits of their acquired skills. Under these circumstances, injury is unlikely—as long as risks are not hidden. For example, consider this situation:

A play circuit of horizontal and upright logs of various diameters has been installed. Children run around, climb on, jump from one to another, practice balancing skills, and jump off having completed the circuit. The size of the logs, the height above the ground, the gaps between them, and the overall scale appear to offer varied, playful challenges to children. The more skilled 4-year-olds try balancing on the horizontal logs, walk along, and delight in jumping off. Others see the all the logs as too challenging and simply chase each other around and between the logs at ground level. The most adventurous climb on the tallest vertical logs but don't notice that they not anchored until the logs start wobbling. Children lose their balance and jump to the ground. Fortunately, no one gets hurt and no logs fall over. Although the fatter, vertical logs are secure, the thinner ones need anchoring. Managers cordon off the space and remedy the situation.

When risks are not perceived by intended users they may misread the situation, and make uninformed judgements. In the example above, an unacceptable risk of harm was present because the logs appeared to be anchored but were not and could topple when children stood on them.

UNDERSTANDING HAZARD, RISK, AND INJURY SEVERITY

Words like “hazard” and “risk” are often used interchangeably. However, it is important to understand what the terms mean if play and learning settings are to be managed to avoid unacceptable risk of harm.

+ **Hazard** refers to anything that may cause harm. As any action or object may be hazardous under certain circumstances, risk managers are faced with judgement challenges. They must assess risks and remove hazards that in present and foreseeable circumstances may cause unacceptable harm, while at the same time not eliminating every potential hazard with a level of risk beneficial to children’s development (PSF, p. 27).



A mix of fixed and loose natural components may substantially increase play value. What if the bamboo shelter collapses on a group of young builders? Is that an acceptable hazard? (Hint: Bamboo is quite light.)— Santa Barbara Museum of Natural History, Backyard. Image: NLI.

+ **Risk** is discussed as a neutral term by PSF as essentially meaning the combination of the probability of occurrence of harm and the possible severity of that harm—and the implied need for judgement by a risk manager of the acceptability of that risk (PSF, p. 29).

+ **Risk assessment** in play provision “involves balancing risks and benefits in a strategic way” (PSF, p. 41). This means consideration of the developmental benefit of the hazard, judgement of the probability that the hazard will cause harm, and the likely severity of the harm. Risk is present in virtually every situation both in nature and in life, and part of growing up is learning about risk and how to navigate it.

A setting devoid of risk is boring, and, from a developmental perspective, lacks opportunities for children to develop skills and judgment. Indeed, bored children are far more likely to pick on each other for want of something to do. For this reason, play experts, Joe Frost and colleagues conclude that, “a reasonable risk level is necessary in play but, as in other life activities, there must be limitations on the degree of physical risk.”³

+ **Severity of injury.** When managing risks, preventing serious injuries is typically prioritized over preventing minor injuries that have no long-term effects—as defined by the Abbreviated Injury Scale ranging from 1 (minor) to 6 (un-survivable).⁴ As an example, the U.S. standards and guidelines for protective surfacing under and alongside playground equipment were developed to minimize the likelihood of serious head injuries—not to prevent all possible bumps, scrapes, and grazes (and even broken bones) related to falls.

+ **Reasonable risk.** Children acquire and develop skills through seeking out and testing increased levels of risk. The Play Safety Forum discusses ‘good risks’ in play areas “are those that engage and challenge children, and support their growth, learning and development.” ‘Bad risks’ “are those that are difficult or impossible for children to assess for themselves, and that have no obvious benefits” (PSF, p. 29). A skilled risk manager will strive to cultivate good risks and eliminate bad ones.

RECOGNIZING VARIABLE REGULATORY CONTEXTS

The regulatory context for an outdoor area will often affect how risk needs to be managed. The rules, regulations, design standards, and standards of care that apply to an outdoor area (or some feature within it) may vary based on:

- State and/or local jurisdiction.
- Type of facility (e.g. childcare center, family childcare home, school, park, public garden, etc.).⁵
- Source of funding.
- Whether a feature meets the definition(s) of playground equipment or soft contained play equipment used in the jurisdiction and/or in playground equipment standards and guidelines (e.g. ASTM F1487, ASTM F1918, and the CPSC Public Playground Safety Handbook).⁶
- If and under what circumstances a government entity is immune to liability related to recreational areas in that state.⁷



Water is easily the most attractive play material. Little is needed to be viable. In this preschool space, the trickling stream is operated “on demand” by the children turning a valve (off camera). The mix of large, fixed stones and smooth, loose pebbles adds substantial play value. No, children don’t throw the pebbles. That rule is well established as part of the “culture of the place.” Besides, the fascination of hands-in-the-water play is so attractive, the idea of throwing never occurs.—Arlitt Nature PlayScape, University of Cincinnati Campus. Image: NLI.

DEVELOPING A RISK MANAGEMENT PROTOCOL

If stimulating nature play environments are to be provided to children that eliminate exposure to unacceptable risk of harm, managers need to apply a systematic risk assessment and management protocol covering the eight steps in the chart to the right:

REFERENCES

- 1 This brief overview of risk management was adapted from Moore, R. with Cooper, A. (2014). *Nature Play & Learning Places. Creating and Managing Places Where Children Engage with Nature*. Raleigh, NC: Natural Learning Initiative and Reston, VA: National Wildlife Federation.
- 2 Ball, D., Gill, T. & Spiegel, B. (2012). *Managing risk in play provision: Implementation guide*. London: National Children's Bureau (Play Safety Forum 2nd Ed.). <http://www.playengland.org.uk/media/172644/managing-risk-in-play-provision.pdf>
- 3 Frost, J. L., Wortham, S. C. & Reifel, S. 2012. *Play and child development*. New York: Pearson. (4th Ed.). p. 422.
- 4 Gennarelli, T.A. & Wodzin, E. (2008). *The abbreviated injury scale, 2005 (updated 2008)*. Des Plaines, IL: American Association for Automotive Medicine (AAAM), Des Plaines, IL.
- 5 For an extensive analysis of regulations in relation to these types of facilities, see: Jost, Daniel; Cosco, Nilda; & Moore, Robin. 2019. *Playing by the Rules* [Colorado: A Practitioner's Guide to Rules, Regulations, and Rating Systems for Outdoor Learning Environments in Colorado Child Care Facilities]. Raleigh, NC: Natural Learning Initiative at North Carolina State University and Denver, CO: National Wildlife Federation, Early Childhood Health Outdoors.
- 6 U.S. Consumer Product Safety Commission. 2010. *Public Playground Safety Handbook*. Available at <http://www.cpsc.gov/PageFiles/122149/325.pdf>. (lists ASTM Standards related to playgrounds, p. 2).
- 7 See for example the 2017 Colorado State Supreme Court case involving a playground injury: <https://law.justia.com/cases/colorado/supreme-court/2017/15sc933.html>.

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EIGHT-STEP RISK MANAGEMENT PROTOCOL

1. Determine applicable standards of design and care in your jurisdiction 
2. Engage together risk managers and insurers. 
3. Conduct systematic risk assessments and eliminate hazards judged to expose children to unacceptable risk of harm. 
4. Conduct risk assessments of natural features within a designated nature play space. 
5. Develop inspection routines. 
6. Document, evaluate, and report all incidents when they occur. 
7. Maintain records of inspections and incident reports coupled with regular staff reviews, evaluations, and recorded responses. 
8. Communicate implementation of risk management and request cooperation with users of the space. 



A fallen tree trunk will automatically attract children to play on it. As the height is around two feet, managers have added a resilient surface of "free" woodchips generated elsewhere in the nature center. The woodchips also encourage jumping and keep mud and soil erosion in check.— Nature PlayScape, Cincinnati Nature Center: Image: NLI