

National Caucus of Environmental Legislators

# Outdoors as a Health Solution Briefing Book



**NCEL**

National Caucus of  
Environmental Legislators





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The Outdoors as a Health Solution Briefing Book examines the human health benefits of time outdoors and the policy options for states to access these benefits across nine distinct categories:

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## An Introduction to the Outdoors as a Health Solution

Spending time outdoors is a critical health behavior – access to the outdoors offers countless health benefits across all ages, activities, and regions. Some of these [benefits](#) include improved cognitive function, reduced stress and anger, increased physical activity, and better relationship-building in children. However, [most Americans currently spend very little time outside](#), with communities of color and low-income populations far more likely to live in [neighborhoods with little to no access to nature](#).



**Figure 1:** The health benefits and opportunities of increasing outdoor access. Source: [National Caucus of Environmental Legislators \(NCEL\)](#).

States are championing the outdoors as a health solution and seeking to make outdoor access more equitable across holistic health models, physical activity, mental wellbeing, school and schoolyard access, childhood wellbeing, greener neighborhoods, outdoor careers, and a safer outdoors.



## Overview

The health of humans is deeply tied to the health of animals and the environment. When human development comes at the expense of animal and environmental health, it can have serious consequences for human health. These impacts can be direct, like increasing the risk of [zoonotic diseases](#), those that spread from animals to humans (like COVID-19). Some health impacts are indirect, such as losing [ecosystem services](#), the direct and indirect benefits ecosystems provide to humans. Likewise, **as biodiversity increases, the human health benefits of time outdoors also increase.** States are well-situated to use a [One Health](#) approach – including in outdoor recreation and access – to promote coexistence between humans, animals, and the environment.

## One Health Policy Options

- **Waterway One Health:** “Do Not Consume” advisories, or warnings about fish that are unsafe to eat due to environmental pollution, are a potent reminder of One Health in outdoor recreation. Alabama [H.B.14/S.B.45](#) would make fishing safer and easier by creating and posting do not consume advisories on impacted waterways.
- **Healthy Trail Planning:** Balancing motorized and non-motorized trails to minimize impact on wildlife also increases the safety and health benefits of trails for humans. Minnesota [H.F.2791](#) would require motorized trails to be planned to prevent impact on wildlife while maximizing benefits for humans.
- **Wildlife Corridors:** Conserving and restoring wildlife corridors is critical for combating biodiversity loss and promoting outdoor access. Shared pedestrian and bike trails in wildlife corridors, like Florida’s [\(CS/S.B.106\)](#) new trail network, protect critical conservation areas while providing transportation and recreation opportunities
- **Balanced Outdoor Lighting:** Outdoor lighting offers important safety and access benefits for humans, but excessive outdoor light impacts both human and wildlife circadian rhythms, behaviors, and mental health. Illinois [S.B.2763](#) sets guidance for wildlife- and human-friendly outdoor lighting, including at recreation sites.



## Help State Agencies Collaborate for One Health

State agencies can collaborate around one health to maximize human [Social Determinants of Health](#), nonmedical factors that influence human health. Oregon [H.B.4128](#) connects Health, Public Safety, Agriculture, and Fish & Wildlife agencies to improve monitoring, prevention, and response to zoonotic diseases. Missouri [H.B.3020](#) (See SEC 20.135 and SEC 20.610) appropriates over \$182 million for the design and construction of a multi-agency One Health Laboratory Campus, creating collaborative and research resources for agencies to promote human and ecosystem health.





## Overview

Time spent outdoors supports and improves mental health at all ages, increasing happiness, reducing stress, [decreasing sleep deprivation](#), and reducing symptoms of [ADHD](#), [PTSD](#), [depression, and anxiety](#). Restoring access to the outdoors can reduce the mental health impacts of climate change, [promote hope for the future](#), and [reduce fear and stress about climate change](#).

## Mental Health Policy Options

- **Gardening at Home:** Gardening is one of the [most effective](#) outdoor interventions for mental health. Illinois [H.B.3892](#) allows the housing development authority to create incentives for affordable housing projects that incorporate urban and suburban gardening programs, and Illinois [H.B.633](#) allows homes to garden in front yards.
- **Parks Passes for Recovery:** New Hampshire [S.B.387](#) would establish a 3-year pilot program for state park passes for recovery centers and community mental health centers. [Washington](#), [South Dakota](#), and other states offer free park passes through health providers.
- **State Land As a Healthcare Resource:** The New York Outdoor Rx Act ([A.8094A](#)) requires a review of veterans' abilities to access state parks, lands, and facilities, especially for outdoor therapies. Up to two-thirds of post-9/11 veterans have a [diagnosable mental health condition](#).
- **Help State Parks Prevent Suicide:** State parks may be [higher risk areas](#) for suicide due to their remoteness, access, opportunity, and for some, lack of familiarity. States can support existing parks' efforts to offer safe, welcoming facilities by [identifying higher-risk areas](#) and installing reasonable prevention solutions like [signage](#) or [barriers, art, and lighting](#).
- **Support State Parks Staff After Incidents:** States can also encourage that [risk and incident management plans](#) include opportunities for staff to attend trainings on mental health as well as offer [post-incident support](#) for impacted state land and parks staff.



## Extreme Heat and Mental Health

Emergency room visits for mental health care [increase by 8%](#) in the hottest days of summer, and suicide rates [rise by about 1%](#) for every 1.8 degree F increase in temperature. Neighborhoods with a history of [redlining](#) can be [up to 12.6 F degrees hotter](#) than other neighborhoods in the same city.

Environmental Justice Acts like Colorado [H.B.24-1338](#) allow states to identify neighborhoods overburdened with heat and restore greenspace, tree cover, and other outdoor resources to reduce or end health inequity. Alternatively, states can study specific effects, like New York [A.10001B/S.08431](#) researched the impact and distribution of [heat islands](#).





## Overview

Time outdoors reduces [heart rate, blood pressure, stress hormone levels, inflammation](#), and risk of vision loss, while improving immune function, [sleep quality](#), and much more. These policies explore ways to address challenging public health crises through access to parks, green spaces, and active transportation, promoting physical well-being through connection with the outdoors.

## Physical Health Policy Options

- **Prescribe a Park:** [Vermont](#) and [South Dakota](#) empower healthcare providers to promote time outdoors by prescribing free [park passes](#), and Maine [L.D.1317](#) would study the use of state land in health care.
- **Outdoor RX Grant Programs:** Washington's [successful](#) Parks RX pilot program ([S.B.5292](#)), the new Illinois Outdoor RX program ([H.B.1526](#)), and Arizona's proposed Outdoor RX Program ([S.B.1552](#)) provide guidance and funding to promote health through outdoor access.
- **Encourage Active Transportation:** [Nearly 50% of Americans](#) would commute by bike if protected bike lanes were available. Washington ([S.B.5975](#)) is investing \$1.3 billion in non-motorist safety with [bicycle-friendly federal funds](#), Tennessee ([H.B.685/S.B.728](#)) identifies roads endangering cyclists and pedestrians, and Maine ([L.D.1674](#)) requires large construction projects to protect cyclists.
- **Create Active Transportation Commutes:** Alabama [S.B.298](#) is strategically linking and improving existing trails and Illinois [H.B.5277](#) would establish a need-based Transit-to-Trails grant program to link public transportation to public outdoor recreation sites. Transportation is one of the [most significant barriers](#) to outdoor recreation.



### Case Study: Increasing Access for Disabled People

Disabled people, [13% of all Americans](#), also need and benefit from outdoor access. Unfortunately, outdoor recreation sites are often exempt from federal accessibility laws like the Americans with Disabilities Act. As a result, outdoor resources are rarely designed with disabled people in mind.

Building on Colorado [H.B.23-1296](#) (2023) studying the rights and needs of disabled communities accessing state outdoor spaces, Iowa [H.F. 2364](#) studies disability access in state parks and legislators also appropriated \$1.3 million for disability access improvements in parks. Similarly, Virginia [H.B.1186](#) established a two-year all-terrain power wheelchair pilot program to develop guidelines and processes for providing all-terrain power wheelchairs in state parks.





## Overview

Outdoor activities offer significant health benefits, but often carry unique health and safety risks. States can support safer outdoor industries and outdoor recreation with guidelines tailored to maximize safety and minimize unnecessary intervention.

## Outdoor Safety Policy Options

- **Balance Motorized and Non-Motorized Use:** Spaces shared between motorized users and pedestrians, swimmers, and wildlife can be made safer and promote lasting, high-quality motorized access with simple guidelines. Michigan [H.B.5532](#) and Wisconsin [A.B.656/S.B.680](#) would increase wakesurfing safety by setting clearer guidance for boats, and Minnesota [H.F.2791](#) would require motorized trails to be planned to prevent impact on wildlife and pedestrians while maximizing motorized use.
- **Support Effective Self-Regulation:** Many risky outdoor activities like caving or scuba diving are self-regulated to ensure educators can adopt rapidly evolving best safety practices. States can support safety by collaborating with self-regulated industries such as [New Hampshire](#) regulating diving between sunset and sunrise.
- **Grow Education for Higher-Risk Activities:** Arizona [S.B.1567](#) establishes educational resources and requirements for off-highway vehicles and New York [A.5147](#) would link the establishment of an ATV trail fund with educational resources and training requirements for users. States can offer similar support for hunting and other higher-risk activities.
- **Encourage Responsible Use of State Lands:** States with high tourism demands, clearly marked trail networks, and volatile conditions can improve safety by [detering unsafe trespassing](#). Hawaii [H.B.2174](#) requires the state to recover search and rescue costs for persons who require rescue as a result of willfully trespassing on trails clearly marked as closed to the public.
- **Promote Safer Air Search & Rescue:** It can be difficult for governments to safely contract professional search and rescue (SAR) aircraft, and SAR aircraft are also vulnerable to collisions as they move between different localities. Colorado [H.B.24-1309](#) sets criteria for SAR aircraft and operators, extends specific liability protections for government public safety operations to qualified aircraft, and clarifies operations communications.
- **Reduce Drowning Risks:** Uniformly safe facilities and access to swimming lessons would prevent [up to 90%](#) of youth drowning deaths. Maryland [H.B.303](#) adopts a uniform, evidence-based pool code closing loopholes that disproportionately endangered youth of color, and California [A.B.1056](#) is exploring free water safety and swimming lessons for underserved youth.





## Overview

States are championing the growing trend of connecting people with safe, quality outdoor careers. These programs not only address the increasing demand for skilled workers in the outdoor recreation industry, but also provide people with fulfilling, well-paying jobs that promote health and environmental stewardship.

## Healthy Jobs Policy Options

- **Invest in Outdoor Job Training:** States can meet demand for skilled outdoor workers and increase access to outdoor jobs with skills training programs. Oregon ([H.B.2910](#)) invested \$3.5 million in outdoor workforce programs, and Texas [H.B.2179](#) would expand student preparedness incentives to reward placing students in Americorps programs.
- **Open Federal Funds to Skilled Outdoor Jobs:** New Mexico [H.B.303](#) includes outdoor recreation, sustainable agriculture, renewable energy, and natural resources management careers as high-demand, living wage jobs in the state [TANF](#) workforce development program.
- **Promote Extreme Heat Work Safety:** Outdoor workforces are more vulnerable to extreme heat, [especially](#) low-income workers and workers of color. Colorado [S.B.21-087](#) requires employers to develop safety procedures for when the temperature at a worksite is at or expected to be at least 80 degrees.
- **Encourage Safer Tourism with Clear Liability Definitions:** States can define safe site and operating conditions that result in limited liability, incentivizing small businesses to reduce risk even in emerging industries. New Mexico ([S.B.464](#)) extends outdoor recreation tourism liability protections to agritourism and offers definitions of safe conditions.
- **Establish Outfitter and Guide Licensing:** Licensing establishes uniform qualifications for guides and outfitters offering activities known to be inherently hazardous. Idaho [S.B.1085](#) amends licensing requirements to cover more risky outdoor activities and defines hazardous excursions.
- **Create Fair Rules on Licensing:** While many states have some form of outfitter permitting, the process for when and how licenses can be suspended is often underdeveloped. Fair, justified processes protect both outfitters and recreators. Colorado [H.B.24-161](#) creates fair hearing procedures for river outfitter license suspension and revocation.





## Overview

[One in three](#) Americans lack access to green spaces vital for health and well-being. From creating new green spaces in underserved areas to protecting existing parks and allowing for more community gardens, states are innovating to expand access to nature for all.

## Healthy Neighborhoods Policy Options

- **Expand Greenspace Equity:** Maryland [S.B.923/H.B.503](#) established a greenspace equity grant program to increase equitable access to quality green spaces in overburdened & underserved areas funded by existing land conservation funding.
- **Build Green Streets:** Streets with permeable paving and plantings can prevent collisions, manage extreme heat, protect from flooding and drought, and increase access to nature at home for everyone. California ([A.B.464](#)) offers enhanced financing for green infrastructure; New Jersey ([NJS 1073](#)) funds green streets with stormwater utility fees.
- **Conserve Existing Greenspace:** Park lands are often in highly desirable locations, making them vulnerable to conversion or trade. Connecticut [S.B.294](#) and New York [S.252](#) would require municipalities to provide comparable replacement land when park lands are repurposed or converted.
- **Allow Gardening in Neighborhoods:** Pollinator and vegetable gardens offer unique ecological, social, and community benefits to neighborhoods. Colorado [S.B.178](#) prevents homeowners associations from limiting plantings and vegetable gardens.
- **Convert Abandoned and Vacant Lots Into Gardens:** Replacing even small abandoned lots with gardens can reduce local prevalence of depression by [nearly 30%](#). Illinois [H.B.3418](#) (2018) established Urban Agricultural Zones, incentivizing cities to use vacant lots for locally-grown foods.



## Restoring Tree Canopy

Tree canopy coverage is considered a [gold standard indicator](#) of neighborhood health. Tree canopy is strongly linked to a [broad range](#) of protective and preventive health factors – so much so that for every 100 trees planted, at least [one premature human death](#) is prevented.

Nevada [A.B.131](#) established an Urban and Community Forestry Program to fund and advance the health and canopy coverage of urban and community forests. New York [S.5759](#) would establish an urban and community tree planting and forestry program act to provide education, technical assistance and long-term support for forestry projects in urban areas and in disadvantaged communities; this approach addresses [common challenges](#) to urban tree planting programs.



## Overview

Childhood time outdoors is the single greatest predictor of lifelong time outdoors. This translates to a range of health benefits, including physical fitness, mental well-being, and a deeper connection to the environment. However, many children face barriers to getting outdoors, including safety concerns, lack of green spaces, and inaccessible play areas.

## Healthy Childhoods Policy Options

- **Children’s Outdoor Bill of Rights:** Many cities have enacted a [Children’s Outdoor Bill of Rights](#) to highlight the importance of children participating in and enjoying time outdoors, especially in policy and appropriations decisions. Illinois ([H.R.0011](#)) maintains that every child should have the right and opportunity to play outside.
- **Establish a Healthy Childhood Task Force:** Identifying where children do and don’t have meaningful outdoor access is often the greatest barrier to improving childhood nature engagement. Louisiana ([S.R.84](#)) established a task force to promote healthy childhoods, especially through time outdoors in and out of school.
- **Establish a Childhood Physical Activity Task Force:** Youth exercise more often and for longer when they have [access to the outdoors and positive role models](#). North Carolina [S.B.900](#) established a task force to study and promote childhood physical activity, including through access to outdoor recreation opportunities, and New York [A.735/S.3019](#) studied promoting outdoor activity.
- **Build Safer Playgrounds:** In most states, playgrounds can be built with [concerning levels of toxic materials](#). Maryland [H.B.1147](#) prohibits installing new playground surfacing materials with unsafe levels of lead or PFAS.
- **Build Accessible Playgrounds:** Minnesota [H.F. 5463](#) / [S.F. 5524](#) would create a playground accessibility grant program for schools. Grants cover through paths, access to play areas, accessible playground equipment, and repairs to existing equipment.



## Outdoor Preschool Licensing

Most states already have outdoor, forest, or nature-based preschools, but only Washington ([H.B.5357](#)), Oregon ([H.B.2717](#)), Maryland ([H.B.525](#)), and Colorado ([S.B.24-078](#)) currently offer licensing for outdoor preschools, and Kentucky ([H.B.423](#)) and Illinois ([S.B.3294](#)) are exploring outdoor preschool licensing. Licensing establishes uniform safety and training standards for outdoor preschools.

Licensing is key for equitable, fair access; licensed outdoor preschools can offer full-day care, are eligible for state funding for low-income families, and are more competitive for federal and private grants.





## Overview

The average American child spends [4-7 minutes](#) playing outdoors daily, and [up to 9%](#) of all youth spend no time outside. However, learning and playing outdoors is critical for healthy social, emotional, and physical development. Public schools often have the broadest and most equitable reach to support children and families in reaching the health benefits of meaningful time outdoors.

## Healthy Learning Policy Options

- **Set Minimum Standards for Recess:** For many children, just playing outside at recess – or even getting recess at all – is a [luxury](#). Washington ([S.B.5257](#)) requires schools to provide a minimum of 30 minutes of daily recess that is outdoors when possible.
- **Grow Outdoor Classrooms:** Georgia's Outdoor Learning Commission ([S.R.203](#)) established [highly successful](#) Outdoor Learning Development grants, increasing outdoor school resources. Georgia [S.B.202](#) would establish an outdoor education pilot program to develop state-wide recommendations on outdoor education facilities and curriculum.
- **Create Outdoor Education Positions:** New Mexico [S.B.32](#) would establish Outdoor Learning Specialist positions and funds for outdoor learning. Maine [L.D.1682/H.P.1081](#) would establish grants and cost-sharing guidance for public schools to establish outdoor educator positions.
- **Study Outdoor Education in State Curriculum:** New Hampshire [S.B.266](#), New Jersey [A.3243](#), New Mexico [S.B.289](#), and more states are all exploring including outdoor education in state curriculum for student wellbeing.
- **Share Outdoor Recreation Resources with Schools:** Nevada [A.B.164](#) studies using and sharing existing state outdoor recreation resources to offer quality outdoor education in public schools.
- **Protect Schools from Heat:** California [S.B.499](#) would require schools to provide adequate facilities for extreme heat, including providing shade, low heat surfaces, and greenery.
- **Build Out Parks for Learning:** Washington [H.B.2138](#) would promote outdoor learning access and equity by directing the parks commission to consider outdoor learning uses for new infrastructure and coordinate with public schools and outdoor education program providers on outdoor education opportunities in state parks.





## Overview

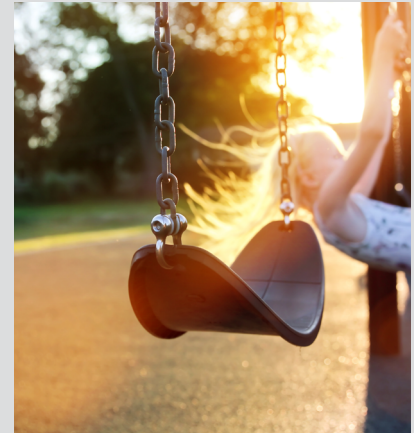
States are exploring living schoolyards and school gardens for their heat and weather protection, exciting agricultural and pollinator educational opportunities, and nature-based play experiences. Living schoolyards, sometimes called green schoolyards, can also be planned around managing stormwater, flooding, or drought through greenery, landscaping, permeable surfaces, gardens, and other nature-based play features.

## Living Schoolyard Policy Options

- **Study Green Schoolyards:** Minnesota [S.F.20](#) allocated \$250,000 in appropriations to implement and study green schoolyards in a successful partnership with the Trust for Public Lands.
- **Establish Schoolyard Greening Funds:** California [A.B.2600](#) would establish a School Greening and Resiliency Fund to fund landscaping and greening projects in schools that promote extreme heat resilience and offer educational opportunities.
- **Promote Student Leadership Through Living Schoolyards:** Washington [H.B.1935](#) would establish a green schools program based on student leadership opportunities including schoolyard greening projects.

## School Food Gardens Policy Options

- **Create a School Garden Coordinator Position:** School gardens often rely on a handful of administrators or teachers with personal experience. Dedicated leadership opens up gardens to schools without such resources. Hawaii [S.B.2182](#) established a School Garden Coordinator position within the Department of Education with a \$200,000 allocation for the position and to fund school gardens.
- **Offer Funding to Launch and Maintain School Gardens:** Many schools have leadership to start and maintain gardens, but no funding to do so. Nevada [S.B.167](#) allocated \$600,000 over 2 years to create and maintain school gardens, and also required the gardens to support learning and/or teaching.
- **Open Agricultural Garden Funding to Pollinator Gardens:** Pollinator gardens can improve crop yields and provide examples of the ecosystem services driving time-honored agricultural heritage. Pennsylvania [S.B.1236](#) opened existing agricultural education grant funding to school pollinator gardens.



## Sharing Schoolyards

Opening up schoolyards as public spaces in off-hours would connect [millions of Americans](#) to nearby greenspace and quality exercise facilities.

States like [Arkansas](#) already offer joint community use of school facilities, and Hawaii [H.C.R.90/S.C.R.30](#) would request for the Department of Education to offer access to school recreational facilities during off-school hours and non-school days.



## NCEL Resources

1. [Outdoor Engagement Issue Page](#)
2. [Outdoors as a Climate Solution Briefing Book](#)
3. [Active Transportation Issue Page](#)
4. [Extreme Heat Protections](#)
5. [Wildlife Disease Fact Sheet](#)
6. [Cumulative Impacts Issue Page](#)

## Additional Resources

### 1. [The Youth Outdoor Policy Playbook](#) | *Youth Outdoor Policy Partnership*

Youth outdoor policy background, bill tracking, and case studies with comprehensive policy resources.

### 2. [Nature and Health Alliance Database](#) | *Nature and Health Alliance*

Resource center of academic articles on the connections between nature engagement and health.

### 3. [National Library of Medicine Outdoor Wellness Collection](#) | *National Library of Medicine*

Database with 100+ curated academic articles on the health benefits of time in nature.

### 4. [Nurtured By Nature](#) | *American Psychological Association*

Introduction and primer on the mental health benefits of time outdoors.

### 5. [Hazard Mitigation Guide](#) and [Nature-Based Solutions Guide](#) | *Federal Emergency Management Agency (FEMA)*

Climate mitigation and adaptation background, policies, case studies, and funding resources.

### 6. [Children & Nature Resource Library](#) | *Children & Nature Network*

Youth outdoor access resources ranging from research papers to policy briefs.

### 7. [Environmental Education Resources for Policymakers](#) | *North American Association for Environmental Education*

Environmental education policies and best practices across school districts, states, and countries.

### 8. [Rural Health Information Hub - Outdoor Resources](#) | *Rural Health Information Hub*

Case studies, topic overviews, and resources exploring rural outdoor health solutions.

### 9. [Outdoor Safety](#) | *U.S. Army Safety Center*

Directory of resources on best practices for both individual and community outdoor safety.

### 10. [Greater Good Magazine](#) | *UC Berkeley Resource Center*

Resource center and newsletter with updates on positive mental health news.









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