



Green schoolyards for Los Angeles

THE SMART POLICY SOLUTION FOR EQUITY, HEALTH, AND CLIMATE RESILIENCE





The Trust for Public Land creates parks and protects land for people, ensuring healthy, livable communities for generations to come.

The Los Angeles Living Schoolyards Coalition creates and advocates for equitable access to nature and healthy school environments designed with the community to support: safe outdoor education, physical and mental health, social and emotional well-being, and climate resilience for Los Angeles County’s public-school students and communities.

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Some schoolyards are full of vegetable gardens, trees, and native plants, providing opportunities for learning and places to play. © JENNA STAMM FOR THE TRUST FOR PUBLIC LAND

In fall 2005, when Claire Latané arrived to drop off her two eldest children for their first day of school at Eagle Rock Elementary, she was thrilled. “I saw the outside of the school and it was gorgeous—1920s building, 100-year-old deodar cedars. I couldn’t be happier,” says Latané, an assistant professor in landscape architecture at California State Polytechnic University (CalPoly Pomona). But when they stepped through the front doors and onto the campus, located in northeastern Los Angeles, Latané was taken aback. In sharp contrast to the welcoming façade, the schoolyard beyond was nothing more than a sun-baked expanse of asphalt.

“That is what got me interested in green schoolyards,” says Latané. “I thought, this is not healthy for children.” Within a few years, she was part of a long-term collaborative effort between school

administrators, educators, parents, and community partners that resulted in the construction of a vibrant green schoolyard during the summer of 2016. Now, native plants and trees provide shade, a home for birds and pollinators, and plenty of learning opportunities. A circle of logs and tree stumps serves as an outdoor classroom, a quiet place to read, and a landscape for imaginative play. There’s a teaching garden and a large grassy field and the remaining asphalt has been coated with lighter, sun-reflective paint.

This story is not unique.

For over 30 years, the Council for Watershed Health, North East Trees, Los Angeles Beautification Team, Los Angeles Neighborhood Land Trust (People for Parks), The Trust for Public Land, and other organizations and academic institutions have helped school

communities like Eagle Rock Elementary reimagine their school campuses. Yet, while these individual greening projects have been transformative for their local communities, they remain anomalies in a school district characterized by elementary schoolyards covered in asphalt and middle and high schools that feel more punitive than supportive. There is still no clear path for replicating this work so that all students, particularly those in high need communities that lack access to open space, reap the benefits of a greener, healthier campus. Despite decades of evidence pointing to the academic, social, health, and environmental benefits of nature-filled campuses that nourish and inspire students, policies too often prevent implementation of these models.

The Los Angeles Unified School District (LAUSD), the second-largest school district in the country, has over 1,000 school sites across 31 cities and several unincorporated areas of LA County. The LAUSD includes [400 school campuses with gardens or agricultural areas](#), [150 schools with edible teaching gardens](#), and [26 Schoolyard Habitats](#) certified by the National Wildlife Federation. This progress is both admirable and not nearly enough. As with most large school districts, healthy and green campuses are inequitably distributed throughout the LAUSD. And for the schools that do include green spaces, they are located in the front or around the edges of campuses and are inaccessible to students during the school day. More often than not, higher income communities have greener school sites while [schools in lower income communities are largely asphalt and unshaded](#)—especially at the elementary level.

“Unfortunately, these individual green schoolyard projects have not sparked the systemic changes needed to take this idea to scale,” says Guillermo Rodriguez, California state director for The Trust for Public Land.

The Los Angeles Living Schoolyards Coalition came together to change that.

“Unfortunately, these individual green schoolyard projects have not sparked the systemic changes needed to take this idea to scale,” says Guillermo Rodriguez.



Over 1.5 million Angelenos don't have a park within a 10-minute walk of home. Transforming our city's schoolyards can help close that gap. © ANGELA DECENZO FOR THE TRUST FOR PUBLIC LAND

The Los Angeles Living Schoolyards Coalition

In 2019, driven by the urgent need to provide comprehensive supportive, healthy, and thriving environments for the over 600,000 students that the LAUSD serves, a group of non-profit organizations and academic researchers focused on environmental justice, health, and climate-resilience came together to form the Los Angeles Living Schoolyards Coalition. The coalition includes Cal Poly Pomona, Council for Watershed Health, Heal the Bay, Los Angeles Beautification Team, Los Angeles Neighborhood Land Trust (People for Parks), Kounkuey Design Initiative, Natural Resources Defense Council, North East Trees, Occidental College, and The Trust for Public Land. The 2020 global pandemic and a national reckoning with deep systemic injustices—including education—make the coalition's objective more urgent than ever. Within this diverse group, there is a shared recognition that this moment in time offers a unique opportunity to build off policy momentum on equity, public health, climate, and the need for green space, particularly in high-need communities, to transform schoolyards into nature-filled, multi-benefit oases for learning.

The Coalition creates and advocates for equitable access to nature and healthy school environments designed with the community to support: safe outdoor education, physical and mental health, social and emotional well-being, and climate resilience for Los Angeles County’s public-school students and communities. The work is based on extensive experience transforming school campuses and is backed up by half a century of academic research. The Coalition calls for large-scale systematic and comprehensive change across all Los Angeles schools.

“The impact of green schoolyard projects cannot be overstated, especially in Los Angeles, where the LAUSD is the single largest landowner in the greater Los Angeles Area,” says Mark Kenyon, Executive Director of North East Trees. “With the LAUSD’s cooperation, we envision utilizing the 6,400 acres of the LAUSD owned land to build resilience to climate change and create a world-class learning environment for students and faculty.” For decades, North East Trees has worked with local communities to identify neglected or distressed parcels of land to transform them into safe and inviting green spaces. Having planted hundreds of thousands of trees, designed and built over 200 parks and greenways, and trained and employed thousands of local youth in their environmental

stewardship program, North East Trees is intimately familiar with the multiple benefits green schoolyards can provide, such as reducing the urban heat island effect, mitigating harmful greenhouse gas emissions, reducing air and water pollution, capturing and cleaning polluted urban runoff, creating local water sustainability, and sequestering carbon. Additional, longer-term benefits include improved academic performance and better physical and mental health among students and community members.

Schoolyards: the park access solution hiding in plain sight

The LAUSD serves over 600,000 students. [Roughly 80 percent of them qualify for free or reduced meals.](#) [Around 63,000 students suffer from asthma. About one in six are English language learners. In a 2016 study by the district on adverse childhood experiences, 98 percent of students screened had experienced at least one adverse childhood experience and 50 percent suffered moderate to severe posttraumatic stress disorder.](#) And this was before 2020. The Los Angeles Living Schoolyards Coalition sees school sites as the natural place to begin reversing the environmental and health injustices suffered by low-income communities of color.

When implemented across an entire school district, metropolitan region, or county, green schoolyards can remedy historic inequities in environmental conditions, public health, and climate-resilience. Coalition partners consider a number of factors, including distribution of nearby green space, number of students from low-income households, rates of asthma and obesity, and racial demographics to identify school sites for improvement. Another crucial consideration is protection from heat. “Heat islands” are heavily paved and unshaded pockets of the city where midday [temperatures are routinely at least 1.25°F—but sometimes up to 20°F](#)—higher than those in surrounding areas due to the built environment and lack of tree cover. Nationwide, [data shows that 36 percent of public school students spend their school days in a heat island.](#) In Los Angeles, where temperatures sometimes exceed 100°F, over [75 percent of students identify as people of color.](#)



Nationwide, 36 percent of students go to school in an urban heat island. Blacktop schoolyards contribute to higher temperatures throughout the neighborhood. © ANGELA DECENZO PHOTOGRAPHY

Addressing Environmental Inequities

LORETO STREET ELEMENTARY

Loreto Street Elementary is a predominantly Latino/a school community with over 96 percent of students qualifying for free or reduced cost meals. In addition to experiencing disproportionate financial insecurity, Loreto families have also been burdened by historical exposure to toxic waste and pollution. The public streets and sidewalks families use to get to school currently have less than 5% tree canopy cover, and the campus itself sits above a major freeway and near passenger and freight railway lines, a major intermodal rail yard, and heavily used freight transportation corridors. Air Quality Management District monitoring station measurements for this community consistently exceed standards for ozone, PM 2.5 and PM 10 pollution levels.

Because of these challenges, the Loreto Street school community sees greening their campus as an environmental justice issue. Students, teachers, parents, and a champion Principal are eager to grow and expand their edible garden to include an outdoor classroom and community shared-use space. Loreto is partnering with the Urban Environmental Policy Institute at Occidental College and North East Trees to develop a mindfulness garden space, and to reimagine a greener campus through a collaborative design process. Principal Maria Leticia Arciniega said that she “would love to see school garden spaces expand to the entire campus and not only be a safe green space for our students but eventually develop a joint-use agreement so that families can enjoy the space on the weekends. But the process for greening more of our mostly blacktop campus and opening it up to the community is uncertain.”

Including Students in The Design Process

CAMINO NUEVO CHARTER ACADEMY

Camino Nuevo Charter Academy’s José A. Castellanos Campus is an elementary school located two blocks from bustling Interstate 10 in the largely Salvadoran Pico Union neighborhood. Roughly half of the students are classified as English-language learners and over 90 percent of them qualify for free or reduced cost meals. Save for a few trees, the only green in this

semi-industrial neighborhood is in a nearby cemetery. The schoolyard is mostly blacktop, except for a small patch of dried out grass.

Beginning in 2019, Matilda Reyes, a project manager for The Trust for Public Land, spent ten weeks visiting Kathia Garcia’s fourth-grade class to work with the students to redesign their campus. The goal was to provide an environmental science curriculum and to build agency by guiding students to determine the look and feel of their schoolyard. Reyes adapted The Trust for Public Land’s participatory design curriculum from its highly successful Community Schoolyards (TM) program in New York City to reflect the Los Angeles environment. She taught them about native plants and the water cycle, helped them observe and analyze heat, shade, and drainage on the schoolyard, and organized field trips to visit local parks that inspired sketches of their ideal schoolyard.

Garcia, who grew up in this neighborhood, was excited for the opportunity to dream big along with her students. “When I was a kid, I remember there weren’t a lot of green spaces around,” she said. “When we started working on the project, the students were so excited about the potential that was there. They started seeing things through a different lens—like, what else could be here?”

While students, teachers, and school staff know their school campus and are affected by it more than anyone, they are rarely included in the design process.



Existing campus at Castellanos Elementary School. © THE TRUST FOR PUBLIC LAND



Spending time outside boosts students' test score, strengthens concentration, and even helps reduce stress. © ANNIE BANG

Asking students what they need and want in their school gives them the sense they are valued—critical to creating a sense of belonging. It also helps shine a light on solutions that matter to children and youth and that particular community.

One aspect that makes the Castellanos schoolyard such an excellent candidate for greening is that it sits inside one of Los Angeles' many "heat islands." The State of California awarded a \$1.1 million grant to cool the school grounds by replacing heat-absorbing asphalt with trees, plants, and cooler permeable surfaces.

Reducing Heat and Improving Health

"In the places we give our children to play, the conditions are thermally more similar to a strip mall parking lot than they are to even a residential area where the kids live," says V. Kelly Turner, an assistant professor of urban planning and geography at UCLA's Luskin School of Public Affairs. "We need to start tilting the balance back."

Turner, whose research focuses on urban climate, is concerned about "thermal comfort," or a person's experience of the cumulative effects of various types of heat—air temperature, radiant, and surface contact. "Kids are some of the most vulnerable groups. They can't tolerate as much heat exposure as adults," she says. In addition to being at risk for dehydration and

other heat-related illnesses, children's brains are at risk from heat exposure—and they're getting more of it by the simple fact that they're closer to the ground. "It affects their concentration and their ability to learn," says Turner. "There have been studies showing that [PSAT scores are lower during heat waves](#), and this predominantly affects lower-income communities." [High heat is also associated with dangerous ozone pollution levels](#) that can trigger asthma attacks and other serious health impacts.

So how can schools solve for the impacts of being located within an urban heat island? "What kids need is shade," says Turner, who recommends both tree cover and built structures that will create strategic shadows on the schoolyard. "The number one thing you can do to prevent somebody from being exposed to heat is to prevent the sunlight from creating radiative energy in the area in the first place."

"In the places we give our children to play, the conditions are thermally more similar to a strip mall parking lot than they are to even a residential area where the kids live," says V. Kelly Turner.

Marcella Raney, PhD, an associate professor of kinesiology at Occidental College, first visited the Eagle Rock Elementary schoolyard in 2014 at the invitation of her colleague and now research collaborator Bevin

Ashenmiller, PhD, an associate professor of Economics at Occidental College. Raney was shocked at just how much asphalt there was. “I was aghast,” she says. “[The students] all hovered as close as they possibly could to the buildings and the shade provided by the overhang.” It was simply too hot to play.

The Eagle Rock Elementary renovation was initiated by parents, funded by a \$349,000 stormwater grant from the State of California, and built by the Los Angeles Beautification Team. The grant funds replaced 25 percent of the blacktop with natural materials like trees, plants, soil, grass, and mulch. The school district coated the remaining asphalt with a light-colored paint that reflects sunlight. Raney and a cohort of Occidental students studied the effects of the renovation over a 16-month period. Their research showed that [children were more active in the new green areas on campus](#), and in different ways. Raney said that before Eagle Rock Elementary’s transformation, less than a quarter of students spent time on the largest area of the asphalt expanse. After that area was converted to a grassy field with shade trees, the number of students spending time there more than doubled. More students also engaged in what Raney calls “moderate to vigorous physical activity.” Before the improvements, students primarily engaged in traditional blacktop games—things like kickball, handball, and tetherball, all of which involve a lot of waiting around. [The newly greened yard invites more activity](#) as children dance and tumble on the grassy field, jump and play on logs and boulders, and create imaginative new games.

In a separate study with Green Schoolyards America, Raney measured surface heat around the schoolyard before and after the improvements. “We saw that compared to bare asphalt in direct sunlight, there could be up to a 30-degree drop in temperature on the greener elements, depending on the surface,” she says. “This is degrees Celsius; this isn’t even degrees Fahrenheit. It’s significant.”

Increasing Climate-Resilience

In addition to addressing urban heat, living schoolyards address Los Angeles’ urgent need for water capture in the face of crippling drought. “We have an incredible opportunity to punctuate the thousands of acres

of asphalt owned by LAUSD with patches of urban forest and rain gardens that increase biodiversity, capture and clean stormwater runoff, and cool school campuses” says Eileen Alduenda, Executive Director of the Council for Watershed Health (CWH). CWH led Technical Assistance for the state-funded Drought Response Outreach Program for Schools (DROPS) throughout the state. LAUSD received \$5 million in State Water Resources Control Board (SWRCB) DROPS funding to re-design LAUSD campuses to capture, clean, and infiltrate stormwater, create habitat, and create outdoor spaces for LAUSD students to learn and play. CWH conducted pre- and post-construction monitoring of LAUSD’s DROPS “green infrastructure” at the four participating school campuses. CWH also managed LAUSD’s education and outreach required by the DROPS program, in partnership with TreePeople and the Los Angeles Audubon Society, as well as operation and maintenance training on the green infrastructure features for LAUSD facilities staff. The campus improvements resulted in multiple benefits, including improved water quality, increased stormwater infiltration, enhanced native habitats, and created new learning environments with direct connections to science, technology, engineering, and math (STEM) curricula, new opportunities for student engagement and professional development for teachers.

CWH’s monitoring of LAUSD’s DROPS green infrastructure features indicated that one of the many solutions to the growing volume of pollution in our waterways and ocean, depleting water supply, and increasing cycles of extreme heat and drought due to climate change, lies in transforming public school campuses with nature-based solutions. “Capturing, cleaning, and infiltrating stormwater runoff by using Low Impact Development Best Management Practices (LID BMPs) like permeable paving and Nature-Based Solutions like vegetated swales reduce the amount of pollutants entering our waterways and flowing to the ocean. These are important features of Living Schoolyards which support the health of our watersheds, educate school communities, demonstrate sustainable landscape strategies to surrounding communities, and inspire the next generation of scientists, leaders, and voters to be good stewards of our water resources and local watersheds where they spend a significant amount of their time...at school.”



Recently, California voters have approved a slate of ballot measures that could fund schoolyard improvements across the state. © ANGELA DECENZO PHOTOGRAPHY

Improving public health, increasing academic achievement

Experts agree that close-to-home access to nature improves quality of life not just [for children](#), but [for all people](#), especially those in communities with high rates of trauma, and those lacking access to parks and other green spaces. Trees and gardens improve our mental and physical health. Research shows that connecting with nature helps us feel [less stressed](#), [decreases our blood pressure](#), and [elevates our mood](#). Studies also indicate that [physical activity levels increase for people of all ages](#) when they have green space nearby, an important outcome when you consider that physical activity levels can [serve as a barometer for overall health and wellness](#).

Replacing asphalt with trees, soil, plants, and mulch helps schoolyards reduce air pollution and heat, and by extension improves student health and their ability to learn. A high number of LAUSD students suffer from asthma, which Raney says accounts for up to [18 percent of chronic absenteeism](#) in Los Angeles County. Reducing air pollution is also crucial for many LAUSD neighborhoods where fuel fumes from the nearby freeway exacerbate the city’s notorious smog.

Beyond simply improving the environment in which children spend much of their day, green schoolyards

affect how students of all ages feel, play, socialize, and learn. “Being around nature relaxes them,” says Heidi Gott, a fourth-grade teacher who worked at Eagle Rock Elementary well before the greening project occurred, and returned in 2019 to a completely changed campus. Gott noticed that the new natural schoolyard led to higher levels of creativity, mindfulness, and better relationships between students in her classroom.

Studies show that spending time outdoors in nature [can reduce stress](#), [strengthen the ability to concentrate](#), [decrease negative social behaviors](#), and even [improve test scores](#). “Children’s brains actually change if they spend time learning lessons in the outdoors,” says Raney. “The white matter of their brain development is different.” But the benefits of green space track indoors, as well.

[“If you have a view of trees out your window, you’re likely to be calmer and do better on tests,”](#) says Latané. She believes that we shouldn’t admonish students for gazing outside during class. “They are doing what their bodies are telling them they need—looking out the window for a restful distraction, to reduce their stress so they can learn.”

All of this also helps boost attendance. Ashenmiller finds that “all of these changes work to increase student attendance and learning.” As the Eagle Rock elementary

PTA President, Ashenmiller championed the schoolyard improvements. Her research now focuses on quantifying the impact of the new space on attendance and learning so that the economic argument for these changes becomes even more clear. School funding is partly determined by annual daily attendance, so showing that greener campuses boost attendance would make a strong economic case. Since [studies show sick days decrease in work environments with views of or access to nature](#), the same is likely true for schools.

One of Gott's students, 9-year-old Dixon Brown, says that being outdoors is his favorite part of the school day. During recess, he plays a world-building game with classmates they've dubbed "bunker digging," where they create small structures from dirt and wood chips and work together in what he calls "a democracy," where everyone has a role and the chance to be a leader. "It makes me more happy to be in a schoolyard that's not all development and concrete, that has some element of trees and greenery to it," he says. "It inspires me to be more creative in class."

Opening Schoolyards to the Community

"Our work is all about closing the equity gap in access to open space," said Robin Mark, The Trust for Public Land's Los Angeles program director. Space itself is at a premium in a city like Los Angeles, which makes it difficult to create new parks or expand existing parks. But Mark points to a powerful solution to providing green and natural space for communities that have none: by utilizing public space that already exists. "There's a school in every community," she said. "If we're able to transform and open schoolyards, then it's getting us closer to making sure that everybody has a green place to go outside, be healthy, and get exercise." Since schools are distributed throughout communities and cities, they are the ideal place to create healthy, park-like environments for the whole community to use during evenings and weekends.

"The science tells us that if you live within a half-mile radius of a park, guess what—you're going to use it, you're going to have better health outcomes, you're going to have better environmental outcomes, you're going to have better economic outcomes," says Rodriguez. Since 1972, The Trust for Public Land has

taken up the charge of creating and transforming parks and green spaces around the country to ensure that all people have the opportunity to get outdoors safely right where they live. To date, the organization has transformed [more than 280 schoolyards around the country](#) through the Community Schoolyards Initiative. This initiative goes beyond development of demonstration sites to embed research into practice, engage in advocacy to change policy at all levels of government, provide technical assistance and resources to inspire others, and catalyze the creation of Community Schoolyard projects through partnerships and grant making.

As a partner in this work, The Los Angeles Neighborhood Land Trust has been at the forefront of creating community access to public spaces in Los Angeles for over three decades. "Due to [racist planning practices including historic redlining](#), access to open space in Los Angeles has long been divided on racial lines," said Tori Kjer, Executive Director of the Land Trust. Kjer continued, "Our work with People for Parks created an opportunity for schoolyards to be opened to the public, free of charge, on weekends. This Community School Park program gave thousands of Angelenos in dense pockets of Koreatown, Pico Union, West Lake, Central Alameda, South Los Angeles, and East Hollywood places to play and connect within walking distance of their homes." By opening the schools to communities, students and other residents had access to play space and programming in their neighborhood. We can amplify the impact of green schoolyards by opening campuses to communities so that everyone in the community can benefit from these improved, nature-filled spaces.

"Due to racist planning practices including historic redlining, access to open space in Los Angeles has long been divided on racial lines," said Tori Kjer.

Through a longstanding relationship with the LAUSD, the City's Department of Recreation and Parks (RAP) launched a Community School Park Pilot Program prior to the pandemic, establishing "shared-use agreements" to open elementary schools for community access and recreational programs in some of the most park-deficient areas of Los Angeles. While access to these

schoolyards provided some benefit to the community, the vast majority of them are asphalt, with little to no tree canopy or green features.

“Opening the gates to schoolyards during non-school hours in communities that lack green space represents an important strategy toward increasing equitable park access,” said Michael Shull, general manager of RAP. “But these schoolyards should have shade, should be green, and low-cost recreation programs should be offered, similar to any other community park in the City.”

This approach can help communities across the country. [More than 100 million Americans, over a quarter of them children, don't have access to quality green space within a 10-minute walk of home.](#) This leaves the residents of those communities, which are [disproportionately made up of people of color and low-income households](#), more susceptible to the effects of pollution and climate change, poor mental health, and ailments such as heart disease because they have too few opportunities for an active lifestyle.

[Here in Los Angeles](#), more than 1.5 million people—including over a third of the city's children, people of color, and residents of low-income households—live outside of a 10-minute walk of a quality park. When there is green space nearby, it often falls short of meeting a community's needs. “Parks that serve predominantly white neighborhoods tend to be five times larger than parks that serve neighborhoods of people of color—and they tend to serve five times fewer people,” says Linda Hwang, director of strategy and innovation for The Trust for Public Land. She says that the organization's research shows a similarly bleak picture for parks in low-income neighborhoods, which are, on average, [four times smaller than those in higher-income areas](#) and are straining under the demand of quadruple the users. While the work to increase close-to-home park access and green schoolyards has always been important, it's now more urgent than ever.

“We're just going to have more and more days where it's extremely hot and dangerous for children to be outside,” says Turner, who points out that the rising temperatures we see with climate change go hand-in-hand with increased air-conditioning costs for

schools. “It's not a tenable solution to just say, ‘Go inside.’ The problem is just going to get worse.” Just as parks are inequitably distributed throughout the city, so is [shade](#), and rising temperatures throughout Los Angeles will continue to disproportionately impact the city's most vulnerable populations.

The COVID-19 pandemic has increased the urgency of this work, especially from an equity standpoint. Research shows that following a year of remote instruction, not only have many students experienced learning loss, but [this loss has also disproportionately affected students of color](#). As students return to school in person, the trauma they've experienced through the global pandemic makes them even more in need of nurturing, nature-filled learning environments. Having healthy, tree and garden-filled schoolyards to learn and play in can boost immune systems, help students learn—especially struggling students—and provide restorative environments for all students, teachers, staff, and community members who use the school. Principal Brad Rumble installed a habitat garden at LAUSD's Leo Politi Elementary School with help from the National Wildlife Federation. In three years, [standardized science scores went up from just 9% of students showing proficiency to 53% scoring as proficient or advanced.](#)

“COVID taught us, sadly, that parks and outdoor spaces are so critical to our physical and mental health—and so many communities lack green space,” says Rodriguez. “It takes a long time to build, design, and put a park in a neighborhood. But unlocking a public asset like a schoolyard can have an immediate impact on a community that has zero green space.”

Rodriguez says that we can learn something else from the pandemic—that communities and the systems that operate within them are capable of responding creatively and adapting to challenging situations. He credits the LAUSD with not just providing students with technology that allowed them to learn remotely, but also ensuring that students—and their families—wouldn't go hungry. “Los Angeles Unified became one of the largest meal distributors in Los Angeles County, feeding hundreds of thousands of people,” says Rodriguez. “I think what COVID-19 also said to me is that when there's a will, there's a way.”

Where are green schoolyards needed most?

Since schoolyard transformation takes time, it is crucial to address environmental injustices by starting with the school communities that have been historically marginalized. To help state and local officials identify where green schoolyards are most urgently needed, The Trust for Public Land recently completed a study assessing needs for all California school districts and communities based on three factors:

- **Equity**, as determined by California’s Local Control Funding Formula, which measures the number of low-income and other high-need students within each school district.
- **Health**, as measured by performance on California physical fitness tests and self-reported measures of physical and mental well-being.
- **Climate**, as measured by the percentage of schools located in high-temperature “heat islands” and the percentage of school area currently shaded by natural tree canopy.

All school districts were rated on a 1–5 scale, with five indicating the highest-need districts that would benefit most from green schoolyards. The assessment found high needs statewide, with the highest need in California’s Central Valley, the Los Angeles metropolitan area, San Diego, and the East Bay. The Trust for Public Land also used its data to quantify the number of local residents who would gain access to a park within a 10-minute walk if schoolyards were greened and opened to the community after hours. The table below lists the ten California cities that would benefit most.

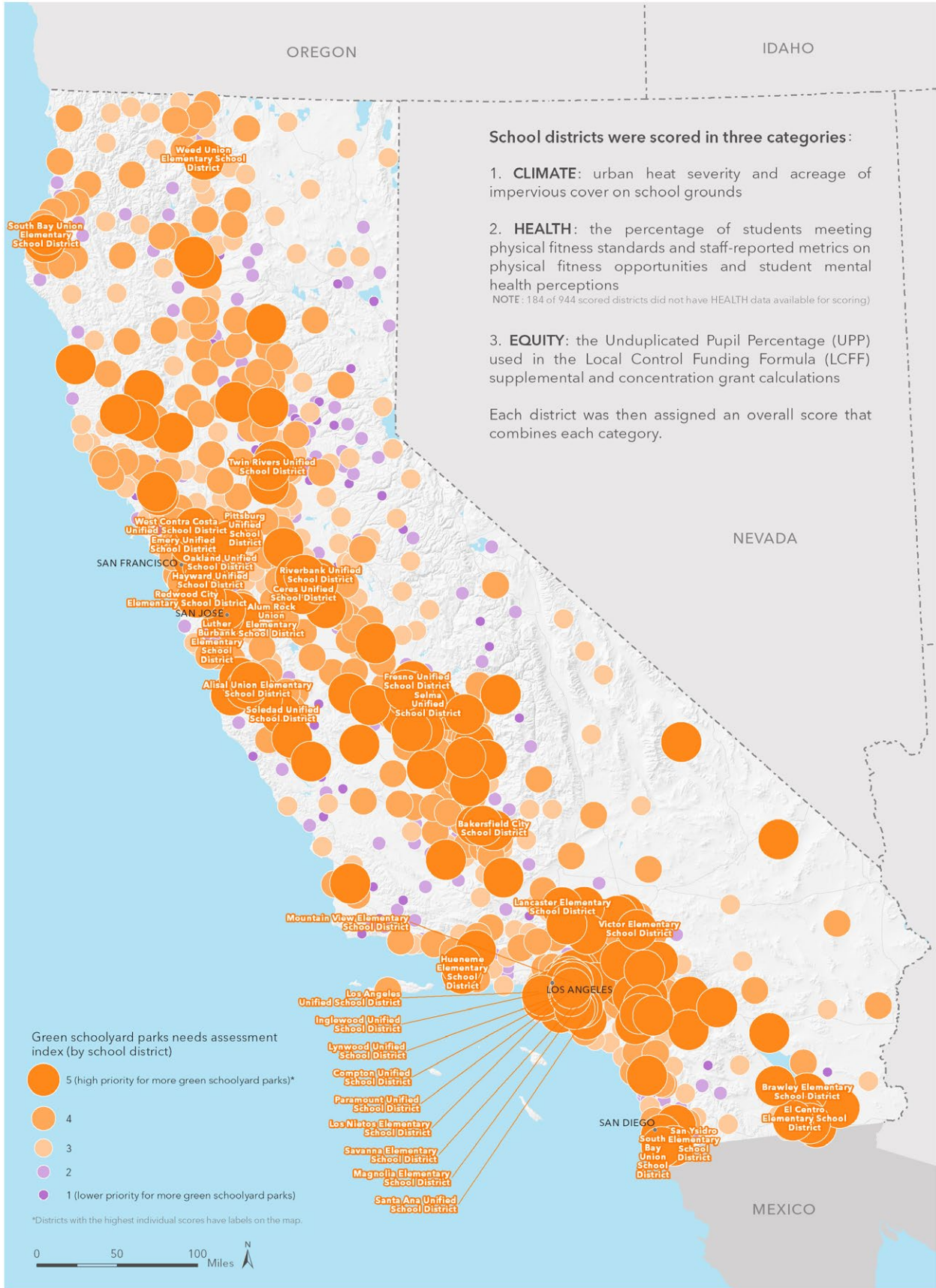
The high-impact solution for equity, health, climate resilience, and access

To bring the green schoolyard movement and its myriad benefits to Los Angeles, members of The Los Angeles Living Schoolyards Coalition are committed to helping transform every school site into nature-filled environments that support students’ overall health and well-being. To start, The Trust for Public Land has set a goal to work with partners to green and open

City	Percentage of people who live within a 10-minute walk of a park	Percentage increase in park access if green schoolyards were adopted	Number of residents who would gain access to a park within a 10-minute walk if green schoolyards were adopted
Los Angeles	64%	87.7%	1,082,559
San Diego	81%	86.9%	112,182
San Jose	80%	89.2%	109,934
Bakersfield	47%	72.4%	95,413
Riverside	51%	77.0%	82,711
Fresno	67%	83.2%	81,060
San Bernardino	46%	81.6%	80,858
Garden Grove	44%	85.3%	76,614
Anaheim	67%	83.7%	65,340
Santa Ana	75%	93.6%	64,657

Some cities may have limited joint-use agreements in place with specific schools. These statistics show the impact of all public schools in the city on park access.

State of California park-need assessment



28 school sites by the 2028 Olympics that will be held in Los Angeles. Also known as 28x28, this effort sets an achievable goal in the next several years that will ensure high need communities' receive some of the benefits associated with the international competition. But this is just the beginning. The Coalition intends to work collaboratively with the LAUSD, the City of Los Angeles Department of Recreation and Parks (RAP), and the community to create a district-wide plan to guide design, implementation and prioritization of the school sites most in need of transformation. These improvements will increase tree canopy, outdoor classrooms, and bioswales to manage stormwater on public school campuses. They will be designed for the schoolyard—where students spend time—to achieve maximum benefit for the students. This work is just a starting point for a greening effort that will include all public schools in Los Angeles. It will require strong partnerships, long-term commitments, and creative thinking.

When you consider that the LAUSD operates over 1,000 schools, the potential impact is enormous. A Trust for Public Land analysis found that creating open, nature-filled, park-like settings for every school site would give access to quality green space within a 10-minute walk from home for over one million Angelenos.

What about Funding?

Two of the most cited reasons for not implementing green schoolyards are [funding and maintenance](#). There are serious issues with both. [The US under-invests in school buildings and grounds by \\$85 billion every year](#). And unlike buildings, which are relatively straightforward to maintain, living landscapes grow and shed leaves and need thoughtful care to keep them healthy. The need for maintenance agreements to prove funding is in place to provide long-term care is a real hurdle in getting grant funds to pay for constructing green schoolyards. But there are solutions to these issues.

Green schoolyards can be funded through grants held by non-profit organizations, as discussed in the case studies above, by bond measures, or through private foundations and donations. But they can also be integrated into efforts already underway with little

to no extra cost. The LAUSD already does this. [The district reduces the amount of schoolyard asphalt it replaces whenever it repaves or removes a portable classroom](#). An important approach to funding is to make sure facilities design and construction teams—including outside consultants—understand the value of green schoolyards and keep funds allocated for landscaping, protected from construction budget overruns. Creating clear policies outlining community-led, nature-based schoolyard design guidelines at the district level will smooth the road to greening every school.

Recent local and statewide legislation like California [State Proposition 68](#) and Los Angeles County [Measure A](#), [Measure W](#), and [Measure RR](#) provide funds that can be used to build and/or maintain green schoolyards. The LAUSD Board of Education passed a [unanimous resolution in February 2021](#) that specifically calls for greening schoolyards and creating more opportunities for outdoor learning. The resolution also calls for the District to work with the City, County and other small cities in Los Angeles County to find opportunities for joint-use facilities. And the State of California passed a [Blueprint for Environmental Literacy](#) in 2015 strengthening the need for local, environmentally relevant instruction. Using green schoolyards as experiential and/or outdoor learning environments can make them eligible for maintenance from the general fund. Alternatively, there are numerous examples of students, teachers, and community members taking care of their school's natural landscape. As a vital piece of green infrastructure, green schoolyards are an opportunity to expand on the history of vocational training in horticulture and farming by creating Career Technical Education programs around designing, building, and maintaining them.

How Other Cities Are Getting It Done

Oakland Unified School District (OUSD), the City of Oakland and community-based organizations are partnering to bring nature into the district's playgrounds. The César E. Chávez campus, home to a pair of elementary schools in the city's diverse Fruitvale neighborhood, is the first completed green schoolyard. What once was a hot asphalt expanse is

now a shaded oasis that includes a garden, a grassy field, an orchard, and outdoor classroom space—all cared for with help from the students.

While the [Oakland initiative](#) launched with just a handful of sites, the goal is to go much wider. To do this requires a long-term commitment from all partners and a willingness to rethink the functions of the school environment. “We are trying to take a district-wide approach, and not just build projects, but change the systems and the policies to be able to allow for all of the schools to be green,” says Alejandra Chiesa, The Trust for Public Land’s Bay Area program director. To that end, the OUSD Facilities Master Plan, a document that outlines funding and care for its buildings and grounds, now includes directives for supporting green schoolyards. On November 3, 2020, voters in Oakland voted yes to help fund this change. [Measure Y](#) will provide \$735 million to make basic repairs and upgrades to Oakland schools, including \$200 million that can be applied to convert empty blacktops into verdant green play spaces.

Kat Romo is an educator who works on a variety of OUSD’s district-wide wellness initiatives, including green schoolyards, where she coordinates programming, resource allocation, and maintenance troubleshooting. She was part of a working group convened to craft a living schoolyards policy that was formally adopted by the OUSD Board of Education in 2019—the first such policy of its kind in California. “Schools can be, should be, and are the hub of the community. So, to make them resilient spaces that are beautiful, biodiverse, well maintained, cared for, and tended with love mirrors the care and tending that students and families deserve,” says Romo of the effect that green schoolyards can have. “We need these everywhere.”



If every schoolyard in the United States were renovated and made publicly accessible, an additional 19.6 million people would have access to green space within a 10-minute walk of home. © ANGELA DECENZO

Green schoolyards create nature-based outdoor spaces to turn heat-absorbing asphalt and paved surfaces into cooling, living ecosystems. They help close equity gaps in access to healthy, experiential learning environments. They improve health and well-being, help students feel less stressed and more focused, and mitigate the effects of climate change. It’s time to bring what is working in Oakland—and what has already been proven with long-term successes in places like New York, Philadelphia, and Dallas—to Los Angeles. “This isn’t a luxury that we are proposing,” says Kenyon. “This is a critical response to environmental and health conditions that our students are facing everyday.”



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