

# PARTNERS IN COMMUNITY FORESTRY

## 2024 CONFERENCE



# Taking Schoolyard Forests to Scale Across the USA



PRESENTED BY:

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# Green Schoolyards Initiative

Progress from 2021-2024

Problem → Framework → Partners → Grants → Expansion





CAL FIRE

# Grant Statistics

## Green Schoolyards K-12 (2022-2023)

- 29 awards
- \$121,678,125.77\*
- 13 Planning, 16 Implementation type grants
- 5,115 trees
- 164 campuses

\* State General Fund and Greenhouse Gas Reduction Fund





CAL FIRE

# Grant Statistics

## Green Schoolyards Childcare (2023-2024)

- 20 awards
- \$27,047,418.83\*
- 41 facilities

## Inflation Reduction Act (2024-2025)

- 5 awards
- \$6,966,364.85 (federal funds provided through the USDA Forest Service)
- 14 campuses

\* State General Fund and Greenhouse Gas Reduction Fund



# Taking Schoolyard Forests to Scale Across the USA



PRESENTED BY:

**Sharon Gamson Danks, MLA-MCP**

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Green Schoolyards America partners with public agencies and school districts across the U.S. to establish large-scale living schoolyard programs that transform school grounds into ecologically-rich, park-like green spaces. Our goal is to improve children's health, learning, and happiness while contributing to communities' ecological and climate resilience.



**Green  
Schoolyards  
America**



**We are working to change the paradigm for school ground design, use, and management so all children will have access to the natural world in the places they visit every day.**



# THE PROBLEM

**Across the United States**, nearly 50 million students attend school every day on thousands of square miles of public land. Most school grounds include **acres of barren asphalt** that do not support the health and well-being of students, communities, or the environment—and they **exacerbate the impacts of the climate crisis on children**.





# Extreme Heat

**Millions of children across the country don't have any shade at school.**

Schools across the USA need to adapt their grounds to protect vulnerable children and youth from extreme heat.



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# Tree Placement

Many trees on school properties are not planted where students can access them during the school day.

Tree placement for curb appeal is often prioritized over children's health, comfort, and happiness.

Trees planted for curb appeal

Children don't have any shade on the playground





# Equity

## School grounds reflect systemic inequities.

Communities with the lowest incomes and communities of color are often the most impacted by the climate crisis and have the least access to nature and trees —including on school grounds.



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# Level of Use

## Opportunities to Experience Nature on Public Land

**Public school grounds are one of our most heavily used public lands.**

They need increased investment to reflect their high user rates and reach their potential.

If every school had a living schoolyard, every child would experience nature every day.



American National Parks receive ~325 million annual visits.



American K-12 public school grounds receive ~9 billion annual visits.



# THE SOLUTION

**Living schoolyards** with schoolyard forests are a scalable, nature-based solution that protects vulnerable children from the impacts of climate change while improving their health, learning, and environment.





# What are Schoolyard Forests?

**Clusters of trees planted as climate oases on school campuses, designed to nurture and protect students from extreme heat.**

Design goals:

- Plant trees in areas used by students during the school day to facilitate outdoor learning, physical activity, social interaction, and play
- Use climate-adapted tree planting palettes with high biodiversity and many large tree species
- Engage students in design, planting, stewardship
- Adapt layout for campus size and age groups



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# How Do Schoolyard Forests Help?

## Happiness and Hope

- Increase children's joy, laughter, and happiness
- Provide opportunities for students to be change-makers

## Learning

- Provide engaging, convenient, hands-on resources that support curriculum across grade levels and subjects

## Mental and Physical Health

- Create opportunities for physical activity
- Reduce heat exposure and provide access to nature

## Child-friendly green Infrastructure

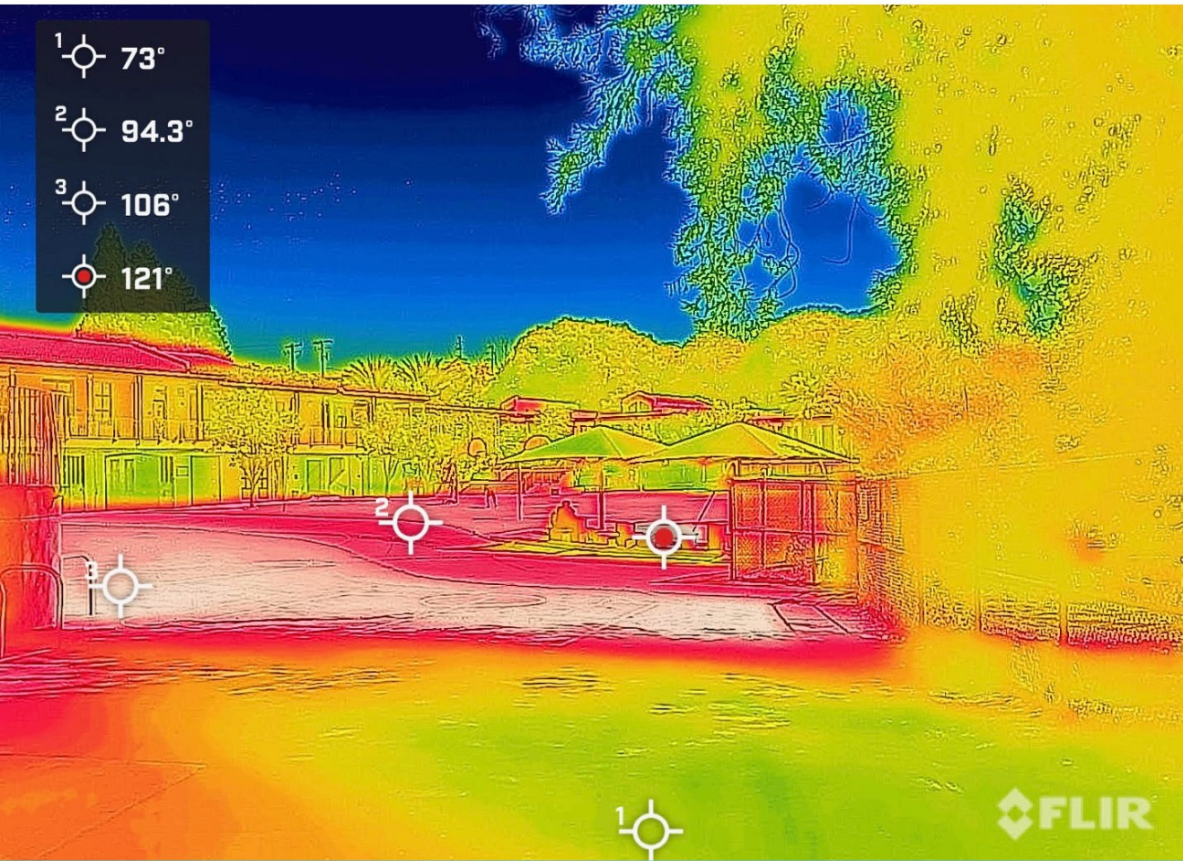
- Support local ecological systems by strengthening wildlife corridors, managing stormwater, cooling urban heat islands, and improving air quality



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# Trees Provide Shade



On hot days, tree canopy is essential to make outdoor areas useable for kids.

81°F Air Temperature  
September 3, 2022



106°F  
Unshaded Asphalt

73°F  
Shaded Asphalt

The asphalt surface shown above was 33°F COOLER with shade from the adjacent tree!



# PARADIGM SHIFT

The benefits are clear, so why are most American schoolyards still barren?

Planting trees one schoolyard at a time is not enough...





# Paradigm Shift

## Transforming thousands of acres

from pavement into schoolyard forests and living schoolyards requires coordination and collaboration.

The National Schoolyard Forest System® was founded to support this paradigm shift.





## PARADIGM SHIFT

## SYSTEMS CHANGE

## TECHNICAL SUPPORT

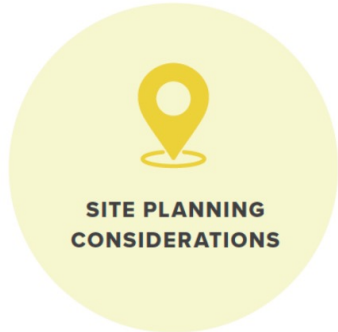
## PLANT TREES AT SCALE

- **Shift** the goal from pavement and grass **to climate-adapted, multi-use spaces with ecosystems and shade trees**
- **Align interdisciplinary planning, policy, and funding** at state and local levels to support new greening goals
- **Identify places with greatest need** for shade and nature
- **Streamline approval processes** for design / installation
- **Build school district's** capacity to say "yes" (demand)
- **Increase supply** of:
  - Professional development
  - "How-to" information
  - Nursery stock (climate-adapted tree species)
  - Tree planting assistance
  - Long-term maintenance capacity





# Systems Change is Often Needed in These Areas



**School facilities** often need significant upgrades and repairs for deferred maintenance



**Districts lack capacity and expertise** to manage and maintain nature-based landscapes



**Districts' approach to safety and liability** is based on outdated information about risks and benefits that trees and nature bring to students



**Old institutional systems perpetuate paved schoolyards.** Siloed approaches and outdated academic goals contribute to greening being deprioritized.



**Lack of dedicated funding for greening and long-term tree care.** Maintenance funds come from districts' general funds and compete with other needs.



**State standards that govern public school facilities need to be updated** to embrace schoolyard forests as integral for student learning and health.



# Schoolyard Forests — Taking Tree Canopy to Scale



**DEMONSTRATION  
SCALE**



**SCHOOL-LEVEL  
IMPACT**



**DISTRICT-SCALE  
IMPACT**





**National  
Schoolyard  
Forest System®**

A national initiative that seeks to increase tree canopy on public school grounds across the United States, to directly shade and protect PreK-12 students from extreme heat and rising temperatures due to climate change.

California is the first state in the National Schoolyard Forest System®.



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## Purpose



# Founding Partners



**California**  
**Schoolyard Forest System®**



**PARTNERS IN COMMUNITY FORESTRY 2024 CONFERENCE**



# Schoolyard Forest System® Goals

## Goal 1

**Plant enough trees** that when mature, will cover at least 30% of each school property, in the areas used by PreK-12 children and youth during the school day.

## Goal 2

**Center equity** by prioritizing schools and districts in underserved communities with the highest poverty levels, fewest trees, and hottest climates.



**Use school grounds as learning laboratories** across the curriculum and grade levels.

## Goal 3

**Build environmental and climate literacy** by engaging students in the design, planting, and stewardship of their schoolyard forests, and in standards-based hands-on learning outdoors.

## Goal 4





# Overall Approach

## Address schoolyard tree canopy equity and scale schoolyard forests

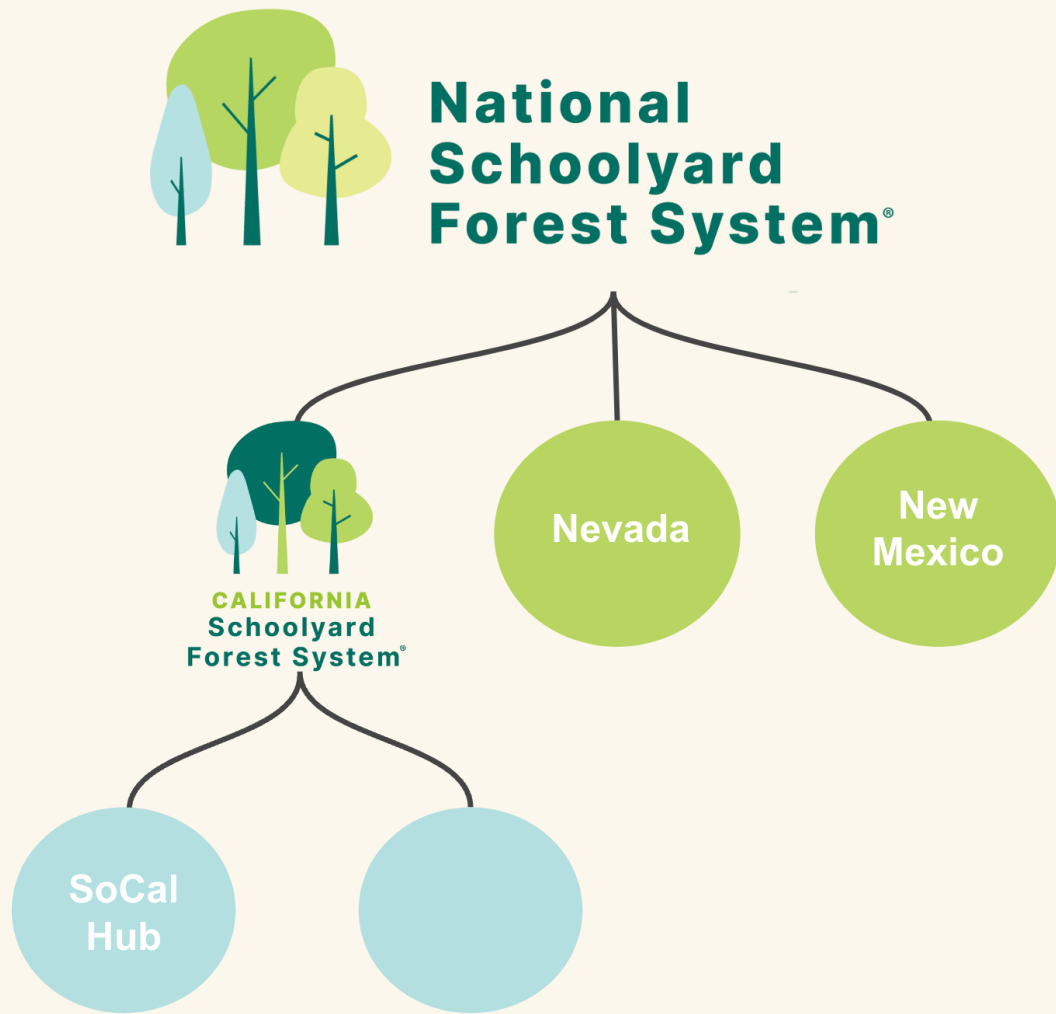
- **Research:** Barriers, opportunities
- **Create Baseline Map Data:** Assess needs
- **Share Information and Resources:** Engage public, support decision makers
- **Build Consensus:** Align support
- **Provide Technical Assistance:** Regional hubs, school districts, public agencies
- **Pilot Projects:** Test approaches



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# Building a Framework for Collective Impact



## National Initiative

- Coordinated system across the USA, including federal agencies

## Statewide Backbone

- Coordinated planning, research, and information within each state, in collaboration with state agencies

## Regional Hubs

- Technical support systems at the regional level to provide assistance to school districts for schoolyard forest design, implementation, use, and management

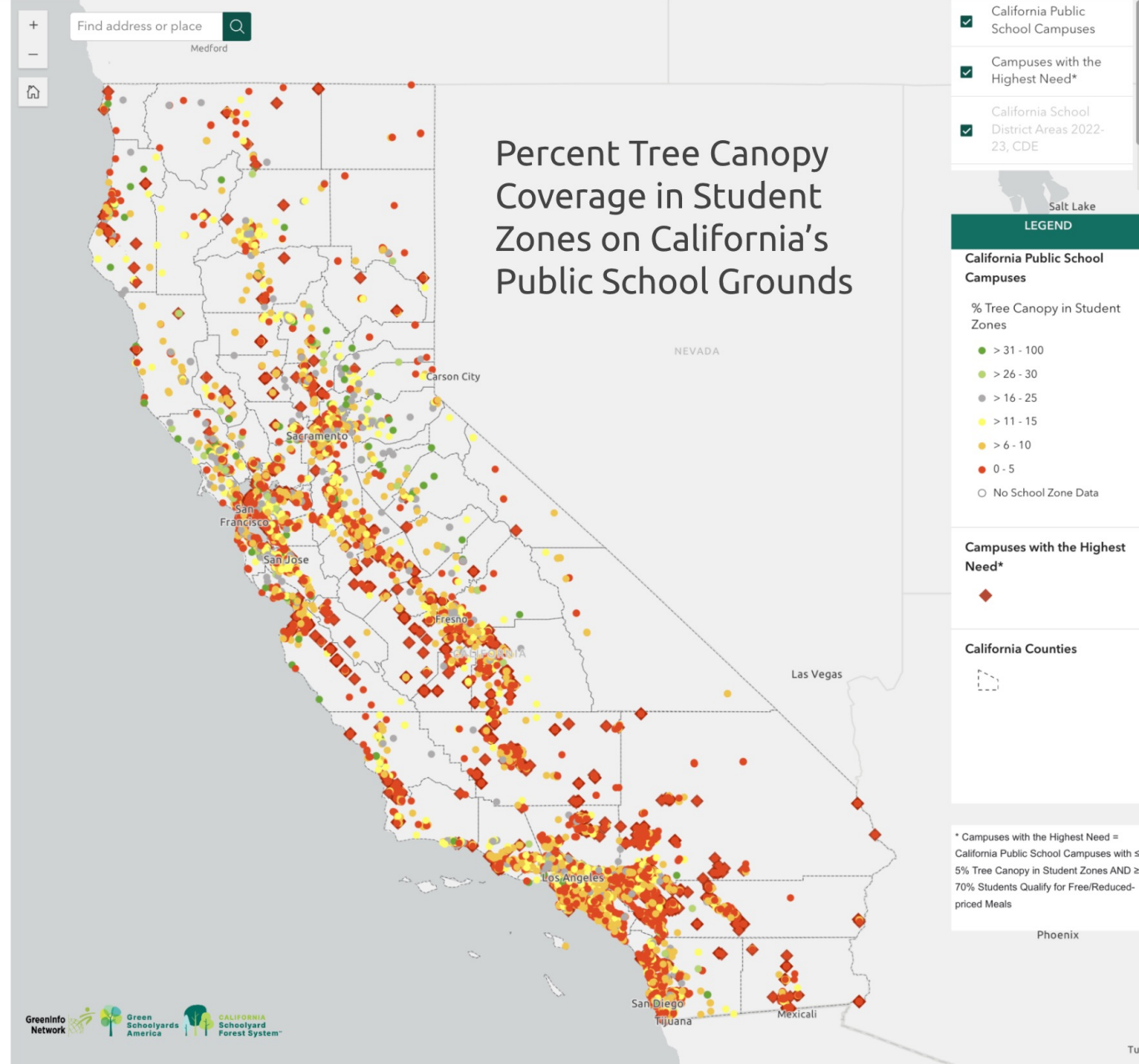


# California Schoolyard Tree Canopy Equity Study

Winter 2024-25 (forthcoming)

Citation:

Gamson Danks, S., Chiesa, A., Knoppke-Wetzel, V., McKenna, L., Ashenmiller, B. (2024-25, Winter). *California Schoolyard Tree Canopy Equity Study: Part 2*. Green Schoolyards America. [greenschoolyards.org.com/tree-canopy-equity](https://greenschoolyards.org.com/tree-canopy-equity)





# California Schoolyard Tree Canopy Equity Study

We analyzed California's schoolyard tree canopy equity to:

**Identify areas** of highest need

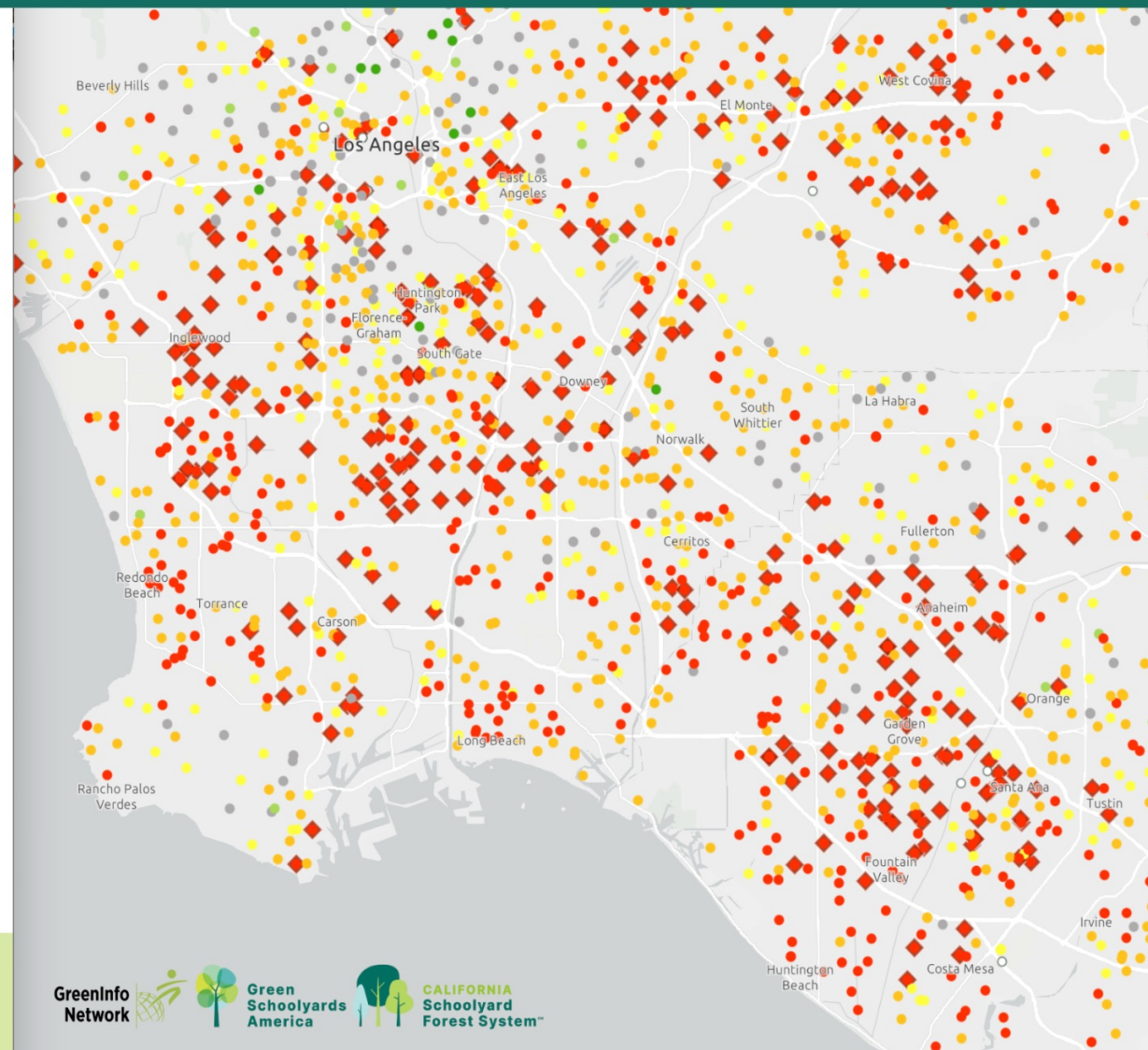
**Establish a baseline**

to measure change over time

**Locate priority areas** to offer in-depth technical support

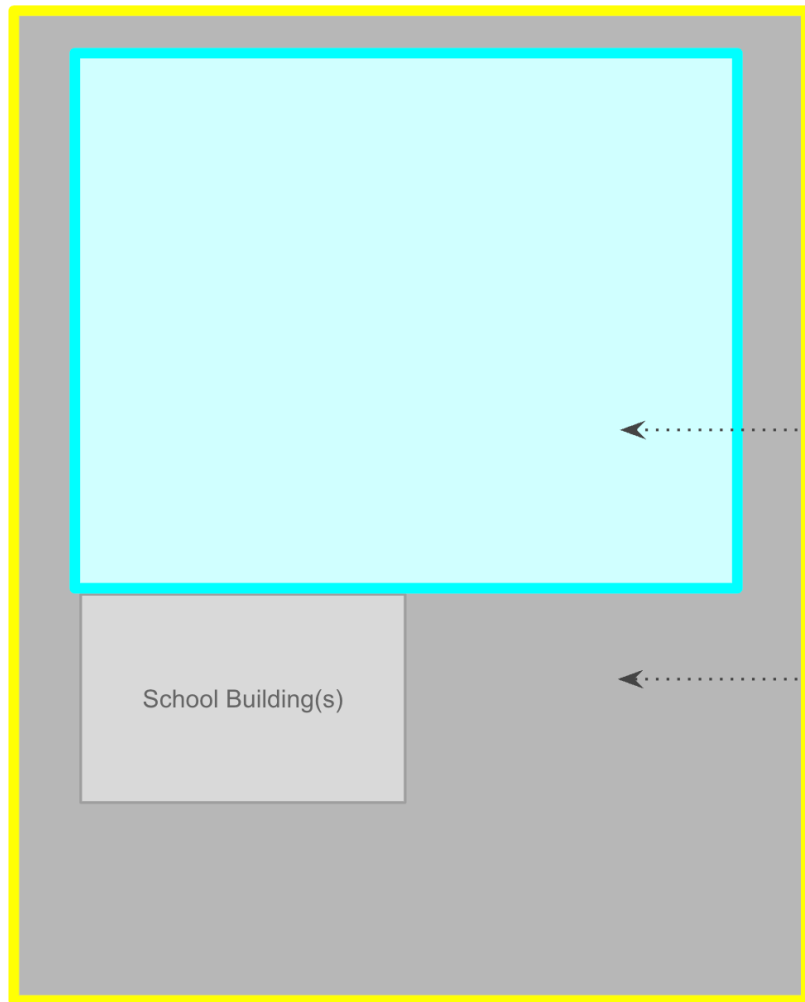
**Communicate findings** to government agencies to support decision-making and to the public to build demand and action

[greenschoolyards.org/tree-canopy-equity](https://greenschoolyards.org/tree-canopy-equity)



GreenInfo Network Green Schoolyards America CALIFORNIA Schoolyard Forest System™





## School District Property

Land owned by the school district

- 8,380 campuses
- 131,360 acres

## Student Zone (Outdoors)

Land students can access during the school day, often fenced

## Exterior Areas and School Building(s)

School land used for parking, entrances, perimeter, and ornamental plantings; Includes school building footprints





# 2,597,000

**Students in California  
attend schools with less than 5% tree  
canopy in the Student Zones**



# 6.4%

Median tree canopy in California public schools' Student Zones, statewide

This is far from the 30% goal.



### TREE LOCATIONS ON CAMPUS

Total percentage, districtwide

#### Exterior Areas

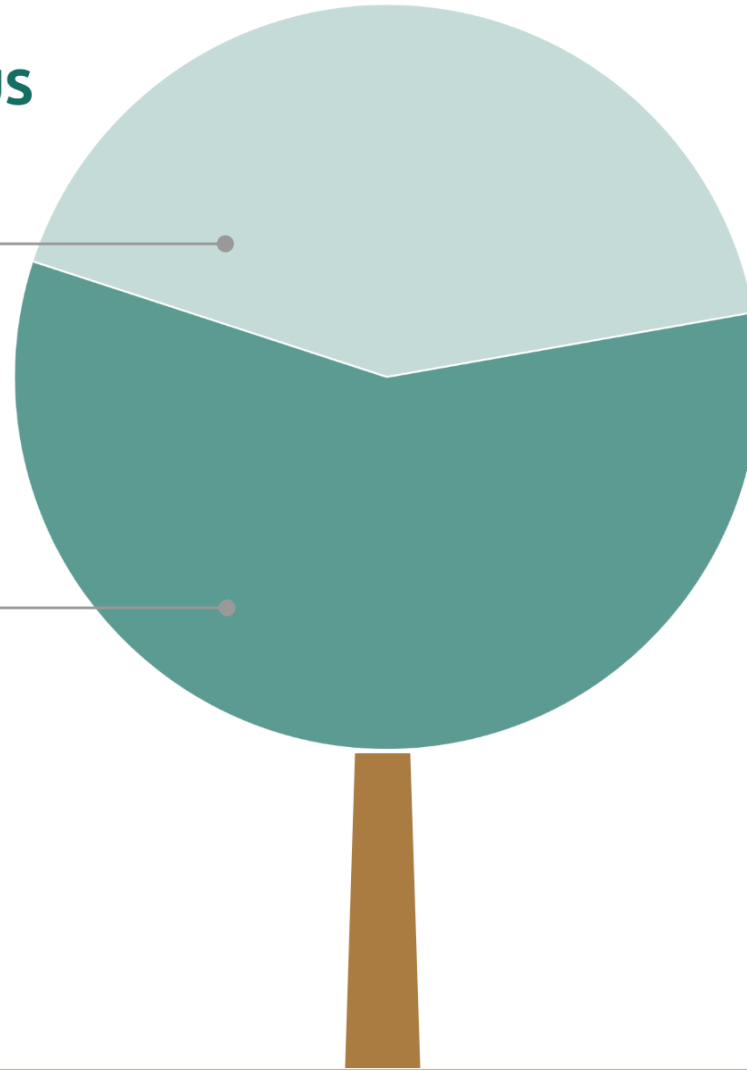
School land used for parking, entrances, perimeter, and ornamental plantings

- 42% of tree canopy is for ornamental purposes

#### Student Zone

Land students can access during the school day, often fenced

- 58% of tree canopy protects kids



**A large portion of the trees planted on California's school grounds statewide are located outside the Student Zone, where students cannot access the shade during the school day.**





# Schoolyard Forest System® Resource Library

## Resources for Schools and Districts

- Making the case
- Design, implementation, and maintenance
- Educator resources
- Case studies
- Funding links
- Webinar series
- Community of practice



MAKING THE CASE  
FOR SCHOPLYARD  
FORESTS

DESIGN  
IMPLEMENTATION  
MAINTENANCE

EDUCATOR  
RESOURCES

SCHOPLYARD FOREST  
CASE STUDIES

FUNDING FOR  
FORESTS

COMMUNITY OF  
PRACTICE

SCHOPLYARD  
FORESTS IN THE NEWS

[greenschoolyards.org/forest-resource-library](https://greenschoolyards.org/forest-resource-library)



# Design Guidance

## Including:

- How to design schoolyard forests
- How to select trees for your schoolyard
- Planting guidance
- Student engagement, including: *How Cool is Your Schoolyard™*
- And more!

## Schoolyard Forest Components

The following section outlines the basic components or elements of a schoolyard forest and highlights key considerations for each of these components.



[greenschoolyards.org/design-implementation-maintenance](https://greenschoolyards.org/design-implementation-maintenance)





# Next Steps – National

## The National Schoolyard Forest System® is growing!

- **Nevada and New Mexico**  
Work is underway to set up Schoolyard Forest Systems® in Nevada and New Mexico, in collaboration with the state urban forestry departments.
- **We welcome new states to join the National Schoolyard Forest System!**  
Please reach out to us if you would like more information.





# Closing Thoughts

## **Land matters**

Public land devoted to children is scarce and precious. We need to use it wisely.

## **Kids need shade**

It is essential to directly protect children from extreme heat and other effects of climate change, using shade trees.

## **Now is the time to act**

Green schoolyards and schoolyard forests provide opportunities to use nature-based solutions to address pressing cross-sector problems at scale.

**We hope you will participate in this important work!**



# Please join us

**Sign up  
to receive updates**  
greenschoolyards.org

**Join our community**  
Participate in our online  
webinar series and  
community of practice



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[greenschoolyards.org/schoolyard-forest-system](https://greenschoolyards.org/schoolyard-forest-system)





**Green  
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**National  
Schoolyard  
Forest System®**

# Thank you.

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