

Senate Bill 499

Cool Schools Act of 2023

Senator Caroline Menjivar (D – San Fernando Valley)

SUMMARY

SB 499 will address the issue of hot surfaces on school campuses that impact the health and safety of children. This bill would require schools to create an Extreme Heat Action Plan stating that by the earliest time or the next time schools will surface or resurface, they will opt for a cooler solution. Schools will also be required to install shade trees and mini-forests that have been shown to mitigate the impacts of extreme heat and pollution.

PROBLEM

Many of the ground surface materials used on school campuses are harmful. These materials generally consist of asphalt, concrete, synthetic turf, and other plastic surfaces that overheat and melt, burning students and staff on contact or even catching fire. For example, on a 93-degree day in the San Fernando Valley, school asphalt temperatures reached 145 degrees.¹ Climate change has led to average temperatures rising in the United States, disproportionately impacting Black, Indigenous, and People of color (BIPOC) and low-income communities. According to the Los Angeles County Climate Vulnerability assessment released in 2021, “extreme heat will increase in frequency, severity, and duration with up to a tenfold increase of heatwaves by mid-century.”²

Communities with the fewest resources usually have the least access to nature within and surrounding their school grounds, coupled with the highest heat, pollution, and environmental toxicology levels. African Americans are 52% more likely than average to live in areas with a higher risk for heat-related health problems, while Latinos are 21% more likely to live in such conditions.³

BACKGROUND

School campuses largely consist of sidewalks, playgrounds, and parking lots. These surfaces are usually concrete, asphalt, brick, pebbles, aggregates, rubber, or synthetic turf, which research has found absorbs and stores radiation throughout the day and slowly releases heat through the night.⁴ These surfaces become

heat islands, and the water runoff from these surfaces are polluted with toxic chemicals such as benzene and Per- and Poly-Fluoroalkyl Substances (PFAS), which have been linked to serious health issues such as cancer, liver damage, and increased risk of asthma.⁵ Researchers conclude that shade trees, grass, shrubs, and gardens can act in two ways against pollution, directly blocking and also absorbing it. When trees have grown to maturity, it's possible to reduce these harmful toxins by 50%.⁶ Children spend significant time on their school campuses and by adding green spaces, there will be significant changes in recess and classroom behavior, such as increased physical activity, attention and social collaboration, higher academic achievement, decrease in stress, anxiety, and disruptive behavior.⁷ The choices school districts make about managing these school surfaces directly impact students' daily experiences, mental and physical health, and learning outcomes. This initiative aligns with the Governor's Extreme Heat Action Plan to support climate-smart planning in heat-vulnerable schools⁸ as well as CAL FIRE's Urban and Community Forestry Program.

SOLUTION

SB 499 will require school sites to develop an Extreme Heat Action Plan to remove harmful surfaces such as asphalt, concrete, rubber, and synthetic turf and replace them with cooler surfaces. SB 499 also states that schools must begin implementing their plan by January 1, 2027, to increase the health and safety of children and adults. Schools must also install and plant nature-based solutions to promote cooling strategies and pollution mitigation through planting trees, expanding greenspace and gardens, and restoring urban streams.

STATUS

Introduced- February 14, 2023

¹ <https://www.latimes.com/california/story/2022-09-01/school-playgrounds-sizzle-in-california-extreme-heatwaves>

² <https://www.latimes.com/california/story/2022-07-12/how-dangerous-is-extreme-heat-in-your-neighborhood-map>

³ <https://www.treepeople.org/wp-content/uploads/2020/09/rx-for-hot-cities-report.pdf>

⁴ Buyantuyev, a. And Wu, j. (2010) urban heat islands.

<https://doi.org/10.1007/s10980-009-9402-4>

⁵ <https://www.hsph.harvard.edu/news/hsph-in-the-news/pfas-health-risks-underestimated/#:~:text=a%20recent%20review%20from%20the,of%20asthma%20and%20thyroid%20disease.>

⁶ <https://edsources.org/2022/can-trees-reduce-pollution-at-schools-next-to-freeways-a-fresno-campus-tries-plantings/681826>

⁷ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7827958/>

⁸ <https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Climate-Resilience/Draft-Extreme-Heat-Action-Plan-ADA.pdf>

SUPPORT

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