California Department of Education's Role in School Siting and Plan Approval

Strategic Growth Council Meeting
April 11, 2016

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Innovate ● Collaborate ● Serve ● Learn

California will provide a world-class education for all students, from early childhood to adulthood. The Department of Education serves our state by innovating and collaborating with educators, schools, parents, and community partners. Together, as a team, we prepare students to live, work, and thrive in a highly connected world.

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Topics

- Collaboration successes and continued opportunities in support of Sustainable Community Strategies
- Role of the California Department of Education in school siting and plans
- Schools and Sustainable Communities

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Existing Collaboration

- Health in All Policies
- Land Use, Schools, and Health
- General Plan Guidelines Update
- CEQA Guidelines Update
- Sustainable Partnership document
- Safe Routes to School
- Green Ribbon Schools awards
- *Healthy Schools Act*
- Environmental education curriculum

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Opportunities for California Climate Investments

- Affordable Housing and Sustainable Communities Program
  - Active Transportation Program
- Low Carbon Transportation Investments
- Energy Efficiency in Public Buildings
- Water-Energy Efficiency
- Urban and Community Forestry Program
- Waste Diversion

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Role of the CDE

Develop standards for sites and plans

- Authorized by *Education Code* 17251
- Standards contained in *California Code of Regulations*, Title 5 14001 et seq.
- Standards are complementary and supportive of sustainable development by encouraging:
  - Walkability
  - Joint Use
  - Collaboration with City/County
  - Flexibility in school site size

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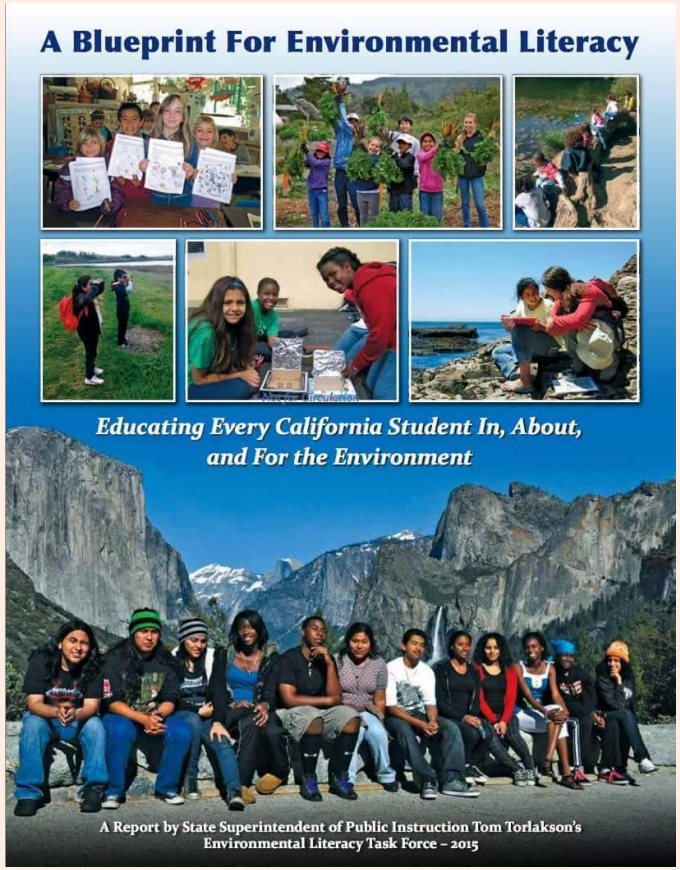
California's Environmental Literacy Plan



- California Climate Investments and schools
- Green building standards and green schoolyards
- Living laboratories

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California Perspective

- 6.2 million public K-12 students
  - More than 9% charter students
- 10,000+ public K-12 schools
  - More than 1,100 charter schools
- 1,000+ school districts

- > 125,000 acres of school sites (~200 square miles)
- > 471 million square feet of school buildings

Fingertip Facts on Education in California – *CalEdFacts* are online at
http://www.cde.ca.gov/ds/sd/cb/ceffingertipfacts.asp

Vincent, Jeffrey M. (2012). *California's K-12 Educational Infrastructure Investments.* Berkeley: Center for Cities & Schools, University of California.

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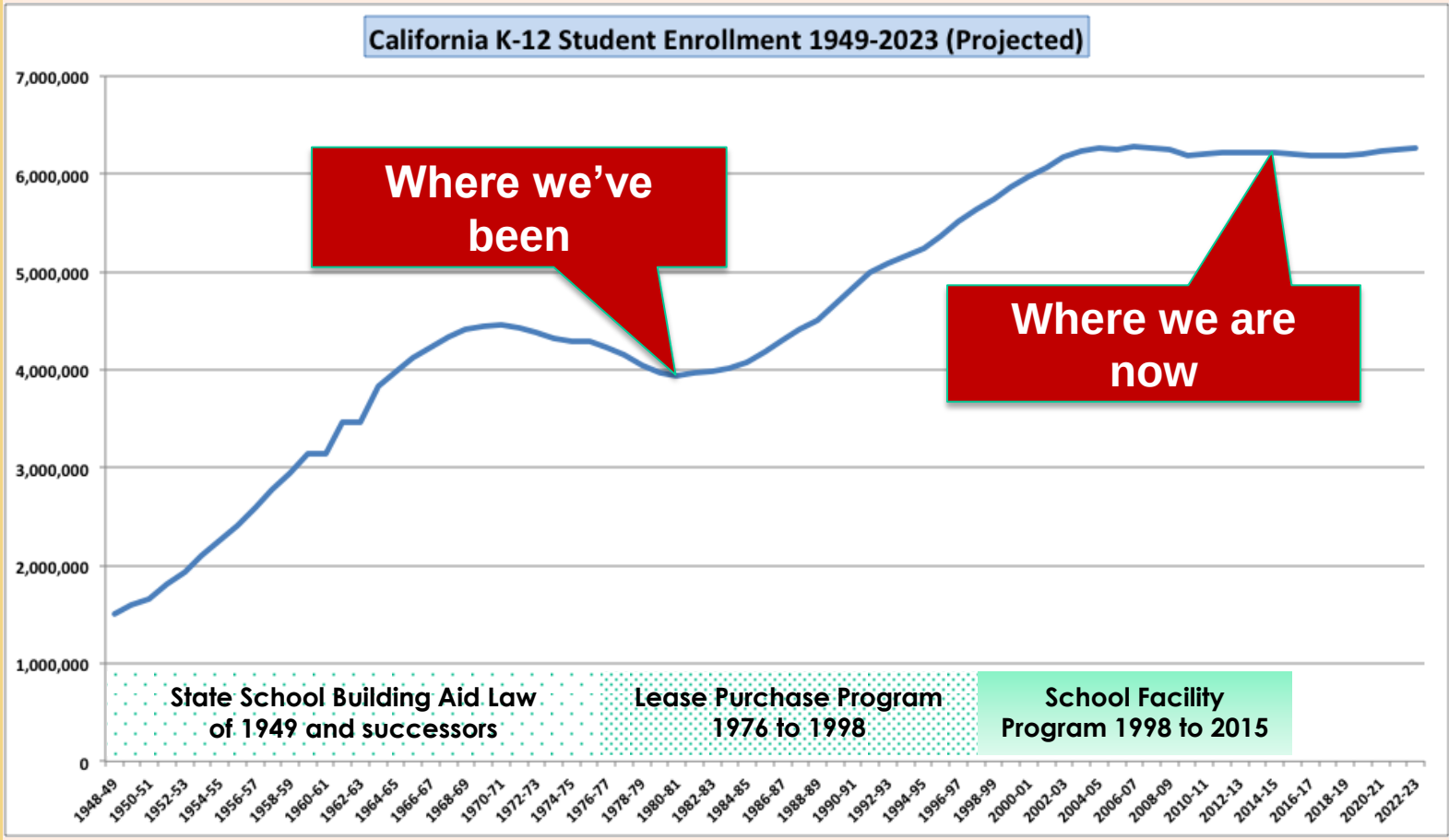
CA K-12 Enrollment Trends



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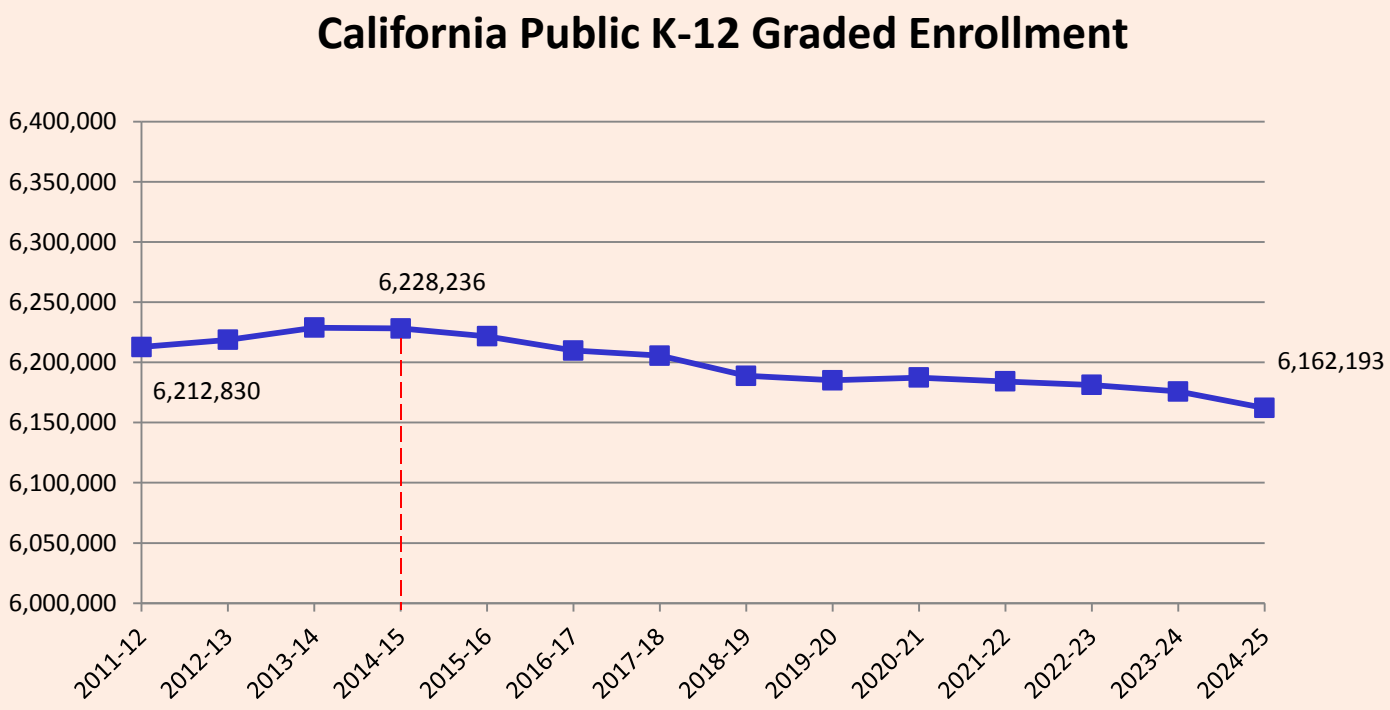
K-12 Enrollment Projections



State of California, Department of Finance, *California Public K-12 Graded Enrollment and High School Graduate Projections by County, 2015 Series*. Sacramento, California, December 2015.

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20th Century School Buildings Are Aging

Year Opened	Count of Open Schools	Percent of Total
Pre-1900	17	0.17%
1900-1949	906	8.90%
1950-1979	5,221	51.31%
1980-2014	4,031	39.62%
TOTAL	10,175	100.00%

Data is a best estimate compiled using CDE sources (1980-present) and California Department of Public Health data.

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Supporting Sustainable Communities

With State funding assistance, school districts have acquired over 16,000 acres of school sites (1998-2012) providing:

- Open space in urban communities
- Safe school sites in underserved communities
- Schools in new developments approved by cities
- Active transportation opportunities
- Neighborhood renewal

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Supporting Sustainable Communities

With State funding assistance, school districts have built over 90 million square feet of classrooms and other facilities (1998-2012) allowing:

- Removal of portables and increased playfield area
- Neighborhood schools
- Community meeting space
- Modernization contributes to neighborhood revitalization

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Sustainable School Projects

- Infill sites
- Urban sites rebuilt
- Joint Use with parks
- Transit-oriented development
- Safe Routes to School

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Sustainable Standards and Best Practices

Requirements

- *CCR* Title 24
  - Green Code
  - Field Act
- Reducing diesel particulate matter from school buses and other vehicles' emissions by 2023

Best Practices

- Net Zero by 2030
- CHPS or LEED certification
- Converting school buses to alternative and renewable fuels

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Opportunities for Collaboration

- Health in All Policies
  - Land Use, Schools, and Health
- School siting and design
  - CDE publications
  - Title 5
- California Climate Investments

Sustainable Schools Improve Learning and the Environment

The recent *National Action Plan for Greening America's Schools* concludes that a sustainable school creates a healthy environment that is conducive to learning and saves energy, resources, and money. Additional benefits of sustainable schools include improved student health, attendance, and academic achievement.[1]

Here are a few more reasons to consider sustainable features:

- A 2006 study showed that sustainable schools use 33 percent less energy and 32 percent less water than conventionally constructed schools, significantly reducing utility costs over the average 42-year life cycle of a school.[2]
- Additional studies show the continuing high cost of energy and utilities. According to national data from 2008, the median annual cost for energy and utilities per student in kindergarten through grade twelve was $295.13.[3]
- Improving a school's health and safety standards can lead to a 36-point increase in California Academic Performance Index scores.[4]
- Because green schools emphasize a healthy indoor environment, a district that builds green schools will benefit from reduced exposure to liability for students' and staff's health-related problems, fewer lawsuits, and less risk of damage to its reputation.[5]
- A school site that uses effective construction techniques can reduce, reuse, and recycle between 50 percent and 75 percent of building materials (e.g., brick, asphalt, wood, plastic, glass, gypsum board, and carpet), thereby reducing environmental impacts.[6]
- Attention to school siting practices can improve solar access; take advantage of natural air flows; maximize daylighting; and increase easy and safe pedestrian, bicycle, and mass transit options.[7,8]
- Substandard physical environments are strongly associated with truancy and other behavior problems in students. Lower student attendance led to lower scores on standardized tests in English–language arts and math and to less funding.[9–10]
- Studies indicate that student performance is improved by an even distribution of daylight, an expansive view, and limited glare and thermal heat gain. One study found 20 percent faster student progress on math and 26 percent faster progress in reading compared with students in classrooms with less exposure to daylight.[11,12]

Notes

1. Brooks Rainwater and Jason Hartke, *A National Action Plan for Greening America's Schools: Local Leaders in Sustainability, Special Report from Sundance* (Washington, DC: U.S. Green Building Council, 2010).
2. Gregory Kats, *Greening America's Schools: Costs and Benefits* (n.p.: Capital E, 2006).
3. Joe Agron, "38th Annual Maintenance & Operations Cost Study," *American School & University* 81, no. 9 (2009): 20–23.
4. Jack Buckley, Mark Schneider, and Yi Shang, *Los Angeles Unified School District School Facilities and Academic Performance* (Washington, DC: National Clearinghouse for Educational Facilities, 2004).
5. Collaborative for High Performance Schools, *Best Practices Manual, Volume I: Planning* (San Francisco, 2006).
6. U.S. Environmental Protection Agency, *Travel and Environmental Implications of School Siting* (Washington, DC, 2003).
7. See note 5.
8. See note 6.
9. Valkiria Durán-Narucki, "School Building Condition, School Attendance, and Academic Achievement in New York City Public Schools: A Mediation Model," *Journal of Environmental Psychology*, no. 3 (2008): 278–86.
10. Revathy Kumar, Patrick M. O'Malley, and Lloyd D. Johnston, "Association between Physical Environment of Secondary Schools and Student Problem Behavior," *Environment and Behavior* 40, no. 4 (2008): 455–86.
11. Peter Boyce, *Reviews of Technical Reports on Daylight and Productivity* (Troy, NY: Rensselaer Polytechnic Institute, 2004).
12. Heschong Mahone Group, *Daylighting in Schools: An Investigation into the Relationship Between Daylighting and Human Performance* (Fair Oaks, CA, 1999).

For more information, contact the California Department of Education, School Facilities Services Division, at 916-322-2470.

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