



School Siting and Community Building

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Office of Sustainable Communities
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About EPA's Office of Sustainable Communities

- EPA's mission is to protect human health and the environment.
- OSC focuses on the environmental and public health impacts of the built environment because where and how we build affects our land, air, and water.
- We work on:
 - *Changing the conversation:* Education and outreach
 - *Helping the willing:* Tools and technical assistance
 - *Changing the rules:* Research and policy analysis





Goals of This Discussion

- Present you with a more thorough discussion on the relationship between school capital investments and a broad range of community goals.
- Provide you with an introduction to and brief overview of EPA's voluntary school siting guidelines.
- Discuss an EPA technical assistance project using the guidelines.





Baseline for Discussion

- Something we can all agree on: Schools should provide students with a safe, healthy place to get a good education.
 - This is their primary goal.
- But...having established that, we should also be asking what other goals school investments can support.



What's the connection between schools and community?



- Schools both affect and respond to community growth.
- Schools are a major financial investment that the entire community bears.
- Schools can either work with or against a wide variety of community goals.



School investments influence community goals.



- Children's health
- Fiscal health of local and state government
- Open space and farmland preservation
- Traffic congestion
- Environmental goals – air quality, water quality, climate change
- Revitalization of downtown and existing neighborhoods
- Community character
- Social equity





The Demand for Facilities

- Over half of our school facilities are at least 40 years old.
- Over \$30 billion spent annually from 1995 to 2005 on K-12 school construction.
- 2008-09: More than 1,900 new schools, serving nearly 1.2 million children and costing more than \$13 billion.

GROWTH and DISPARITY A Decade of U.S. Public School Construction





During the construction boom...

- In 1969, **48%** of children 5 to 14 years of age usually walked or bicycled to school.
- In 2009, **13%** of children 5 to 14 years of age usually walked or bicycled to school.
- In 1969, **41%** of children in grades K–8 lived within one mile of school.
 - **89%** of these children usually walked or bicycled to school.
- In 2009, **31%** of children in grades K–8 lived within one mile of school.
 - **35%** of these children usually walked or bicycled to school.

HOW CHILDREN GET TO SCHOOL

School Travel Patterns From 1969 to 2009

Prepared by the National Center for Safe Routes to School



SafeRoutes

National Center for Safe Routes to School

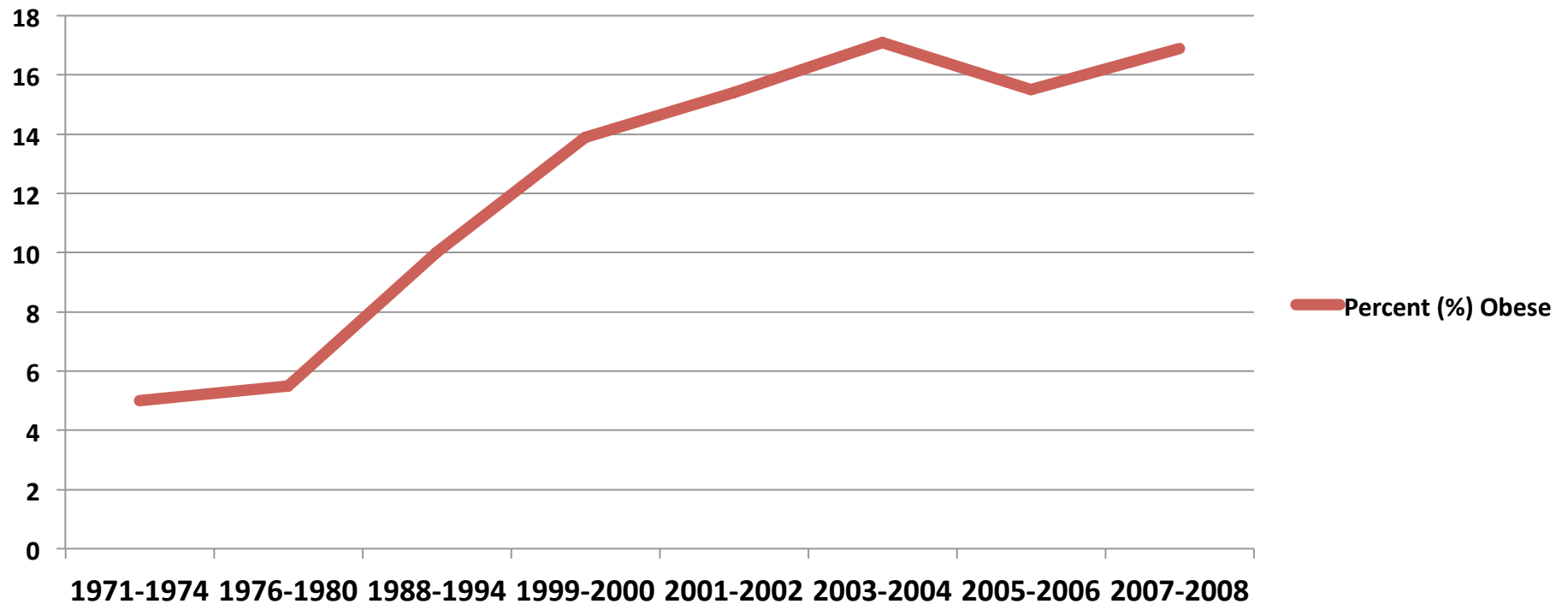


November 2011



...and over the same time period

Prevalence of Obesity Among U.S. Children and Adolescents Aged 2-19, for selected years 1971-2008



Source: Centers for Disease Control



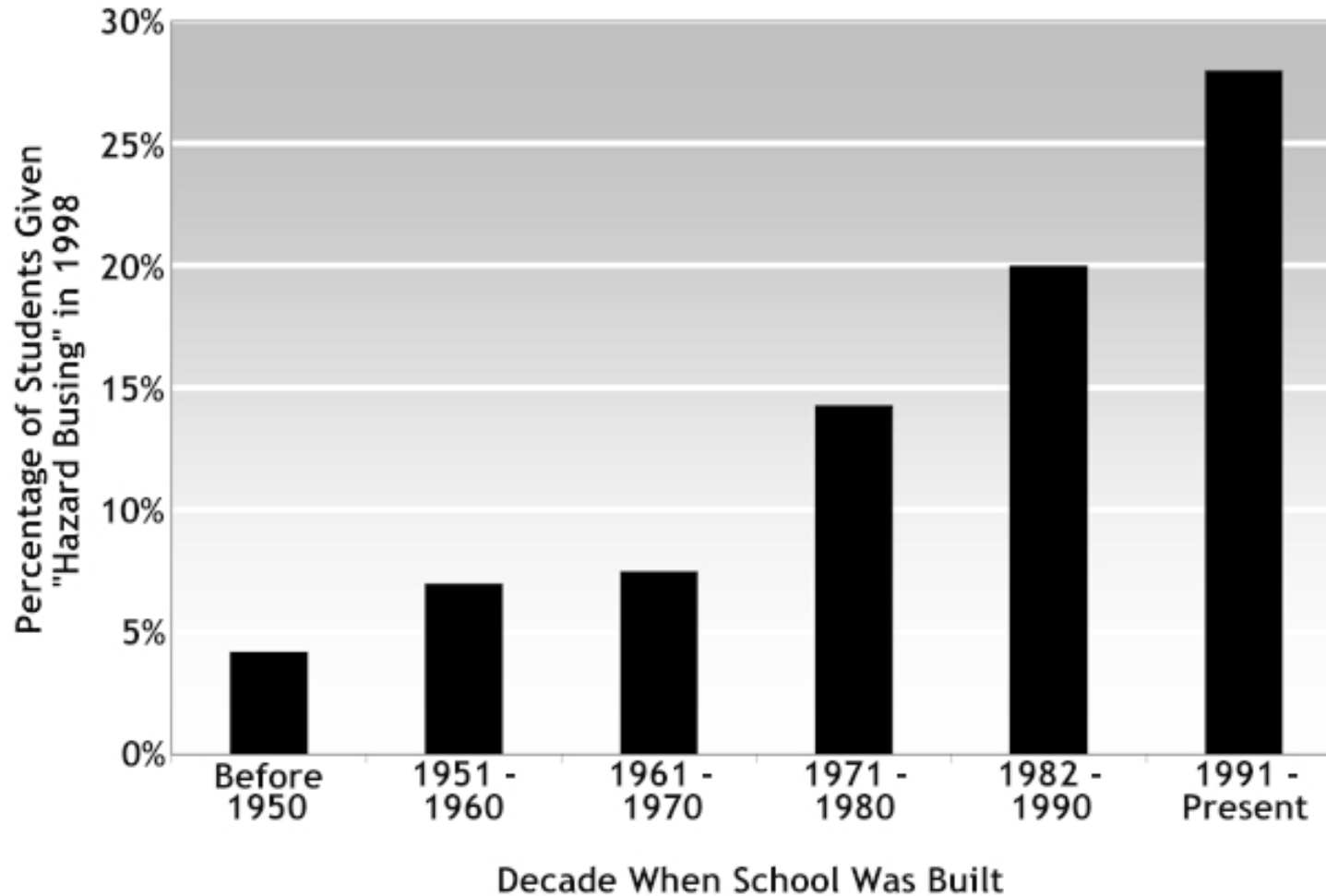


Why Johnny Can't Walk to School





Where you put the school matters.



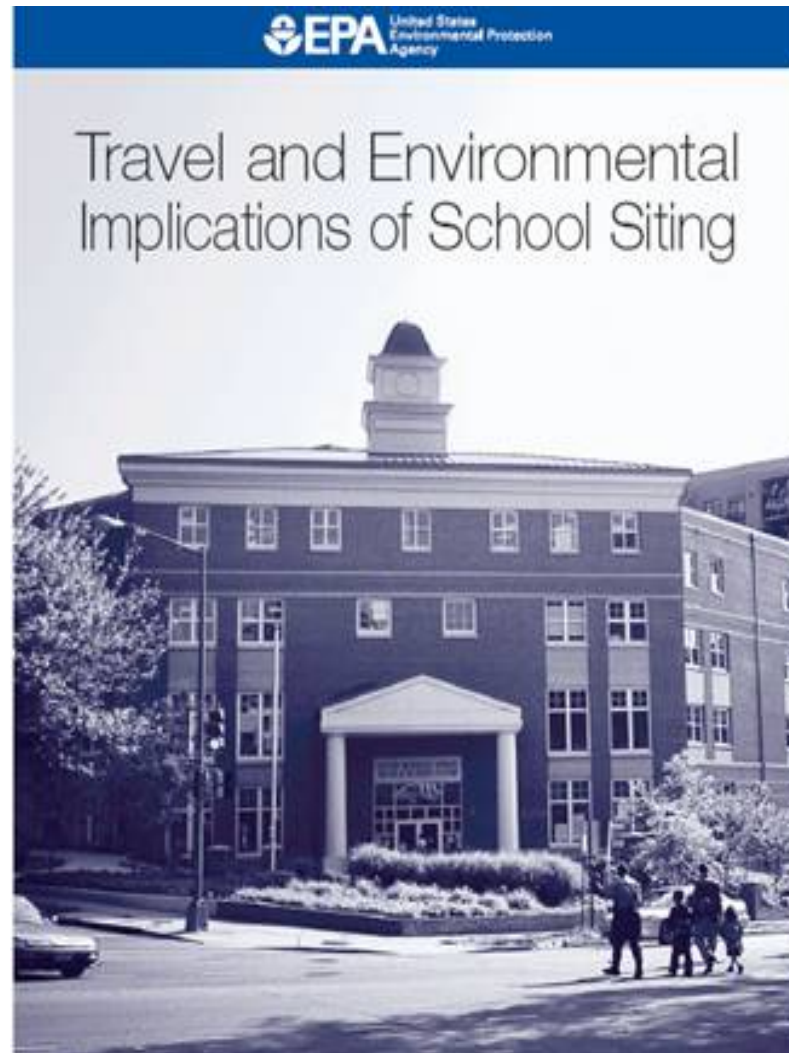
Southern Carolina Coastal Conservation League, 1999, 'Waiting for the Bus: How Lowcountry School Site Selection and Design Deter Walking to School.'





Where you put the school matters.

- Schools built close to students in walkable neighborhoods can:
 - Reduce traffic
 - Increase walking and biking
 - Reduce emissions



www.epa.gov/smartgrowth/publications.htm





Bigger Schools

- 1930 = 262,000 school facilities
- 2002 = 91,000 school facilities
- Student population over the same time increased from 28 million to 53.5 million.



Dorman High School in Spartanburg, SC





Mandatory Minimum Acreage



ISSUETRAK

A CEFPF Brief on Educational Facility Issues

Topic: State Acreage Policies
 Issue Tracker: Janell Weibs
 Date Filed: September 2003

School Site Size—How many acres are necessary?

In recent years one of the most discussed topics regarding school construction is that of appropriate acreage for siting school facilities. This question that needs to be addressed for new schools, but for renovation and/or addition projects as well. Many factors need to be considered with respect to acreage. These include, but are not limited to the number of students; the grades to be housed; the educational programs and services the site requirements including physical education programs, parking, forestation or reforestation, zoning and set-backs, storm water management, and leisure, and recreational events. Very often there are state, school district, and/or local government site size requirements, guidelines, or standards considered. These entities may have varying opinions, methodologies, and rationales for their school site size requirements, guidelines, or standards.

Although the Council of Educational Facility Planners (CEFPF) is not a "standards" setting organization, the Council does publish guidelines on various educational facility planning. Many states that do provide acreage and other design specifications are formulas that are similar to the CEFPF record were published in past editions of *The Guide for Planning Educational Facilities*. These recommendations are being carefully reviewed as the new edition *Planning Educational Facilities* is being prepared, due to be released in the Spring of 2004. Currently many states follow these site formulas:

Elementary Schools = 10 acres plus 1 acre for every 100 students;
 Junior High/Middle Schools = 20 acres plus 1 acre for every 100 students;
 Senior High Schools = 30 acres plus 1 acre for every 100 students.

In this report, no attempt has been made to either evaluate the published documents or determine how a state implements the acreage formula. Add does not identify local district or governmental policies that may vary from the figures listed for a specific state. Most states with oversight respon waivers and alternatives to the published requirements, guidelines or standards, and often differentiate between existing facilities and new construction have formulas that only apply to the maximum amount of state funding available and allow districts to locally fund acreage beyond the site size accompanying chart. In other cases a state might approve a site smaller than what is specified in the charts based upon the submission of a request well-documented justification. For specific information regarding the school site size requirements, guidelines, or standards, please contact the State Education or school building authority in your state. Please contact your local school district for additional information and policies affecting the size general or for a specific project. State documents that have been referenced may be accessible through the individual department of education website.

With the assistance of Barbara Kent Lawrence, Ed.D., educational consultant, CEFPF staff collected this data from state facility reports, manuals and legislation, and verified it through direct contact with personnel from state educational agencies and practitioners. Dr. Kelvin Lee, Ed.D., Superintendent of Joint Elementary School, and Yale Stenzler, Ed.D., educational facilities consultant, also deserve recognition and thanks for their assistance in developing

All information in the table was collected from state facility reports and manuals, and verified through direct contact with personnel from state educational practitioners. For additional information, details, and/or procedures regarding school site size requirements, guidelines, or standards in your state, State Department of Education or school building authority in your state. To recommend revisions and additions to the table, please contact CEFPF. This document may not be reproduced or distributed without providing appropriate reference to The Council of Educational Facility Planners, International

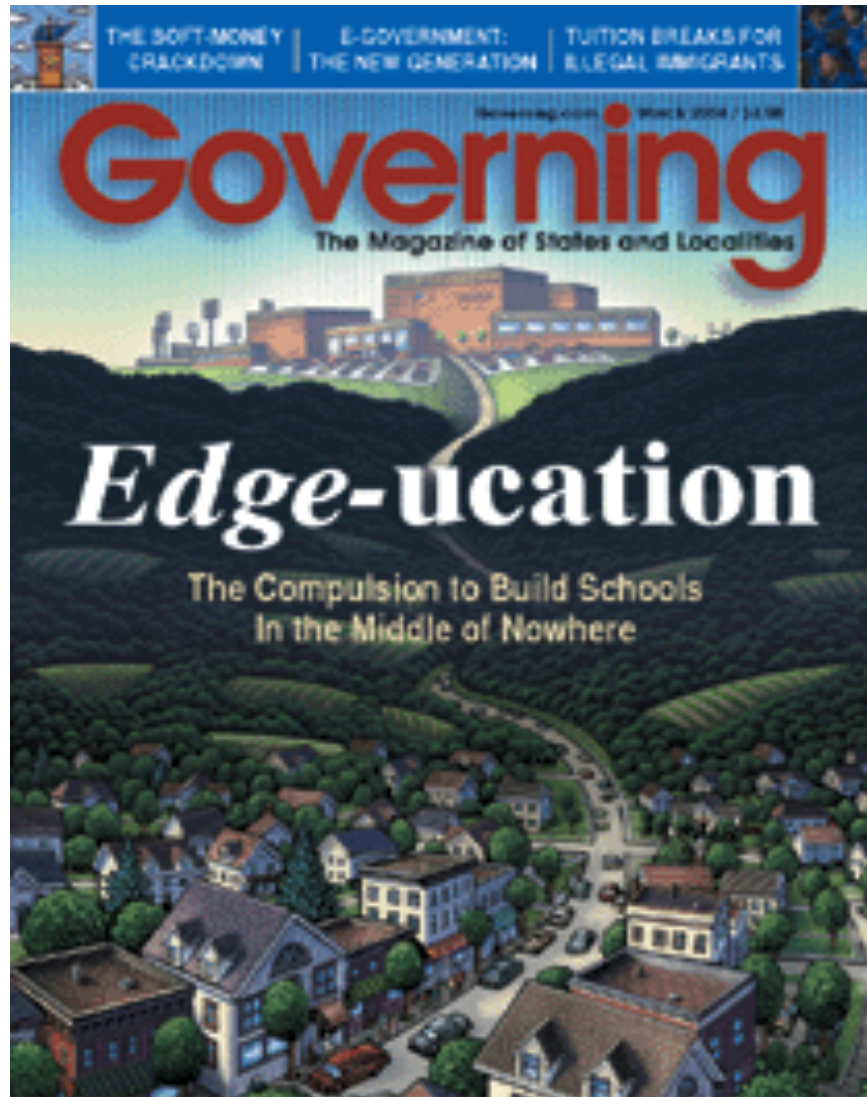
State	Contact Info	Formulas for School Site Analysis	Comments	Document(s)
Alabama	School Architect & Facilities (334) 242-9731 http://www.alsde.edu/text/sections/section_detail.asp?section=68&menu=sections&rooter=sections	Elementary School (K-6, and must not contain a grade above 6) Base of 5 acres plus one acre for every 100 students Middle School (4-8, but not including both grades 4 and 8) Base of 10 acres plus one acre for every 100 students Secondary School (5-12, but must contain a grade above 8) Base of 15 acres plus one acre for every 100 students for existing schools Base of 30 acres plus one acre for every 100 students for proposed schools	The state architect referred to the specifications as recommendations only.	Construction Requirements for County and Public Schools
Alaska	Department of Education & Early Development Facilities (907) 485-2785 http://www.ed.state.ak.us/facilities/	Elementary = 10 acres plus one acre for every 100 students Middle = 20 acres plus one acre for every 100 students High = 30 acres plus one acre for every 100 students K-12 = 20 acres plus one acre for every 100 students For very small schools: 4 acres = 10-25 students; 6 acres = 26-50 students; 8 acres = 50-99 students.	No acreage requirements are regulated. Specifications are recommendations only and are applied to the state share of funding.	Site Selection Criteria and Evaluation Handbook (1997)
Arizona	School Facilities Board (602) 542-6501 http://www.sfb.state.az.us/	Elementary = up to 8-18 acres Middle/Junior = up to 16-36 High School = up to 30-70	Acreage guidelines range based upon student capacity and serve for new construction only. Recommendations are not listed in the Rules and Policies.	Arizona School Facilities Board Rules and Policies
Arkansas	Department of Education (801) 982-1591 http://arkeds.state.ar.us/administrators/077.html	No acreage recommendations made		Arkansas Department of Education Rules and Regulations Governing the Minimum Schoolhouse Construction Standards
California	School Facilities Planning Division (916) 322-2470 http://www.cde.ca.gov/facilities/	Grades K-6 450 students = 9.6 acres 750 students = 13.6 acres 1200 students = 17.6 acres Grades 7-8 600 students = 17.4 acres (with track facilities) 900 students = 20.9 acres (with track facilities) 1200 students = 23.1 acres (with track facilities) Grades 9-12 1200 students = 33.5 acres 1800 students = 44.5 acres 2400 students = 52.7 acres	Alternative solutions to acreage recommendations are provided. If a school site is less than the recommended acreage required, the district shall demonstrate how the facilities shall accommodate an adequate educational program, including physical education, as described in the district's adopted course of study.	1. Guide to School Site Analysis and Development, 2000 2. School Site Selection and Approval Guide 3. Small School Site Policy Memo (2001)
Colorado	Department of Education (303) 866-6500 http://www.cde.state.co.us/index_branche.htm	The state does not provide any recommendations for school facilities.	Jefferson County has developed comprehensive guidelines for their facilities, which do address acreage requirements.	
Connecticut	School Facilities Unit (860) 713-6490 http://www.state.ct.us/ed/sgm/sfu/index.htm	Elementary = 10 acres plus 1 acre for each 100 students* Middle = 15 acres plus 1 acre for each 100 students* High = 20 acres plus 1 acre for each 100 students* * of the projected enrollment (8 years from the application date)	Site allowances refers to the maximum amount the state will consider funding and does not restrict local districts to exceed the acreage allowance or obstruct the district to use a smaller site.	Regulations of the State Board of Education Concerning School Construction Grants
Delaware	Department of Education (302) 739-6001 http://facilities.del.state.de.us/siteinfo/default.asp	Elementary = 10 acres plus 1 acre for every 100 students of school capacity Middle/Junior High = 20 acres plus 1 acre for every 100 students of school capacity High School = 30 acres plus 1 acre for every 100 students of school capacity	Specifications are minimum recommendations only, but "there is probably no real substitute for sufficient size." Options to consider for sites that do not meet the minimum acreage recommendation are provided.	School Construction Technical Assistance Manual
Florida	Office of Educational Facilities (850) 245-0494 http://www.fln.edu/oeffac/	Guidelines provide detailed information about the site but do not address acreage guidelines.	Site specifications refer to the spaces in the building(s) and the number of spaces allowed according to enrollment.	State Requirements for Educational Facilities

www.cefpf.org/pdf/state_guidelines.pdf





Schools Located Far From Students



www.governing.com/articles/3schools.htm





Schools Located Far from Students



Image from the Metropolitan Design Center Image Bank.
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Existing Schools - Neglected or Demolished





Unwalkable Locations



Image from the Metropolitan Design Center Image Bank.
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Unwalkable Locations

- A pedestrian hit at 40 mph has an 85% chance of being killed.
- At 20 mph, the fatality rate is only 5%.

Source: FHWA, Pedestrian Facilities Users Guide, 2002





Sidewalks and Crosswalks



Photo by Steve Ringman, *The Seattle Times*





Separate Parallel Universes

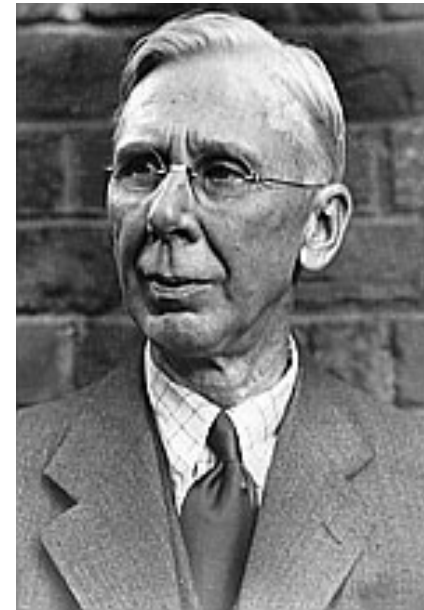
School Planning

Community Planning



Schools and Communities

- In 1929, planner Clarence Perry published *The Neighbourhood Unit: A Scheme of Arrangement for a Family Life Community*.
- This work advocated building “neighbourhoods” as the basis for city growth.



School siting is often not coordinated with community planning.



Side impacts =
demand for new:

- Roads
- Traffic signals
- Sewer lines
- Utilities
- Other infrastructure and services



Photo: Dan Burden



The Good News?



- Former Stapleton Airport, Denver, CO
- 7.3 square miles
- 12,000 homes and apartments
- 3 million sq. ft. of retail space, 10 million sq. ft. of office space



The Good News?



Westerly Creek
Elementary
School

Odyssey
Charter School







The Good News?

American Academy of Pediatrics (2009) *Policy Statement:* *The Built Environment: Designing Communities to Promote Physical Activity in Children*

- “An estimated **32% of American children are overweight**, and physical inactivity contributes to this high prevalence of overweight.”
- “The most **universal opportunity** for incidental physical activity among children **is in getting to and from school.**”
- “Factors such as **school location** have played a significant role in the **decreased rates of walking to school**, and changes in policy may help to increase the number of children who are able to walk to school.”





The Good News?

Research finds

- Smaller schools are better for students:
 - education outcomes
 - social involvement
 - behavior
 - attendance rates
 - dropout rates
- All this “is particularly true for disadvantaged students, who perform far differently in small schools...”*

Raywid, Mary Anne; *Small Schools: A Reform That Works*; Educational Leadership, December 1997/January 1998, Volume 55 | Number 4; Pages 34-39.



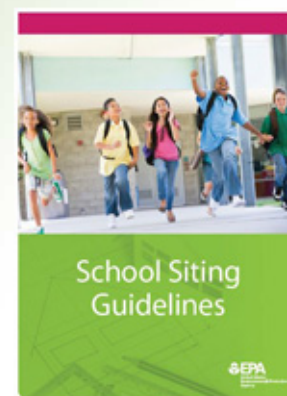
School Siting Guidelines

 Contact Us

 Share



EPA's voluntary school siting guidelines can help local school districts ([local education agencies or LEAs](#)) and community members evaluate environmental factors to make the best possible school siting decisions. This website includes an overview for the guidelines, as well as links to resources and additional information.



[View and Print the guidelines](#)

- [Basic information about the guidelines](#)
 - [What are the School Siting Guidelines?](#)
 - [Why did EPA issue the guidelines?](#)
 - [How can the guidelines be used?](#)
 - [How can I get involved?](#)
 - [How was the public involved in the development of the guidelines?](#)
 - [What are the principles behind the guidelines?](#)
- [Learn how to navigate the guidelines](#)
- [View and print the guidelines](#)
- [View frequently asked questions and answers](#)
- [Related links to information and resources](#)

Related information:

- [Learn how to keep your school environment healthy](#)
- [Find links to other EPA programs for schools](#)



Statutory Mandate

Energy Independence and Security Act of 2007
Sec. 502. Model Guidelines for Siting of School Facilities

The Administrator, in consultation with the Secretary of Education and the Secretary of Health and Human Services, shall issue voluntary school site selection guidelines that account for—

- (1) the special vulnerability of children to hazardous substances or pollution exposures in any case in which the potential for contamination at a potential school site exists;*
- (2) modes of transportation available to students and staff;*
- (3) the efficient use of energy; and*
- (4) the potential use of a school at the site as an emergency shelter.*





Context: State regulations are “all over the map.”

- [A 2006 study](#), funded by EPA and done by Rhode Island Legal Services, found that 23 states put no limits on building schools near environmental hazards.
- No regulations in those states compel school officials to consider such dangers when picking a spot to build.

http://stage.nylpi.org/pub/School_Siting_Final.pdf





Context

CONCERNS: Cleanup efforts aren't always complete / **DEFENDERS:** Students will be safe; land reused

New schools being built on contaminated sites

Posted by the Asbury Park Press on 02/20/05

BY JAMES W. PRADO ROBERTS
AND JASON METHOD
STAFF WRITERS

New Jersey plans to build multimillion-dollar schools on or near what are now contaminated properties — including at one federal Superfund site with radioactive soil — as part of its \$6 billion program to improve school buildings in the state's 31 poorest districts.

The Schools Construction Corp., which is overseeing the massive program in mostly urban areas, has purchased at least 22 contaminated or possibly contaminated sites, a review of state records shows.

SCC and state environmental officials say the sites will be cleaned or

Wren, a spokeswoman for the New York Department of Environmental Conservation.

Commissioner Campbell said New Jersey changed its cleanup standards because of the new information.

In the fall, state environmental officials compiled a list of 55 contaminated properties, and 38 more properties possibly contaminated, which are under consideration to become schools. Four were rejected.

Seebode said the DEP has not estimated cleanup costs because they must be paid for by the SCC.

Lenny Siegel, director of the California-based Center for Environmental Oversight, a nonpartisan activist group, also reviewed state DEP records of several sites for Gannett New Jersey.





Context

- The decision about where to locate a school is fundamentally local in nature.
- The EPA School Siting Guidelines are voluntary and do not preempt or serve as a substitute for state, tribal or local school site selection policies or requirements.
- These guidelines present recommendations on evaluating the environmental and public health risks and benefits of potential locations as part of the school siting process.





When can the guidelines be used?

The guidelines should be used before:

- Deciding whether to renovate an existing school, or build a new school on the current site or on a new site;
- Acquiring land for school facilities;
- Leasing space; and/or
- Renovating or reusing existing properties and structures already owned.

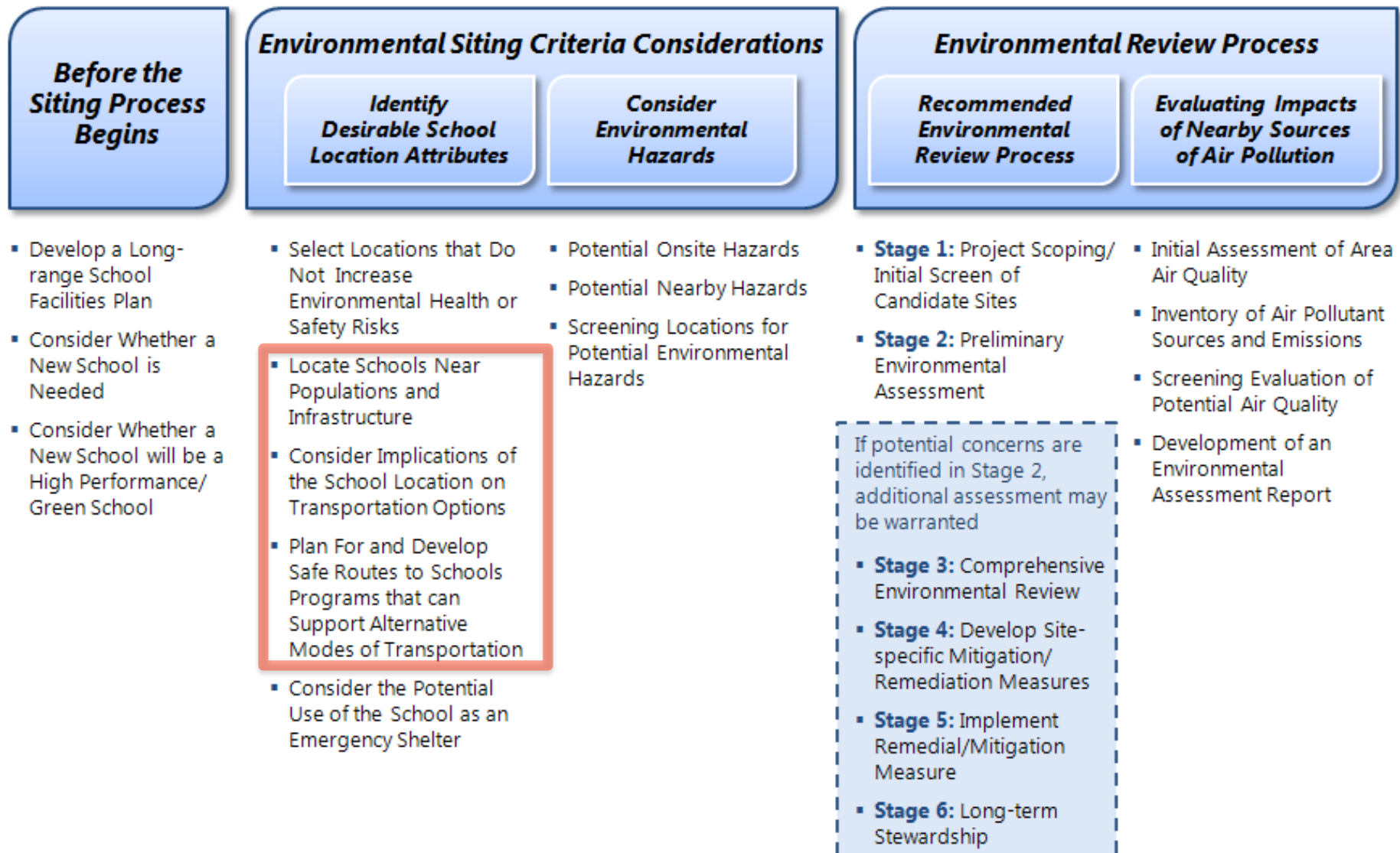
IMPORTANT: The guidelines are NOT designed for retroactive application. They are designed to inform and improve school siting decision-making from this point forward.



Overview of the Siting Guidelines



Meaningful Public Involvement





How to Access the EPA Guidelines

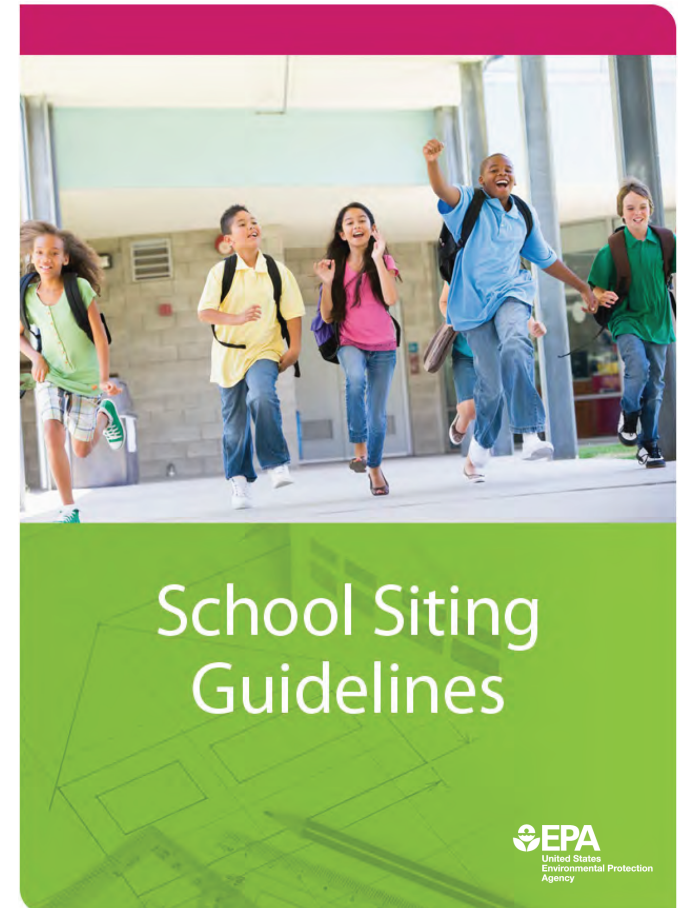
School Siting Guidelines Website

The guidelines are available at www.epa.gov/schools/siting

Ordering a Hard Copy

To request a hard copy of the School Siting Guidelines (EPA-100-K-11-004), contact EPA's National Service Center for Environmental Publications:

- Internet: www.epa.gov/nscep
- Phone: (800) 490-9198
- E-mail: nscep@bps-lmit.com
- Fax: (301) 604-3408
- US Mail: U.S. EPA/NSCEP
P.O. Box 42419
Cincinnati, Ohio 45242-0419



School Siting
Guidelines





EPA's Smart Growth Implementation Assistance

- EPA's Smart Growth program provides technical assistance through SGIA
- The City of Billings, MT requested assistance with school siting – they were seeking tools that could help them make informed choices
- EPA is working with Billings city and school officials to create tools that will help them and (when the tools become available to the rest of the nation) other municipalities across the country make the best choices for their children and their budgets





School Siting and Community Planning in Billings

Policy Scorecard – Evaluate how city planning policies, school capital investment policies and local environmental programs interact and how Billings might better integrate them

Cost Calculator – Inform future local decision-making processes by summarizing the potential costs associated with candidate school sites, including infrastructure and fiscal impacts, transportation, land use and health



Next Steps



School Siting and Community Planning Assessment Tool

- Tool is complete
- Will be made publically available in **Fall 2014**

School Siting Calculator

- Draft in Spring 2014
- Will be made publically available in **Fall 2014**





Thanks



Matthew Dalbey

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202.566.2860

[Get Directions](#) [My Maps](#)

[Save to My Maps](#)

Walk to School Day

A map showing the "Walking School Bus" routes for Earth Day, April 22, 2008.

Families should feel free to join up along the walking school bus routes. And if families south of Franklin develop their own route, send a description to Alex Jonas for inclusion on this map.

272 views - Public
Created on Apr 11 - Updated Apr 12

By [Alex J](#)

★★★★★ 1 ratings - 1 comments

- [Caroline & Normandy "Bus Stop"](#)
8:30 a.m. Caroline and Normandy bus stop; travel sou
- [Brewster & Caroline "Bus Stop"](#)
8:35 a.m. Arrive at the corner of Brewster and Caroline
- [Leighton & Worth "Bus Stop"](#)
8:35 a.m. Leighton and Worth Avenue bus stop; travel
- [Baden & Caroline "Bus Stop"](#)
8:40 a.m. Corner of Baden and Caroline; two groups c
- [Franklin & Wire "Rally Point"](#)
8:45 a.m. Arrive at the corner of Franklin and Wire, R

