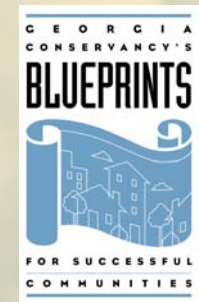


School Siting Considerations



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FOR CLEAN AIR



Presentation to the Sutton Middle School PTA November 4, 2010

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Katherine Moore, Program Manager
Growth Management & Blueprints
for Successful Communities

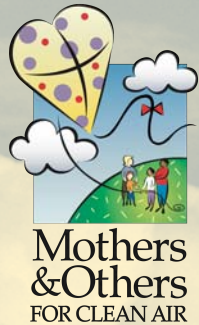
Georgia Conservancy

kmoore@gaconservancy.org

www.gaconservancy.org



Mothers & Others for Clean Air



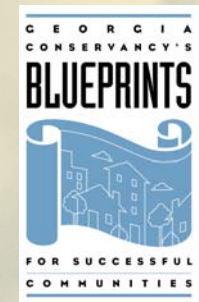
Mothers & Others for Clean Air is a partnership of leading public health, environmental and child advocacy organizations dedicated to improving air quality by educating the public about the negative health impacts of air pollution and engaging people in both individual change and public policy advocacy.



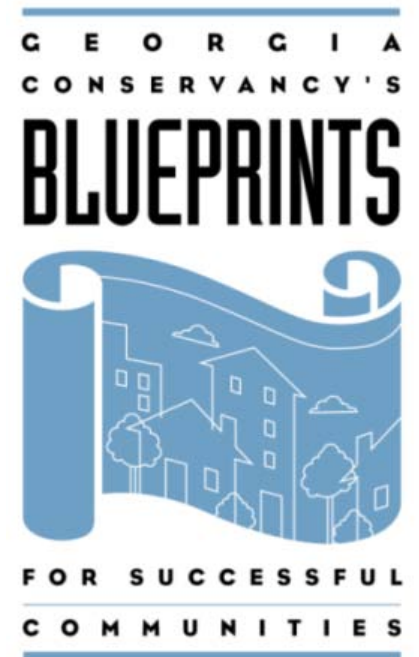
Georgia Conservancy's Growth Management Program



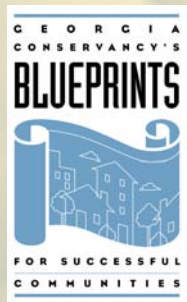
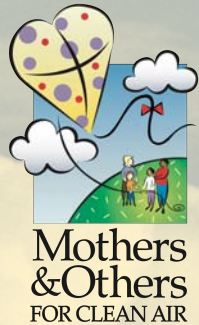
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Blueprints for Successful Communities is a unique growth management program that offers planning and design assistance to communities pursuing a sustainable future by balancing their development needs with conservation of natural resources. Blueprints has served over 22 communities throughout Georgia in its 15 year history.



Blueprints Partners



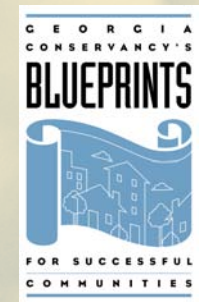
- American Institute of Architects (AIA)
- American Council of Engineering Companies of Georgia (ACEC)
- American Society of Landscape Architects, Georgia Chapter (ASLA)
- Association County Commissioners of Georgia (ACCG)
- Atlanta Neighborhood Development Partnership (ANDP)
- Georgia Institute of Technology, College of Architecture
- Georgia Municipal Association (GMA)
- Georgia Planning Association (GPA)
- Greater Atlanta Homebuilders Association
- Institute of Transportation Engineers (ITE)
- Southface Energy Institute
- Urban Land Institute – Atlanta District Council (ULI)
- U.S. Green Building Council, Atlanta Chapter (USGBC)



School Siting Considerations



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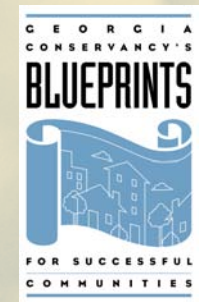
- What is *school siting*?
- Why are we interested?
- Why federal guidelines for school siting?
- What are the key issues we expect the guidelines to address?
- How do these compare with state and local guidelines?
- How can parents get involved?



What is *School Siting*?



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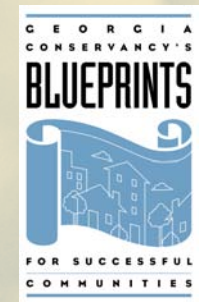
School siting refers to any and all decision-making about the location and configuration of new schools, as well as decision-making about renovation vs. new construction and reconfiguration and repurposing of existing schools.



What is *School Siting*?



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Factors that can directly affect health and wellness include:

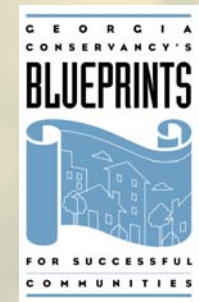
- ✓ Potential air, soil and water contamination
- ✓ Traffic and busing implications that affect local air quality
- ✓ Presence or absence of safe walking and cycling routes, affecting physical activity and vehicle emissions
- ✓ Presence and quality/safety of play spaces and athletics facilities that support physical activity



Why are we interested in school siting?



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• Air Quality Concerns

- ✓ Ambient air quality concerns
- ✓ Proximity to busy roadways: 1/3 of all U.S. public schools
- ✓ High number of diesel soot “hotspots” in metro Atlanta
- ✓ Atlanta’s ambient air quality problem: indoor alternatives on code orange and red days?



• Smart Growth Concerns & Opportunities

- ✓ Sprawl generated around new schools in undeveloped areas
- ✓ Unsustainable infrastructure costs (roads, sewer, water, stormwater, police, fire, waste management)
- ✓ Increase in vehicle miles driven
- ✓ Connections between the school and the community are weakened



Why federal school siting guidelines?



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Energy Independence & Security Act of 2007

- ✓ Requires that EPA develop, in consultation with the Secretaries of the Departments of Education and Health and Human Services, *model guidelines for siting of school facilities*

Guidelines must take into account:

- ✓ the special vulnerabilities of children to hazardous substances and pollution;
- ✓ The modes of transportation available to students and staff;
- ✓ the efficient use of energy; and
- ✓ the potential use of a school at the site as an emergency shelter.



Why Federal School Siting Guidelines?



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A note about the process:

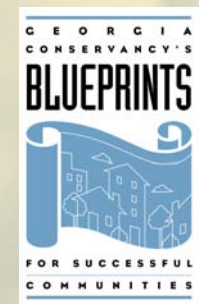
- ✓ EPA completed (internal) draft guidelines July 15, 2009
- ✓ In February 2010, the School Siting Task Group (SSTG) of the Children's Health Protection Advisory Committee (CHPAC) submitted comments on EPA's draft
- ✓ EPA expected to release a public draft by late summer, 2010, then revised its target to late fall
- ✓ Once released, there will be a public comment period



What are the key issues to be addressed?



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General Guidelines for Communities

- ✓ Consider renovation, repair and expansion before choosing new construction
- ✓ When building a new facility, consider building a “green and healthy” school (energy efficient with high performance features such as good air flow and natural lighting)



Suggestions for an inclusive process

- ✓ Broad community-wide involvement
- ✓ Planning for oversight and systems for maintaining a healthy environment, indoors and outdoors



What are the key issues to be addressed?



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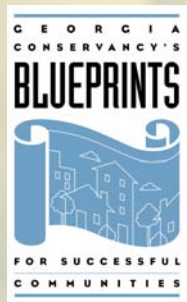
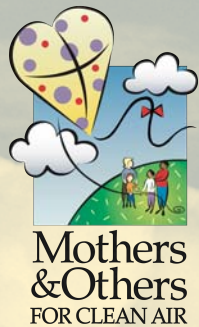
General priorities emphasized to EPA:

“The CHPAC SSTG supports guidance that takes into account best practices that promote a *collaborative, equitable and democratic* site selection process...

...The SSTG supports guidance that ensures that the *health and well being of school children and school staff is not placed at risk* because of the location of a school and that appropriately *considers the benefits of siting decisions that support healthy behaviors*. The SSTG supports approaches to school siting decisions that lead to health benefits to both the school population and the larger community.”



What are the key issues to be addressed?



Environmental Review: Evaluating Potential Sites and the Surrounding Area for Environmental, Health and Safety Impacts

The environmental review should answer the following questions:

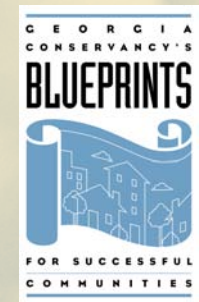
- ✓ Is there significant on-site contamination of surface or subsurface soils or groundwater?
- ✓ Are there off-site sources of pollution, contaminants or other environmental hazards affecting the site?
- ✓ What are the impacts of the project on the environment and are they so significant that the school should not be placed there?



What are the key issues to be addressed?



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1. On-site Environmental Evaluation

✓ Hazards Within Existing Structures

- PCBs in caulk and paint
- Lead in plumbing or in paint
- Mercury from past spills
- Mold and conditions that favor its growth

✓ Check with Georgia EPD and local authorities (tax records) to determine if the site has ever been listed as contaminated.

✓ Natural Hazards

- Earthquake faults
- Flooding risk
- Methane and radon gases
- Wildfire prone



What are the key issues to be addressed?



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2. Off-site: Evaluating Potential Hazards Nearby

✓ Stationary Sources

■ **Concerns**

- Air pollutants (particulates, VOCs, air toxics, metals)
- Soil and sub-surface contamination
- Storage of hazardous chemicals

■ **Examples**

- Auto body shops
- Boilers and back-up generators
- Cement kilns
- Chemical, rubber, plastic plants
- Dry cleaners using TCE, Perc
- Furniture manufacturing and repair
- Industrial coating operations
- Power plants and pipelines
- Quarries
- Salvage or scrap yards
- Sewage & wastewater treatment
- Storage tanks– water and fuel
- Wood product manufacturing
- Gas stations
- Incinerators



What are the key issues to be addressed?

2. Off-site: Evaluating Potential Hazards Nearby

✓ Transportation & Goods Movement

■ **Concerns**

- Air pollutants (fine & ultra-fine particulate matter, VOCs, air toxics, metals)
- Noise and odors
- Pedestrian/cyclist safety
- Accidents and related hazards

■ **Examples**

- Airports and heliports
- Distribution centers (100+ trucks per day)
- Rail lines and rail yards
- Freeways/highways/roads (100,000+ vehicles per day in urban areas)
- Bus garages and truck stops
- Waste transfer stations



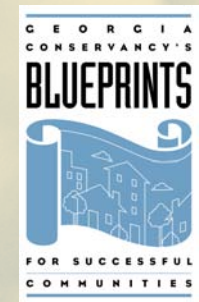
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What are the key issues to be addressed?



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Traffic & Air Pollution

Health Effects Associated with Traffic

- Reduced lung function growth in children
- Slowed fetal growth, DNA damage & infant mortality
- Asthma, bronchitis, pneumonia, sinusitis, cancer
- Heart disease, stroke, diabetes



How Close is Too Close (busy roads)?

- Health Effects Institute: <500 meters (1640 feet)
- CHPAC: Screen ½ mile; exclude site if closer than 1,000 feet
- California law:
< 500 feet from busy roadway/highway



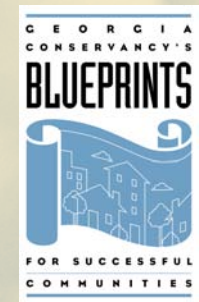
Image courtesy of Clean Air Task Force



What are the key issues to be addressed?



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2. Off-site: Evaluating Potential Hazards Nearby

✓ Communications & Power Transmission

▪ **Cellular phone antennas**

- Exposure to electromagnetic fields and radio frequency emissions
- Soil and sub-surface contamination

▪ **High voltage power lines– electromagnetic fields**

✓ Naturally Occurring Hazards (Nearby)

- Earthquake faults
- Flooding risk
- Methane and radon gases
- Wildfire prone



What are the key issues to be addressed?



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2. Site Design and Community Assets

■ Concerns

- Divestment from existing communities
- Increase in vehicle miles driven
- Increase in infrastructure costs (raised taxes)
- Decrease in physical activity opportunities
- Increase energy efficiency of structures

■ Examples

- Prioritize new schools in existing communities
- Prioritize locations with existing infrastructure connections
- Maximize proximity to program support facilities (parks, museums, libraries, theaters, etc.)
- Prioritize sites that promote use of alternative transportation (transit, Safe Routes to Schools)



What are the key issues to be addressed?

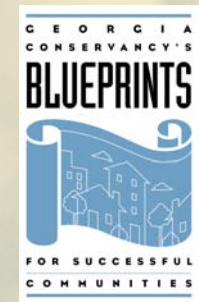
2. Site Design and Community Assets Cont'd

■ Tools

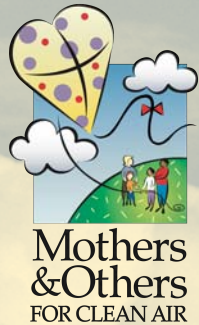
- School siting ordinances
- Joint use agreements
- Coordination with local governments on infrastructure investments (same fiscal cycle)
- Relationships between Planning Departments, Public Works Departments and School Board (or other siting authority)
- Interlocal agreements



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How does this compare with state guidelines?

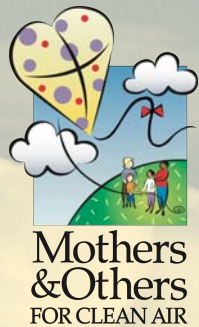


Off-Site Environmental Hazards

- Stationary source hazards in federal guidelines not specifically listed in state resource:
 - Dry cleaners using TCE, Perc
 - Furniture manufacturing and repair
 - Industrial coating operations
 - Autobody shops
- Federal guidelines may include greater clarity about acceptable distances and about acceptable mitigation of hazards



How does this compare with state guidelines?



Off-site Environmental Hazards: Transportation & Goods Movement

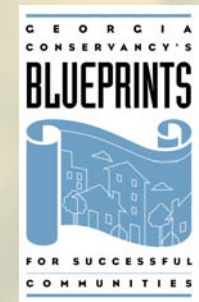
- ✓ Busy roadways: Georgia guidance only lists “major highways”
- ✓ Greater specificity for mobile source (e.g., diesel traffic and daily number of vehicles)



How does this compare with state guidelines?



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Current Major Site Location Criteria (State Guidelines)

- Minimum usable acreage requirements, with bias toward larger
 - Elementary – 5 acres + 1 acre for each 100 children in FTE
 - Middle School – 12 acres + 1 acre for each 100 children in FTE
 - High School – 20 acres + 1 acre for each 100 children in FTE
- Located near an “efficient transportation system”
- Cannot be located in area zoned for commercial or industrial development
- Cannot be located within 1000 feet of a current business selling certain goods or services
- Variance for the minimum useable acreage requirements

Local considerations

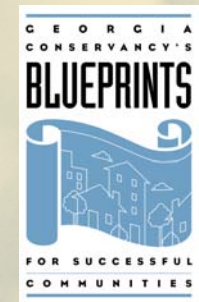
- Particularly in dense urban areas, availability within the school zone
- Amount of usable acreage at a potential site
- State guidelines inform the process



Interesting Facts and Documented Trends



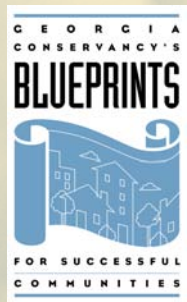
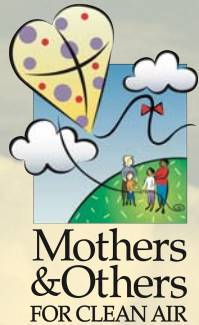
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- Presence of a local school supports higher property values.
- 1 sq. ft. of nonresidential building demolition = 155 lbs. of solid waste to landfills; nonresidential renovation = 18 lbs of waste per sq. ft.
- In 1969, 87% of students lived within 1 mile of their school; In 2007, 6% elementary, 11% middle and 6% high schoolers could reasonably walk to school.
- Research found a 30% increase in cars on the road between 7:15 a.m. and 8:15 a.m. during the school year.
- Today, 9 million children > 6 years old are considered obese.



What can parents do to get involved?



- **Get informed!**

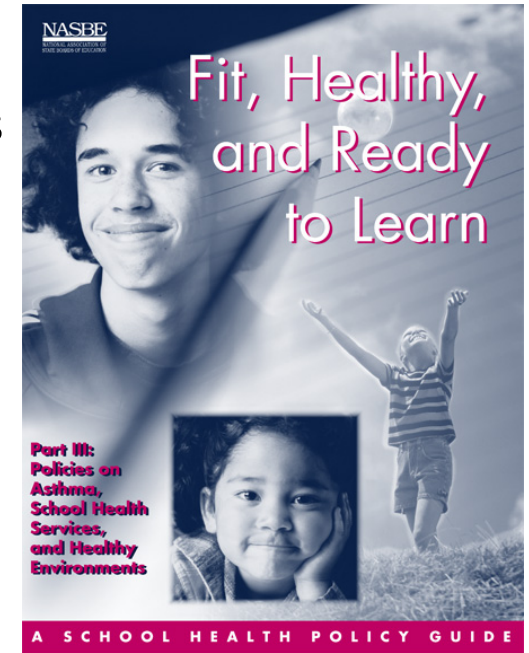
- ✓ Review other federal, state & local resources
- ✓ Pick up our resource list

- **Short-term:**

- ✓ Share resources with other parents
- ✓ Weigh risks and benefits

- **Long-term:**

- ✓ Review and comment when EPA guidelines are released
- ✓ Help us use the new guidelines to revisit existing state and local guidelines



What can parents do to get involved?

Parents and other community members should have a voice.

“What I can tell you with certainty is that **the guidelines will emphasize the importance of conducting a timely, thorough, and transparent assessment of the potential risks of candidate sites, and the importance of involving the community throughout the process.**

By timely, I mean, for example, building time into the site evaluation process to allow for the environmental and safety assessment to be completed before a commitment to a site is made;

By thorough, I mean a site evaluation that broadly looks for all potential health and safety risks associated with the site and considers those risks along with other criteria and factors;

By transparent, I mean a process that is designed to instill community confidence in the site selection, and community support for the end result.”

Dr. Peter Grevatt, EPA Senior Advisor for Children's Health

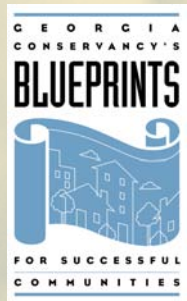
Capitol Hill Briefing on Sources of Pollution and Safe School Siting, April 28, 2009



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Thank you for your interest!



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