

May 10-11, 2013 Conference Proceedings: Developing Policy on
Environmental Quality, Schools, and Health

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List of Acronyms

AASA	American Association of School Administrators
AFT	American Federation of Teachers
ASTM	American Society for Testing Materials
ATSDR	Association for Toxic Substances and Disease Registry
CBA	Cost-benefit analysis
CDC	Center for Disease Control & Prevention
CDE	California Department of Education
CHEJ	Center for Health, Environment, and Justice
CHPAC	Children’s Health Protection Advisory Committee
DAMAT	Detroit Asthma Morbidity Air Quality and Traffic Study
DCAC	Detroit Climate Action Collaborative
DWEJ	Detroiters Working for Environmental Justice
DTSC	California Department of Toxic Substances Control
EAA	Education Achievement Authority
EMF	Electromagnetic fields
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESA	Environmental Site Assessment
FHWA	Federal Highway Administration
GDI	Green Door Initiative
GIS	Geographic information systems
GLISA	Great Lakes Integrated Sciences and Assessments
HIA	Health Impact Assessment
HKHM	Healthy Kids Healthy Michigan
HVAC	Heating, ventilation, and air conditioning
LEED	Leadership in Energy and Environmental Design
MAP	Michigan Association of Planning
MDCH	Michigan Department of Community Health
MDEQ	Michigan Department of Environmental Quality
MDOT	Michigan Department of Transportation
MEAP	Michigan Educational Assessment Program
MIOSHA	Michigan Occupational Safety and Health Administration
MLUI	Michigan Land Use Institute
MSHDA	Michigan State Housing Development Authority
NAACP	National Association for the Advancement of Colored People
NEA	National Education Association
NAFTA	North American Free Trade Agreement
NASS	National Association of School Superintendents
NBOA	National Business Officer Association
NCDC	National Climatic Data Center
NCLR	National Council of La Raza
NIEHS	National Institute of Environmental Health Sciences
NIH	National Institute of Health

DEVELOPING POLICY ON ENVIRONMENTAL QUALITY, SCHOOLS, AND HEALTH

NIOSH	National Institute of Occupational Health
NREPA	National Resources and Environmental Protection Act
NYSP2I	New York State Pollution Prevention Institute
OSHA	Occupational Safety and Health Administration
PSA	Public service announcement
PTA	Parent Teacher Association
REC	Recognized environmental conditions
RILS	Rhode Island Legal Services
SFPD	California School Facilities Planning Division
SRtS	Safe Routes to School
USGBC	U.S. Green Building Council
WHO	World Health Organization

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Introduction

Members of Michigan's government, academic, and community stakeholders convened for the *Developing Policy on Environmental Quality, Schools, and Health* Conference on May 10-11, 2013 at the University of Michigan's School of Natural Resources and Environment in Ann Arbor. With support from the Kresge Foundation, the conference worked to bring together over 35 scientists, academics, community organizers, government officials, state and local school board members, teachers' union officials, parent-teacher organizers, and policy analysts to discuss a statewide school siting policy in Michigan that takes into account environmental quality factors. The lack of such policies leaves students vulnerable to the harmful effects of polluted environments in urban, suburban, and rural settings. In contrast to Michigan, 26 states in the U.S. currently have such policies, although these vary greatly in extent and comprehensiveness. Many of these policies were discussed at the conference. The products of the conference will be utilized as instrumental first steps in the process of developing a statewide school siting policy for Michigan.

As a basis for how to address Michigan's school siting problems and the ill health effects that polluted schools in Michigan have on students, the conference planning committee developed the following objectives:

- To address the research being conducted in Detroit and throughout Michigan regarding the relationship between polluted school environments and the cognitive development and functions of school-aged children.
- To initiate a dialogue among political players in the Michigan government; leaders of grassroots organizations at the local, regional, and state levels; and representatives from state and local school boards, teachers' unions, and parent teacher associations recognizing the need for reform in the current political system.
- To demonstrate the capabilities of a statewide school siting policy, observing precedents set by other states, such as Rhode Island and California, and the U.S. Environmental Protection Agency's voluntary School Siting Guidelines.

In support of the conference objectives, the planners formed seven panels of researchers, political officials and professionals, and community organizers expert in their respective areas of school siting issues. Each panel presented information regarding their fields of expertise, their experience in Michigan's political climate developing policies that would better school environments, and the issues that communities face when trying to provide school children with healthy learning environments. The panels discussed with the conference attendees the opportunities, such as looking at other U.S. states' school siting policies as precedents for Michigan, and the challenges, such as little existing public education of school environmental problems, that Michigan faces.

On the second day of the conference, participants were split into three groups to discuss a list of posed questions, addressing the subsequent steps that need to be taken in the development of a statewide policy. Significant initial themes of the

conference included the following: developing teams to expand the research, political action, and environmental issues; identifying data gaps that help support policy development; and assessing the capacity of resources, such as time, energy, and money, that will engage the community and public officials. The diverse company of government, academic, school, and community stakeholders that gathered at the conference represents a great mix of experts needed to ensure the successful development of the project. As next steps, a committee composed of those government and community participants should be created. The deliverable of the committee will be to provide a clear, detailed plan for the development of a statewide siting policy for Michigan's schools.

In the following sections, the principal ideas and recommendations of invited panelists consisting of school siting advocates, experts, and policy makers are summarized and discussed. Key recommendations offered by the panelists and other conference participants are identified.

School Siting Policy: Lessons Learned

Lois Gibbs, Center for Health, Environment, and Justice

Stephen Lester, Center for Health, Environment, and Justice

Steve Fischbach, Rhode Island Legal Services

School siting policies are composed of multiple entities at the community, state, and national levels that contribute to the identification, organization, and creation of successful regulations to improve school environments. Lois Gibbs and Stephen Lester with the Center for Health, Environment, and Justice and Steve Fischbach with the Rhode Island Legal Services represent establishments in the multi-level structure of school siting policy in the United States. Organizations exist at every level and are more than willing to aid communities seeking help in creating healthy school environments. Communication between each of these tiers may be difficult to maintain during the school siting process, but it is critical to the success of healthy policies.

Lois Gibbs is a community organizer and the executive director of the Center for Health, Environment, and Justice (CHEJ), a national nonprofit that helps communities take action where environmental justice is concerned. Their focus is community organization and neighborhood groups. The Center for Health, Environment, and Justice provided assistance to the Clean Air Coalition of Western New York to reduce carcinogenic air emissions. The New York State Pollution Prevention Institute (NYSP2I), a state organization, through \$2 million in state funds, provided technical assistance to companies in the area to help reduce air emissions in North Tonawanda, NY to keep the process confidential. During the Tonawanda negotiations, three industries agreed to decrease the amount of emissions, while four industries remain in talks. Initially the polluting industries stated that they could not reduce air emissions due to a lack of funds. Because the New York State Pollution Prevention Institute has funding, the organization was able to help industries make the needed changes without having to incur additional costs. The U.S. Environmental Protection Agency (EPA) also gives grants to industries agreeing to reduce emissions. The Center for Health, Environment, and Justice is currently working on a case involving the port in Portland, Oregon and continues to help communities seek the organization needed to reverse harmful effects caused by industrial practices. According to Ms. Gibbs, change can only come when “community organizers and neighborhoods come together.”

Stephen Lester is the Science Director of the Center for Health, Environment, and Justice and was a member of the School Siting Task Group for the U.S. Environmental Protection Agency. The task group under the EPA’s Children’s Health Protection Advisory Committee (CHPAC) drafted model school siting guidelines for the U.S. Environmental Protection Agency to use in developing its voluntary school siting guidelines, which were released for public comment in the fall of 2011. Multiple key issues arise in school siting. Public participation is critical. A school siting committee, made up of teachers, administrators, professionals, etc., should be involved in every step of the process, keeping the public engaged and informed from the beginning and integrated throughout the entire process of the environmental review. Categorical exclusions should be part of the siting process. These exclusions

refer to sites that are off limit for building schools, such as landfills. Screening perimeters and exclusion zones should be part of a multi-tiered operation for choosing sites. Any site that falls within the screening perimeter, e.g. one mile from a hazardous facility, needs to be investigated. Any site that falls within the exclusion zone, e.g. 500 feet from a hazardous facility, is considered unacceptable and must be removed from the list of location options. Cleanup goals need to be addressed for contaminated sites. Because there is no national standard for soil mitigation and remediation levels and state standards vary, guidelines should select the most stringent remediation levels in effect for any contaminant found on site. Long-term monitoring should also be part of the industry standards. Finally, a last resort option should exist in the school siting process when no other option is available, such as in urban areas where location choices are limited. The key element of this is redundancy: redundant cleanup measures are critical at every level (institutional, remedial, and engineering). They provide safety and increase public confidence.

Mr. Lester stated that multiple issues came up during the U.S. Environmental Protection Agency guidelines task group talks. While the guidelines can be put towards a national standard or applied at the state level, they are voluntary. The U.S. Environmental Protection Agency is concerned about overstepping local control, not wanting to interfere with the decision of where to build a local school. The guidelines do not address the impact of siting policies on existing schools, which may or may not be located near environmental or health hazards. The U.S. Environmental Protection Agency guidelines may also compete with smart growth principles. Smart growth principles encourage schools to be built in population centers, where existing infrastructure is located; however, there needs to be a balance between the existing infrastructure and environmental quality and health concerns in urban centers.

Steve Fischbach is a supervising attorney with Rhode Island Legal Services (RILS). He also served as a member of the School Siting Task Group for the U.S. Environmental Protection Agency's Children's Health Protection Advisory Committee. According to Mr. Fischbach, the U.S. Environmental Protection Agency's Children's Health Protection Advisory Committee deliberations report is the gold standard for school siting policies, and it should be used in all school siting policy advocacy work to follow. In 1999, Rhode Island Legal Services filed a lawsuit against the Rhode Island Department of Environmental Management (DEM) when city officials in Providence wanted to build an elementary and middle school on top of the city's former garbage dump. Rhode Island Legal Services won the case, and as a result, the judge decided that the Rhode Island Department of Environmental Management should convene a stakeholder group to propose legislation, regulations, and policies for the agency on a number of subjects related to environmental justice and public involvement. Included in these issues was legislation related to the siting of schools. The stakeholder group was composed of individuals and professionals from the environmental and environmental justice community.

Rhode Island's new school siting laws were created in two stages. The first stage occurred on the Rhode Island Department of Environmental Management's initiative, and was in response to a second school siting controversy involving the site of what was the largest silver manufacturing facility in the world at the turn of the last century. The Rhode Island Department of Environmental Management proposed

a bill to require more public participation in the site investigation process when contaminated sites were proposed for school use. Before a site investigation could be conducted, a public meeting or “public consultation” was required to solicit public comment on how the site assessment should be completed, to receive insight from the community about a site’s previous history and the community’s firsthand experience with the location, and to allow people to address issues that needed to be investigated on a site. A Phase 1 Environmental Review became required to review the public records of a particular site and to determine whether further investigation was needed. The second stage involved a proposal that was developed in the Stakeholder group, which included an “effective ban” on the use of contaminated sites where risks of vapor intrusion were involved. This proposal also required school project sponsors to complete a publicly vetted written report that addressed the following: the costs of using the site and remediating it to residential standards, the time required to complete the remediation tasks, and a statement for why a site was chosen over other alternatives. The “effective ban” bill was passed in 2012 and signed into law by Rhode Island’s governor.

The “effective ban” bill came under attack shortly after it was passed by the charter school industry. The Rhode Island Mayoral Academy, a network of charter schools formed by several mayors, wanted to build a charter school on the site of an old factory building. Under existing laws, the Mayoral Academy was prohibited from building the school on the site. The Mayoral Academy urged legislators to introduce legislation to repeal the “effective ban.” At the time of the Michigan conference the fate of this legislation was uncertain. Mr. Fischbach reiterated, “When you think you win, you’ve got to protect your victories.” Regarding Detroit, Mr. Fischbach observed that charter schools would be the source of new school siting controversies, and that charter school sponsors, might, as was the case in Rhode Island, choose to site schools on sites of abandoned industrial and commercial facilities instead of reusing the many closed public school buildings in Detroit. This inclination may be because it can be cheaper to demolish and/or reuse abandoned industrial and commercial buildings than to renovate large, abandoned public school buildings, the latter of which might contain lead and asbestos and require expensive remediation and renovations. To keep costs low, charter schools might not conduct thorough contaminated site investigations; and if little or no contamination is found in a site investigation, fewer dollars would be spent on remediating contamination.

Discussion and Recommendations

The two notable cases in Tonawanda, NY and the State of Rhode Island demonstrate how community organizing and legal forces can succeed in improving school siting guidelines on environmental quality. Communication, collaborations between community organizers and communities, and public participation throughout school siting decisions are key for improving existing policies. Policies need to approach the issue from multiple directions, to allow for redundancy to improve safety.

In Michigan air quality standards are being benchmarked at a regional scale, but gerrymandering (manipulating electoral boundaries to create district partisan

advantages) is shifting the political climate. “There is so much money in campaigns on the other side,” said Senator Young, speaking about the two opposing sides of environmental issues. Money sways support and wins campaigns. Rhode Island’s political makeup is somewhat different from Michigan’s. The bill to reform school siting policies in Rhode Island was heard by the environmental committees in the state Senate and House.

During the panel discussions, questions were raised regarding how to utilize resources, e.g. Health Impact Assessments (HIAs), which help inform the potential health outcomes or risks of a school site. Health Impact Assessments have not been used very often in regards to the issue of health of school children. Health studies have been used to inform the potential health outcomes or risks of a site, in Ohio for instance, but health is not the main issue addressed by standards. Health Impact Assessments are not available to most communities. For low-income communities, the health problems of students are often blamed on parents, e.g. a lack of food, rather than the school environments.

A strong basis in scientific information is needed for cause and effect support of environmental hazards and health outcomes. “The health side is so gray, in terms of cause and effect... The level of information you need to prove something is absolutely enormous,” said Mr. Lester. “When you get into a discussion of ‘how clean is clean’ and ‘how safe is safe’, you get into trouble,” explained Mr. Fischbach. It is difficult to prove the source of a particular exposure when there may be many different contaminants and sources. Health information is part of the toolbox that helps achieve the environmental goal, but it is not the sole implement. The panel is not reducing the importance of children’s health, but they understand that it is tactically more difficult to prove the link between health effects and environment.

Health Impact Assessments would be very useful organizing tools because they give visibility and credibility, but they are not useful in regards to policy-making. Policy makers (and scientists) have many more resources that go beyond what community organizers can do. “So it’s good for community but not good for policy,” said Ms. Gibbs. The U.S. Environmental Protection Agency’s Children’s Health Protection Advisory Committee (CHPAC) report does recommend the use of Health Impact Assessments; however, in many cases, a Health Impact Assessment may not offer any new information or any information that is not already known by the community. Maps and data are powerful tools for presenting data and analysis. Environmental cost-benefit analyses (CBA), risk assessments, and Health Impact Assessments are important for gaining support of legislature and policy-makers.

As discussed in the breakout sessions, there is a void on siting guidelines for existing schools, which occurs in tandem with waning school construction in recent years. The exemption of charter schools is an additional issue facing Michigan, where school privatization is on the rise. Involvement with students, families, educators, administrators, organizations, and community groups are pivotal for gaining awareness and momentum.

Environmental Quality, Schools, and Health

Dr. Michael Elliott, University of Michigan

Dr. Stuart Batterman, University of Michigan

Dr. Paul Mohai, University of Michigan and Dr. Byoung-Suk Kweon, University of Maryland

This panel discussed the most recent studies and research regarding environmental hazards and their effects on the health of Michigan schools. Children's health-related research provides valuable information that supports proper school siting policies in Michigan. The investigations and inquiries into the health effects of environmental hazards on school children suggest a direct correlation between environmental factors and cognitive functioning. Studies involving blood lead levels in Detroit, Michigan, ambient air quality in schools, and air pollution risks to school children are educational sources for keeping the public and politicians informed. Dr. Michael Elliott and Dr. Stuart Batterman with the University of Michigan's School of Public Health, Dr. Paul Mohai with the University of Michigan's School of Natural Resources and Environment and Dr. Byoung-Suk Kweon with the University of Maryland's Department of Plant Sciences and Landscape Architecture conducted investigations into the health effects of the environment on school-aged children. Each investigation found that prevention of environmental and industrial hazards in school areas is critical in ensuring healthy children.

Dr. Michael Elliott is a Professor of Biostatistics at the University of Michigan's School for Public Health. His research studies the link between early childhood lead exposure and academic achievement in Detroit public schools. Detroit has extensive problems with lead exposure. Large numbers of industrial sites are scattered throughout the city; many are now abandoned. About 90% of the housing in Detroit was constructed before the lead paint ban in 1978. Consequently, 20% of Michigan children under age five living in Detroit account for more than 50% of Michigan children with elevated lead levels.¹ The study relates childhood lead exposure to standardized testing, concluding that high levels of lead in blood were associated with reductions in scores on the Michigan Educational Assessment Program (MEAP) exams.² Classic lead poisoning is defined by blood lead levels of 60 micrograms or more per milliliter.³ The Center for Disease Control (CDC) advises a blood lead level of 5 µg/mL.⁴ While the relationship between lead exposure and cognitive function in young children is reasonably well understood, few studies have directly related lead exposure to scholastic achievement in school children. The study conducted by Dr. Elliott and others related the blood lead of children aged two to four years to their subsequent Michigan Educational Assessment Program test scores (math, reading, writing, science, social studies) in grades three, five, and eight. The study found that high blood lead levels correspond with low Michigan Educational Assessment

¹ Zhang, N., Baker, H. W., Tufts, M., Raymond, R. E., Salihu, H., and Elliott, M. R. (2013). Early childhood lead exposure and academic achievement: Evidence from Detroit Public Schools, 2008–2010. *American Journal of Public Health, 103* (3).

² Ibid.

³ Ibid.

⁴ Ibid.

Program scores; proficiency level decreases as the blood lead level increases and those with blood lead levels in excess of 10 µg/mL had twice the odds of scoring “less than proficient” than those with blood lead levels at or below 1 µg/mL.

The lead exposure discussion needs to continue, says Dr. Elliott. Lead exposure has declined on the public health agenda, but the problem has not been fixed. There is no effective treatment available for children with elevated lead concentrations, making prevention critical. Detroit has a major problem that cannot be ignored as the city’s children’s blood lead level is 4.5 times higher than the national average.⁵

Dr. Stuart Batterman is a professor of Environmental Health Sciences in the School of Public Health and of Water Resources and Environmental Engineering in the College of Engineering at the University of Michigan, leading studies of ambient air quality in schools. According to the U.S. Environmental Protection Agency, ambient air is defined as “that portion of the atmosphere, external to buildings, to which the general public has access.”⁶ Dr. Batterman conducted the Detroit Asthma Morbidity, Air Quality and Traffic (DAMAT) Study, which evaluated direct health indicators of pediatric asthma resulting from exposure to ambient air pollutants.⁷ The study found that asthma events were less likely with increased distance of residences to primary roads.⁸ School buildings often have deficient, trouble-prone heating, ventilation, and air conditioning (HVAC) systems due to simple, inexpensive construction. A Michigan schools study found that ventilation was poor in many classrooms.⁹ A Michigan/Texas indoor air quality and ventilation study compared schools in southeast Michigan with schools in south Texas, revealing that many schools were poorly ventilated for carbon dioxide. Thermal comfort levels and odor problems were also addressed in the study, having mixed reviews from participants.¹⁰

When studying ambient air quality, Dr. Batterman noted that the amount of air pollution varies greatly depending on location. Transportation is the largest emitter of pollution in urban areas, with the greatest accumulation of pollution near roadways; the amount of pollution decreases as one moves away from

⁵ Mohai, P., Kweon, B., Lee, S., and Ard K. (2011). Air pollution around schools is linked to poorer student health and academic performance. *Health Affairs*, 30(5), 852-862. doi: 10.1377/hlthaff.2011.0077

⁶ U.S. Environmental Protection Agency. (2007, Jun 22). *Memorandum: Interpretation of “ambient air” in situations involving leased land under the regulations for prevention of significant deterioration (PSD)* (Office of Air Quality Planning & Standards No. C404-04). Retrieved from <http://www.epa.gov/region7/air/nsr/nsrmemos/leaseair.pdf>

⁷ Batterman, S. (2008, Apr 9). Batterman Lab: Exposure and environmental impact assessment: The Detroit asthma morbidity, air quality and traffic (DAMAT) study. Retrieved from <http://research.sph.umich.edu/project.cfm?deptID=2&projectID=1&groupID=1>

⁸ Li, S., Batterman, S., Wasilevich, E., Elasaad, H., Wahl, R., and Mukherjee, B. (2011). Asthma exacerbation and proximity of residence to major roads: A population-based matched case-control study among the pediatric Medicaid population in Detroit, Michigan. *Environmental Health*, 10.

⁹ Goodwin, C., and Batterman, S. (2006). Indoor air quality in Michigan schools. *Indoor Air*, 17, 109-121.

¹⁰ Batterman, S. A., Godwin, C., Franzblau, A., Jia, C., Ellendula, S. Corsi, R., Torres, V., and Sanders, M. (n.d.). *IAQ and ventilation in Michigan and Texas schools* [PDF document].

thoroughfares.¹¹ Traffic-related exposure to pollution corresponds with significant health problems. The U.S. Department of Transportation Federal Highway Administration (FHWA) estimates vehicular traffic on M-10 in Detroit at about 180,000 vehicles daily.¹² Dr. Batterman raised concerns that due to a lack of government regulation, private and charter schools in Michigan were more likely than public schools to be located near high traffic roads.

Dr. Paul Mohai, a professor of environmental justice with the University of Michigan's School of Natural Resources and Environment, and Dr. Byoung-Suk Kweon, a professor of landscape architecture at the University of Maryland's Department of Plant Sciences and Landscape Architecture, conducted a study to investigate the relationship between air pollution risks and the school-aged children in Michigan. The greatest numbers of schools in Michigan are located in the more polluted parts of their cities or school districts. The research concluded that air pollution around schools is linked to poorer student health and academic performance with the three major risks associated with pollution being respiratory, carcinogenic, and neurological. The study found that pollution levels are higher around schools where students of color and poor students are in greater numbers. The results showed that African American students and students eligible for free and reduced lunch programs are at the greatest respiratory, carcinogenic, and neurological risks. The study also confirmed that these higher health risks are associated with increased numbers of students not meeting Michigan Educational Assessment Program standards in math and English. The air pollution study also showed that respiratory, carcinogenic, and neurological risks decreased as distances between schools and points of pollution sources increased. Dr. Mohai stated that all sources of air pollution need to be accounted for when assessing air toxics and that Michigan needs to reevaluate its school siting factors that influence where to locate new school sites. A 2008 survey conducted by Dr. Richard Norton of the University of Michigan's Urban and Regional Planning Program revealed the environment as a low priority compared to cost-related factors for school officials when devising land use policies and zoning codes regarding schools.¹³

Discussion and Recommendations

Evidence has shown the correlation between the environment and cognitive function and the importance of preventing environmental hazards in school areas. Studies on pollution and education are key for keeping the public and decision-makers informed. While some concern about industrial pollution, particularly around lead, has waned in recent years, the contamination has not been remediated

¹¹ Robert L. Pearson, Howard Wachtel and Kristie L. Ebi (2000). Distance-weighted traffic density in proximity to a home is a risk factor for leukemia and other childhood cancers. *Journal of the Air & Waste Management Association*, 50(2), 175-180. doi: <http://dx.doi.org/10.1080/10473289.2000.10463998>

¹² *Full Road Closure for Work Zone Operations - A Cross-Cutting Study*. (2004). Washington, DC: United States. Dept. of Transportation. Federal Highway Administration. Work Zone Program.

¹³ Norton, R. K. (2008). Using content analysis to evaluate local master plans and zoning codes. *Land Use Policy*, 25(3). doi: 10.1016/j.landusepol.2007.10.006

and still poses a risk to children, especially in Detroit, where exposure are elevated. Issues of ventilation and heating/cooling systems can also be a problem in schools, impacting indoor air pollution.

In the breakout sessions, participants emphasized the importance of addressing all areas of health needs in school siting decisions—physical, emotional, psychosocial, and mental health needs. Health and educational achievement are externalities that should be considered when presenting information to decision-makers on cost-benefit analyses. Using a sustainability platform for “green schools”, there is an opportunity for districts to create criteria on traditional “sustainability” issues and environmentally healthy school siting decisions.

School Siting Policy in Michigan

Senator Coleman A. Young II, Michigan Senate

Peter Morman, Environmental Policy Analyst, Michigan House of Representatives

This panel discussed Michigan's current political climate, past attempts by policy-makers to introduce school siting legislation, and the steps needed at the legislative levels to reform Michigan's school siting policies. Michigan's political landscape plays an important role in the proposal, ratification, and execution of school siting legislation. A charged political climate at each level of the legislature creates difficult barriers for passing regulations; however, as more constituents take their knowledge of environmental justice issues to the polls, representatives from each district and city become key players for bringing Michigan's school siting process to the state level. Environmental bills need organized efforts to raise the profile of the issues and more bi-partisan support. The authority regarding school siting policies is with the State Superintendent of Schools and the state's legislative branch. Substantial education effort is needed for legislators to understand the significance of the issues. In the meantime, supporters could possibly seek action with the Michigan State Board of Education as an interim step.

Coleman Young II is a State Senator with the 1st District of Detroit. Senator Young addressed the healthcare costs of United States citizens, citing that in 2010, the cost of healthcare was ten times the amount it was in 1980. Environmental cost-benefit analyses (CBA) are critical for gaining support of legislators and policy-makers. The current legislative majority sees environmental policies as holding back business. "This line of thinking is myopic," says Senator Coleman; however, the current legislative and governor's offices are not going to change their agendas. Senator Coleman recommends building a broad base of support that stands for children, the environment, and creating health and safe communities. "You cannot expect change if you don't demand it," Senator Coleman declared.

Peter Morman is a senior policy analyst with the Michigan House of Representatives Democratic Caucus. Mr. Morman referred to Michigan's laws and proposed legislation in regards to school siting and remediation efforts. In 1992, legislation was enacted that required school boards to visually inspect a proposed school site and to review past ownership and uses of the property. The 1992 provision was deleted when the Revised School Code¹⁴ was enacted. Part 201 of the National Resources and Environmental Protection Act (NREPA)¹⁵ was amended in 1995 to a causation liability standard, from a strict liability standard. This was a controversial decision because it made it more difficult to determine who the responsible party was for cleaning up a contaminated site, causing a higher proportion of cleanup costs to fall on taxpayers. Part 201 provides that, after 1995, persons or entities acquiring a property can establish their innocence and declare

¹⁴ Morman, P. (2013, May 10). Schools and contaminated land: Michigan law and proposed legislation [PowerPoint slides]. From *Developing Policy on Environmental Quality, Schools, and Health in Michigan Conference*. Ann Arbor, MI: University of Michigan School of Natural Resources and Environment.

¹⁵ Ibid.

that they did not cause the contamination on a site; however, they are responsible for “due-care” obligations. “Due-care” obligations¹⁶ refer to the following:

- The new owner cannot exacerbate the existing contamination.
- The new owner must take measures necessary to prevent exacerbation of the existing contamination.
- The new owner must undertake responsive activity to mitigate unacceptable exposures to hazardous substances and otherwise protect public safety.
- The new owner must take precautions against reasonable, foreseeable acts or omissions of a third party and the resulting consequences.
- Local governments, including school districts, were historically exempt from due care obligations, however.

Construction of the Beard Elementary School in southwest Detroit in 2001 created a lot of excitement in the community; however, community members questioned the efficacy of the cleanup and filed a lawsuit to attempt to block the opening of the school. As a result, the state representative from the area proposed a bill in 2001 that required an environmental assessment prior to a school’s construction to prevent construction in hazardous areas. The legislature had a hearing, but the bill did not advance. In 2010, Representative Rashida Tlaib offered two bills stating that an environmental assessment must be completed prior to site acquisition or school construction; remediation must be completed if contamination is found; and the due-care exception would be eliminated in regard to a new or expanded school. The two bills passed the House, but they did not pass in the Senate. Part 201 of the National Resources and Environmental Protection Act was updated in 2010 eliminating the local government due-care exception if the governmental unit invites the general public to use the property, such as a school.

Currently, Representative Tlaib has introduced House Bill 4278,¹⁷ which addresses the following:

- The bill prohibits a school board from acquiring a site or constructing a “school building” on a site without first conducting a preliminary environmental assessment.
- The bill prohibits the acquiring of a contaminated site unless appropriately remediated.

¹⁶ Ibid.

¹⁷ House Bill 4278 is a bill to amend 1976 PA 451, entitled "The revised school code," (MCL 380.1 to 380.1852) by adding section 1264. Introduced by Reps. Tlaib, Banks, Roberts, Faris, Geiss, Durhal and Robinson and referred to the Committee on Education. Retrieved from <http://www.legislature.mi.gov/documents/2013-2014/billintroduced/House/pdf/2013-HIB-4278.pdf>

- The term “school building” includes an addition to an existing building or a recreational building.
- The bill specifies that the school board provide public notice of the environmental assessment results before acquiring a site or, if a site has already been acquired, before constructing a school building.
- A licensed professional engineer must sign off before construction can begin.

Mr. Morman stressed that multiple factors play into the bill’s success. Republicans, who now control the legislative and executive branches, showed little support for the bill in the 2010 vote. More bi-partisan support is needed to pass the bill. The bill needs organized effort to raise the profile of the issue. School environmental health is not a “top of mind” concern in Lansing; there has been a long history of inaction on this issue.¹⁸ Substantial education effort is needed for legislators to understand the significance of the issue and get this bill to the governor’s desk. The governor may be sympathetic, but the issue is not a high priority. For successful school siting policies in Michigan, Mr. Morman recommended the possibility of expanding the scope of the issue to address additional exposure pathways for children. Supporters could also seek action with the Michigan State Board of Education as an interim step since the Board has the authority to sign off on school construction and may have the political climate willing to cooperate.

Discussion and Recommendations

A fundamental barrier to policy change of environmental quality and school siting lies within the political landscape and climate of the legislature, which is notably anti-regulation under the current leadership. School environmental health is not a top concern of policy-makers. An example of this is a failed 2010 bill requiring an environmental assessment to be completed prior to site acquisition or school construction. Educating policy-makers about the pertinent issues of school siting is vital. Greater constituency involvement can also help to bring this issue to the forefront and garner bipartisan support. Cost-benefit analyses (CBA) are key in gaining support from decision-makers.

The legislative history of school siting is scant in Michigan, but recent efforts by Representative Tlaib (House Bill 4278) provide an opportunity for a positive change. Charter schools and schools under the power of the Education Achievement Authority (EAA) are included in Representative Tlaib’s proposed legislation. Owing to the current political climate, action is doubtful unless something unexpected happens. Otherwise, a power shift in terms of legislative control may be needed to

¹⁸ Morman, P. (2013, May 10). Schools and contaminated land: Michigan law and proposed legislation [PowerPoint slides]. From *Developing Policy on Environmental Quality, Schools, and Health in Michigan Conference*. Ann Arbor, MI: University of Michigan School of Natural Resources and Environment.

move related bills forward. The State Board of Education can also be encouraged to act in the interim for school construction decisions.

The challenging political climate of Michigan came up often during the breakout group discussions, and dictates when an initiative will be most effective. There is a lot of confusion on issues of power regarding school siting decisions and how best to influence decisions. Encouraging people to vote and working with voting groups to expand the school siting campaign is important. While the importance of cost-benefit analyses was stressed during the discussions, many people also expressed the significance of incorporating externalities and true costs of siting decisions when communicating with decision-makers. The growing awareness of sustainability and environmental conservation provides an opportunity to leverage school siting work. Also environmental literacy needs to improve among decision-makers and students, e.g. the Maryland State Superintendent of Schools approved a regulation requiring all high school students to complete one environmental literacy class.¹⁹

¹⁹ Maryland State Department of Education. (2011). *Environmental Education*. Retrieved from <http://www.marylandpublicschools.org/MSDE/programs/environment/>

School Facilities: Planning Perspectives

Mac McClelland, Otwell Mawby, P.C.

Meg Thomas, Safe Routes to Schools, Michigan Fitness Foundation

Andrea Brown, Michigan Association of Planning

Multiple steps for improving school facilities are being taken at different stages of Michigan's planning process. This panel discussed where school development is lacking and what procedures can help better school facilities during the initial stages of siting, construction, and implementation. Michigan's school facility planning is addressed at multiple levels, with suggestions for ways to improve the current agenda through construction, health-related actions, and local governance. Each of the areas embraces correcting school siting problems by establishing standards that all Michigan schools must follow. Mac McClelland, who is with the consulting engineering company Otwell Mawby, P.C., Meg Thomas from Safe Routes to Schools and the Michigan Fitness Foundation, and Andrea Brown from the Michigan Association of Planning presented information regarding issues where Michigan's school facilities planning is lacking, along with recommendations for how to better improve the school planning process.

Mac McClelland is the project manager of the consulting engineering company Otwell Mawby, P.C. in Traverse City, Michigan. Mr. McClelland's experience with school construction in Michigan led him to be part of the team for the Michigan Land Use Institute (MLUI) that issued a report of the causes and consequences of the Michigan school construction boom in the late 1990s to the early 2000s. Much of the development was due to Proposal A,²⁰ Michigan's tax reform policy, which shifted school operating costs from local millages to a two percent increase in the Michigan Sales Tax. School districts receive a per student allocation from the State for operations. Proposal A significantly reduced property taxes, and school districts immediately asked voters to approve construction bond issues. The number of bond millage requests doubled in the first year Proposal A took effect and over the next ten years. The total amount of debt under the bond fund tripled from \$4 billion to \$12 billion. In addition, school districts were able to use "shiny, new" schools to compete for students and the state aid they were allotted.²¹ Proposal A did not help to diminish the enormous inequities between school districts, which increased with the additional construction. A key finding of the report was that decisions regarding school construction were made by a few select people in most cases. "Free" feasibility studies offered by construction professionals skewed decisions toward new construction. As Stephen Lester and Steve Fischbach mentioned in their panel discussion regarding public participation, Mr. McClelland recognized that broad-

²⁰ Lockwood, A., Haas, M. P., Heidman, H., Morden, M., and Patchak-Schuster, T. (2002, Dec). School finance reform in Michigan: Proposal A: Retrospective. *Michigan Department of Treasury*. Retrieved from http://www.michigan.gov/documents/propa_3172_7.pdf

²¹ McClelland, M. (2013, May 10). Hard lessons: The causes and consequences of Michigan's school construction boom [PowerPoint slides]. From *Developing Policy on Environmental Quality, Schools, and Health in Michigan Conference*. Ann Arbor, MI: University of Michigan School of Natural Resources and Environment.

based citizen input was critical during the construction process. The MLUI report also acknowledged, as Mr. Fischbach noted with the Rhode Island Mayoral Academy Case, the misconception that it is cheaper to build new schools than to renovate old ones. School development planning and local land use planning are not connected, and Michigan doesn't have specific policies that either encourage or discourage neighborhood schools.

The state public planning policies have inadvertently encouraged unnecessary new school construction. To combat Michigan's current school construction process and all the while agreeing with Peter Morman's previous panel presentation, Mr. McClelland proposed that supporters should look to influence the Michigan State Board of Education and the State Superintendent, rather than seeking the state legislature's help. The State Board of Education and the State Superintendent have jurisdiction over school construction but exert little influence in the decision-making process. The State could start by providing technical assistance to local districts for expanding public input. They also should establish state level standards and require districts to submit plans for review and comment based on the existing standards. Mr. McClelland also recommended that the state government provide financial incentives to urban school districts for renovating existing properties rather than building new schools altogether.

Meg Thomas presented the Safe Routes to School program, working to make it safe and convenient for children to walk to and from school. The program is funded by the Michigan Department of Transportation (MDOT) and the U.S. Department of Transportation Federal Highway Administration. Fewer kids are biking and walking to school, and more parents are driving nowadays. "We've lost that community of walking to school," says Ms. Thomas. In a 2009 study, it was determined that 13% of students walk or bike to school, 44% are driven, and the rest are bussed in. In 1969, only 12% of students were driven to school.²² School travel by private vehicles accounts for 10 to 14% of morning rush hour traffic.²³ School siting issues and barriers hinder walking and biking. A generation ago, schools were smaller, averaging about 127 students, and located in community centers. Forty-eight percent of students walked or biked. Today, due to their site designs, most schools are not able to handle the traffic that surrounds them. Mega-schools, averaging about 521 students, are located on the fringes of towns with unintended consequences, such as increased wear and tear on roads, increased chance of accidents, etc.

Students and parents are discouraged from walking and biking because of traffic dangers. Another concern is the fear of crimes being committed against students when walking and biking to school or playing in their neighborhood. Reality and perceptions need to be addressed in each case. Ms. Thomas makes the case for school transportation to be redefined. A comprehensive transportation plan should include active transportations, such as walking, biking, and other non-motorized

²² Safe Routes to Schools. (2010). *U.S. travel data show decline in walking and bicycling to school has stabilized*. Retrieved from http://www.saferoutesinfo.org/news_room/2010-04-08_2010_nhts_release.cfm/

²³ Safe Routes to Schools. (2011). Table 2. Morning school travel by personal vehicle as a percentage of all travel in 2009. Retrieved from http://saferoutesinfo.org/sites/default/files/resources/NHTS_school_travel_report_2011_0.pdf/

modes of transportation, and support coordinated school health and safety plans. The plan should reduce the number of buses and bus routes needed and decrease the amount of parent-traffic around schools. An example of a transportation plan is the “walking school bus” or “bike train” where children are picked up on the way to school and dropped off at home at the end of the day by members of the community who lead the walks. The solution proactively addresses potential cuts to the budget: it is much cheaper to pay part-time walkers than to pay bus drivers. It is important to consider all costs, not just the initial costs. When making decisions regarding construction, consolidation, and reconfiguration, expansion and increased maintenance of roadways are expenses that raise taxes and affect communities. Transportation costs to school districts and individuals, and the reduced ability for families to be able to get their children to and from school easily need to be assessed.

Andrea Brown works for the Michigan Association of Planning (MAP), which is a 501(c)(3) organization, dedicated to promoting comprehensive, beneficial community planning for the residents of Michigan.²⁴ The organization’s mission is to focus efforts on education and training in planning and siting, making it clear why school siting is important to local public school planning. The Michigan Association of Planning adopted a school and local siting policy in 2005 that required more than a cursory sit-down with the site plan. Communication is a major issue for schools districts and local governments. The Michigan Association of Planning reached out to the Michigan State Department of Education for help. As a result of their efforts, State Representative Philip LaJoy sponsored a bill that required school boards to communicate with local township planning officials when expanding school building square footage by 20% or greater.²⁵ The bill passed in 2006. It may be a small step, but it is a step nonetheless.

Ms. Brown agrees with both Mr. McClelland and Ms. Thomas regarding the issue of financing the infrastructure that makes up school sprawl. “Who pays for the pipes to a school when it’s 20 miles away?” Ms. Brown asked. The answer is the taxpayer. Schools are unsustainable with the inefficient infrastructure and sprawl, and due to new construction and school sprawl, needed schools are closing elsewhere. Michigan’s Department of Community Health’s (MDCH) Healthy Kids Healthy Michigan’s (HKHM) Complete Streets ordinances and resolutions are being offered as solutions to the 20-mile-away question. The plans include adopting all modes of transportation, including walking, biking, etc., and Safe Routes to School is also being offered as a healthy alternative for transportation.

Discussion and Recommendations

²⁴ Michigan Association of Planning. (2005). *Michigan Association of Planning*. Retrieved from <http://www.planningmi.org/>

²⁵ Michigan Legislature. (2006, March 20). High school site plan review by local zoning authority. Retrieved from <http://www.legislature.mi.gov/documents/2005-2006/billanalysis/House/htm/2005-HLA-5479-3.htm/>

In the past two decades, school construction has shifted dramatically in Michigan, with a school construction boom in the late 1990s that favored new schools over renovations to a more recent stagnation in school construction. This shift has also favored schools located in neighborhood fringes, making active transportation, e.g. walking or biking, to school difficult. However, communities with little or no wealth and that cannot afford to travel long distances to schools can encourage school districts to build schools on the fringes of communities with bus drop-offs not directly on the school property but located a few blocks away. This allows schools to diversify, and reap the health benefits of walking.

Many concerns of traffic and safety dangers discourage walking and biking to school. Safe Routes to School promotes children walking together in groups to school. Harvey Hollins III, the Director of the Office of Urban and Metropolitan Initiatives for the State of Michigan, and the Michigan Safe Schools Initiative, a workgroup made up of local, state and federal agency representatives and Michigan residents, use holistic approaches to address blight, safety, and walkability for students. The goal is to redevelop school sites, clean them up, and reuse them, rather than just abandoning them. Less vacant properties and more active spaces help to decrease crime.

An incentive for school districts to renovate existing schools or properties, particularly in urban areas, could be useful. A barrier is the common misconception that it is cheaper to build new schools than to renovate existing schools. School transportation needs to be redefined to include active transport and coordinated plans. Successful change needs to improve communication between school districts and local governments. The discussion of planning new school construction needs to include monitoring during the construction phase, including both the physical aspects of the school and the financial aspects of the construction. Michigan seems to be primarily concerned with addressing minimum construction and fire code standards. The state needs to consider what roads schools are being built on and what newer urban design standards are being considered. There are construction bills available to be proposed to the state legislature, but the political climate is keeping those bills from being picked up. Public input should be considered for the construction and review of new schools. Bulletin 412 states that policies need better site design standards.²⁶

The issue of true cost²⁷ considerations and externalities discussed in the breakout sessions highlight some of the concerns around transportation and school locations in relation to neighborhood centers. Concern for students of “special needs” schools (schools for the physically disabled, deaf, etc.) is increasing as more of those schools are closing in Detroit due to coffers decreasing. A system to compare costs of remediation, new school construction, renovation, and not building new schools is necessary. As concerns rise about obesity and sustainability, redefining school transportation provides a unique opportunity to acquire community support.

²⁶ *School fire safety: school bulletin 412-revised*. (1973). Lansing, Michigan: Department of State Police, State Fire Safety Board.

²⁷ True cost economics refers to an economic model that includes the cost of negative externalities with the costs of goods and services. Retrieved from <http://economictimes.indiatimes.com/definition/true-cost-economics>

Schools can also play a role as emergency centers or shelters in climate change impact planning, as an additional way to collaborate with local governments.

School Facilities: Management and Practice

Elena Herrada, Detroit Public Schools Board of Education

Michelle Fecteau, State of Michigan Board of Education

Sandra York, Michigan Parent Teacher Association

This panel discussed the state and local educational agencies who are championing for healthy and safe school sites, facing financial barriers for educational funding, and informing the public about how to advocate for better schools. The success of school siting policies in Michigan will rely on those people who are working in the different tiers of education offices throughout the state. Officials from the school administrations to the State Board of Education are witnessing both the presence and the absence of policies to efficiently run the siting process. Elena Herrada from the Detroit Schools Board of Education, Michelle Fecteau with the State of Michigan Board of Education and the American Federation of Teachers, and Sandra York with the Michigan Parent Teacher Association offer insight from their experiences at the administrative level and the relationships that they have formed with community members to help the children of Michigan have healthy and safe schools.

Elena Herrada is a member of the Detroit Public Schools Board of Education. She testified that the Sugar Law Center wanted to sue the Detroit Public Schools for allowing the New Beard Elementary School, currently known as the Roberto Clemente Learning Academy, to be built on a contaminated site. The Center could not find any plaintiffs for the lawsuit: no one wanted to sue because the district had a shiny, new school. The tearing down of schools in Detroit has created many problems for students throughout the city. It has forced students to attend schools, such as the New Beard Elementary School, despite their sites being contaminated and has created racial tensions between Hispanic and African American students. In such cases where the schools were housed on contaminated sites, officials did not even require for the remediation process to be completed while students were not in session. For example, the Waldrige Construction Company removed asbestos while students were occupying the Beard School. The Board tried to file a complaint, but there is no state action committee. The Detroit Public Schools Board of Education is lacking the power and authority to better the school environments. Too many lawsuits against the Board of Education have made it cautious and weak. Ms. Herrada recommends that test scores should include considerations for students in poor study environments, such as those similar to the Beard School. Affirmative environmental action needs to be taken.

Michelle Fecteau is a member of the State of Michigan Board of Education.²⁸ Because the State of Michigan Board of Education is an independently elected body, it can be challenging to coordinate with the governor. The State of Michigan Board of Education appoints the State Superintendent whose job consists of overseeing day-to-day functioning of the Department of Education, which includes granting and revoking teacher licenses; approving teacher preparatory programs at colleges and

²⁸ Ms. Fecteau was elected in November 2012, and her term began in January 2013. Board members serve eight year terms and are unpaid.

universities; approving administrative rules detailing implementation of state laws; waiving some administrative rules; and approving/disapproving deficit elimination plans, district boundary changes and annexations, district consolidations, charter school contracts, and intermediate school district special education plans. The State of Michigan Board of Education has had difficulty exercising authority over charter schools.

Because Michigan is a “local control state” (or “Home Rule” state), local school districts have significant powers when it comes to their administrative duties. Some of these duties consist of determining how to spend their state and local school funds, owning or leasing their school facilities, and operating and maintaining school buildings. Due to a lack of funds, particularly in low income districts, many school districts have significant financial pressures including state-required deficit elimination plans, forcing schools to look for the most affordable places to locate schools, or making it financially difficult to ameliorate environmental hazards. A recent example of efforts to further cut education costs is the development of lower cost models for public school education. The state government was seeking to save money by reducing per pupil funding to \$5,000 through online education, in which costs go down as teaching staffs decrease.

Sandra York is the Executive Director for the Michigan Parent Teacher Association (PTA) whose motto is “Every child, one voice.” The Michigan Parent Teacher Association has been in operation for 95 years and has a grassroots advocacy training program that teaches parents how to promote better schools for their children. Parents need to be in the policy-makers offices daily, making a case for schools and their children. Ms. York says, “The first day you talk to your child’s teacher, you’re an advocate.” Supporters for school siting policies and healthy learning environments need to look at not just the local goings-on but also the regional and global spheres. School siting is important because society has only become more transient. People will move more in the future, making this issue of healthy schools more important. The National Parent Teacher Association’s position statement on environmental health and safety “urges its members at all levels to monitor, support, and advocate for laws, regulations, and programs that . . . [e]liminate environmental pollutants and prevent new hazards . . . protect children from health risks by testing for specific hazards in and around homes and schools and, if hazards are found, by limiting exposure and addressing remedies . . . [r]equire comprehensive right-to-know and public information provisions in environmental laws and policies . . . [i]mprove the quality of our physical environment by securing and monitoring the enforcement of stricter health and safety standards for contaminants and pollutants . . . [s]upport research and data collection about environmental hazards and health risks [*et al.*].”²⁹ Ms. York invites people to contact her about any future legislative efforts and to send her information.

Discussion and Recommendations

²⁹ For the complete text of the position statement, please see <http://www.pta.org/about/content.cfm?ItemNumber=1293/>

School closures and demolitions in Detroit have raised concerns among parents, students, and teachers and have forced students to attend schools that may be located in hazardous areas. Legal action is difficult to pursue, as in the New Beard Elementary School case, when some people are reluctant to sue and go against a new school in the district. There is no state action committee to bring concerns or file complaints to improve health for students. Even for the school board to voice their concerns, there is no committee, as demonstrated by a case in Detroit where environmental remediation occurred while students were in session. The Michigan State Board of Education lacks authority over charter schools and the ability to enact laws. During the breakout sessions, participants emphasized the importance of having charter and private schools under guidelines in school siting. School districts are also facing additional problems of limited funding and are often forced to look for the best bargain when in competition with lower cost educational projects.

School siting may be an important factor in the future as people seek out “healthy” schools for their children. To ensure the equitable distribution of test score-linked funding, test scores should account for students located in poor student environments. Parents need to be encouraged to make a case for their children to school districts and decision-makers. If parents are informed, if the constituency is informed, then the community will be empowered to protect their children. Scientific reports and bulletins need to be easy to understand. “Most of the time, when people disagree with something, it’s because they don’t understand why we’re doing it,” said Ms. York.

Supporters for school siting can partner with different statewide programs and organizations, such as the Michigan Parent Teacher Association (PTA). The Michigan Parent Teacher Association has great potential and is made up of 60,000 members within 400 schools, with the heaviest membership in southeast Michigan. The Michigan Parent Teacher Association also has a presence in charter schools. Teachers unions, ventilation systems unions, and the National Heritage Academies are examples of other groups to work with.

Environmental literacy could be a valuable resource, utilized to educate decision-makers, policy-makers, and the public about environmental issues and how to clean up polluted school sites. The state of Maryland provides an excellent example, requiring environmental literacy in its high school curriculums, which was instated by the Maryland State Superintendent of Schools. The new, next generation standards should make it possible to hear this conversation. The proposed Environmental Steward Program at the Beard Elementary School is an example of environmental literacy in Detroit: one student is elected to monitor the school’s environmental health while raising student body and public awareness of environmental hazards.

The panel discussions involved questions about where the authority to make school siting decisions in Michigan lie and which statutes need to be updated. The Governor of Michigan was seen by many to have more power than the State Board of Education in school siting decisions. For example, the Governor used an inter-local agreement, the same kind of agreement that he used for the international bridge, to

create the Educational Achievement Authority (EAA), a new public system that seizes failing schools and places them into a state-run school district.

To keep advocates of school siting policies motivated, issues and supported candidates need to win at the local levels to encourage people to continue voting. Organizers can create support groups that focus on similar issues. Political organizers need to hold officials and politicians accountable for what they said they would vote for or stand behind. An assertive campaign is needed to let people know what is going on. Many people do not believe there are problems with school environments because it is not seen. Supporters can create multi-year databases of information for their causes.

Potential Michigan Policies

Mozhgon Rajae, University of Michigan

Amy Marin, University of Maryland

Dr. Byoung-Suk Kweon, University of Maryland

This panel discussed Michigan's current school siting policy and siting criteria models found in the Michigan State Housing Development Authority and the state of California. Mozhgon Rajae and Amy Marin, graduate students at the University of Michigan and the University of Maryland, respectively, and Dr. Byoung-Suk Kweon, a professor of landscape architecture at the University of Maryland's Department of Plant Sciences and Landscape Architecture, highlighted recommended policies and actions taken through other initiatives throughout Michigan and school siting policies in other states.

Mozhgon Rajae is a graduate student in the University of Michigan School for Public Health and conducted a study with a team of graduate students at the School of Natural Resources and Environment on the current school siting policies in Michigan.³⁰ The study reported that Michigan has no regulations on school siting related to environmental health or quality, and there is a policy gap between environmental health and school siting in Michigan. Recognized in the *Hard Lessons* report completed by Mac McClelland's team, school construction on undeveloped sites generates many new expenses for infrastructure and government services, which eventually raise taxes for business and property owners, reiterating the concerns that Andrea Brown voiced in the previous Planning Panel discussion. The study conducted stakeholder interviews with individuals from California, Florida, Massachusetts, Michigan, Minnesota, New Mexico, New Jersey, North Carolina, and Wyoming. The goal was to gain insights, assess feasibility, and learn about the successes and potential barriers for establishing school siting policies. Eight common themes were reported:

- Inter-agency and government collaboration
- Long-term planning and true cost considerations
- Transportation infrastructure and student transportation
- Mandates versus guidelines
- Public involvement
- School building trends
- Funding
- Pollution and brownfields

The 16 recommendations in the report are divided into two policy categories: approach and evaluation. Authority and communication are critical aspects of the approach method. Statements need to be made regarding when policies are to be

³⁰ Brown, R., Etue, E., Fox, E., Rajae, M., and Schafrick, N. (2012). *Developing a Policy On Environmental Quality, Health, and Schools*. Ann Arbor, MI: University of Michigan School of Natural Resources and Environment.

guidelines, which decisions are recommended and not enforceable by the state, and which decisions are laws at the state level that are enforceable when overseeing local school siting processes. Ms. Rajae stated that public participation is critical, just as Stephen Lester and Mac McClelland had determined. Onsite and offsite factors, such as hazards in the soil and transportation, were key components of the evaluation method reported. The feasibility of implementing the policy recommendations must also be taken into consideration. The report offered multiple options and solutions for school siting policies that are directly applicable to the state of Michigan.

Amy Marin is a graduate student in the University of Maryland's Department of Plant Sciences and Landscape Architecture. Ms. Marin analyzed the Michigan State Housing Development Authority's (MSHDA) residential guidelines for environmental screening as a model for school siting policies in Michigan. The Michigan State Housing Development Authority provides financial and technical assistance to create and preserve safe and decent single and multi-unit affordable housing, requiring site-specific environmental screening for all development proposals being considered for financing. The environmental screening includes a Phase I Environmental Site Assessment (ESA) and a Phase II Investigation. The Phase I Environmental Site Assessment follows the American Society for Testing Materials (ASTM) E1527-05 Practice. The Michigan State Housing Development Authority has specifically identified "non-scope considerations"³¹, such as the presence of lead-based paint, the proximity to electromagnetic fields (EMF), and the completion of a noise analysis, to also be included in the Phase I Environmental Site Assessment. Existing hazardous site conditions, identified during the Phase I Environmental Site Assessment, are categorized as being either negative site impacts or recognized environmental conditions (REC) and must be addressed in the Phase II Investigation.

Dr. Byoung-Suk Kweon, a professor with the University of Maryland's Department of Plant Sciences and Landscape Architecture, presented California's School Siting Policies as an example of an existing, statewide school siting policy. Multiple agencies, like the School Facilities Planning Division (SFPD), the Department of Toxic Substances Control (DTSC), and the Division of State Architect (DSA), play significant roles in the school siting process, headed by the California Department of Education (CDE). To help focus and manage the site selection process, the California Department of Education developed screening and ranking procedures addressed in the order of importance as stated in the *California Department of Education Site Selection Criteria Application*:

1. Safety
2. Location
3. Environment
4. Soils
5. Topography
6. Size and shape

³¹ "Non-scope considerations" refer to those factors that are beyond the capacity of the assessment or investigation but may warrant discussion between the environmental professional and the user. Retrieved from <http://www.astm.org/Standards/E2247.htm/>

7. Accessibility
8. Public services
9. Utilities
10. Cost
11. Availability
12. Public acceptance

Siting criteria list specific proximities and distances from environmental and natural hazards that school sites are allowed to be located. The cost of infrastructure and public services is considered during the siting process. While California's school siting policy is extensive, it is not completely comprehensive: charter and private schools need to be considered in the siting process; there is a lack of public involvement in the approval process; and the statutes and regulations for siting criteria should be more centrally located for ease of accessibility to the public.

Discussion and Recommendations

Issues of the cost of land, the costs to a municipality, parents, taxpayers, and children's health should all be considered in school siting decisions. A difficulty in developing policies, particularly with prohibitions and strict limitations, is determining distance requirements of school sites to hazardous sites or polluting facilities. Minimum distances are not well-informed by science and policies vary from state-to-state; however, as a state effort to base decisions on well-informed scientific data, the State of California conducted its own exposure study to determine safe distances from electromagnetic fields (EMF). California's adoption of a school siting policy raised questions among conference participants about what factors trigger such policy development. California first took action on setting a school siting policy in the 1960s, but it was a school siting fiasco that spurred a comprehensive policy. The Belmont School, built on an abandoned oil field and fault zone, eventually cost the state over \$500 million in development, construction, demolition, and reconstruction expenses. Minimally, Leadership in Energy and Environmental Design (LEED) standards can be applied.

Decisions on school closure, not just siting new schools, were highlighted in the recent book, *School Siting and Healthy Communities*.³² The closing of schools can lead to neighborhood destabilization and eventual blight. Remediation costs for new school sites should be weighed against the cost of closing an existing school. Charter schools have been cropping up recently, furthering this school closure problem. The privatization of government-run schools presents policy and regulatory loopholes that must be addressed.

There are key issues that need to be addressed in policies on school siting and environmental quality in Michigan, including inter-agency and governmental collaboration, long-term planning, transportation, true costs, and public participation. An update of the current school siting policies around the United States

³² Miles, R., Adelaja, A., and Wyckoff, M. (2011). *School siting and healthy communities: Why where we invest in school facilities matter*. East Lansing, MI: Michigan State University Press.

would help to understand what policy changes have occurred and could provide examples that Michigan can follow. California is a prime example of a state with a statewide school siting policy that places safety as the number one factor in school siting decisions. California's policies, however, lack a public involvement component and exempt charter and private schools. The Michigan State Housing Development Authority's residential guidelines, which provide technical and financial assistance to create and preserve safe, affordable housing (including Phase I and II Environmental Site Assessments), provides a model for school siting policy in Michigan. Many issues of collaboration, planning, transportation, true costs, and public participation came up often in the breakout sessions.

Community Health and Engagement

Rhonda Anderson, Sierra Club and Ryan Stock, University of Michigan

Donele Wilkins, Green Door Initiative

Michelle Martinez, Consortium of Hispanic Agencies

Kimberly Hill Knott, Detroiters Working for Environmental Justice

This panel discussed the roles played by community organizers in the cause to help underserved communities who are facing environmental injustice in regards to schools in Michigan. Many community groups and organizations are working on the ground to improve the health of Michigan's schools. The relationships established between residents of affected communities and these organizations are crucial in spreading the word and communicating with city and state government officials. These organizations assist communities in developing their own voice to speak for themselves and realize their own power. Rhonda Anderson with the Sierra Club, Ryan Stock with the University of Michigan, Donele Wilkins with the Green Door Initiative, Michelle Martinez with the Consortium of Hispanic Agencies, and Kimberly Hill Knott with Detroiters Working for Environmental Justice discussed their roles in working with underprivileged and undervalued communities that are fighting to clean up Michigan's school environments.

Rhonda Anderson, an environmental justice organizer with the Sierra Club, and Ryan Stock, an environmental justice intern and graduate student of the University of Michigan's School of Natural Resources and Environment, wrote a synthesis report *The State of Detroit's Environment*, drawing attention to environmental justice issues in Detroit and highlighting the main problems under the categories of census data, health issues, and the city. They addressed that the *New York Times'* "Mapping America" highlighted racial and class segregation in Detroit. As quoted from the sociologist and environmental justice advocate Robert Bullard, "Which has the greater health disparities: race or class?" The history of race and racial discrimination plays a major role in the current segregation of Detroit, despite the passing of the Fair Housing Act in 1968.³³ There are higher rates of asthma and cardiovascular disease in Detroit with African American and Hispanic students being the most exposed to pollution. The zip code 48217, whose population is made up of 88% African American and 25% below the poverty line, is the most polluted zip code in the state of Michigan. Ms. Anderson and Mr. Stock recommended fighting these environmental injustices by educating the public. Ms. Anderson reiterated, "People often already know the problems, but what they lack is the facts and information of what to do with it." The Michigan Department of Community Health (MDCH) provides data and reports that communities can access to become informed and empowered.

Michelle Martinez is the Public Policy Associate for the Consortium of Hispanic Agencies, which is made up of six Latino-run, Latino-serving organizations that help

³³ Title VIII of the Civil Rights Act of 1968 (Fair Housing Act), as amended, prohibits discrimination in the sale, rental, and financing of dwellings, and in other housing-related transactions, based on race, color, national origin, religion, sex, familial status (including children under the age of 18 living with parents or legal custodians, pregnant women, and people securing custody of children under the age of 18), and disability. Retrieved from <http://www.justice.gov/crt//about/hce/title8.php/>

seed and support the Latino agenda in Detroit. The city saw a huge influx of Latino immigrants into southwest Detroit after the North American Free Trade Agreement (NAFTA).³⁴ About 40% of the southwest Detroit population is Hispanic with an average income of \$16,000. Ms. Martinez explained the pressures that are faced by Hispanics in Detroit: crime and safety in neighborhoods, the lack of ability to engage in the political discourse, the lack of security in Detroit, and facing racial profiling and criminalization. “There is this constant feeling of disenfranchisement,” referring to people’s impressions that voting does not lead to results. Ms. Martinez advocated for a vertical analysis of school siting issues of power and authority. The democratic system needs to be part of the school siting agenda. “How do we create spaces where truth actually resonates?” she asked. Communities and activists need to discuss actions and strategies that strengthen the relationship between academics and communities.

Kimberly Hill Knott is a Senior Policy Manager for Detroiters Working for Environmental Justice (DWEJ), whose mission is to work with communities to create cleaner, healthier and safer neighborhoods. In 2011, Detroiters Working for Environmental Justice convened with key stakeholders from diverse backgrounds to form the Detroit Climate Action Collaborative (DCAC), tasked with developing the City of Detroit’s Climate Action Plan (CAP).³⁵ The Detroit Climate Action Collaborative is currently conducting a greenhouse gas inventory of municipal emissions from all local government owned- and controlled-operations and of community emissions from civic activities such as energy, transportation, agriculture, industries, and waste. The Detroit Climate Action Collaborative partnered with the University of Michigan Taubman College of Architecture and Urban Planning to conduct a vulnerability assessment for Detroit that focused on extreme heat and flooding, and identified places and populations in Detroit that are most at risk from specific effects of climate change. The Great Lakes Integrated Sciences and Assessments (GLISA) has published the first Detroit climatology report, “which evaluates climate trends related to temperature, precipitation, air quality, flooding and stormwater management, water quality, and impacts to transportation infrastructure.”³⁶ There are six workgroups in the Detroit Climate Action Collaborative: Solid Waste; Homes and Neighborhoods; Parks, Public Space and Water Infrastructure; Energy; Public Health; and Business and Institutions. Each workgroup will contribute to a section of the final report by developing mitigation and adaptation strategies. The Detroit Climate Action Collaborative has partnered with the Great Lakes Environmental Law Clinic at Wayne State University to develop policy recommendations to support the plan that is

³⁴ Implementation of the North American Free Trade Agreement (NAFTA) began on January 1, 1994. This agreement removed most barriers to trade and investment among the United States, Canada, and Mexico. Under the NAFTA, all non-tariff barriers to agricultural trade between the United States and Mexico were eliminated. In addition, many tariffs were eliminated immediately, with others being phased out over periods of 5 to 15 years. This allowed for an orderly adjustment to free trade with Mexico, with full implementation beginning January 1, 2008. Retrieved from <http://www.fas.usda.gov/itp/policy/nafta/nafta.asp/>

³⁵ Mrs. Hill Knott is currently the Project Director of the Detroit Climate Action Collaborative.

³⁶ Detroit Climate Action Collaborative. (n.d.). *Detroiters Working for Environmental Justice*. Retrieved from <http://www.dwej.org/campaigns/dcac/>

developed. Mrs. Hill Knott identified potential opportunities with educators to engage Detroit youth in climate action plans, such as public service announcements (PSA), recycling programs, and sustainable cooperatives. A strategic plan must be implemented to approach people and gather support to achieve a common goal.

Donele Wilkins is the President and CEO of the Green Door Initiative, an environmental justice organization that “works to ensure that every person is environmentally literate [and] capable of practicing and promoting sustainability as a life style.”³⁷ “Science can sometimes be a backlash to the environmental justice movement,” Ms. Wilkins pointed out. Multiple layers make up the political movements for community causes, such as environmental justice. There are grassroots and grasstops. Grassroots are the actions taken by community members to improve situations. Grasstops are organizations that reflect and represent the goals of the grassroots organizations; they communicate directly with the political officials, acting as intermediaries. Encouragement is constantly needed to keep action committees engaged. Like Michelle Martinez stated, community members need to see that their actions are creating results in order for people to continue fighting for causes. “There have been major and magnificent movements that faced monumental tasks, but even so—even so—they didn’t allow that to defeat them or deter them,” said Ms. Wilkins. Supporters of school siting issues need to stay determined despite the mountains of work that lay ahead. Successes keep people motivated: community organizers should encourage people to work in small groups. According to Ms. Wilkins, “When we do not engage real grassroots folks, we fail.”

Discussion and Recommendations

Language is critical in connecting people to a cause and keeping them informed, making language translational services key. Funding for translations should be worked in at the start of funding processes. Title VI³⁸ compliance requires any federally funded entities, such as schools, to provide translations. The National Committee for Responsive Philanthropy is a grassroots and grasstops organization that reports funding issues and inequality among other philanthropic and non-profit organizations. Engagement strategies with Latino and other minority groups are key to building bridges and consensus. Science “translation” can also be problematic, as communities can come into disagreement with academics or researchers.

The role of community organizations is pivotal in engaging people and ensuring that their voices have the opportunity to be heard, particularly in immigrant communities. A barrier to public engagement lies in disenfranchisement, as people may not see results for their actions and voting. School closures can highlight historical realignment and discrimination, particularly in minority communities. In

³⁷Green Door Initiative Detroit. (n.d.) *Green Door Initiative Detroit: About*. Retrieved from <http://greendoorinitiative.org/>

³⁸ Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d; 28 C.F.R.) requires that any federal or state agency receiving federal financial assistance to take reasonable steps to provide information or services, if necessary, in a language other than English to ensure the public is effectively informed and able to participate in a program. More information can be found at <http://www.justice.gov/crt/about/cor/coord/titlevi.php>

Detroit, issues of racial and class discrimination still exist, and can make people wary of certain organizations or academics. It is important, however, that these relationships are strengthened. Detroit is also faced with additional issues around crime and safety, racial profiling, and the inability for some immigrants to engage in political discourse. As Detroit develops its Climate Action Plan and other organizations develop environmental justice projects, there is an opportunity to engage various groups of the community, especially youth, to create public service announcements, and to work with sustainability efforts.

In the environmental justice movement, there can be distrust of the scientific community and industry reports that can confound issues when attempting to express causality of exposures and diseases. These were discussed as a barrier to working with the science and business communities.

Breakout Sessions

The breakout sessions were conducted on the second day of the conference. Conference participants were separated into three groups, in which they were to discuss the questions in bold below. The groups were instructed to evaluate the information presented during the conference and to propose steps that could be taken in the future for advancing a school siting policy in Michigan that takes into account environmental quality. A discussion leader and a note taker were chosen in each group to keep the participants on task and to record the highlights of the session, respectively.

What opportunities and challenges do you see in trying to develop momentum on policy development around this issue?

Opportunities in developing momentum and policy on school siting include cost-benefit analyses, student involvement and growing awareness of environmental and health issues. Cost-benefit or life cycle analyses that factor in external costs of pollution to education and medical care, and specifically that examine the costs of clean up to the costs of leaving a site contaminated, need to be addressed to garner more attention. Students should be engaged early as environmental stewards and a strategy developed to determine how to increase environmental literacy (like Maryland's new program), improve national standards in science and to involve student voices. There are numerous opportunities as awareness and interest in sustainability and the environment grow for us to seize educational awareness and messaging opportunities and to review urban agendas and ensure that schools fit into them. We need to tap into various government agencies and reach out to champions within and figure out a strategy to work with them. With an emphasis on climate change impact planning, schools can play a unique role as emergency centers or shelters.

An initial challenge is for us to specifically identify the policy question and goals and to have a clear vision for them. There is a need for public education, as many people simply do not know about issues around school siting and environmental quality. We need to be able to speak to different audiences and decision-makers and to address issues of economics and costs—examining long-term costs of siting changes, greenfield v. renovation, health impact benefits, etc. Using residential standards as guidelines for school siting is one avenue to explore. Knowing the power structure and who the decision-makers are is key, but there are still issues of government fragmentation in the decision-making process, and unknowns about where pockets of support lie. The state politics in Michigan can make the introduction of a policy difficult. Champions within government should be identified and their input sought after. Issues of voter suppression, low voter turnout, and social injustice should be addressed for creating a successful school siting campaign. Funding issues play an important role and pose challenges. With the increasing numbers of privatized and newly constructed charter schools, independently funded schools should be included in the proposed policies from the very beginning. Issues around

school closure can be contentious, touching on issues of relocation, historical realignment, gentrification and sensitivity to community marginalization.

What is the best timing on approaching policy development and implementation?

There is no “best timing” for developing a policy on school siting in Michigan. There must be short and long-term goals and workgroups dedicated to reaching these goals. We need to determine where the best place is to start the school siting campaign: at the gubernatorial, legislative, or local levels. Also, we should determine if any pilot programs or studies to address data gaps are needed. As pollution is not relegated to a one-state-only issue, surrounding states can be integrated into policy development. The reduced construction of schools makes this an opportune time to take action.

What are the trends in educational policy in Michigan and future trends? How do national trends impact the state climate and policies?

There are data gaps on educational policy trends nationally and in Michigan. We need an update of the policies nationally, by state, and to understand what the pressures are to consolidate schools (if any). A schematic of decision-making for school closure or district contraction would help to address issues facing many Michigan school districts and how we can influence closure decisions from a siting perspective.

The rise of the Emergency Management Association and privatization of education is an issue of concern in policy development. There have been considerable developments recently on school siting through the U.S. Green Building Council’s (GBC) school LEED program in 2010 (Center for Green Schools), the National Green Ribbon Schools, the U.S. Environmental Protection Agency’s voluntary guidelines, and action in various states (California, Arizona, Indiana, Georgia, Maryland, etc.). In Michigan, school funding schemes have changed, and the political climate is not favorable to regulations, environmental or otherwise.

What additional topics should be discussed at future conferences focused on developing policy on environmental quality, health, and schools in Michigan?

Other topics included an analysis of power and decision-makers and actionable strategies that can be taken to enact policy change. A discussion of health and environmental needs, available data, and communication would also be beneficial.

Throughout the conference, it was emphasized that we needed a deep analysis of power and process for school siting in Michigan to achieve our goals. This includes a review of local and state decision-makers, existing regulations, the funding infrastructure for school construction and siting decisions, and whose authority private and charter schools fall under, and how siting decisions are made. Decision-making includes building new schools, renovating existing schools and remediation

decisions, and having a schematic to display decision-making for school closure or district contraction would be beneficial. The role of voting patterns, gerrymandering, and dividing presidential votes by congressional district is also important.

Before moving forward with this policy endeavor, a discussion around goals of tactics and hierarchy are needed to form consensus. A two-day conference solely on *actionable* solutions targeting policy recommendations, identifying limits and capacities, and communication strategies are needed. Strategies focused on how to reach out to entrepreneurial innovation and green technologies are also necessary for helping to address environmental quality issues in and around schools. Create criteria for “green” schools to learn from schools that have aligned with a “green” agenda, and to encourage a more holistic approach of school sustainability that incorporates environmental health of school areas. An emphasis should be placed on how to improve community organizing and community benefit agreement impacts. The exemption of charter schools in policies must also be addressed.

An additional focus is needed on other areas of health, including psycho-social, emotional, and mental health needs. Climate change and resiliency should also be addressed. A remaining question is how to address environmental remediation and future needs to de-stress school systems. There are considerable data available, and it would be beneficial to have a demonstration on technology and data mining, as well as an overview of the data gaps. Participants could benefit from understanding how they can be environmental monitors for schools. Emphasis should also be placed on how we should be forming messages, how to raise visibility and public support effectively, and how to engage children to be good environmental stewards. A session on the comparative costs of new siting, renovating existing buildings, not building, and remediation would help to underscore the pervasive issue related to costs.

What other issues should be addressed in a school siting policy?

Conference participants addressed other issues that should be addressed when developing a policy on school siting and environmental quality, particularly around environmental health, funding, communication, and school education.

Environmental health and quality:

- Install and use air quality monitors and filtration systems
- Require regular air, soil, and water testing
- Require solar panels, wind mills, and other renewables to be standard on new schools
- Consider building codes, LEED green building, and retrofits for schools to improve energy efficiency
- Preserve natural areas within safe walking distances of schools for exploration and study
- Consider evacuation plans and routes
- Prohibit the construction of facilities that may pose environmental hazards to schools

Funding related:

- Consider a diverse range of funding sources
- Create a clearing house for funding information and distribution of funds

Communication:

- Provide community reports in languages of the community
- Consider how to inform families and children about a school's status

School education:

- Utilize the *What's Good in My Hood?*³⁹ program
- Give input into the next science curriculum revisions
- Provide techniques or training for teachers on how to teach children with lead-pollution damage
- Provide a program that introduces kids to books or have special, free programs specifically in high-lead areas (like the Children's Environmental Health Initiative in North Carolina) to combat cognitive decline that may occur from lead exposure

What other stakeholders should be included in future conferences of this type? How can we tap into national organizations and unions?

Stakeholders should be engaged from national, state and local organizations and government agencies, including school agencies (unions, associations, boards, etc.), businesses, health groups, and media. Conference participants mentioned the following organizations and agencies:

National Organizations

- National Institute of Health (NIH)
- Center for Disease Control (CDC)
- National Institute of Occupational Health (NIOSH)
- National Institute of Environmental Health Sciences (NIEHS)
- Agency for Toxic Substances and Disease Registry (ATSDR)
- Occupational Safety and Health Administration (OSHA)
- U.S. Environmental Protection Agency (EPA), including Region V EPA and EPA's Children's Health Protection Advisory Committee (CHPAC)
- National Business Officer Association
- National Association for School Superintendents (NASS)
- National Business Administrators for School Districts
- League of Women Voters
- National Association for the Advancement of Colored People (NAACP)

State and Local Agencies

- Michigan Department of Environmental Quality (MDEQ)
- Michigan Department of Community Health (MDCH)

³⁹ For further information, please refer to http://www.nyrp.org/Kids_Parents_Teachers/Whats_Good_In_My_Hood_

- Michigan Occupational Safety and Health Administration (MIOSHA)
- Michigan League of Conservation Voters
- Michigan League of Women Voters
- Michigan Department of Transportation (MDOT)
- State Attorney General's Office
- Local health departments

School-related Groups

- School superintendents
- School board members
- School nurses association
- Students who are in schools that are being affected by pollution and environmental hazards
- Education/social workers
- School administrators
- School teachers and unions
- School staff (maintenance, transportation, facility, other staff) and unions
- Education associations
- Business administrators of schools and districts
- Michigan Association of Charter Schools
- Detroit Public Schools
- American Federation of Teachers (AFT)
- National Education Association (NEA)

Businesses

- Green entrepreneurs
- Representatives from industries
- Architectural consulting firms that design schools

Organizations

- Daycare, pre-schools, and nursery facilities
- Youth groups and leadership groups
- Green faith movement
- Health professionals and associations (doctors, nurses, cardiologists, oncologists, etc.)
- Health-affected groups and associations (environmental justice groups)
- Insurance companies
- Michigan Children, other children's advocacy groups
- U.S. Green Building Council (USGBC) or other standard setting organizations
- Other grassroots groups from other areas of the state (beyond southeast Michigan)

Individuals

- Parents, grandparents

- Bring in people and parents who have experienced success to applaud and learn from, such as residents from North Tonawanda, New York and Portland, Oregon (how did they inspire people?)
- Academics of Michigan State University's K-12 Educational Administration Program
- Michigan Office of Urban and Metropolitan Initiatives Director
- Law professionals
- Executive Director of Science Education, Detroit Public Schools (look at next generation science standards)
- U.S. Secretary of Education

Media:

- National Public Radio & Television
- World Health Organization (WHO)
- Perhaps consider having smaller meeting sessions with those groups who are hesitant to meet; enlist environmental media and reporters to help promote ideas

To effectively engage with national organizations, we should identify who the champions are in these organizations. While many groups should be engaged, more active groups should be prioritized. We should identify groups' goals, resources, and mission statements before engaging them.

What recommendations do you have for moving this issue forward? What do you envision as next steps?

To move this policy forward effectively, short, intermediate and long-term goals must be taken. The foremost steps are to develop a structure of how to move forward. The goals must be defined explicitly, as mentioned earlier, to help determine what the next steps should be. A timeline of achievements and goals should be created. Key working groups should be developed to expand the issues. Possible groups include:

- Groups by activities:
 - Research group
 - Immigration multicultural group
 - Political action group
 - Sustainability environmental action group
- Groups by topic:
 - Siting
 - Remediation
 - Public participation
 - Transportation

More information is needed to address data gaps and help support policy development. Specifically, it would help to have visual aids (e.g. maps, charts, tables) to more easily display information, such as a flowchart of the structure of the

governance of Michigan schools or a map displaying Michigan schools that would meet the criteria under California's school siting policies. We need an analysis of educational policy trends and projections, an update of the other 49 states' policies, and a model to represent school criteria in Michigan.

Intermediate next steps include an assessment of our capacity resources (time, energy, money, expertise, etc.) and what can be leveraged. Participants should be trained on data mining techniques, geographic information systems (GIS) and/or displaying information effectively. We should recommend funding to partner groups. More long-term goals include participation with Detroit Future Cities Plan (and other similar initiatives) and encouraging schools as emergency shelters/planning centers. Legislation on conflict of interests is also needed. School superintendents and architects should be educated on environmental laws and concerns.

Efforts should be made to engage with other stakeholders in the future, including health groups, students, and families. We can engage with the Healthy Kids/Healthy Michigan program for walkable communities. Students should be engaged to learn about their own school environments (and potential hazards). State science standards should be revised to improve student environmental literacy. Parents, grandparents, and other guardians should be engaged to help promote this issue and work with their political representatives. Pre-schools and Head Start Programs should also be engaged.

Recommendations and Conclusion

Prevention of environmental and industrial hazards in school areas is critical in ensuring healthy children. Recommendations from the panel discussions and the breakout sessions were collected to determine what the next steps are for establishing a statewide school siting policy in Michigan. Those important proposals are presented in the following paragraphs.

A stakeholder group should be formed to propose legislation, regulations, and policies to the Michigan State Board legislature regarding school siting issues. The stakeholder group can be composed of individuals and professionals from the environmental and environmental justice communities, who will provide substantial education to legislators concerning the significance of the issues. The environment is often a low priority compared to cost-related factors for school officials when devising land use policies and zoning codes regarding schools. While environmental cost-benefit analyses are critical for gaining support of legislators and policy-makers, incorporating externalities and true costs of siting decisions is also important when communicating with decision-makers. It is also necessary to expand the scope of the issue to address additional exposure pathways for children. Children's health-related research involving blood lead levels in Detroit, Michigan, ambient air quality in schools, and air pollution risks to school children are excellent educational sources for keeping the public and politicians informed. Multi-year databases should be created to support the cause.

The community also plays a key role in environmental advocacy. Parents need to hold local school districts and policy-makers accountable. Greater constituency

involvement can help to bring this issue to the forefront and garner bipartisan support. Engagement with minority groups can help build consensus. Organized efforts can raise the profile of environmental bills. Encouraging people to vote and working with voting groups to expand the school siting campaign is important. Supporters could seek action with the Michigan State Board of Education as an interim step since the Board has the authority to sign off on school construction and may have the political climate willing to cooperate. Supporters and the public need to be reminded of successes to stay motivated and to affirm that their actions can create results. Individuals and organizations need to partner with state programs and organizations to leverage efforts. Involvement with students, families, educators, administrators, organizations, and community groups are pivotal for gaining awareness and momentum. Organizations need to engage the community in climate action plans, public service announcements, recycling programs, sustainability initiatives, etc.

Communication between school districts, local governments, and the general public is critical in the development of school siting policies. Statutes and regulations on school siting should be centrally located for easy public access. The State should provide technical assistance, such as funding for language translations of reports and communications, to local districts to help expand public input. Scientific reports, bulletins, and maps are powerful tools for presenting data and need to be easily understandable. Health reports available through the Michigan Department of Community Health should be utilized.

Comprehensive school siting policies should approach environmental issues from multiple directions, allowing for redundancy to improve safety. The U.S. Environmental Protection Agency's voluntary school siting guidelines and the Michigan State Housing Development Authority's residential guidelines for environmental screening can act as models for a multi-phase school siting policy in Michigan. First, a school siting committee, made up of teachers, administrators, professionals, etc. that are involved in every step of the process should be created to keep the public engaged and informed throughout the entire environmental review. Next, a public meeting or "public consultation" should solicit public comment on how the site assessment should be completed, to receive insight from the community about a site's previous history and the community's firsthand experience with the location, and to allow people to address issues that need to be investigated on a site. Then a Phase 1 Environmental Review should review the public records of a particular site and determine whether further investigation is needed. Next a site investigation should locate all sources of pollution, including sources of air pollution, to thoroughly assess air toxics. Categorical exclusions and cleanup goals for contaminated sites should be part of the siting process. Guidelines should select the most stringent remediation levels in effect for any contaminant found on site, with long-term monitoring as part of the standards. A last resort option should exist in the school siting process when no other option is available, such as in urban areas where location choices are limited. Finally, school project sponsors should be required to complete a publicly vetted written report that addresses the following: the costs of using the site and remediating it to residential standards, the time required to complete the remediation tasks, and a statement for why a site was chosen over other

alternatives. The State should require local districts to submit plans for review and comment. As a preventive measure, Michigan could offer grants to industries agreeing to reduce emissions, similarly to the U.S. Environmental Protection Agency's model.

The guidelines should address the impact of siting policies on existing schools, which may or may not be located near environmental or health hazards. The system needs a method of evaluating costs of remediation, new school construction, renovation, and not building a new school. Incentives should be provided to urban school districts for renovating existing properties over building new schools. Smart growth principles should be utilized in planning areas, such as school transportation, where active modes of transportation (i.e., walking and biking) help reduce the number of buses and bus routes needed. While smart growth principles encourage schools to be built in population centers, where existing infrastructure is located, there needs to be a balance between the existing infrastructure and environmental quality and health concerns in urban centers. Charter and private schools also need to fall under school siting guidelines.

With the conference planning committee currently scheduling the next conference date, a stakeholder group composed of government, academic, school, and community investors should be created to provide a clear, detailed plan for the development of a school siting policy for Michigan. A statewide school siting policy is an opportunity to reach out to all schools and to foster healthier and safer school environments for children. The key message of this conference is that environmental quality, social justice, and sustainability are essential if we want to progress towards a comprehensive school siting plan.