

Green Infrastructure on Chicago Public Schoolyards: an Intergovernmental Opportunity

In an effort to reduce maintenance costs for individual Chicago public schools, there was a movement in the 1970s and 1980s to lay asphalt over large swaths of school campuses. While asphalt certainly requires less day-to-day landscape maintenance than sidewalks and grass, the added impermeable surface has decreased open space usability and increased the amount of storm water entering into the Chicago sewer system – no small point during our current times of one to two hundred year rain falls within a single year. Chicago Public Schools (CPS) is the third largest landowner in the City of Chicago. It is estimated that CPS schoolyards now represent 763 acres of impermeable surface, with a total of 1,349 acres of surface area (this estimate does not include the school buildings, city sidewalks or parkways).

An effort is underway at CPS to transform Chicago schools yards into spaces that provide students, their families and the broader community with the opportunity for active play, space for physical education classes, opportunities for outdoor learning, gardening and environmental literacy, and engagement with art. The benefits of providing children with opportunities to improve their physical health and social emotional learning have been well documented. These green schoolyards will have the added benefit of reconnecting communities with their local public schools, providing much needed green space in otherwise heavily urbanized neighborhoods and significantly contributing to a reduction in storm water runoff across the city.

Pilot Projects:

Throughout the spring of 2013, Openlands, Healthy Schools Campaign and Learning Landscapes worked with three school communities in diverse geographic locations within the CPS district to create schoolyard plans. The goal is to transform these Chicago schoolyards into safe and sustainable places that support student health and wellness, address the city and county's green infrastructure needs, engage the broader community, and support play, learning, physical activity, interaction with nature and environmental awareness. The schools are Grissom Elementary in the Hegewisch Community Area, Morrill Elementary in the Chicago Lawn Community Area, and Dirksen Elementary, in the O'Hare Community Area (see attached map).

Using lessons learned from efforts in other cities as well as the expertise of the local partner organizations, the project uses an inclusive school/community planning process that involves key community stakeholders; school administrators, teachers, parents, students and community members in developing master/sustainability plans for each schoolyard. The Master/sustainability plans include key elements related to health and wellness, green space, environmental education, art, physical education and activity, community use and green infrastructure. The planning process included:

- Assessing the present situation at the school including the existing site condition as well as the needs and desires of the stakeholders.

- Planning for the future and developing a vision, a set of goals, a list of program elements, a spatial diagram and an organizational concept.
- Creating an integrated plan for capturing storm water on the school grounds.

The final plan for each school is tailored to the school community's interests, but generally includes turf fields, age appropriate play structures, outdoor classrooms, vegetable and native gardens, revamped parking, urban agriculture, art, and a shared schoolyard gateway. The incorporation of green infrastructure into the design and use of the schoolyards includes vegetated swales, urban agriculture, permeable concrete, curb cuts, detention under parking lots and turf fields, permeable playground and gathering areas, and underground or above ground storage tanks.

Calculations are being made for each schoolyard's capacity to capture storm water that falls on the school property (both the building and the available open space). A conversation is also underway about using the schoolyards to capture storm water from surrounding streets and blocks.

The goal is to construct and monitor these three green schoolyards in the summer of 2014, while laying the foundation for public and private agencies to build the capacity of key institutions to fund, support, maintain and fully utilize schoolyards to maximize student health and learning and meet their institutional goals. An evaluation plan for these first pilot schools will include the amount of "green acres" developed and amount of storm water captured or diverted.