

SCHOOLYARD REDEVELOPMENT SUMMARY

2016 - 2019



COHORT 1

**A.E. BURDICK SCHOOL • HAWLEY ENVIRONMENTAL
H.W. LONGFELLOW SCHOOL • STARMS EARLY CHILDHOOD**

APRIL 2020

INTRODUCTION

Many Milwaukee-area schoolyards are in poor condition and offer little if any green space. Schoolyards were originally paved to reduce lawn maintenance costs. Decades later, the deteriorating infrastructure is now costly to repair and furthermore, we now know that excessive hardscape impairs the environmental health of our city and the social-emotional health of our children. An increasing body of research underscores that students' access to green schoolyards can result in better academic outcomes, increased engagement and enthusiasm, improved social-emotional skills, and decreased childhood obesity. Redeveloped schoolyards also offer many other benefits including improved stormwater management, urban biodiversity, community engagement, and meaningful STEAM (science, technology, engineering, arts, and math) curricular connections.

NETWORK OF SUPPORT

The time is ripe to capitalize on a growing network of support surrounding greener, healthier schools in the Milwaukee area. Over the past few years many motivated teachers, parents, nonprofits, governmental agencies, and funders have organized transformational projects through the Green Schools Consortium of Milwaukee (GSCM). Through bimonthly meetings and an annual conference, hundreds of consortium members have collectively shared ideas, resources, and lessons learned.



Typical Milwaukee-area Schoolyard



Example of Student Integrated Projects



Example of Green Schoolyard



2nd Annual Green Schools Conference



GSCM's Project Selection Committee

SCHOOLYARD REDEVELOPMENT PROCESS

The redevelopment process begins with schools applying to receive conceptual planning support provided by the nonprofit Reflo and the Milwaukee Metropolitan Sewerage District. Schools are selected based on their *need* and *enthusiasm* from their applications and in-person "pitch" to the 40+ person GSCM's Project Selection Committee. Annually, five schools are awarded the planning grant and begin the planning process with monthly Green Team meetings that culminates in the development of a conceptual plan document that is well supported by the school community, administration, and project partners. After the year of planning, over a year of fundraising is supported by the school district, project partners, and school-specific fundraising activities. School districts hire engineering consultants to create the necessary detailed designs before construction can begin in the summer of the third year of the process. School-specific curricular connections and stakeholder engagement happen throughout the process.

STATUS OF SCHOOLYARD REDEVELOPMENT PROJECTS IN 2020

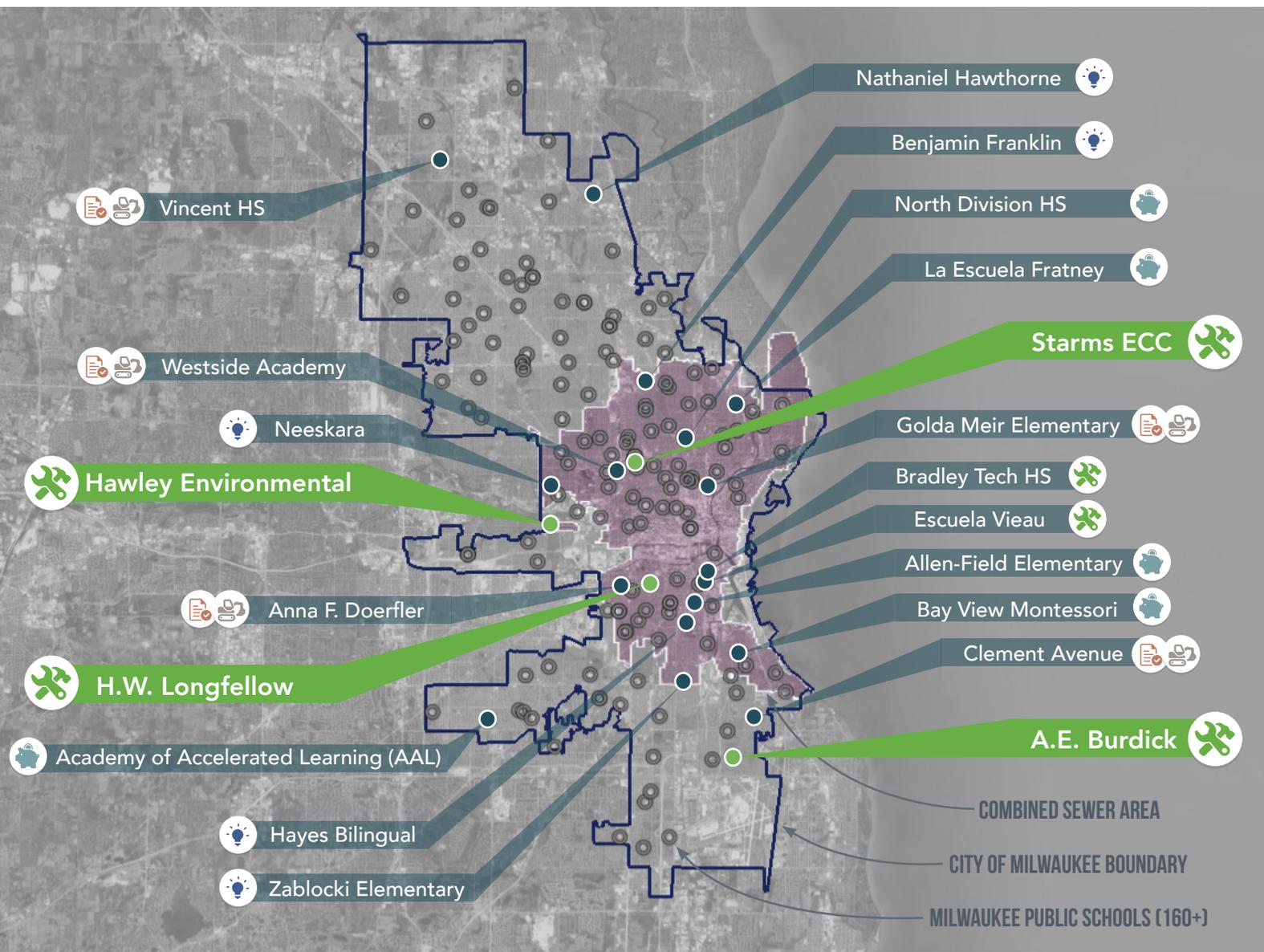
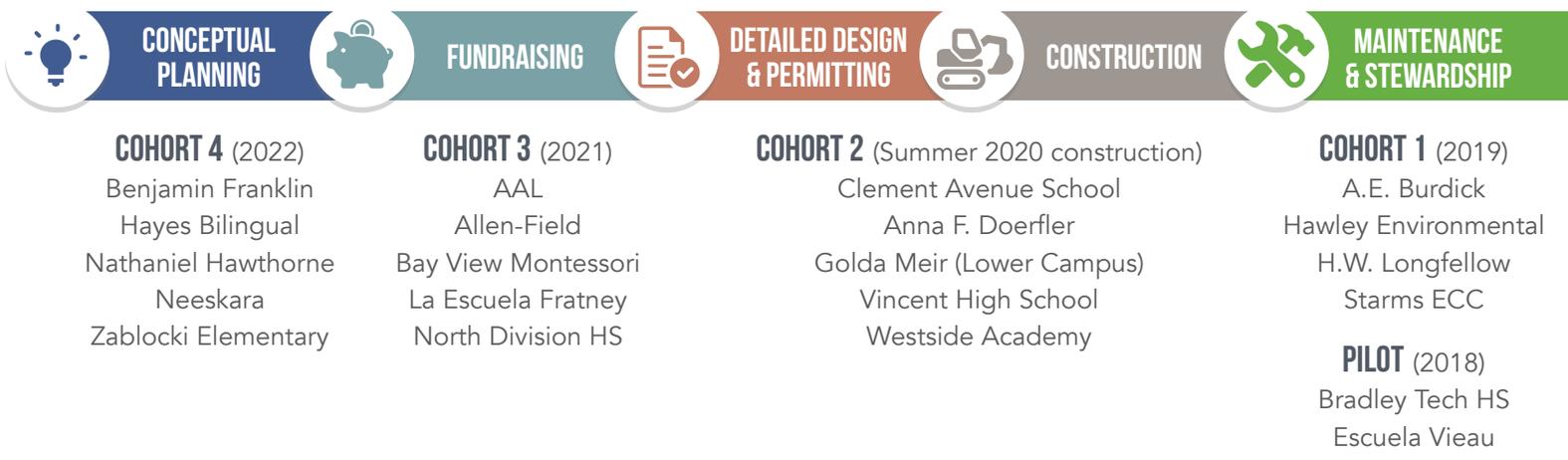
CURRICULAR CONNECTIONS THROUGHOUT

YEAR 1

YEAR 2

YEAR 3+

MAY REQUIRE MULTIPLE PHASES



Please note that there are many schools in the area that are implementing green and healthy school related initiatives. The schools represented on this graphic are only Milwaukee Public Schools and those that participated in the schoolyard redevelopment planning process conducted by Reflo through the GSCM beginning in 2016.

BEFORE



A.E. BURDICK SCHOOL 4348 S. GRIFFIN AVE., MILWAUKEE

In 2019, A.E. Burdick School (MPS) transformed 70% of its schoolyard asphalt with a turf kickball field, naturalized schoolyard, an outdoor classroom, plus native plants and stormwater trees.

DEMOGRAPHICS

- Milwaukee Public School
- Grades: K - 8
- 637 students
- 53% economically disadvantaged
- 3% English language learners
- 12% special education students
- Separated sewer area

IMPACTS

- 29,900 square feet of asphalt removed
- 6 stormwater trees planted
- 34,260 gallons of stormwater managed/rain event
- Estimated project costs: \$335,000



Freshwater ecologists from UWM School of Freshwater Sciences help students explore turbidity, a physical property of water.



I am going to remind my family that our choices affect more than just ourselves. Everything is connected.



7TH GRADE BURDICK STUDENT



Third grade students use scientific tools to gather data and practice Digital Observation Technology Skills (DOTS) working with educators from Upham Woods.

I am going to ask my family to save water. We only have a VERY small amount of freshwater to use in our world.

7TH GRADE BURDICK STUDENT



Students learn about watersheds and how water has shaped our land on a field trip to Schlitz Audubon Nature Center.



The Virtual Water Table helps students learn about landforms, contour lines, and topography through hands-on exploration.

BEFORE



HAWLEY ENVIRONMENTAL 5610 W. WISCONSIN AVE., MILWAUKEE

In 2019, Hawley Environmental School (MPS) transformed its pavement into a joint recreational and educational space featuring an underground cistern below a new kickball field, new raised beds and rain gardens, and student-made signage.

DEMOGRAPHICS

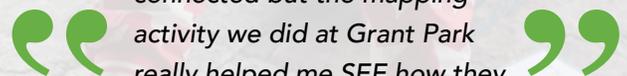
- Milwaukee Public School
- Grades: K4 - 5th
- 366 students
- 79% economically disadvantaged
- 0% English language learners
- 19% special education students
- Separated sewer area

IMPACTS

- 19,200 square feet of asphalt removed
- 4 stormwater trees planted
- 37,567 gallons of stormwater managed/rain event
- Estimated project costs: \$450,000



Elementary students observed how pollution impacts the environment using an Enviroscape model.

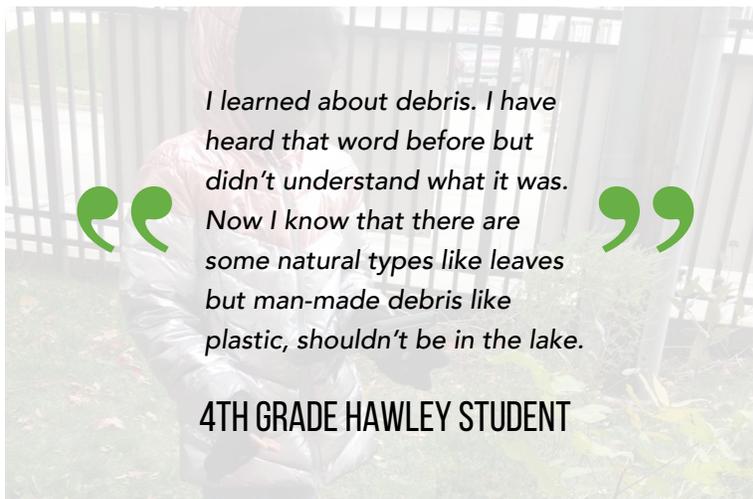


I know that the Great Lakes are connected but the mapping activity we did at Grant Park really helped me SEE how they are connected to each other.

4TH GRADE HAWLEY STUDENT



Students explored earth science by studying rocks and fossils found on the shores of Lake Michigan.



I learned about debris. I have heard that word before but didn't understand what it was. Now I know that there are some natural types like leaves but man-made debris like plastic, shouldn't be in the lake.

4TH GRADE HAWLEY STUDENT



Young scientists embark on a hike through Grant Park to study forest and lake ecology.



Fourth graders were challenged to chart the path between two destinations only traveling via waterways.

BEFORE



H.W. LONGFELLOW SCHOOL 1021 S. 21ST ST., MILWAUKEE

In 2019, H.W. Longfellow School (MPS) transformed its schoolyard through green infrastructure additions, featuring an outdoor stage, bioswale, and a greenhouse with a rainwater catchment system.

DEMOGRAPHICS

- Milwaukee Public School
- Grades: K - 8
- 853 students
- 97% economically disadvantaged
- 37% English language learners
- 22% special education students
- Separated sewer area

IMPACTS

- 20,470 square feet of asphalt removed
- 7 stormwater trees planted
- 70,267 gallons of stormwater managed/rain event
- Estimated project costs: \$362,000



Students investigated the flow of water by creating watersheds at Grant Park Beach.



It takes a lot of people and a lot of effort to clean our water. Sometimes we take the good things we have for granted. I hope my students go home and share how important the lake is and how lucky we are to have Lake Michigan.



6TH GRADE LONGFELLOW TEACHER



Middle school students toured Jones Island Water Reclamation Facility to learn how water is cleaned before it is returned to Lake Michigan.



I found a teeny, tiny seashell of a snail, a worm, and two baby dragonflies – and we got to get dirty. It was so fun!

1ST GRADE LONGFELLOW STUDENT



Sixth graders practiced their navigation and mapping skills aboard the S/V Denis Sullivan.



Young scientists test the pH level of water samples during a lab experience at Discovery World.



STARMS EARLY CHILDHOOD CENTER 2616 W. GARFIELD AVE., MILWAUKEE

In 2019, Starms Early Childhood Center (MPS) replaced 80% of its asphalt with porous pavement and a permeable rubberized play surface designed as Lake Michigan, connecting students to local geography and watersheds.

DEMOGRAPHICS

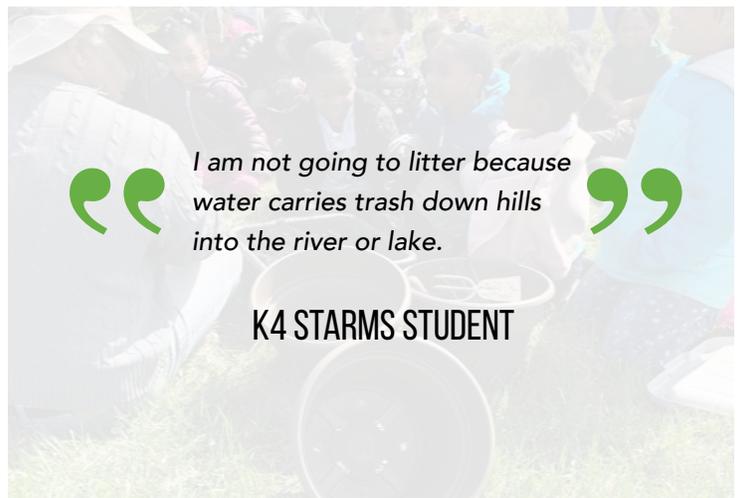
- Milwaukee Public School
- Grades: K3 - K5
- 304 students
- 93% economically disadvantaged
- 0% English language learners
- 10% special education students
- Separated sewer area

IMPACTS

- 12,200 square feet of asphalt removed
- 4 stormwater trees planted
- 42,430 gallons of stormwater managed/rain event
- Estimated project costs: \$455,000



Mrs. Misky teaches her K4 students about the importance of freshwater and encourages them to care for the lake and environment.



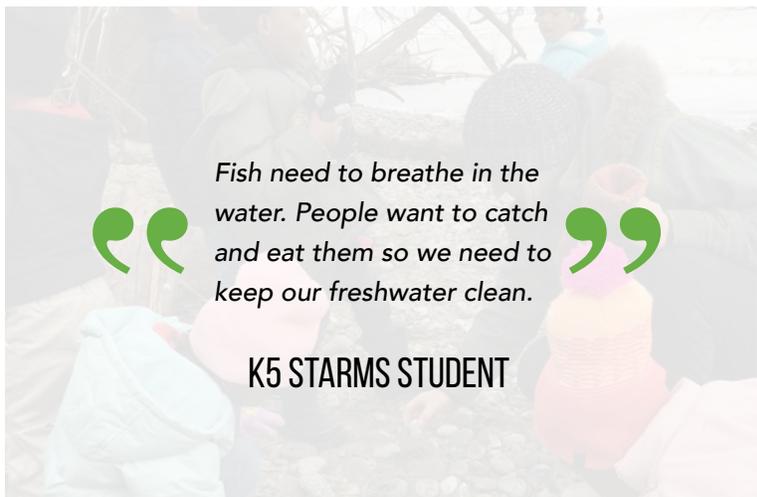
I am not going to litter because water carries trash down hills into the river or lake.



K4 STARMS STUDENT



Celebrating the new schoolyard redevelopment projects at the Cohort 1 Ribbon Cutting Ceremony in October 2019.



Kindergarteners learned about natural and unnatural beach debris during a field trip to Schlitz Audubon Nature Center.



Children at Starms Early Childhood love to imagine, climb, and explore in their newly redeveloped schoolyard!

TOTAL PROJECT IMPACTS



85,000
SQUARE FEET OF
ASPHALT REMOVED

GALLONS OF STORMWATER MANAGED
PER RAIN EVENT

184,500



2,000+ STUDENTS
IMPACTED



STORMWATER TREES
PLANTED

20+

\$1.6 MILLION
ESTIMATED PROJECT COSTS



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Impervious surfaces (hardscapes including asphalt and concrete) characterize so much of our built environment that we no longer even notice how they shape the contours of our urban communities. Excessive imperviousness leads to sewage overflows and basement backups, degrades the quality of our rivers and lake, and costs us millions each year in economic losses and infrastructure repair, all of which deter investment and impede socioeconomic progress. Schools surrounded by seas of splintering asphalt offer opportunities to replace imperviousness with beautiful, nature-inspired landscapes that increase urban biodiversity, educate, and inspire.

These projects also provide a multitude of STEAM (science, technology, engineering, arts, and mathematics) curricular connections as well as triple-bottom-line (social, environmental, and economic) benefits for the students, school, and community.

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In Fall 2019, over 1,000 students in grades K-8 learned about freshwater science, ecology, and the environment as they visited local nature centers, museums, toured educational facilities, and welcomed community partners into their schools. Made possible by funding support from the

Sustain Our Great Lakes (SOGL) grant (provided by the National Fish and Wildlife Foundation) as well as MMSD, and other community partners, these experiences helped students increase their ecoliteracy and appreciation of the natural world.



EDUCATIONAL PARTNERS





Rosa Cerda-Castañeda
Longfellow Principal

Angeline Koch
MPS Sustainability Project Specialist

Tom Barrett
City of Milwaukee Mayor

Vicki Elkin
Fund for Lake Michigan Executive Director

H.W. Longfellow Students

Dr. Keith Posley
MPS Superintendent

SPECIAL THANKS TO ALL OF THE SCHOOLYARD REDEVELOPMENT PROJECT PARTNERS



**MILWAUKEE
PUBLIC SCHOOLS**



Funders' Network for Smart Growth and Livable
Communities - Partners for Places Grant
Petrovic Nature & Art Trust
Herb Kohl Philanthropies
Northwestern Mutual Foundation
Rotary Club of Milwaukee

Greater Milwaukee Foundation:
Walter & Olive Stiemke Fund
Gertrude Ann Meixner Fund
Krall Family Fund
Douglas L.P. Hamilton Fund
Enroth Family Fund

Design Consultant: SmithGroup

Contractors: Eddy's Landscaping Services LLC., Gibraltar Landscaping LLC., Pablocki Paving Corporation

FOR MORE INFORMATION PLEASE CONTACT:

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