

Sustainability and the City: New Kensington CDC's Sustainable 19125 Initiative



Prepared by Eric Hangen, AICP
I Squared Community Development Consulting, Inc.

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New Kensington CDC staff Interviewed for Case Study:

Sandy Salzman, Executive Director
Shanta Schachter, Deputy Director
Kevin Musselman, Community Relations Specialist
Toby Altman, VISTA Volunteer
Janice Reese, VISTA Volunteer

Community Partners and Volunteers Interviewed for Case Study:

Anders Morholt	Green Guide
Chad Ludeman	President, Postgreen
David Elliot	Project Manager, Pennsylvania Horticultural Society
Debbie Carrera	Principal, Kensington CAPA High School
Gabriel Lopez	young resident, Green Guide
Holly Logan	Green Guide
Jessica Brooks	Water Resources Engineer, Philadelphia Water Department
Katherine Gajewski	Director of Sustainability, City of Philadelphia
Loretta Wallace	Green Guide / Block Captain
	Vice President of Programs, Pennsylvania Horticultural Society
Maitreyi Roy	Green Guide
Melissa Colossi	Green Guide
Neil Brecher	President, Fishtown Neighborhood Association
Nic Darling	Chief Marketing Officer, Postgreen
Nixon Jung	Green Guide / NKCDC Board Member
Nykia Perez	Founder, Philly Tree People
Peggy Weinman	green guide; Friends of Pop's, ORCA president
Viola Toner	Green Guide / Block Captain

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Cover photos: Recycling bins and street trees on Belgrade Street; NKCDC staffer Marlene Buck at a container gardening workshop at the NKCDC Garden Center.

Executive Summary

New Kensington Community Development Corporation (NKCDC), an organization long dedicated to revitalizing the East Kensington, Fishtown, and Port Richmond neighborhoods of Philadelphia, launched an urban sustainability initiative in 2009 called “Sustainable 19125.” The initiative’s goal is to make the 19125 ZIP code the most sustainable ZIP code in the city. Key themes of Sustainable 19125, and examples of program activities to promote these themes, are:

- *Greening*: planting street trees, creating community gardens
- *Recycling*: distributing recycling bins, connecting residents to a RecycleBank incentives program
- *Energy*: distributing compact fluorescent light bulbs, providing energy audits and efficiency services for homes and businesses
- *Water conservation*: holding DIY rain barrel workshops, implementing projects to reduce impermeable surfaces (like concrete) that create stormwater management issues
- *Walk/bike/ride*: promoting use of transportation alternatives (biking, walking, transit) through informational campaigns; urban design interventions to strengthen pedestrian connections between the transit system and the neighborhood
- *Buy local, grow local*: Gardening and composting workshops; reward systems for shopping at local businesses

NKCDC utilizes a mix of community engagement approaches to implement Sustainable 19125. These approaches include:

- *Education and marketing work*: NKCDC uses a “Green Guides” program in which volunteers reach out to their neighbors to encourage them to do simple things to live more sustainably. NKCDC supports Green Guides with training and a wide range of promotional materials.
- *Neighborhood collective action*: With support and encouragement from NKCDC, groups of residents have taken the lead to plant trees, develop parks and community gardens, build rain barrels, and much more.
- *Planning and design*: NKCDC has sponsored and convened a series of planning processes that engaged community members in re-designing the neighborhood to be a more attractive, livable, and sustainable place. In one case, planning work supported a “Big Green Block” project that included the construction of a \$43 million, LEED-platinum high school, cutting edge “green infrastructure” projects for stormwater management, and other investments to make the area more pedestrian friendly. Larger-scale plans envision the sustainable redevelopment of the Delaware River waterfront.
- *Issue-based organizing and advocacy*: NKCDC partners with and supports civic associations, organizing groups, and other grassroots groups who are working on issues such as education, food justice, and green jobs.

Sustainable 19125 has generated impressive results to date:

- NKCDC has distributed over 3,400 free CFL lightbulbs – saving over 2.1 million pounds of carbon dioxide over the lifetime of the bulbs. In a 10-month period from October 2009 through August 2010, 95 households installed rain barrels, 150 households applied for street trees, 1,250 households accepted recycling bins, and over 1,000 households signed on to a “green pledge” committing themselves to actions (such as recycling and using mass transit) to make their lifestyle more sustainable. Researchers at Temple University estimated the environmental savings of these actions at over 125,000 gallons of stormwater and 390,000 pounds of carbon dioxide per year (not counting CO₂ savings from the CFLs).
- A study done in the 19125 ZIP code by the Wharton School of Business at the University of Pennsylvania concluded that street tree plantings in the area raised the value of adjacent properties by 10 to 20 percent.
- Additional carbon savings are achieved every time NKCDC attracts or retains a household in its target neighborhoods that might otherwise locate in a suburban area of Philadelphia. Due to reduced automobile usage, the average household in the NKCDC target area produces about 5 metric tons less carbon dioxide per year than a household in a typical suburban area of Philadelphia.
- Promoting sustainability has served as an important neighborhood revitalization strategy for NKCDC, with evidence that it has helped to encourage people to move to and invest in the neighborhood, improve neighborhood health and safety, and put money in residents’ pockets.

The detailed case study that follows is meant to serve as a resource for community nonprofits and other community development groups seeking to integrate environmental sustainability concerns into their work. The case study describes the evolution of NKCDC into an urban sustainability organization, the design and outcomes to date of its Sustainable 19125 initiative, and the inter-relationships between environmental sustainability and urban revitalization work at play in NKCDC’s work.

Table of Contents

The neighborhood	6
The evolution of New Kensington Community Development Corporation	8
A new nonprofit housing group.....	8
Becoming a neighborhood revitalization organization.....	8
Evolving into a “neighborhood sustainability” organization	12
Making 19125 Sustainable: the toolset	16
Education and social marketing	18
Neighborhood collective action.....	25
Planning and design	28
Issue-based organizing and advocacy	33
Peas and carrots: Environmental sustainability and neighborhood revitalization ...	34
Urban revitalization promotes sustainability.....	34
Sustainability promotes revitalization	36
Lessons for CDCs: the management of a sustainable revitalization organization.....	40
Discussion questions for readers.....	42
Linking community development and “green”	42
Using four tools to promote green	42
Thinking about rural and suburban communities	43
End Notes.....	44

From downtown Philly, if you ride out to the Berks stop on the Market Frankford El and walk down the stairs to Front Street, a long, blank, 8-foot cement wall will tower over you down one side of the street. In the shadow of the train tracks on the other side, you'll see a Spanish-speaking, storefront Pentecostal church, a cluster of vacant and shuttered brick storefronts, and barren asphalt lots lurking behind rusted fences topped with barbed wire.

As you turn right on Norris Street, the concrete wall turns with you – then a horizontal web of squiggly flows of blue paint, no more than a foot wide, appears and starts to run along the wall. If you stop and look closely, you'll see some words cryptically floating in this painted river: “70.8% of the earth's surface is water. 29.2% is land. A tomato contains 95% water, a tree has 75% water. The human body is made up of 66% water.”

Salsa music blares from a car getting worked on at a tire shop on the corner. A few 3-story row houses, some sided in sky-blue vinyl and others in brick, overlook some newly planted street trees and a small, landscaped patch of grass and trees. This scene then abruptly gives way to the remains of a derelict warehouse being overtaken by a tangle of weeds and old tires. When you reach Frankford Avenue two blocks later, a hipster café and a few edgy-looking art galleries have taken hold a few doors away from an old-school, working-class Irish bar, a boarded-up stationery store, a thrift store and a second-hand appliance shop. Two and three story row houses in various states of repair – ranging from tidily kept homes to empty shells - dot the edges of the street, sometimes packed in cheek by jowl, sometimes spaced out like seeds haphazardly scattered in a garden row. The vacant lots between them, planted with grass and overlooked by murals, are protected by rows of trees instead of rusted fences. A sign on one lot tells passer-by that someone has applied for zoning approvals to build a new 3-story building there. In the distance, you can hear another building going up, with a whirr of air compressors and the banging of hammers.

Welcome to the greenest ZIP code in the City of Philadelphia.

This story is about the turnaround of an urban ZIP code – and more than that. It's the story of how that area is fast becoming one of the most environmentally sustainable communities in Philadelphia, and how environmental sustainability and neighborhood revitalization go hand-in-hand. And it's the story of how a group of hard-working residents, a small community development corporation, and a lot of helpful and dedicated partners have made it happen. In the case study that follows, we'll provide some background on the neighborhood, talk about the evolution of New Kensington Community Development Corporation – the nonprofit group that has driven the revitalization of the neighborhood – into a comprehensive “neighborhood sustainability” organization, and then get into the details about the tools they use and the impacts they have had.



The neighborhood

ZIP Code 19125 spans three neighborhoods in Philadelphia – East Kensington, Fishtown, and Port Richmond. Today, the area has a population of about 21,500 people. It is a mostly white, working-class neighborhood, although 23% of the population is minority. The median income, of about \$39,000, is a little higher than the City as a whole but much lower than the metropolitan area’s median income of \$57,000. Just under 20% of residents live under the poverty line. Two-thirds of the households in the area own their homes.ⁱ

These neighborhoods have a long history as working-class centers of industry and production. In the late 1700’s they were home to German, Irish and Scottish-Irish immigrants working along the Delaware River in the shipbuilding and fishing trades. Irish immigrants formed the workforce for over a hundred mostly cottage-scale textile and weaving firms that had been established in the neighborhood by 1850. Immigrants from Poland and other parts of Eastern Europe kept arriving into the early 1900’s. The legacy of the neighborhood’s history is evident today in its eclectic mix of row homes and industrial buildings, and in its population. Many people living in these neighborhoods today have been there all their lives, some with local roots going back for generations.

Philadelphia went into decline starting in the 1960’s as a combination of forces led to a mass exodus to the suburbs. The city’s overall population declined from over 2 million to about 1.4 million in 2000, leaving behind 29,000 vacant lots and 23,000 vacant homes and commercial buildings. The neighborhoods fell on hard times. By

1995, the Kensington-Fishtown area alone had lost about half of its peak population and was saddled with 1,100 vacant lots and hundreds of vacant buildings, many of which provided trash-strewn havens for drugs, crime and prostitution.ⁱⁱ Says Viola Toner, a 51-year resident of the neighborhood, “the vacant lot near my house, people dumped rocks and junk and all kinds of stuff in there. The city was getting bad, with graffiti and everything, and drugs started getting bad.” Sandy Salzman, who grew up in the neighborhood and is now the Executive Director of New Kensington Community Development Corporation, recalls that “When I was a child, there were still a lot of the factories operating. By the 1970’s, most of those had closed down and moved away.” She remembers that neighbors would direct visitors to their homes via circuitous routes to try to avoid making a bad impression on them.

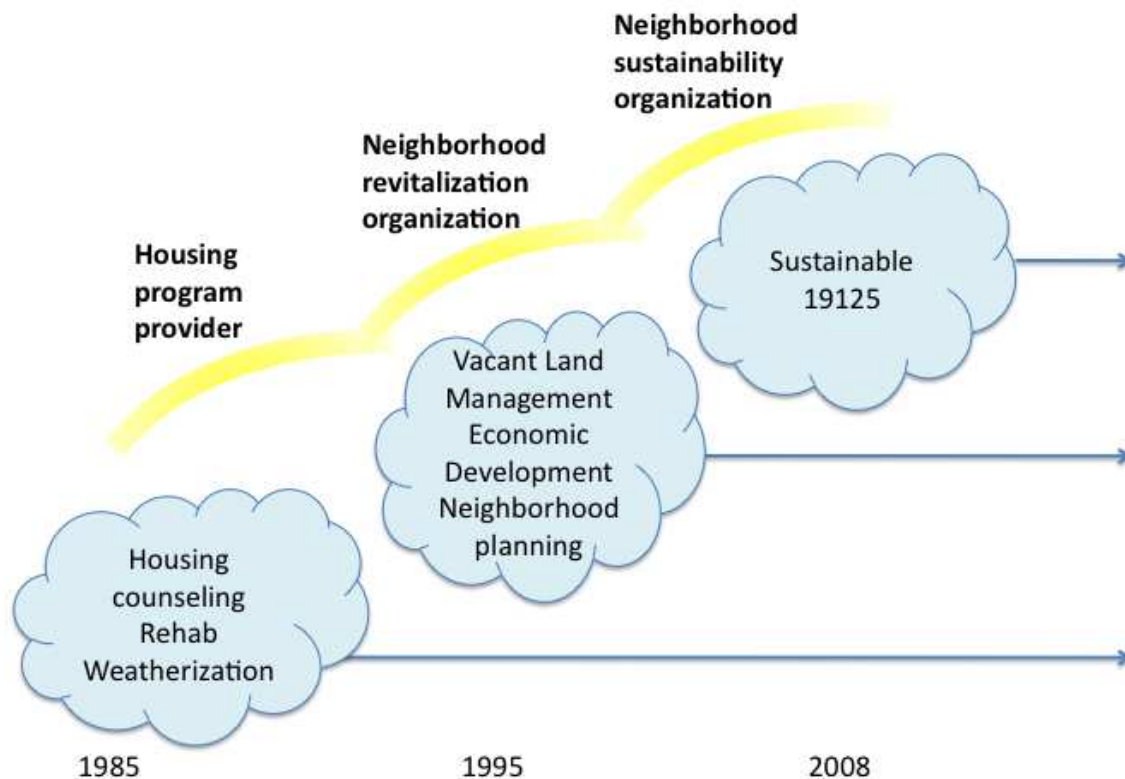


Figure 1. Map of NKCDC target area, showing parks, the Delaware River, and transit stops.

Today, however, 19125 is making a comeback. Vacant lots have been turned into gardens and green space, homes are being built and repaired, reformers have re-invented the neighborhoods’ high school system, and new residents and businesses – including a rapidly growing arts community - are moving in. Several private

developers, sensing opportunity, are building new homes – on a speculative basis and with minimal to no government support – and turning a profit.

The evolution of New Kensington Community Development Corporation



A new nonprofit housing group

New Kensington Community Development Corporation (NKCDC) was founded in 1985 by the leadership of a local civic association in order to meet the housing needs of the community. During its first ten years, NKCDC concentrated on acquiring, rehabilitating and reselling vacant homes, providing housing counseling services, and running a weatherization program. NKCDC has been very successful at these programs – in fact, since its founding, the organization has helped over 5,000 families to buy their first home. NKCDC also worked to provide more than 100 substantial rehabs which were then sold to income qualified families.

Becoming a neighborhood revitalization organization

Despite NKCDC's successes, something was missing. At a programmatic level, NKCDC was doing good work, but its good work wasn't enough to stem the decline that was threatening the community. When NKCDC undertook a strategic plan in 1995, according to Executive Director Sandy Salzman, "the neighborhood told us

that the housing work we were doing was not really all that important. Residents were more concerned with issues like trash-strewn vacant land, overcrowded and failing schools, and bringing back jobs and businesses. We decided that while we should continue our work as a housing provider, we needed to deliver a more comprehensive, neighborhood-based revitalization approach.” Salzman, who was the Assistant to the Executive Director at that time, knew that responding to these concerns would be a challenge due to the organization’s tight financial situation and small size. “We tried to do a job placement program at first, but quickly realized that other agencies could do it better than we could, and we had to let it fall away,” says Salzman. (In 1997, when a housing slump affected NKCDC’s real estate business and the organization missed several grant opportunities, it entered a financial crisis that resulted in the departure of the former Director and Salzman’s promotion to the position.)

NKCDC looked around for manageable ideas the organization could implement to address neighborhood needs without taking on massive new programs like job training. Working with neighbors to tackle the vacant land issue, while a daunting challenge given the huge number of lots and their abysmal condition, seemed like something the organization could at least take on a little bit at a time. In the 1980’s, New Kensington had gotten the City to put concrete jersey barriers around vacant lots to stop illegal short dumping. As Salzman puts it, “The problem was that then the lots became much more threatening looking, the weeds were growing, no one was going in to clean them, and the short-dumpers were making a game of seeing how much trash they could dump over the jersey barriers. The trash that didn’t make it over the barriers, of course, clogged up the sidewalks and just made everything look so much worse.”

Looking for a new way to tackle the issue, NKCDC hired on Brenda Miller in 1996 as a “land use manager” for the neighborhood. Miller had worked at the Pennsylvania Horticultural Society and studied horticulture at Longwood Gardens, a famous arboretum southwest of the city. She reasoned that if NKCDC planted trees around the perimeters of vacant lots, they might provide a more effective deterrent to dumping than concrete barriers. Salzman remembers, “When I went to the City, told them what we wanted to do, and asked them to take away the jersey barriers, they told us it was absolutely crazy. I asked for permission to try it on just a few lots – they agreed, but picked the very worst lots in the neighborhood. Working with over 50 neighborhood volunteers, we planted 100 trees on them in one day. That night, at a lot on Montgomery and Frankford Avenue, someone came to steal one of the trees. The neighbors happened to see the tree thief from across the street. They came out and they chased down the car and pulled the tree out of the trunk. The tree died, but it gave us this amazing knowledge that the neighborhood was really embracing this program.” Not only did neighbors police the trees, they also pitched in to help clean up trash, start guerilla-style community gardens on land they did not own. The City, seeing the success of the program, changed their own policy and began to require planting trees around properties that were demolished from then on.

Looking for further ways to involve neighbors in their vacant land management programs, NKCDC engaged the Philadelphia Mural Arts program to paint murals on the walls of buildings overlooking vacant lots. Brenda Miller then came up with an idea to start a “garden center” on a vacant lot that NKCDC owned to help neighbors who wanted to start community gardens or adopt and landscape a vacant lot as their side yard. The initial version of the garden center was minimalist – just some piles of horse manure, wood chips and soil that NKCDC sourced from friends of the organization and let neighbors take for free. “Little old ladies would come on Saturday mornings and take away manure and wood chips in shopping carts,” recalls Salzman. In 1997, NKCDC took the concept to the next level, working with residents, AmeriCorps volunteers, and the Pennsylvania Horticultural Society to develop a true, full-service garden center on a vacant lot over a 6-week timeframe. NKCDC’s Garden Center currently offers landscape materials, plants - including seedlings started in a new community-build greenhouse developed in 2009 - and gardening-related community workshops.



Figure 2. The NKCDC Garden Center site, before and after

Education was another huge issue facing the neighborhood. Kensington High School was in crisis. Originally designed for an all-girls school of 700 students, it had about 1,600 students enrolled in 1995. The school had only half a gym, a basement cafeteria, a schoolyard that was given over entirely to parking, not enough teachers, and not enough books. The only reason the crowding could be tolerated at all was that attendance was horrible – and with poor attendance came poor achievement. “In 1998, only 11 students graduated out of a class of something like 400 kids,” notes Salzman. While NKCDC was not an education organization, its background as a developer allowed it to bring something to the table. NKCDC had been given an abandoned factory for \$1, and worked with the School District to see whether part of the site could be used for a new school. The School District demolished one of the factory buildings on the site to build a new culinary arts High School with a gym, while NKCDC developed another of the factory buildings into affordable live-work spaces for low-income artists. NKCDC would subsequently partner with other neighborhood advocates to support the development of an additional new high school for the neighborhood, Kensington High School for Creative and Performing Arts.

A third area that NKCDC decided to tackle was the challenge of business development. NKCDC added an economic development program in 1999. Through this program, NKCDC creates an annual business directory, markets available sites for businesses, assists businesses with façade and energy-related property improvements, oversees design guidelines for the Frankford Avenue commercial corridor, and coordinates events and programs to raise the visibility and image of the neighborhood business district – such as establishing an Arts Corridor on Frankford Avenue (see www.frankfordavearts.org). NKCDC also tried to boost the neighborhood economy by fighting lenders’ redlining of the neighborhood. It helped to start a credit union, called New Horizons Federal Credit Union, and negotiated a community benefits agreement with a bank that was seeking to close a branch in the neighborhood. New Horizons Credit Union was bought out by the Post Office’s Eagle One Credit Union but continues to have a presence in the neighborhood.

Finally, NKCDC also realized that it could also play a bigger role in community organizing and planning. In 2001, it became the facilitator of the official Neighborhood Advisory Committee to the City for its community, adding a community building and organizing component to its work. NKCDC’s model, developed by organizer Dwayne Wilcox, was to “model, mentor and maintain” – model things like group facilitation and active listening, mentor and train residents to take on leadership roles, and then work more in the background to help these leaders maintain their efforts and develop other leaders. NKCDC organizers helped to start East Kensington Neighborhood Association in 2003, and Old Richmond Civic Association in 2007. Working with these Civic Associations, planning consultants, and other stakeholders, NKCDC helped to prepare a series of neighborhood plans, including a comprehensive neighborhood plan that was completed in 2003 and a series of design studies. To help implement these plans, these civic associations

with support from NKCDC functions as the official City zoning approvals agency for its neighborhood and has also worked with City officials to make streetscape improvements.

NKCDC's work as a neighborhood revitalization organization has led to impressive accomplishments that it continues to build on:

- Over 160 vacant lots have been transferred to adjacent owners as side yards; 40 more have been incorporated into community gardens. Through cleaning, greening, side yard transfers, and other strategies, NKCDC has addressed 65% of the 1,100 vacant lots in the community.
- NKCDC's award-winning Coral Street project converted a vacant factory into 27 units of artist live/work space in 2005
- Creation of the Culinary Arts High School
- Between 2008-2010, more than \$25 million in private investment was brought to the Frankford Avenue Arts Corridor and adjacent areas. In 2010 during an economic downturn, 40 new businesses located to the community.
- NKCDC helps to organize two community clean-ups every year, with leadership provided by neighborhood civic associations (many of whom take on additional beautification work).



Figure 3. Coral Street Arts House provides 27 units of live-work housing for artists.

Evolving into a “neighborhood sustainability” organization

In 2007, NKCDC staff and board members reflected on their organization's role in promoting environmental sustainability. Implemented as a natural part of its revitalization work, many of NKCDC's activities over the past years could also be described as environmental work. For example, with help from the Pennsylvania Horticultural Society and other groups, NKCDC had worked with neighbors to plant hundreds of trees and build community gardens. It had been doing weatherization work to help low-income families with energy efficiency projects since its inception, and had facilitated neighborhood recycling projects before city-wide recycling had begun in Philadelphia. Staff now found themselves working with a group of resident leaders who had come up with the idea to install solar-powered street lighting along Norris Street, since the existing City policy did not allow the installation of

conventional pedestrian lighting. At the neighborhood level, other people were engaging in a variety of sustainability work as well. On vacant land that NKCDC had worked to remediate, a group of farmers had started Greensgrow Farm in the neighborhood, growing hydroponic vegetables on a former brownfield site. A new restaurant, Johnny Brenda's, had opened in the neighborhood with an emphasis on locally grown and sustainable food. And a development firm named Post Green was building the first LEED-certified row home with a construction cost of no more than \$100,000 "All of this activity around sustainability had been happening organically, simply as a way of responding to the needs of the neighborhood," says Deputy Director, Shanta Schachter. "We started wondering what we could do if the organization reframed its work with not only neighborhood revitalization, but also environmental sustainability at the center of its approach. What if we tried to connect everything the organization did back to both neighborhood improvement and sustainability?"

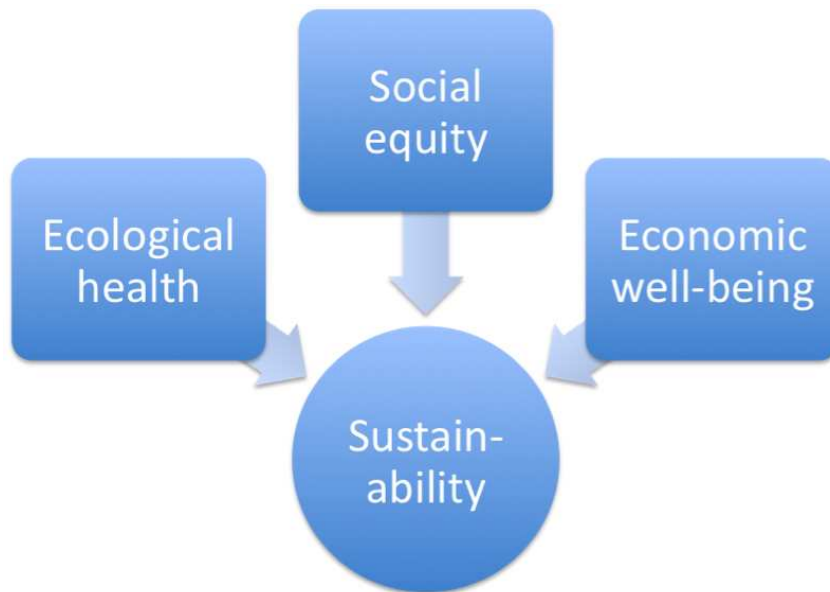
The time was right to be asking this question – the recent release of Al Gore's film about global warming, "An Inconvenient Truth," along with a spike in gas prices and the Hurricane Katrina disaster, had been sparking growing national awareness of sustainability issues, and funders were increasingly interested as well. "Because there was this interest globally around the issue, and the shape that Philly was in and the competition for resources there, we felt that 'green' would give us an angle to draw some resources into our neighborhood," Schachter notes. NKCDC had also hired a Deputy Director, Shanta Schachter, in 2005 who had a strong background in sustainability. "I've had a great interest in green all my life," Schachter says. "I grew up in Madison, Wisconsin and my parents were hippies. When I first came to Philly I was thinking, 'what is going on in this city? How can it be natural to have trash in the middle of the road?'"

Schachter pushed for NKCDC to "think about each action that we took in a really holistic way and how it would sustain itself." As a part of this process of reflection, NKCDC reached out to partners including the Pennsylvania Horticulture Society, the City of Philadelphia and its Water Department – who were already engaging in developing sustainability strategies for the city as a whole – and an environmental advocacy group called Penn Future. Says Maitreyi Roy of the Pennsylvania Horticultural Society, "What's wonderful about our partnership with New Kensington CDC is that it continues to grow... In 1995, the vision was about freeing the community of blight; today the vision is about being the most sustainable green neighborhood in Philadelphia."



Figure 4. NKCDC and Pennsylvania Horticultural Society co-hosted a kickoff meeting for a "Partnership for a Green Community" in February 2009.

With guidance from these partners, NKCDC decided to submit a grant to the William Penn Foundation, requesting funding to develop and implement its ideas about neighborhood sustainability. The proposal read, *"Given ongoing environmental and economic concerns, substantial increases in energy costs and the need for improved quality of life, NKCDC proposes to develop an overarching strategy to community development... that fully captures sustainable practices, innovative redevelopment approaches, and conservation strategies."* NKCDC's comprehensive approach, blending environmental work into neighborhood improvement efforts, mirrored how leading thinkers have described the core concept of "sustainability" as the intersection of ecological health, economic well-being, and social equity.ⁱⁱⁱ



After winning the grant, NKCDC reached out to neighbors – conducting a neighborhood survey, and inviting residents to a meeting to identify neighborhood priorities around sustainability. “We found that a lot of people wanted to know about easy, actionable steps they could take on their own block and in their own house,” relates Schachter. “They wanted an educational component around this. They wanted to build off of existing assets in the neighborhood. And they wanted a model of green infrastructure.”

Building off of this input, NKCDC came up with the concept for “Sustainable 19125,” an initiative named for the ZIP code it serves. Formally launched in February 2009, Sustainable 19125 has the goal of making the 19125 ZIP code “the greenest neighborhood in Philadelphia,” according to NKCDC’s brochure, which continues: *“Sustainable 19125 follows the examples of innovative local residents, businesses, organizations, and city agencies who have been at the cutting edge of sustainable action for years. They have already taken steps to plant trees, recycle, reduce their consumption of non-renewable energy, protect our water resources and even green our region’s economy.”*

Sustainable 19125 would have an educational component to help individual residents and businesses make choices in their everyday lives to be more sustainable. It would engage neighbors to work with and reach out to each other. It would create models for how green design could work in a neighborhood like 19125. Last but not least, it would support partners in their advocacy work on important neighborhood sustainability issues.

Sustainable 19125's Six Themes

Sustainable 19125 has six themes of environmental sustainability that it works to promote.

- Greening: planting trees and gardens
- Recycling: distributing recycling bins, educating residents and businesses about recycling, connecting residents to the RecycleBank incentives program
- Energy: distributing Compact Fluorescent Lights, providing energy audits and energy efficiency services for homes and businesses
- Water Conservation: DIY rain barrel workshops, reducing concrete surfaces
- Walk/Bike/Ride: promoting alternative transportation
- Buy Local, Grow Local: gardening and composting workshops; reward systems for shopping at local businesses

Making 19125 Sustainable: the toolset

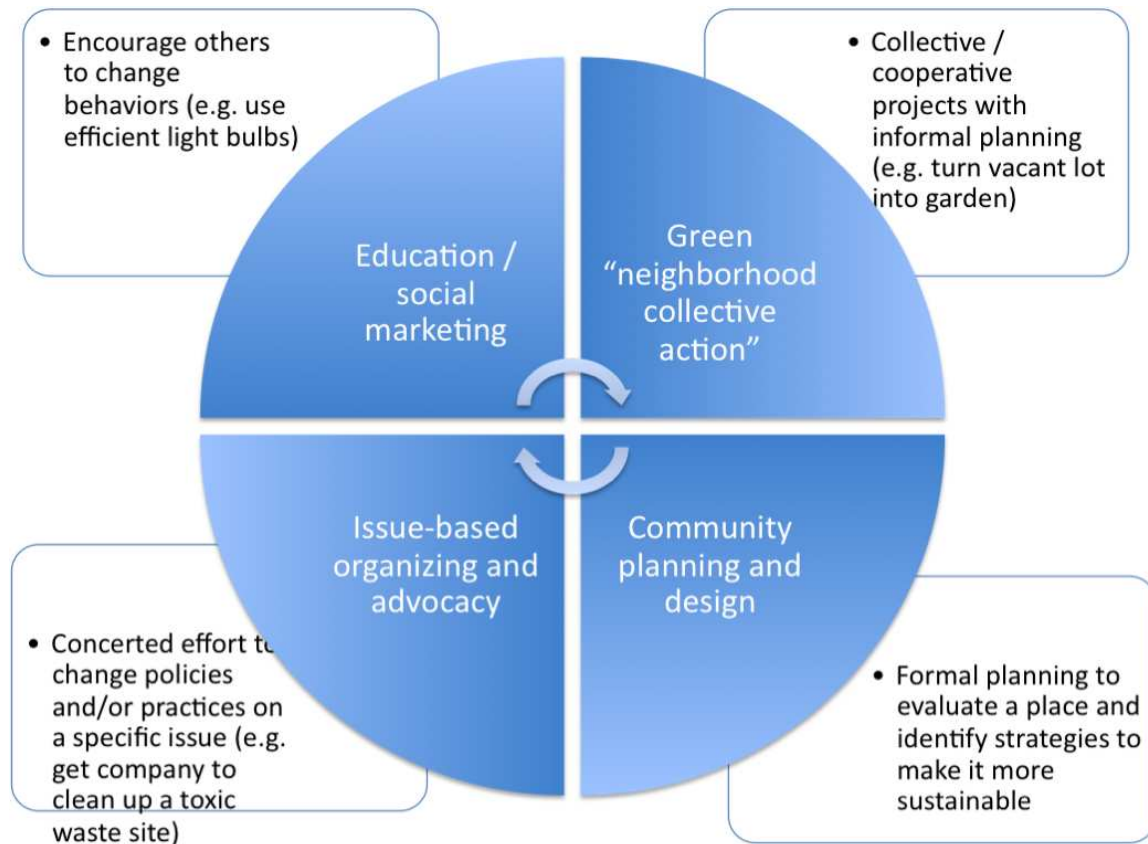
Any organization seeking to engage community members in making that community more sustainable has four approaches available to it:^{iv}

- *Education and social marketing:* The organization can provide information and assistance to individuals, households and businesses in an effort to change their behaviors in ways that benefit the environment. This approach can involve not only visibility and marketing campaigns, but also products and services that make it easier for people to “do the green thing.” For example, an organization working on energy efficiency could provide an energy audit or give away energy-efficient products in addition to marketing the idea of energy efficiency and telling people how much money they could save. Keys to success include understanding the different needs and interests of different people, and carefully honing the marketing messages and ancillary services to appeal to targeted groups.
- *Neighborhood collective action.* The organization can support and connect residents, businesses, and neighborhood groups who want to take on projects and programs that help make the neighborhood more sustainable. For example, neighbors might want to start a car-sharing cooperative or organize a “walking school bus” to help children walk to school safely. An organization can help neighbors make ideas like this a reality in several ways. These include building social connections among neighbors; listening to their ideas; and helping grassroots groups through facilitation, small amounts of financing, or logistical support. Keys to success include building connections between neighbors and encouraging neighborhood leadership and ownership of the initiative.
- *Planning and design.* The organization can help to work with the community to design more sustainable buildings, blocks, neighborhoods and even entire cities

and regions. Often, existing planning processes (for example, a neighborhood plan or a citywide master plan) can be modified to incorporate more attention to sustainability issues. Other times, specific plans can be made expressly around making a place more sustainable (for example, a design charette for a green building or a greenway). Keys to success include analyzing and framing information in a way that helps people to make decisions, and working to build a strong political consensus around the plans.

- *Issue-based organizing and advocacy.* The organization can work with residents and other stakeholders to change the policies and practices of governments, corporations, or other players to promote sustainability. For example, this might include environmental justice organizing to get a brownfield in a neighborhood cleaned up, or to advocate for implementation of a recycling program. Keys to success include building grassroots leadership around the issue, making a compelling case for change, and effective negotiating with the stakeholders who impact and are impacted by the issue.

While its Sustainable 19125 Initiative is probably best known for its educational components, NKCDC is using all of these methods in its effort to make 19125 the greenest ZIP code in the City.



Education and social marketing

Green Blocks and Green Guides. The mainstay of Sustainable 19125's education and social marketing work is its "Green Blocks" program. This program is built around "Green Guides," neighborhood residents who volunteer to be a liaison and their neighbors on their block. They provide information about sustainability, give out materials that people need – like CFLs and recycle bins – and answer questions that people have about living more sustainably. They mostly do their work through one-on-one interactions with their neighbors, talking about their own experiences and trying to convince their neighbors to take actions like installing a rain barrel, applying to the City for a street tree in front of their home, or requesting an energy audit for their home. In addition to recruiting Green Guides, NKCDC supports them by providing them with marketing materials and freebies to give away, conducting training seminars on topics like energy audits and composting, and organizing social events for Green Guides to get to know one another and trade tips and ideas. One of the most important parts of this support effort is a training on "How to Talk to Your Neighbors," that is designed to help Green Guides get comfortable with knocking on doors and making connections. NKCDC also has established a website, www.sustainable19125.org, that provides a way for residents to track, map, and share the green actions they are taking, a blog to trade ideas about greening the neighborhood, and a variety of other tips and resources.

Through the first year of the program, 65 residents have volunteered to be Green Guides. As NKCDC VISTA volunteer Jamie Reese describes, many different kinds of neighbors have volunteered to be Green Guides. "Some Green Guides were already the most talkative person on their block, and it was a logical step for them to be the Green Guide. Others are new transplants to the area who really care about sustainability and also want to get to know their neighbors." Loretta Wallace, who has lived in the neighborhood for 10 years, relates her story of getting involved in the environment and then becoming a green guide: "Back in the late sixties and early seventies, I wasn't the healthiest person, so I started to study nutrition. Nutrition led me to food and its production, which led me to organics, which led me to the environment, and after that the floodgates were open... it went from organics and pesticides to air to water to earth... When I heard about Sustainable 19125 after all these years of doing this on my own, I was really, really excited that there was finally a formal effort for me to get involved in."



Figure 5. Green Guides on a tour of "green roofs" in the city.

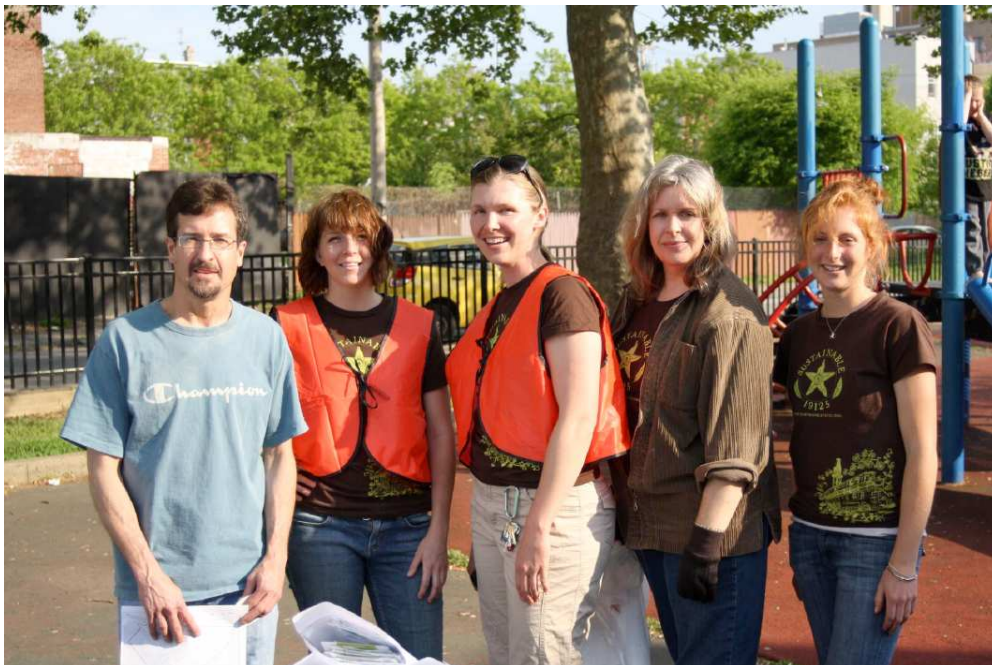


Figure 6. An intrepid group of Green Guides, decked out in Sustainable 19125 t-shirts.

Green Guides usually give about an hour or time per week. To increase the effectiveness of its marketing work, the Green Blocks program focuses on specific themes over specific periods of time. For example, water conservation was the main theme of the program from March through April 2010, when Green Guides, backed with neighborhood-wide visibility and marketing efforts from NKCDC, pushed for neighbors to install rain barrels in their home and take other water-saving

measures. In June and July, the theme switched to “Buy Local, Grow Local” to reflect the growing season.

Sustainable 19125 Theme	Examples of Marketing Actions Taken^v
Greening	Green Guides collect street tree applications from households on their block. A door-to-door campaign generated 148 tree applications from October 2009 through August 2010.
Recycling	Green Guides distributed over 1,250 recycling bins between October 2009 and August 2010 and helped residents get RecycleBank identity tags for recycling bins so that they could win rewards points for recycling.
Energy	Green Guides distributed free CFLs, weatherization program information, and promotional information about an “Energy Fair” where people could learn more about energy efficiency. NKCDC and Green Guides have distributed over 3,400 free CFLs door-to-door and at events between October 2009 and August 2010. NKCDC continues to operate a weatherization program for low-income residents and encourages other residents to get an energy audit through the Energy Coordinating Agency.
Water	After a “train the trainer” workshop led by PHS, a Green Guide, Anders Morholt, volunteered to lead 6 Rain Barrel Workshops where participants learned how to make a rain barrel using materials mostly donated by local businesses. “It’s never been hard for me to teach people things, and when it comes to working with your hands, I’m pretty good at that,” he says, adding this caveat: “I can’t do something unless I am passionate about it.” Morholt and his workshop participants have made and installed about 100 rain barrels so far.
Walk, Bike and Ride	Green Guides and NKCDC distributed information to households about local transit service, bike shops, car sharing organizations, and pedestrian routes. NKCDC negotiated a discount for 19125 residents to join the Zipcar car sharing service, and has also worked to improve the attractiveness and safety of key pedestrian routes to rail transit stops on the Market-Frankford El, for example by installing solar-power lights, cleaning and greening vacant lots, and planting street trees. NKCDC have organized an annual “kinetic sculpture” Derby – think kicked-out bicycles made to look like dragons or steamrollers that have to make it through a motorcross-style gauntlet of mud. The Derby provides a fun way to think about bicycling and get the word out about transportation alternatives, while also promoting the businesses and creative artists in the neighborhood.
Buy Local, Grow Local	NKCDC and PHS hosted a series of free gardening, composting, and other how-to workshops to get people started with backyard

	<p>or container gardening and to expand their skill sets. A reward system for bringing your own Sustainable 19125 bag was established with local businesses. Monthly drawings rewarded shoppers with gift certificates to local businesses. Finally, a “farm dinner” was created to reward green guides for their year of service. The farm dinner was held outdoors at the NKCDC Garden Center and showcased locally grown products. A local cheese blogger, Tenaya Darlington of MadameFrommage.com fame, talked about local cheeses and paired them with beer tastings from a local brewer, Philadelphia Brewing Company. Greensgrow Farm’s David Pendergast discussed the menu they had prepared, where the ingredients came from and the local farms and farmers the meal supported.</p>
<p>Overall sustainability</p>	<p>Green Guides talked to residents about a “Green Pledge” outlining simple things they could do to live more sustainably. Over 800 households in the 19125 ZIP code signed the pledge, representing approximately 9.5% of households in the ZIP code.</p>



Figure 7. Community residents making rain barrels at an NKCDC-sponsored workshop.



Figure 8. Carbon-neutral transportation for three at the Kinetic Sculpture Derby.

Success at encouraging people to “do the green thing” has required Green Guides and NKCDC staff to carefully listen and respond to the interests and needs of neighbors. Toby Altman, a VISTA volunteer with NKCDC who does community organizing work for Sustainable 19125, notes that “Most people are still very much concentrating on what’s happening in their own homes – economically, especially. We ‘sell’ sustainability in terms of the money you can save from installing a CFL, for example, or how planting a tree can increase your property’s value.” Adds Green Guide Loretta Wallace: “I initially approached [older folks in the neighborhood] from a different angle, because I knew that they might not be politically or socially caring about the environment. So I approached them from the pocketbook – it was all about saving money on your heating bill, saving money on electricity, saving money on your water...” Peer pressure, while not exerted forcefully, also has helped to make change. As Green Guide Holly Logan relates, “When Mike and I received our tree this past November, we were really excited... it was the proof that it’s becoming more of an environmentally aware neighborhood. Then our neighbor got his tree, and then some neighbors would come out and say “oh, maybe we can apply for a tree next year.” Holly is now recruiting some neighbors to accompany her to ask neighbors who don’t have a tree yet if they would consider one.

Becoming a Green Guide and going out to knock on doors can be intimidating at first – but NKCDC staff will come along to help out. Says Melissa Colossi, “I was a little intimidated about knocking on my neighbor’s doors, and just having somebody

there to – almost to have a friend – to just hang out with and ring all those doorbells. It was exciting when we distributed the CFL bulbs, that was lots of fun, and that really excited my neighbors to kind of get a gift – not like information, but a gift.”

Both a formal evaluation study by Temple University, as well as comments from Green Guides, indicate that the program has been very effective. On Loretta Wallace’s block, for example, “Everyone has switched to compact bulbs and energy saving. Everyone is recycling, for different reasons – some are interested in the environmental impact, some are interested in the rewards that we in Philadelphia can get for recycling [through the RecycleBank program described later on]. I don’t care what the reason is – they are all on board.”

	CO ₂ Emission Reduction	Stormwater Reduction	Cost Savings
Greening	1,470 lbs/yr	13,650 gal/yr	—
Recycling	388,528 lbs/yr	—	—
Energy	1,775,248 lbs/life of CFLs	—	\$129,956 /life of CFLs
Water Conservation	—	112,000 gal/year	—

Figure 9. Environmental benefits of Sustainable 19125 social marketing activities, as estimated by the Temple University Center for Sustainable Communities.

Visibility and public information campaign. NKCDC supports Green Guides with a sophisticated visibility and public information campaign. The Sustainable 19125 initiative is well known in the neighborhood for its educational campaigns, snazzy brochures, t-shirts and reusable water bottles that it gives away emblazoned with its logo. As VISTA Volunteer Jamie Reese notes, “we will always have a table for Sustainable 19125 at community events and some free stuff for people – for example, stickers for your bike that say ‘I commute but don’t pollute,’ or temporary tattoos with the Sustainable 19125 logo.” NKCDC also puts out a bi-weekly newsletter, maintains a website, and has a presence on Facebook and Twitter. Loretta Wallace, a Green Guide, started a Facebook page for her block after finding out the ¾ of her neighbors were on it. “It’s a good tool to let everybody know what’s about to happen, and kind of as a cheerleading section – like to let everyone know, ‘yay, the trees are coming, we’re getting trees planted this week.’ I found it to be very effective.”

NKCDC uses marketing collateral to concisely convey simple things that people can do to be more sustainable and how it can benefit them. For example, its “Tips and Resources” brochure tells residents that “It costs less to recycle a ton of material

than to put it in a landfill. This means reduced disposal costs for you.” The brochure also provides a link to the Philadelphia RecycleBank program, through which residents earn rewards points every time they recycle that they can redeem at over 1,500 businesses. The same brochure encourages neighbors to apply for a street tree by highlighting numerous benefits such as:

- home values (“A study done in 19125 by the Wharton School of Business showed that trees can increase your property value by 10% to 20%”),
- health (“Hospital patients with views of trees recovered 10% more quickly from surgery and required fewer painkillers than those without the view”), and
- the pocketbook (“Well-placed trees can lower air conditioning bills by up to 30% and save up to 25% on winter heating costs”).



Figure 10. Bumper stickers, bags, t-shirts and reusable water bottles are all elements of Sustainable 19125's visibility campaign.



“Green Block Rankings”

NKCDC keeps track of how each block with a Green Guide is doing at becoming more sustainable – for example, by tracking how many recycling bins, CFLs, and rain barrels have been distributed, and how many people on the block have applied for a street tree. In August 2010, NKCDC held an awards ceremony at a Farm Dinner catered by Greensgrow Farm.

The block with the most sustainable activity got a street sign labeling it as the “greenest block,” and the Green Guide for that block got a sculpture for their home made by a local artist. Other awards were given away, for example to a Green Guide who got 100% of his neighbors to apply for a street tree. “The Green Block Rankings create a fun, friendly competition as a way to motivate people,” says NKCDC VISTA volunteer Jamie Reese.

Neighborhood collective action

NKCDC approaches its sustainability work with a view to tapping all of the great resources – people, organizations, businesses, and physical assets – that it has in its neighborhood, and connecting people to one another so that they can do great things together. NKCDC’s Green Blocks program is also a form of neighborhood collective action – as Deputy Director Shanta Schachter notes, “one of the biggest impacts we’ve had from Sustainable 19125 is getting neighbors to work together and know one another.” Through Sustainable 19125, NKCDC organized 20 community events just between September 2009 and July 2010, with over 700 people attending.^{vi} These events included workshops on composting, energy audits and green roofs; a Farm Dinner; an Earth Day event where residents marked storm drains; a mural project; a container gardening workshop; an Energy Fair, a Cleanup Day; and many others. Many Green Guides agree that Sustainable 19125 has helped to build a strong sense of community. Says Loretta Wallace, “I feel part of the community now and I know a lot of different people that I didn’t know before, and it’s kind of made us all friendlier toward each other. It’s been a very, very rewarding experience.” Adds Holly Logan, “Going through the Sustainable 19125 program, it was a neat way to introduce myself... it’s been nice getting to know people and connect with them in different ways.” Melissa Colossi relates, “Now there are people I wait for the bus with that I can stop and chat and say hi to. It’s a great program and I’m so happy to be a part of it.”

One of the challenges in a rapidly changing neighborhood is building bridges between long-term residents and newcomers – something that Sustainable 19125 has proven to be effective at doing. As Neil Brecher, a Green Guide, describes, “Trying to resolve the different philosophies [between newcomers and old-timers] can be challenging. A lot of the initiatives in the neighborhood have started to bring

people together. I moved to the neighborhood 6 years ago, and one of the first events I went to was a neighborhood cleanup. What I got out of that, in getting to know my neighbors who have lived here for 20,30,40, 50 years, is that everybody does care about the neighborhood, and wants it to be a clean neighborhood. You have people who sweep their steps and their sidewalk every day. So I think that some of the initiatives of Sustainable 19125, especially when it comes to cleaning and recycling, have really been merging those two philosophies and I think that's where it can grow."

Executive Director Sandy Salzman notes, "One of the tricks for organizations like NKCDC to support and promote neighborhood collective action is knowing when to 'step back' and let residents and resident groups drive an idea forward." With NKCDC and other partners - in a supportive, facilitative role, residents and grassroots groups are taking the lead on a wide variety of collective projects that improve neighborhood sustainability:

- Gabriel Lopez, an 11-year-old neighbor, has helped to organize 3 community cleanups. "When I first moved here, I didn't even like living here," says Gabriel. "It was just nasty. The front of the lots was just nasty, with all the trash in there. I said, 'this has gotta go.'" Running errands with his mother, Gabriel met a community organizer at NKCDC, who told him to call her if he was interested in doing something about it. With her help, Gabriel got involved. "The first [cleanup], there was a lot of arguing - so we called a meeting to get more people to help out and stop the arguing. The second time it was perfect... people came and helped. From there, we did block parties, and we're going to plant a garden in front of our houses and we're going to plant a community garden."
- Melissa Colossi, an artist and Green Guide, volunteered with some other residents to make a street mural. teamed up to involve to community in a street mural for the Walk, Bike and Ride theme. "The purpose of the mural was to encourage the community to use forms of transportation other than their cars," recalls 1011. "When we started the mural, there were about 8 of us there, and as the morning continued on, it was really amazing, we started and then there were just people walking by saying, you know, 'can I help?' And they just dove right in. By the end I'd say we had about 20 people there. It was really great."
- Groups like Philly Tree People, a city-wide volunteer organization co-founded by a Kensington resident, and Neighborhood Civic Associations are pulling together volunteers to help plant trees and beautify vacant lots. Over 400 trees were planted in the neighborhood from the fall of 2005 through the spring of 2010.^{vii} Says Nykia Perez, the co-founder of Philly Tree People, "I started with tree planting because it was something that was accessible for volunteers to do... and it provides people with excitement and changes the neighborhood visually. Kind of like instant gratification, instant impact. Trees are not optional. We need them all over the city. If groups like ours are not planting trees, the city does not have the capacity to do what we are doing. Citywide, we have 1,000 volunteers out twice a year planting trees. The City doesn't have that many employees in the parks system, so it's not feasible for them to do that."

- A group of residents came together to build a skate park, “Pop’s Skate Space,” in an unutilized recreational space in the neighborhood. The group raised \$15,000 in donations and brought hundreds of volunteer hours to make the project a reality. “Before we started the program at Pop’s, it was a run-down little piece of land that the City basically had forgotten,” says Peggy Potts. “There were drugs, and prostitutes, and just a whole bad element... Parents wouldn’t let their kids go there. Now we have hundreds of kids from all over the City coming to our skate park every day.” Laura Semmelroth, another active member in the Friends of Pop’s organization, said about the park: “We are really lucky. It is tough to reach kids who are between the ages of 9 to 19. This skatepark has reached this age group and has solved many problems. The skatepark keeps the kids off the corner, provides them with friends, and their parents even get involved watching and encouraging them when they skate.”^{viii} Residents now volunteer to maintain the park and run – again as volunteers – a summer camp for youth at Pops Park. The youth summer program provides food for the children and includes a educational component about healthy eating. Peggy Potts and other volunteers work to bring nutrition into the program by providing different fruits and vegetables for children to try. “We let them help make the meals so they will have a little bit of information to go back with to their parents. We have had kids that didn’t know what a blueberry was, or a plum,” she says, who are now learning about a healthy diet.
- Over the years, neighbors have beautified their own properties as well as engaged in “guerilla gardening” efforts to improve abandoned spaces in the neighborhood, using plants and materials from the NKCDC Garden Center and from other resources. Approximately 15 community gardens are currently functioning in the neighborhood, thanks to the leadership of residents and grassroots groups.



Figure 11. Brown Elementary School students help transform a vacant lot into a garden during summer 2010, as part of a service-learning project.



Figure 12. Community residents planting street trees.

Planning and design

The Big Green Block. A key design initiative for Sustainable 19125 was for a project NKCDC calls the “Big Green Block.” NKCDC worked with the Pennsylvania Horticulture Society (PHS) and the Philadelphia Water Department (PWD) to develop a master plan for a 1-block area surrounding the Schissler Recreation Center. The plan identified more than 16 locations and \$2,000,000 in green infrastructure actions including rain gardens, a stormwater infiltration basin, street tree plantings, and pedestrian-friendly streetscape improvements and pathways. NKCDC selected the block for several reasons. First, it was located adjacent to the new Kensington High School for the Creative and Performing Arts. NKCDC had worked with other neighborhood advocates, including Youth United to Change, to press for the development of the school – and the School District had agreed to develop an environmentally sustainable new school. The \$43 million facility would achieve “LEED Platinum” (Leadership in Energy and Environmental Design) certification from the US Green Building Council. Second, the block was also located right next to the Market-Frankford El line running along Front Street – and, in the words of Deputy Director Shanta Schachter, “it was scary looking,” with vacant and trash-strewn land. Improving the block would mean making rail transit more accessible and appealing for residents, helping the environment while saving people

money on transportation costs. David Elliott, the landscape architect who worked with the community to design the improvements, said “The Big Green Block is about reclaiming land that had been inaccessible to the public... it transforms the landscape into an amenity and not a safety threat.”



Figure 13. Kensington CAPA High School, a new, LEED-Platinum building anchoring the Big Green Block

For the Philadelphia Water Department, the Big Green Block serves as a model for stormwater management that it hopes to bring to the rest of the city. Philadelphia has a Combined Sewer System, in which rainwater and wastewater run through the same set of pipes. During a rainstorm, the combined volume of water overwhelms the sewage treatment system, causing untreated sewage to flow out of 164 “Combined Sewer Overflows” that act as a relief valve and into five different waterways around the city. Many cities have tried to solve the problem by building huge underground storage tunnels to store the overflow until it can be treated – a fix that, according to Howard Neukrug, director of the Philadelphia Water Department’s Office of Watersheds, would cost \$8 billion.^{ix} The Water Department has instead embarked on a program called Green City, Clean Waters, that is looking to use natural methods – such as bioswales and specially designed tree pits for rainwater detention, rain barrels, and permeable pavement – to achieve the same results at a much lower cost, estimated at \$2 billion. Says Jessica Brooks, a Water Resources Engineer with the Water Department, “The projects that we have today [on the Big Green Block] collect the runoff from about 11 acres, removing in excess of 11 million gallons of run off from our system on a yearly basis.” What’s good for the environment is good for residents, too, since the \$6 billion in estimated savings would otherwise have had to go on their tax bill.



Figure 14. Conceptual plan for the Big Green Block.

Community-Scale Plans and Focused Planning Studies. Community planning has been a key tool for NKCDC ever since it decided to take on a comprehensive neighborhood revitalization approach, but its importance has continued and grown as NKCDC has deepened its thinking about environmental sustainability. NKCDC convened a comprehensive neighborhood plan in 2003 and followed up with a planning study for the Frankford Avenue commercial corridor in 2004. Since then, planning studies have included:

- A 2008 corridor study for the “**Norris Street passage**” to strengthen connections between the neighborhood and the Market-Frankford rapid transit rail line. The goal of the study is to identify improvements that would increase usage of rail transit by providing a stronger sense of safety and more enjoyable environment for pedestrians. Improvements are underway and included planting street trees with special stormwater retention basins as part of the tree pits. Nykia Perez, who lives on Norris Street, says it has “changed significantly with the addition of trees. The street was very desolate, unfriendly, and cold – not really a place that you would feel safe walking down. The trees have made a big difference.” In early 2011, a developer came to NKCDC to discuss developing 10 new townhomes on a former vacant parking lot on Norris Street. The developer adjusted the development proposal to help to implement the plan – for instance, scrapping garage door fronts in favor of a greater street front presence.



Figure 15. Artist's rendering of proposed treatment of intersection at Front Street and Norris Street, by Berks Station. Source: Interface Studio, Norris Street Passageway planning study, 2008.

- A **Frankford Avenue Streetscape** study and accompanying design guidelines to ensure that development along Frankford Avenue creates a strong core for the neighborhood and that it is environmentally sustainable. The design guidelines, which are meant to guide review of proposed development projects, specifically set out as criteria whether the proposed project will use sustainable materials and building practices. The guidelines encourage (although they do not require) green roofs, permeable paving for improved stormwater management, passive solar heating and cooling, and on-site renewable energy production.
- A 2008 “**New Kensington Riverfront Plan**” to create a development vision for the neighborhood along its edge with the Delaware River. The planning process included a design charette entitled “Draw Me a River,” in which residents were invited to help envision possibilities for riverfront gateway projects. Environmentally sustainable elements of the plan – to name just a few - include improved pedestrian access to the river, increased green space and a greenway to become part of the East Coast Greenway connecting Florida to Maine, bike lanes along Frankford Avenue, renewable energy production through solar and wind farms on the waterfront, “green roofs” on certain buildings, and “green infrastructure” for natural stormwater infiltration. A task force established to oversee the planning process included residents, NKCDC, and representatives of partner organizations such as the City agencies, the Pennsylvania Environmental Council, the Clean Air Council, the Pennsylvania Horticultural Society, Neighbors Allied for the Best Riverfront, the Delaware River City Corporation, the Delaware Valley Regional Planning Commission, the University of Pennsylvania (PennPraxis), elected officials, and others.



Figure 16. A vision of Tioga Marine terminal, as proposed in the New Kensington Riverfront Plan, showing new greenspace and greenways, natural stormwater management, and wind farm. Wallace, Roberts and Todd, Architects.



Figure 17. Sharing ideas at the "Draw Me a River" community planning charette.

Issue-based organizing and advocacy

NKCDC has played largely a supporting rather than a leading role in issue-based organizing and advocacy efforts, but has been involved in several issues:

- Support for organizing efforts by Youth United for Change, young resident leaders from the neighborhood, and other groups to build new high schools for the neighborhood, and advocacy with the School Department to build Kensington High School for the Creative and Performing Arts as a LEED Platinum building.
- Support for Youth United for Change and other groups working for food justice in the area, which suffers from a lack of grocery stores selling affordable and healthy food. NKCDC is now working with partners to press for a new, rigorous curriculum for the schools, and is working with the principal of the new culinary school to shape a curriculum around food justice issues and healthy food.
- Advocacy for implementation of the Riverfront Plan and development of the East Coast Greenway through the neighborhood.
- Logistical support for grassroots groups such as the Emerald Street Urban Farm, where squatter-farmers are raising and selling produce to residents for prices they can afford to pay. NKCDC is working to try to help this group get title to the land they are on.
- Hosting neighborhood events for the Green Jobs Now National Day of Action, in which residents gathered to call, in the words of the national organizers, “a new green economy strong enough to lift people out of poverty.”



Figure 18. Community meeting; Annual Farm Dinner.

Peas and carrots: Environmental sustainability and neighborhood revitalization

Ever wonder about that expression about things going together like “peas and carrots” that Forrest Gump turned into a cliché? While they do taste great together with some butter, the saying refers to a gardening technique called “companion planting.” Peas fix nitrogen in the soil that helps other crops grow faster. Carrots have deep taproots that help to break up the soil. Plant the two vegetables together and they both do better than they would alone. The same is true of environmental sustainability and neighborhood revitalization – and Sustainable 19125 shows how.



Figure 19. For NKCDC, Sustainability = Healthy Neighborhoods.

Urban revitalization promotes sustainability

Even if NKCDC never built a community garden, set out a recycling bin, or installed a solar panel, the core work of revitalization in which it has been engaged since 1995 is fundamental to environmental sustainability, because of the density and transit-oriented character of the neighborhood it is working to save. City dwellers, it turns out, are inherently green. A recent study, in fact, found that the average Manhattanite emits 14,127 fewer pounds of carbon dioxide annually than someone living in the New York suburbs.^x

A key reason why city-dwellers tend to generate lower environmental impacts is that they drive less. Modeling work by the Center for Neighborhood Technology, a think tank based in Chicago, has estimated the vehicle miles traveled per household and related carbon emissions down to the Census block level for several US urban areas, including Philadelphia. A typical household in ZIP code 19125 drives a little

over 10,000 miles in a year and produces about 3.6 metric tons of carbon dioxide pollution annually. A household in suburban Philadelphia, meanwhile, drives closer to 18,000 miles or more in a year and produces more than 8.6 metric tons of carbon dioxide. The CO₂ savings, from transportation alone, of enticing a household to stay in or move to 19125 are thus at least 5 metric tons (11,000 pounds). Compare that to the carbon savings of building a home to the Energy Star standard compared to building to the current building energy code. While those savings depend on a lot of variables such as the type of heating fuel used and the local carbon intensity of the electric grid, you might expect to saving a little under 2 metric tons of CO₂ per year for a typical house in a climate zone like Philadelphia's.^{xi} In effect, for every household you retain or attract in the 19125 ZIP code, you achieve 2.5 times the carbon savings of building a home to the Energy Star standard.

The total environmental savings of retaining households in the city may be even greater – city dwellers, after all, tend to live in smaller housing units that usually share walls with other homes, thus using less energy in the home. Denser population also means less impermeable surface area (like asphalt roofs and roads) per person, so city dwellers probably also generate less stormwater runoff per capita as well.^{xii}

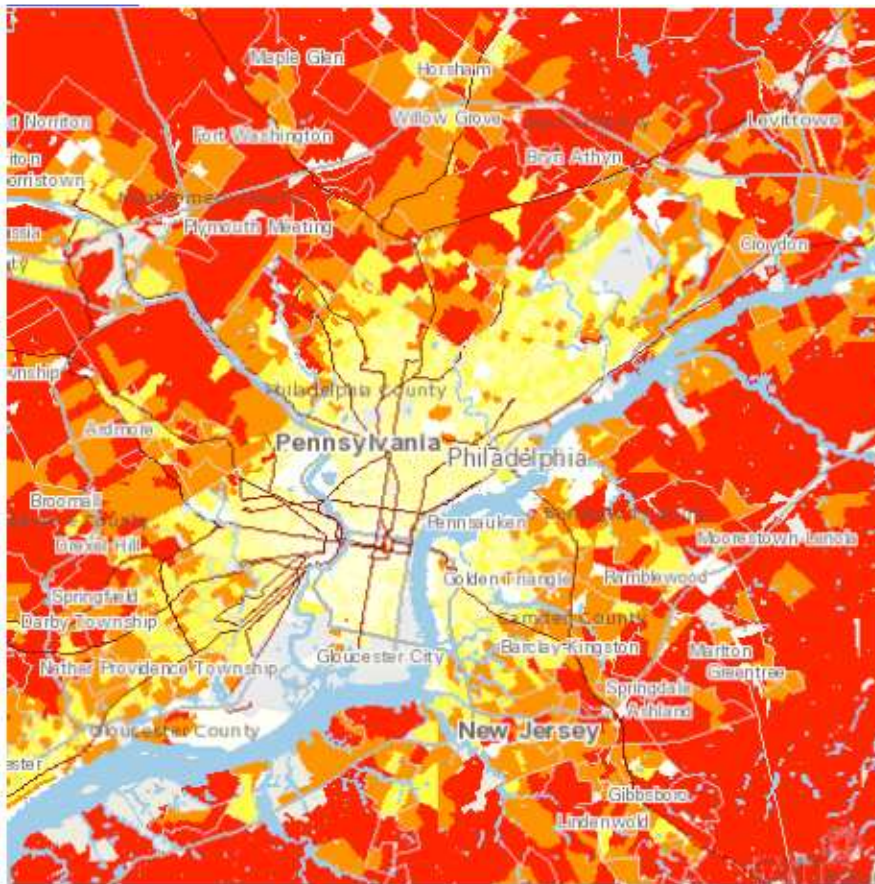


Figure 20. Transportation-related CO₂ emissions around Philadelphia. Households in red areas generate 8.6 metric tons or more of carbon dioxide; in light yellow areas 3.3 metric tons. Source: Center for Neighborhood Technology.

Of course, promoting both green housing and urban revitalization gets you the best of both worlds. That's what NKCDC has been doing with its weatherization programs all along. The organization is also getting involved in cutting-edge residential green building with its new, mixed-income, 14-unit Passive House project in the neighborhood. A Passive House is a very well-insulated, air-tight building that is heated primarily by sunlight and the heat of the home's occupants; while the concept was originally developed in Germany, Passive Houses are now being constructed in the United States and use almost 90% less energy than a typical home.^{xiii} New residents of these homes can expect to produce only a small fraction of the greenhouse gas pollution that a typical suburbs-dweller generates – and pay only a small fraction of the transportation and utilities costs, as well.

Sustainability promotes revitalization

That typical household in 19125 who produces 5 metric tons less of carbon dioxide from transportation than a suburbanite outside of Philly? They are doing more than just saving the environment - they're also saving over \$230 a month in transportation costs compared to the suburbanite, according to the Center for Neighborhood Technology models. That brings us to the flip side of the equation – by making 19125 more sustainable, NKCDC is promoting the revitalization of the neighborhood and addressing key community development issues for residents.

Going green is definitely not a silver bullet to solve every urban ill, but it can help with many of them. Consider the following:

Neighborhood disinvestment – as evidenced by people leaving the neighborhood, abandoned homes, shuttered businesses – was one of the driving issues leading NKCDC to engage in revitalization work. Green strategies have played a direct role in addressing this trend. A study by Dr. Susan Wachter at the University of Pennsylvania Wharton School of Business, for example, found that “cleaning and greening” vacant lots led to surrounding housing values increasing by as much as 30%, and new tree plantings boosted surrounding housing values by approximately 10%. Wachter concludes that “In the New Kensington area this translates to a \$4 million gain in property value through tree plantings and a \$12 million gain through lot improvements.”¹ As Viola Toner puts it, “now that the gardens are all around, it looks so much nicer when you walk around. It makes you feel better about living here.”

Moreover, Sustainable 19125 has ended up functioning as a very effective marketing tool to improve the image of the neighborhood and attract people to it who are interested in sustainable living. Initially, notes Shanta Schachter, NKCDC's neighborhood marketing efforts focused on the arts cluster in the neighborhood. “But now,” she continues, “we've also captured and leveraged the green cluster to attract people to the neighborhood.” Adds NKCDC's community relations specialist,

¹ Susan Wachter (2004). “The Determinants of Neighborhood Transformation in Philadelphia – Identification and Analysis: The New Kensington Pilot Study.” University of Pennsylvania.

Kevin Musselman, “Sustainable 19125 created an allure and a mystique about the neighborhood – so that people on the other side of the city have heard about it.” As Melissa Colossi, an artist and Green Guide, describes, “We were looking for a mixed-use building where we could live above our work space. I’m a painter and my husband’s a drummer. We screen prints and make clothing together so we needed a big space. When we started looking at Fishtown, and heard about Greensgrow Farm being just blocks away, and the Garden Center across the street, and the beginnings of the Frankford Arts Corridor, we were sold.”

Several private developers are now building market-rate, LEED-certified projects in the neighborhood, and community leaders in the City’s toniest ZIP code (19103, where Rittenhouse Square is located) actually called up NKCDC to say they wanted help in replicating Sustainable 19125.

In another telling story, a Philadelphia-based nonprofit, The Reinvestment Fund (TRF), conducted a market assessment for the City in 2001 that essentially used a variety of data points to rank neighborhoods according to their marketability.^{xiv} “TRF had us at the bottom of the ladder,” relates Salzman – specifically at the “distressed” and “reclamation” rungs of it, where TRF recommended more attention on assembling land for redevelopment than on quality of life work such as improving vacant lots. Salzman was so surprised she called up TRF to try to understand how they had made the calculations. In 2006, TRF called Salzman back to tell her that the neighborhood had gone up to a middle-level ranking. Some parts of 19125, in fact, have had their market heat up enough that neighborhood residents who had earlier opposed NKCDC’s efforts to build affordable housing in the neighborhood are now asking it to build such projects in order to ensure that low-income families will be able to stay and enjoy the revitalized neighborhood.

Low incomes present challenges for many residents in the neighborhood (as well as in Philadelphia overall). Sustainable 19125 helps residents by saving them money:

- Energy savings generated by the CFLs that NKCDC distributed will help neighborhood residents pocket about \$130,000 in all over the lifetime of the bulbs. In fact, at current prices for bulbs and energy, even if residents paid for the CFLs, investing in them would be like putting money in a bank account bearing 30% to 40% interest.^{xv} Other simple home energy retrofits – like adding attic insulation, installing weatherstripping and switching to programmable thermostats – yield similarly impressive returns. Water savings add more money to residents’ pockets. NKCDC notes, for example, that installing a low flow toilet can save residents up to \$90 annually, or \$2,000 for the life of the toilet.
- Improving safe access to the Market-Frankford El provides a realistic alternative to owning a car for many. At only \$1.55 per trip, it saves riders thousands in transportation costs. (Transportation costs were the second largest expenditure for the typical American household, averaging \$8,750 per year or more than 17 percent of the average household’s pretax income; over \$8,000 of these costs relate to car ownership).^{xvi}

- Reducing stormwater runoff and increasing recycling rates lower costs for the city – which means lower taxes for everybody. Recall that the Philadelphia Water Department’s green stormwater management program, for instance, will save taxpayers \$6 billion in capital costs. The Philadelphia Controller’s Office estimated in 2006 that for every 1% of the waste stream that is recycled, the City saves \$540,000.^{xvii}
- Positioning 19125 – and Philadelphia as a whole – as a cutting-edge, “green” place to be is a smart business attraction and retention strategy, which means more jobs for residents. “We see the world moving in a way that values sustainability, and ultimately that becomes a bottom line that determines the competitiveness of this city,” says Katherine Gajewski, Director of the City of Philadelphia Mayor’s Office of Sustainability. “At the end of the day, Greenworks [the name for Philadelphia’s citywide sustainability initiative] is as much an economic development plan as it is a sustainability plan.”

Crime is another pressing issue for the neighborhood. Sustainable 19125’s work fits with two of the leading theories about how to improve safety. The “Broken Window” theory, first laid out by George Kelling and James Q. Wilson, asserts that symptoms of physical disorder in a community – like vacant lots, trash or abandoned cars in the streets, and of course broken windows – are “inextricably linked” with crime.^{xviii} Untended property leads to “untended behavior,” and ultimately, a breakdown of community control. By working with residents to clean vacant lots, planting trees and gardens, installing solar street lights, and painting murals, NKCDC and its partners are re-establishing a sense of community control over public space that sends a message to would-be criminals that people care (just think about the neighbors who ran after the person who was stealing their street tree and wrested it from the trunk of his car). Greenery itself, by the way, appears to be associated with “lower levels of fear, fewer incivilities, and less aggressive and violent behavior” in urban communities, according to a study by researchers at the University of Illinois.^{xix}

Another of the leading theories about violent crime is the “Collective Efficacy” theory. Studies by researchers at the Harvard School of Public Health found that violent crime rates were significantly lower in neighborhoods where residents reported that they knew and trusted their neighbors, and felt that neighbors were able to work together to solve problems.^{xx} Sustainable 19125 builds this sense of collective efficacy by strengthening social connections among neighbors and supporting neighbors in collective work such as the creation of Pop’s Skate Park and community gardens. As Neil Brecher, a Green Guide, and President of the Fishtown Neighborhood Association describes, “You can’t walk from one end of the neighborhood to the other without seeing someone you know, and that bond is what helps to form a strong neighborhood. It’s not just a bond between two people, but you can almost look at it like a honeycomb bond where you have connections with so many people who have connections with so many other people, that it’s bound to be stronger than anything you could have started with.”

Health issues for the neighborhood include healthy eating, healthy lifestyles, and respiratory ailments. Sustainable 19125 helps to address these concerns in several ways:

- Trees can reduce particulate matter (one of the main causes of asthma and other respiratory problems) at the street level by 60%.^{xxi} Trees also remove other pollutants including ozone, sulfur dioxide, carbon monoxide, and nitrogen dioxide, generating measurable reductions in these contaminants in cities.^{xxii} Columbia University researchers found that asthma rates among children aged 4 and 5 fell by 25% for every extra 1.4 street trees planted per acre.^{xxiii}
- Community gardens provide affordable and healthy food for residents. A 10' by 10' plot can produce 100 pounds of food in a year, NKCDC notes.^{xxiv} Food justice organizing work will also increase residents' access to affordable, healthy food.
- Green space for recreation, and encouraging biking and walking helps residents live healthier lifestyles. NKCDC notes in its brochures, "If you walk to the Berks El Stop from Norris and Gaul Streets, and take the train downtown to work, you would burn approximately 750 calories a week just getting to work!" NKCDC also calculates that "If you ditch your car for a bike one day a week, you could save \$16... and burn 2,000 calories in one month."
- Green buildings, such as the LEED Platinum Kensington High School for the Creative and Performing Arts, are associated with higher levels of health for building occupants.^{xxv}

Education was a key issue for the neighborhood, especially overcrowded and failing high schools. The new, LEED-Platinum Kensington High School for the Creative and Performing Arts provides spacious and sunlit environs for students – possibly playing a role the observed decrease in disciplinary incidents and perhaps improving student performance, too. Studies of office workers have shown productivity gains of over 1% in green buildings, with some businesses reporting productivity increases of 5% as well as reductions in absenteeism of 40% and reductions in employee turnover of 57% to 83%.^{xxvi} It stands to reason that these sorts of benefits should also apply to students and teachers. Says Deborah Carerra, the Kensington High School Principal, "The building has been unbelievable. We know that environment does make a difference in how people feel about themselves. We've seen a change in the kids – attendance has improved, and we just see a sense of pride. The building itself demands a certain kind of respect... it's constantly letting [kids] know that 'you've been trusted with something special, because you are special – in a good way, and things don't have to be as they've always been.'" Moreover, she adds, "The building is a classroom in itself. We've been working with Earth Force, and training some of our students to really know about the building, and what does it mean that you're in a green building, and what does that mean to your everyday life. That has allowed us to have a recycling club, and to work towards creating a vegetable garden."

More indirectly, but perhaps just as importantly, the health and safety improvements that NKCDC is helping to make in the neighborhood will also help students get to school ready to learn and focus on their studies.

Community Issue	“Green” Approach by NKCDC
Education	New green school; kids programs in new Pops Park; health benefits for kids
Crime	Broken Windows theory; Building Collective Efficacy / Social Capital through green initiatives
Low incomes	Saving money through energy efficiency, trees, recycle bank, improved access to transit, growing food
Disinvestment / reduced tax base	Using “greenness” to market the neighborhood (and the City) as an attractive place to live and work; Trees and vacant land management increase property values
Health	Green school; gardens; culinary school / food justice organizing; trees; walk/bike/ride

Lessons for CDCs: the management of a sustainable revitalization organization

NKCDC’s deep involvement in neighborhood sustainability and revitalization is a very different business model from the more production-oriented, citywide or regional-scale community development corporations that have become increasingly common as the industry matures. Some of the key management lessons NKCDC has to share with organizations that are considering following its path are:

- Work with your neighbors.** Deep involvement with neighbors (both businesses and residents), and indeed often stepping back into a supportive role as neighbors take the lead on grassroots projects or express what they want the neighborhood to become, is a basic prerequisite for successfully carrying out neighborhood revitalization work. Neighbors, not NKCDC staff, have the starring role, for example, in the Green Blocks program. Neighbors built community gardens and Pop’s skate park, plant trees, and are the ultimate arbiters of whether the neighborhood will be sustainable or not. Neighborhood Civic Associations play a lead role in everything from zoning decisions, organizing cleanups, and making plans to guide the future development of the neighborhood. Putting neighbors on your board or asking them to attend a meeting is fine, and NKCDC does that too – but their engagement with neighbors runs far deeper than that. NKCDC has instead worked to integrate itself into the social fabric of the community. In fact, most of its staff, including its Executive Director, live in the neighborhood.
- Work with your partners.** Institutional and organizational partners – such as the Pennsylvania Horticulture Society, the Mayor’s Office of Sustainability, the Philadelphia Water Department, the School District, Universities, Foundations, planning and architectural consultants, and many, many others – have played a

critical role in the neighborhood's progress. "Especially when you get engaged in neighborhood sustainability," says Salzman, "there is simply no way you can get it all done yourself – or even half of it done yourself." The corollary to this theory is that doing this work effectively requires assiduous attention to one's relationships with one's partners. Adds Maitreyi Roy of the Pennsylvania Horticultural Society, "The partnership... with New Kensington CDC has played a huge role in bringing back this neighborhood." Says Katherine Gajewski, the Director of the City of Philadelphia Mayor's Office of Sustainability, "The mayor speaks very openly that he wants Philadelphia to be the greenest city in the country by 2015. In order to achieve a lofty goal like that we're obviously going to have to work very hard with a number of partners... we love the integrated approach of Sustainable 19125." NKCDC is working with the Office of Sustainability and neighborhood groups around the city to explore the opportunities for expanding this approach to other areas.

- **Track and tell the story.** NKCDC invests substantial time and effort in tracking the results of its work. Green Guides are asked to spend some time reporting on their activities, and NKCDC brought in Temple University to analyze this data (as well as other program data). The University of Pennsylvania also helped NKCDC to conduct the study, cited earlier, on property value impacts of trees and vacant land management. NKCDC has staff trained in urban planning and both the organization and its many planning consultants collect volumes of data on the neighborhood. Lastly, NKCDC uses a program at NeighborWorks® America called Success Measures to measure neighborhood changes using a variety of observational tools, interviews, and surveys.
- **Creative financing is needed.** NKCDC has been fortunate to obtain significant funding from the City, the William Penn Foundation, the State of Pennsylvania Elm Street program, and other sources to support Sustainable 19125. Its creative approach to blending sustainability and revitalization, its implementation track record, and its attention to tracking results are among the reasons why it has succeeded in doing so. NKCDC has also been open to grassroots approaches to tackling many challenges – for example, working with youth to paint murals, rather than taking a high-budget approach to redeveloping a block. NKCDC also works, when possible, to leverage market forces in its favor. For example, its new Passive House project will be a mixed-income project, where 10 market-rate units will provide the cross-subsidy needed to create 4 affordable units. Over the long run, NKCDC hopes that the base of community leadership and volunteerism it is helping to build, including civic associations as well as individual resident volunteers, will be able to sustain many aspects of the program.

Discussion questions for readers

Linking community development and “green”

- Pick a top “community development” concern for your community – it could be jobs, schools, safety, affordable housing, or any other concern that is at the top of people’s minds. Can you think of any “green” strategies that might also help to address that concern?
- How would residents in your community benefit if it became more environmentally sustainable?

Using four tools to promote green

- Pick a top “green” concern (an issue around environmental sustainability) for your community – it could be increasing recycling rates, helping people to save energy, getting a community garden built, stopping a toxic polluter in your community, or redesigning a neighborhood to make it more pedestrian friendly, just to name a few examples. Of the four approaches discussed in the case study to promote sustainability, which of these could help you address your top “green” issue?
 - Education and social marketing
 - Community collective action
 - Planning and design
 - Issue-based organizing and advocacy
- If you picked the **education and social marketing** tool:
 - Who is the target audience for your social marketing message? Try to be specific (for example, “young urban professionals citywide” or “elderly Latino households in our neighborhood”)
 - Where can you find them?
 - How does your proposal (about what they should do differently) benefit them, from their perspective?
 - What barriers might prevent them from adopting the changes you want them to?
 - What messages might resonate with them?
 - How are you going to get the message out?
- If you picked the **community collective action** tool:
 - What are the projects / collective actions you’d like to make happen?
 - How could residents benefit from the projects / collective action you’d like to do?
 - How are you going to identify and meet residents who might be interested? Be creative – go beyond just flyers and a meeting.
 - What could residents contribute to the effort?

- What kinds of institutions, businesses and associations could you get involved in this effort? How could they benefit from what you'd like to do?
- What could these groups contribute to the effort?
- If you picked the **planning and design** tool:
 - Who needs to be involved in your planning process?
 - What data and information is necessary?
 - What will the steps look like in your planning process?
 - What steps will you take to bolster the chances that the plan is actually implemented?
- If you picked the **issue-based organizing and advocacy** tool:
 - What is the proposal you want to advocate for?
 - How does this “green” issue, and your proposal, impact residents’ interests?
 - What groups of residents are there that may make natural allies to work on this issue? How can you find them?
 - Who else benefits if you successfully address this “green” issue? How?
 - Who may feel their interests are threatened by your proposal? Can you change your approach to meet their interests too? What is your strategy for working with decision makers to get the outcome you are seeking?
 - What are the key points you need to make to convince others that the community should follow your recommendations?

Thinking about rural and suburban communities

- How might you be able to apply the same overall tools that NKCDC has used – education and social marketing, community collective action, planning and design, and issue-based organizing and advocacy - in a rural or suburban setting? (There are lots of examples out there!) Are there differences in how you would use them?

End Notes

ⁱ Source: analysis of American Community Survey 2005-2009 four-year average data for Census Tracts 143, 158, 159, 160, and 161.

ⁱⁱ National Neighborhood Coalition (2010). Open Space Management Program Case Study on New Kensington CDC.

ⁱⁱⁱ See, for example, The World Conservation Union (2006). "The Future of Sustainability: Rethinking Environment and Development in the Twenty-First Century." Report of the IUCN Renowned Thinkers Meeting, January 29-31, 2006.

On the internet at:

http://cmsdata.iucn.org/downloads/iucn_future_of_sustainability.pdf

^{iv} Adapted from the course materials for "Taking Green Action in Your Community," a 2-day workshop offered by the NeighborWorks® Training Institute (Course number CB260; register at www.nw.org)

^v Source: analysis of data presented by Lynn Mandarano (2010). "Sustainable 19125 Performance Measures Study." Center for Sustainable Communities, Temple University.

^{vi} Source: analysis of data presented by Lynn Mandarano (2010). "Sustainable 19125 Performance Measures Study." Center for Sustainable Communities, Temple University.

^{vii} Source: analysis of data presented by Lynn Mandarano (2010). "Sustainable 19125 Performance Measures Study." Center for Sustainable Communities, Temple University.

^{viii} Greg Lang. "Pop's Skate Park: 1 Year Anniversary." Spirit Community Newspapers, August 4th, 2010.

^{ix} Jacob Lambert (2011). "When It Rains, It Pours." *Grid Magazine*, January 2011.

^x Jonah Lehrer (2010). "A Physicist Solves The City." *New York Times Magazine*, December 19, 2010.

^{xi} Source for estimated carbon savings due to transportation: analysis of Center for Neighborhood Technology data. Use CNT's mapping tool on the internet at: <http://www.htaindex.org/>. Source for estimated carbon savings from building to Energy Star level: analysis of Energy Star program analysis of Energy Star home vs. home built to 2009 IECC standards in climate zone 4, assuming heating via air-source heat pump, and national average carbon intensity of the electric grid of 1.297 lbs CO₂ per kWh.

^{xii} See an EPA discussion of the effects of sprawl on stormwater management costs at:

<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=86>

^{xiii} For more information, see:

<http://www.passivehouse.us/passiveHouse/PassiveHouseInfo.html>

^{xiv} See TRF (2008). "Market Value Analysis: Using Data and Mapping to Identify Public and Private Investment Opportunities in Cities." Presentation to the Federal Reserve Bank of Philadelphia. This presentation summarizes results from both the

2001 and 2006 studies performed by TRF. On the internet at:

http://www.trfund.com/resource/downloads/policypubs/MVA_PhilFedEvent.pdf

^{xv} Many residential energy efficiency investments provide an annual rate of return of 30% or higher, with some investments approaching rates of 100%. For a review and discussion of these opportunities, see David Goldstein (2010). Invisible Energy: Strategies to Rescue the Economy and Save the Planet. Bay Tree Publishing.

^{xvi} Source: Analysis of 2007 Consumer Expenditure Survey data, US Bureau of Labor Statistics.

^{xvii} Jim McCaffrey (2006). "Is Recycling Program Working?" Philadelphia Evening Bulletin, April 6, 2006.

^{xviii} Kelling and Wilson (1982). "Broken Windows." The Atlantic, March 1982.

^{xix} Kuo, F.E., & Sullivan, W.C. (2001). "Environment and crime in the inner city: Does vegetation reduce crime?" Environment and Behavior, 33(3), 343-367.

^{xx} Sampson R, Raudenbush SW, and Earls F. (1997). "Neighborhoods and violent crime: A multilevel study of collective efficacy." Science, 277: 918-924.

^{xxi} Kim Coder (1996). "Identified Benefits of Community Trees and Forests."

University of Georgia. On the internet at:

<http://www.coloradotrees.org/benefits/Identified%20Benefits%20of%20Community%20Trees.pdf>

^{xxii} David Nowak. "The Effects of Urban Trees on Air Quality." USDA Forest Service report. On the internet at:

<http://www.coloradotrees.org/benefits/Effects%20of%20Urban%20Trees%20on%20Air%20Quality.pdf>

^{xxiii} Gina Schellenbaum Lovasi et. al. (2008). "Children living in areas with more street trees have lower asthma prevalence." Journal of Epidemiology and Community Health, 62:569.

^{xxiv} For a full discussion of yields that can be achieved from intensive gardening in small spaces, see John Jeavons (1995). How to Grow More Vegetables Than You Ever Thought Possible on Less Land Than You Can Imagine. Ten Speed Press.

^{xxv} See: Greg Kats (2003). "The Costs and Financial Benefits of Green Buildings." Report to the California Sustainable Building Task Force.

^{xxvi} See: Greg Kats (2003). "Green Building Costs and Financial Benefits."

Massachusetts Technology Collaborative. Also see: Greg Kats (2003). "The Costs and Financial Benefits of Green Buildings." Report to the California Sustainable Building Task Force. Note that a 5% productivity gain would equate to gaining 24 minutes of work time over the course of an 8-hour workday.