



# **Two Shades of Green: Saving Money and Protecting Public Health in Affordable Housing**



Affordable housing providers play a key role in developing and maintaining green and healthy living environments for low-income families. The energy efficiency components of these programs offer substantial long-term savings for residents, developers, and other stakeholders. Additionally, studies show that both adults and children who reside in green and healthy buildings enjoy improvements in overall health status, asthma, and other health outcomes.

## The Challenge

Adopting green and healthy building practices is more challenging for the affordable housing sector due to tight margins, regulatory barriers, and the structure of affordable housing financing. As a result, residents of low-income housing, who could benefit most from green and healthy housing, are often left out of the green building movement.

A group of agency and nonprofit partners, including the NYC Department of Health and Mental Hygiene (DOHMH), Local Initiatives Support Corporation New York City (LISC NYC), and the NYC Coalition for a Smoke-Free City (Coalition) collaborated on an initiative to implement green and healthy property management practices in affordable housing. This exciting project built on prior successful efforts in New York City to improve the energy efficiency of affordable housing. In 2012, LISC NYC and Enterprise Communities weatherized 2,226 affordable housing apartments that resulted in reduced energy and water consumption and cost, improved indoor air quality, and better trained maintenance staff.

## The Goal

The partners designed Two Shades of Green (TSG) to bring green and healthy maintenance practices to existing affordable housing. TSG offers a method for incorporating green and healthy property maintenance strategies into the practices of community development corporations (CDCs) who develop and manage affordable housing. TSG reduces operation and maintenance costs, which allows affordable housing providers to reinvest the savings into the prevention of building conditions that cause or exacerbate health problems, such as asthma, allergies, obesity, diabetes, and heart disease. The model is specifically calibrated to enable replication through other high-need, low-income areas in New York City and across New York State.

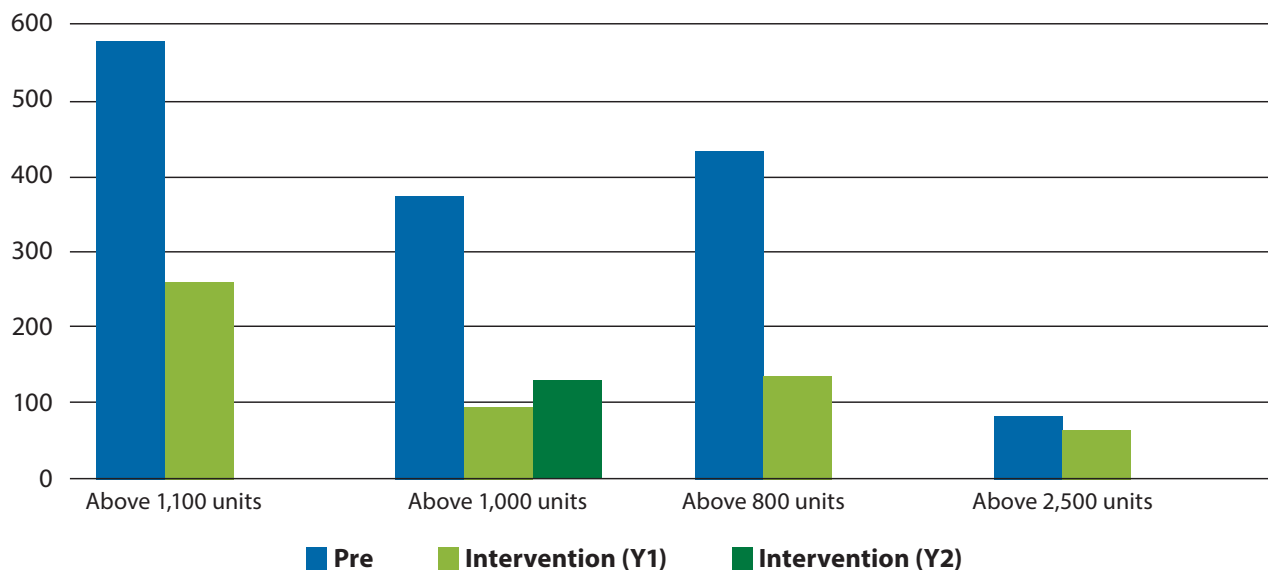
## The Approach

The TSG team kicked off the collaboration at a September 2012 workshop. Over 50 property managers and owners attended to learn about energy and water retrofits, safe pest management, smoke-free housing, active design, and green cleaning principles. The conference compelled nine community development corporations (CDCs) to explore one or more of these strategies at their properties. The TSG team committed to working with each CDC to implement new procedures. In partnership, they developed action plan templates and benchmarks for each priority area to define implementation steps and track progress. The TSG team also developed *Green and Healthy Property Management*, a guide adapted from an existing publication developed by LISC-Boston, adding NYC-specific information on policies and resources.



TSG builds on successes in other jurisdictions. For example, the Boston Housing Authority has implemented similar green and healthy maintenance practices with impressive results. Figure 1 shows the number of cockroach-related work orders before and after the implementation of integrated pest management in Boston. Figure 2 shows the decrease in water consumption following water efficiency measures in Boston.

**Figure 1: Cockroach Work Orders in Boston Public Housing**



## The Impact

Participating CDCs expressed enthusiasm about incorporating green and healthy practices into their property maintenance practices. They also universally expressed a need for technical assistance and start-up resources toward implementing the measures.

St. Nicks Alliance transitioned two affordable apartment buildings from toxic cleaning supplies to green cleaning products—reducing chemical exposure for residents and lowering cleaning supply costs by 28 percent.

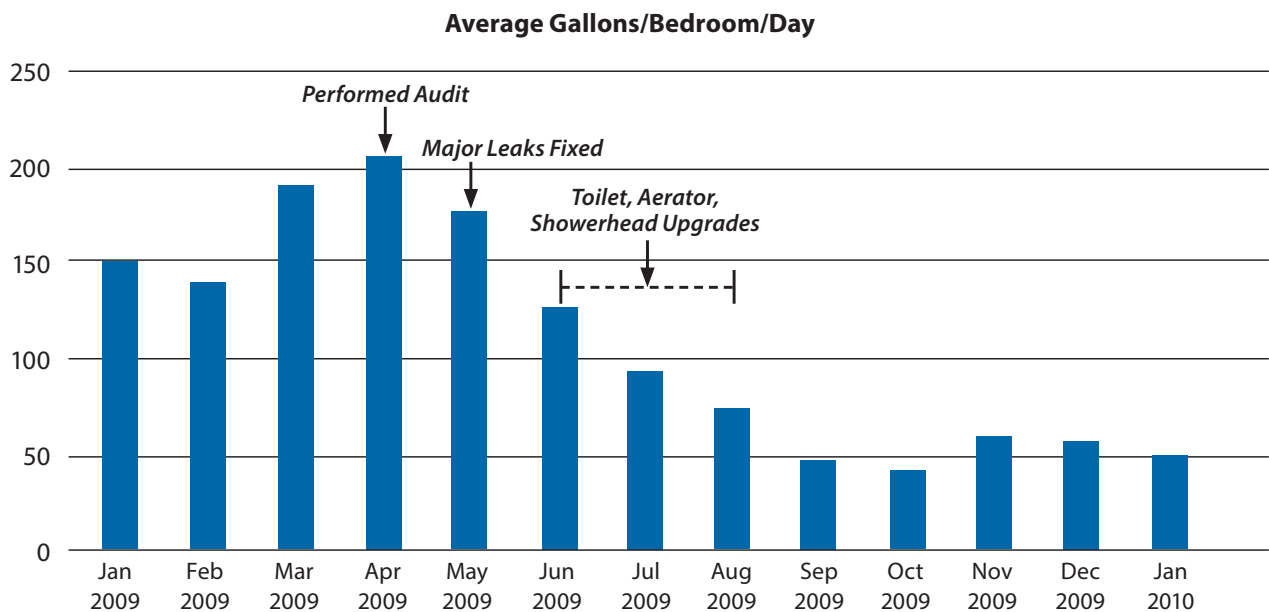
Although the initiative is in its very early stages, early results have emerged in nearly every category of green and healthy property maintenance practices. LISC NYC provided a small grant to one of its CDC partners, St. Nicks Alliance, to conduct a green cleaning project. LISC NYC researched and selected a green cleaning vendor that agreed to use certified green cleaning supplies and provide free training for building staff and residents. LISC NYC also carried out a pre- and post-survey with building staff and tenants. St. Nicks Alliance transitioned two affordable apartment buildings from toxic cleaning supplies to green cleaning products—reducing chemical exposure for residents and lowering cleaning supply costs by 28 percent. Importantly, this change provides a model for the CDC’s other 850 affordable housing apartments.

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Southside United HDFC (Los Sures) is completing the design phase for implementing active design in one HUD 202 building comprised of 56 units for seniors. They are implementing a “call for artists” to create stairwell murals to encourage people to take the stairs instead of the elevator. Another CDC, Cypress Hills LDC, set a goal of making all buildings smoke-free by 2015 and plans to use a lease rider so that tenants are aware of and agree to changes. They are

- Community Development Corporations (CDCs) Participating in Two Shades of Green**
- Banana Kelly
  - Bedford Stuyvesant Restoration Corporation
  - Bridge Street Development Corporation
  - Cypress Hills LDC
  - Harlem Congregations for Community Improvement
  - Mid-Bronx Desperadoes
  - Southside United HDFC
  - St. Nicks Alliance
  - West Side Federation for Senior and Supportive Housing

**Figure 2: Water Interventions Timeline and Results in Boston Public Housing**



## Green and Healthy Property Maintenance Practices



### Integrated Pest Management (IPM)

**Goal: Implement building-wide IPM:**

- Reduce the presence of cockroaches and mice
- Reduce pesticide use and eliminate use of pesticide foggers, bombs, and sprays
- Reduce resident and worker exposures to pest allergens and pesticides



### Green Cleaning

**Goal: Transition properties to use green cleaning products:**

- Minimize the use of harmful or toxic chemicals, reducing exposure to maintenance workers and occupants
- Ensure that property management staff and vendors use cost-effective green cleaning supply products



### Active Design

**Goal: Increase opportunities for active living for residents, staff, and visitors:**

- Incorporating active design strategies ([www.nyc.gov/adg](http://www.nyc.gov/adg)) into the building interior and exterior, and in the surrounding community where appropriate.



### Smoke-Free Housing

**Goal: Implement building-wide smoke-free housing policies:**

- Reduce resident and staff exposure to secondhand tobacco smoke
- Lower property damage costs from secondhand smoke in units
- Decrease risk of fire



### Water Conservation

**Goal: Implement water conservation measures in one or more buildings:**

- Reduce the presence of mold (as identified by building staff and complaints from tenants) and minimize moisture problems
- Conserve water use
- Reduce water expenses

The Bridge Street Development Corporation erected a new 23-unit Low Income Housing Tax Credit green building that, along with the grounds, is smoke-free.

also offering cessation resources to assist with the transition. Their new affordable housing sites will open with a smoke-free policy—three such sites are in the pipeline. The Bridge Street Development Corporation erected a new 23-unit Low Income Housing Tax Credit green building that, along with the grounds, is smoke-free.

Finally, another CDC upgraded its pest control program and successfully dealt with a serious rodent and pest infestation.

Finally, another CDC upgraded its pest control program and successfully dealt with a rodent and pest infestation. The TSG team provided technical assistance and information on best practices, including a walk-through inspection of buildings with pest problems. The team reviewed the CDC's current pest control contract and provided the CDC with "model" integrated pest management contract language. This information will be used when renegotiating the contract with a pest control professional down the road. The team also made suggestions related to garbage management and ways to improve current pest control procedures being used by CDC staff. In the future, the CDC hopes to see fewer pest-related complaints, reduction in the use of pesticides, and a healthier and more pleasant living and working environment for CDC residents and staff.

## Conclusions and Portability

By identifying and delivering an effective value proposition for affordable housing providers (i.e., saving money on water, energy, and supplies), public health practitioners secured a public health victory. Once initiated, the model can be self-supportive through the savings captured from implementing these cost-effective measures. Such an approach can be used in any community with the right tools and resources. TSG leveraged multiple sources of funding and technical assistance to implement the initiative. With more robust funding, the partners could expand critical aspects of the initiative, including technical assistance, baseline measurement of costs associated with pest management, property maintenance, cleaning, and water usage. The following is a list of considerations for communities wishing to test this model:

- Is funding available for an initial investment in CDCs wishing to adopt green and healthy housing strategies on their properties? *This is a helpful inducement for affordable housing providers with thin margins and competing priorities.*
- Are key leaders and property managers within each CDC committed to implementing a healthy homes approach? *Balancing*

*the new healthy homes commitments with day-to-day operational duties may challenge CDCs that are managing multiple demands.*

- Is training available, or can it be offered to provide a common cross-sector language? *The Green and Healthy Property Maintenance guide offers this common vocabulary.*
- Is there a partner who could be involved to evaluate the impact of the effort? *Universities or other research institutions may be willing to assign a student for such a project.*
- Is a partner available to help gather and analyze baseline water bills and usage, pest management costs and work orders for pests, and work orders for maintenance issues?
- Are culturally competent materials available to assist tenants with their responsibilities as they relate to green and healthy maintenance?
- Are there local funding and other incentives streams into which these healthy and green housing strategies can be incorporated?

### About this Case Study

State and local organizations are leading significant advances in healthy housing programs. There is a need to translate lessons learned and successes between jurisdictions and to inform national best practices. To meet this need, the National Center for Healthy Housing (NCHH) launched the Healthy Housing Capacity Building and Technical Assistance Initiative in the fall of 2012. Through this initiative, NCHH provided technical assistance and capacity building support to six state and local government agencies and nonprofit organizations to help them solve a specific challenge or barrier to advancing healthy housing that they are facing in their jurisdictions. NCHH provided technical assistance to the Two Shades of Green team in organizational development, strategic partnership creation, and development of tools to track program impacts and outcomes.

### About the TSG Team

Over the last 30 years, LISC NYC has worked with CDCs to develop close to 33,000 affordable apartments and more than 1.5 million square feet of commercial space. Creating green and healthy homes is an integral part of their Building Sustainable Communities model, which increases quality of life in low-income neighborhoods by creating affordable housing, good schools, economic opportunities, and healthy built environments.

NYC DOHMH is a national leader in developing public health interventions to address infectious and chronic diseases with a focus on primary prevention, an emphasis on data-driven program development and evaluation, and a commitment to reducing health disparities. The Healthy Homes/Lead Poisoning Prevention, Smoke-Free Housing, and Active Design Programs make homes healthier by reducing home environmental hazards and promoting

best practices in building maintenance and active design and targeting high-need neighborhoods.

**NYC Coalition for a Smoke-Free City** is a health advocacy group working to increase awareness around tobacco control among community members and policymakers. By partnering with community members, legislators, and health advocates, the Coalition supports local efforts for effective and long-term change throughout NYC. The Coalition has been leading the movement in NYC around the development of voluntary smoke-free housing. The Coalition's primary goals are to increase awareness of the deadly and costly impact of secondhand smoke, protect families from secondhand smoke where they live, and help property owners and landlords transition their property to being smoke-free. With a Smoke-Free Partnership in each of the five boroughs, the Coalition has helped to make thousands of units throughout NYC smoke-free, thus protecting the health of more of NYC's residents.

### For more information about participating organizations in this case study, visit:

Banana Kelly: [www.bkcianyc.org](http://www.bkcianyc.org)

Bedford Stuyvesant Restoration Corporation: [www.restorationplaza.org](http://www.restorationplaza.org)

Bridge Street Development Corporation: [www.bsdcorp.org](http://www.bsdcorp.org)

Cypress Hills LDC: [www.cypresshills.org](http://www.cypresshills.org)

Harlem Congregations for Community Improvement: [www.hcci.org](http://www.hcci.org)

LISC NYC: [www.lisc.org/nyc](http://www.lisc.org/nyc)

Mid-Bronx Desperadoes: [www.mbdhousing.org/index.html](http://www.mbdhousing.org/index.html)

NYC Coalition for a Smoke-Free City: [www.nycsmokefree.org](http://www.nycsmokefree.org)

NYC DOHMH: [www.nyc.gov/html/doh/html/home/home.shtml](http://www.nyc.gov/html/doh/html/home/home.shtml)

Southside United HDFC: [www.lossures.org](http://www.lossures.org)

St. Nicks Alliance: [www.stnicksalliance.org](http://www.stnicksalliance.org)

West Side Federation for Senior and Supportive Housing: [www.wsfssh.org](http://www.wsfssh.org)

### Acknowledgements and Disclaimer

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