



# GREENING VACANT LOTS: CURRENT PRACTICES

August 2015

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## Overview

Large-scale building vacancy and neighborhood blight increasingly pose challenges for many cities. In response, communities of all sizes are using innovative and ever-evolving strategies to green vacant lots. Oftentimes, this is a balancing act to engage residents, stabilize neighborhoods, manage stormwater, and promote local economic and community development.

The U.S. Environmental Protection Agency's Region 5 compiled current practices on vacant lot greening as a resource on issues of stormwater management, construction specifications, job training, property maintenance and funding. This research provides a snapshot of greening practices conducted by a diverse group in 11 spotlight cities including non-profit organizations, municipal offices, land banks and a sewer authority.

This research supports U.S. EPA's Office of Sustainable Communities' technical assistance to the Genesee County Land Bank in Flint, Mich., on vacant lot greening strategies. Other cities managing vacant lots may also utilize practices presented in the case studies or develop construction specifications modeled after those created for GCLBA.

## Profile of Cities + Organizations

Spotlight cities were selected based on existing vacant lot greening programs, population loss and the diverse organizations leading the greening programs. These cities represent various scales of blight and vacancy, with partners approaching this challenge from various perspectives. Each case study provides a snapshot of an organization's vacant lot greening programs, approach and lessons learned.

Missions, climate, scales of vacancy, revitalization strategies and local programs varied greatly between the 11 cities. A diverse set of key players in this field demonstrates how different community entities are involved with vacant lot greening, and in some cases, how partnerships were formed to expand impact.

Spotlight cities and corresponding organizations include:

- **Baltimore, Md.** – *City of Baltimore, Office of Sustainability.*
- **Buffalo, N.Y.** – *Buffalo Sewer Authority.*
- **Cincinnati, Ohio** – *Keep Cincinnati Beautiful.*
- **Cleveland, Ohio** – *Cleveland Botanical Gardens.*
- **Detroit, Mich.** – *The Greening of Detroit.*
- **Flint, Mich.** – *Genesee County Land Bank Authority.*
- **Grand Rapids, Mich.** – *City of Grand Rapids, Economic Development Corporation.*
- **Indianapolis, Ind.** – *Keep Indianapolis Beautiful.*
- **Philadelphia, Pa.** – *Pennsylvania Horticultural Society.*
- **Warren, Ohio** – *Trumbull Neighborhood Partnership.*
- **Youngstown, Ohio** – *Youngstown Neighborhood Development Corporation.*

## Theme Overview

While the organizations and entities highlighted in this research address vacant land management and greening through diverse approaches, five common themes were identified across the 11 spotlight cities, which include:

1. Construction Specifications + Process.
2. Stormwater Management.
3. Maintenance.
4. Job Training.
5. Funding.

While every city may not specifically address each theme, these considerations and foci were common among the majority of the spotlight cities.

### 1. Construction Specifications + Process

Construction specifications play several important roles in the process of greening vacant lots. While many cities implement site-specific, individual lot treatments, construction specifications allow an organization to give a contractor concise instructions for greening multiple vacant lots with a specified treatment. A set of universal designs allows cities to scale-up their greening programs and contracting process. This can also help simplify the bid process and standardize required maintenance.

Some cities also face challenges of moving from the visioning and design phase to actual on-the-ground implementation. Construction specifications serve as the vehicle to capture treatment designs in a language that is easily implemented by demolition or landscape contractors.

Flint, Buffalo, Philadelphia and several other cities utilize specifications to implement large-scale greening efforts on vacant lots. While variations exist between cities, a typical vacant lot greening “recipe” emerged from the spotlight city specifications.

Key components include:

- **Debris removal**, including trash, tires or remnants from demolition.
- **Regrading**, which typically brings lots to a 0 percent slope and decompacts soil to promote tree and plant health.
- **Addition of topsoil**, which may also include a compost blend to provide optimal growing conditions for trees and plants.
- Seeding the lot with a **low-mow mix or native plants**, which often aims to reduce maintenance needs and, in some cases, promotes stormwater management.

In addition to this baseline recipe, a number of “add-ons” also exist as appropriate for the community, funding or goal of the project.

Several “add-ons” include:

- **Wildflowers.**
- **Trees.**
- **Split rail fences.**

- **Advanced finishing** such as additional stormwater management installations, community gardens, orchards, etc.

Some cities also include maintenance of the lot for one year in the construction specifications, which requires the contractors to maintain the lot for a year after the treatment is installed. In some circumstances, this provides an incentive for contractors to fully and accurately implement the treatment as they will be held responsible for the lot's condition over its first post-treatment year.

In addition to the physical greening of a lot, many cities also include additional components in their greening process such as community engagement, iterative design processes and demolition coordination. Numerous cities found community engagement to be critical as neighborhood residents are key partners both in visioning and sustaining lots after greening has occurred. Residents can also provide a wealth of knowledge regarding a particular site's history as well as activity and trends in the neighborhood. As an example of intensive community-driven projects, Keep Indianapolis Beautiful incorporates a community-based landscape design process to ensure that the communities' needs are being met and that residents have the resources and knowledge needed to maintain the site after greening is complete. Several entities also work to coordinate greening efforts with demolition to streamline the greening and neighborhood stabilization process.

## 2. Stormwater Management

Spotlight cities including Cleveland, Buffalo and Baltimore are utilizing vacant lots as sponges to hold and soak in rainwater. Several organizations have found that vacant lots serve as an opportunity to implement green infrastructure projects that work to both promote clean local waterways through the reduction of combined sewer overflows as well as reduce the quantity of stormwater to be treated and managed by municipal sewer districts. By creatively using vacant lots as an asset, these cities are addressing legacy environmental challenges in new ways.

The use of vacant lots for stormwater management can occur at a variety of intensities. In some cases, entities may simply focus on the removal of impervious surfaces through demolition and basic greening to promote stormwater infiltration. Other organizations implement more intensive green infrastructure treatments such as rain gardens or bioswales designed specifically for a site's topography. Some cities pursue a range of stormwater-focused treatments depending on location, project goals, and funding source and availability.

## 3. Maintenance

Regardless of the organizational mission, both short-term and long-term maintenance are critical considerations. Maintenance concerns are typically centered on who will conduct the maintenance (often multiple parties) and how it will be funded (often multiple sources).

Based on the findings from the spotlight cities, maintenance generally falls into one of the following categories:

- **Community-driven maintenance** conducted by community groups that may have a contract with an organization such as a land bank.
- **Organization-/Agency-/City-conducted maintenance** utilizing maintenance crews directly employed by the organization or the municipality.
- **Private contract maintenance** provided by a contractor paid by an organization or municipality.

- **Maintenance conducted through youth and/or job training programs**, which typically focus on providing participants the opportunity to develop specific skillsets or participate in enrichment activities.
- **Court-ordered community service programs**, which provide community service opportunities to clean and/or green vacant lots.

Some organizations may also have multiple programs that each use a different maintenance methodology and funding source. Others rely primarily on one maintenance strategy, but provide crews to conduct gap maintenance as needed.

#### 4. Job Training

From youth enrichment to workforce development programs, job training was a component of several of the vacant lot greening programs at work in the spotlight cities such as Cleveland, Indianapolis and Detroit.

Job training is a two-way street. It provides residents with valuable skillsets and facilitates maintenance support for the organization. There is also an additional opportunity for organizations to engage community members and include residents in the neighborhood planning and greening process. Keeping these job training and maintenance dollars local has multiple benefits over the long term.

#### 5. Funding

In addition to maintenance, funding is one of the most pressing challenges for vacant lot greening work. A variety of funding sources are used for different types of greening programs and projects.

Federal funding sources include:

- **U.S. Department of Housing and Urban Development's Community Development Block Grants.**
- **U.S. Department of Treasury's Hardest Hit Fund** for demolition-related greening in states that have received an allocation of HHF.
- **U.S. EPA technical assistance** for greening projects focused on stormwater management.

Local funding sources include:

- **Municipal contracts**, typically awarded to local organizations to conduct lot or tree maintenance.
- **Stormwater program funds**, usually associated with a regulatory driver such as a National Pollution Discharge Elimination System permit or combined sewer overflow agreement.
- **Local foundations and organizations** that provide a wide variety of financial and in-kind assistance for various phases of the vacant lot greening process.

## Key Takeaways

Recognizing that there is no “one size fits all” solution to this challenge, cities have the opportunity to learn from the continually increasing network of cities and organizations that are creatively approaching this challenge. Key takeaways from the case study spotlight cities include:

**Partnerships can expand both impact and funding opportunities.** When a variety of stakeholders are at the table, opportunities exist to combine funding sources and other resources to accomplish multiple goals across community and economic development.

**Installation today, maintenance tomorrow—and forever.** While the initial investment in greening a lot can seem steep, long-term maintenance will require a constant flow of resources. Maintenance strategies that incorporate low-mow groundcover or utilize local youth or job training programs can make this ongoing challenge more manageable.

**Vacant lots are “places” with opportunities for location-specific placemaking.** These opportunities—from pocket parks to orchards—can be maximized when a lot’s site-specific considerations (e.g., side lot, corner lot, contiguous vacant lots) are considered in conjunction with neighborhood needs, interests and maintenance capacity.

**Coordination between demolition and greening can streamline processes and maximize resources.** While initial coordination between contractors and specification development can be time intensive, establishing a clear path between demolition and greening can save both resources and the frustration of having to rework post-demolition sites that could have already been prepared for greening.

**A nexus exists between stormwater management programs and greening vacant lots.** When managed and coordinated through local municipal water and sewer departments, vacant lots can serve strategically as assets for managing stormwater.

**Community engagement is critical for long-term sustainability and success.** In addition to supporting long-term maintenance and championing greened lots, residents can offer practical and innovative feedback on greening treatments. For example, while native wildflowers can be a seemingly attractive installation on vacant lots, in several cases, neighbors have actually found these treatments to appear unkempt or have assumed that the wildflowers, while not in bloom, were weeds.

**Continuous piloting can iteratively inform large-scale greening practices.** Pilot projects are critical to test creative approaches and identify unexpected complications. While scaling-up greening practices is the goal for many organizations, continuous testing and adjusting along the way can result in more innovative and effective approaches.

*This project was supported in part by an appointment to the Postgraduate Research Participation Program at the U.S. Environmental Protection Agency, administered by the Oak Ridge Institute for Science and Education through an interagency agreement between the U.S. Department of Energy and EPA.*