Ideas for vacant land re-use in Cleveland
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Overview
Changes in Cleveland’s population and economic base along with the recent foreclosure crisis have created an opportunity for the city to re-imagine its future. Approximately 3,300 acres of land in Cleveland is vacant, most of which was previously occupied by development. This vacant, or vacated, land represents about 20,000 parcels, more than 7,500 of which are under City control in Cleveland’s Land Bank. This scenario creates a unique opportunity for Cleveland to re-imagine itself; to build a vibrant, more healthful and more prosperous community that provides a better quality of life for its residents and encourages new residents to call Cleveland home.

The initiative
Building on the recent study known as Reimagining a More Sustainable Cleveland, the City of Cleveland and its partners assembled eight interdisciplinary Working Groups to prepare action-oriented recommendations designed to facilitate sustainable re-use of vacant land in Cleveland and Cuyahoga County. Most groups focused on a particular land use type or land treatment, such as urban agriculture or stormwater management, while other groups focused on reconfig-

The document
This document highlights eight big ideas for the sustainable and productive re-use of the increasing supply of vacant land in Cleveland and Cuyahoga County. These ideas are guided by the themes of improving Community, Prosperity, and Public Health. More specifically, the document identifies “issues” and “opportunities” and then “keys to moving forward” for each of the land use and treatment types, while presenting a map and criteria to guide the placement and targeting of these uses on an interim basis and on a long-term basis.

What’s next?
The work presented in this document represents a mid-point — not an end point — in Greater Cleveland’s progress toward creating a more sustainable development pattern, marked by dense urban clusters and sustainable open space uses. The City of Cleveland and its partners will continue moving forward by examining the feasibility of particular recommendations and by creating practical mechanisms that can lead to effective implementation.
On the ground today!

Native plantings transformed this vacant lot in Tremont (through City funding).

The Morgana greenway replaced an abandoned rail line in Cleveland’s North Broadway neighborhood.

More than 230 community gardens and farms have been established in Cleveland.

The Great Lakes Science Center was the site of Cleveland’s first wind turbine. Vacant land provides sites for other alternative energy facilities.
What we’ve accomplished!

The City of Cleveland and Cuyahoga County have already taken significant steps to advance the sustainable re-use of vacant land, including the following:

- Created one of the nation’s first and largest municipal “land banks,” now with more than 7,500 vacant lots under public control in the Cleveland Land Bank

- Updated Cleveland’s Land Bank program in 2010 to promote urban agriculture through provision of longer-term leases of vacant lots and by giving greater priority to sustainable open space uses of vacant land in appropriate locations

- Established the Cuyahoga County Land Reutilization Corporation in 2009, which is supported by a dedicated funding source that provides the resources to take control of vacant buildings for rehabilitation or removal

- Adopted innovative zoning districts in Cleveland to protect and preserve selected open space and urban garden sites

- Updated zoning and health regulations to remove unnecessary obstacles to the keeping of small farm animals and bee hives in the City of Cleveland, and drafted regulations to create Urban Agriculture Overlay Districts for more intensive farming

- Adopted zoning regulations to facilitate the appropriate sites for wind turbines in the cities of Cleveland and Lakewood

- Allocated $500,000 of Neighborhood Stabilization Program (NSP) funds in 2009 to assist in the creation of 56 sustainable vacant land re-use projects in Cleveland

- Created comprehensive greenway and bikeway plans for Cuyahoga County (“Greenprint”) and Cleveland (“Bikeway Master Plan”)

- Developed greenways and trails in place of abandoned rail line in Cleveland’s North Broadway (Morgana) area, through neglected stream valley (Treadway) in Cleveland’s Old Brooklyn neighborhood and on Shaker Blvd. median in Beachwood
**Goal:** Develop a targeted land stabilization program to promote economic, aesthetic, and environmental benefits that can restore market confidence in Cleveland neighborhoods.

**Issues**
- Poor appearance of neighborhoods due to presence of vacant lots
- Reduced property values and investment interest in proximity to vacant lots
- Illegal dumping and criminal activity occurring on vacant lots
- Presence of lead and other contaminants on many vacant lots
- Reduced pride in neighborhoods where vacant lots have proliferated
- Budget constraints limiting the ability of cities to carry out large-scale vacant lot stabilization activities

**Opportunities**
- Large and increasing supply of vacant lots suitable for enhancement
- Improved market perception for neighborhoods through enhancements to vacant lots
- Stormwater management, recreation, and public art as an adjunct to stabilization activities
- Job creation for local residents through stabilization activity
- Improved air quality by increasing the community’s tree canopy through tree plantings on vacant lots
- Potential new sources of funding for vacant lot stabilization

**Stabilization:** Enhancement of vacant land to produce a positive perception of the surrounding neighborhood, while also addressing environmental, social, and economic issues.
Quick Facts & Figures

20,000 vacant parcels

There are more than 20,000 vacant parcels in the City of Cleveland.

Cleveland’s Land Bank was one of the nation’s first city land banks and is one of the largest.

The Cuyahoga County Land Bank was established in 2009 to return vacant properties and buildings to productive use.

5,152 Demolitions 2006-10

Cleveland’s Building & Housing Department demolished 5152 buildings from 2006-2010, removing blight and greatly increasing the supply of vacant lots.

According to a study from the University of Pennsylvania, a stabilized vacant lot can increase adjacent property values by roughly 17%.

17%

There are approximately 7,000 houses in vacant and deteriorated condition in Cleveland (as of August, 2010).
Stabilization Map

The map below illustrates preferred locations for stabilization interventions on vacant land in Cleveland. The Stabilization working group identified these as areas where stabilization is a preferred treatment, determined on the basis of a set of equally weighted criteria that are noted on the map.

Stabilization Target Areas & Criteria for Mapping

- Least Preferred
- Preferred:
  - Core development areas
  - Core development area buffer
  - Neighborhood centers
  - Walkable areas
  - Primary corridors
  - Neighborhood Stabilization Program target areas
  - Strategic Investment Initiative areas
- Most Preferred
Keys to moving forward

Identify and prioritize properties most suited for near-term vacant land stabilization, based on criteria identified in this document, and promote stabilization preferences to the appropriate implementing entities.

Develop a funding mechanism to sustain an ongoing stabilization program in prioritized areas.

Develop low-level, mid-level and high-level design treatment options for stabilized parcels, each with cost estimates.

Work with the Cleveland’s Building & Housing and Public Works Departments to alter current demolition and lot clean-up practices in targeted areas to create more attractive and environmentally beneficial conditions on selected vacant lots, as funding becomes available.

Work with youth organizations and at-risk individuals to clean up and upgrade vacant lots (court community services, mycom, Y.O.U, City departments, etc.)

Work with the Northeast Ohio Regional Sewer District to determine where neighborhood-level “best management practices” for stormwater management can be combined with stabilization efforts to multiply the beneficial impacts of stabilization, using the Opportunity Corridor as a pilot area.

Apply soil treatments to reduce exposure to lead and other soil-based contamination and to restore degraded urban soils as an enhancement to stabilization actions.
Urban Agriculture: The practice of growing food in the city for consumption, processing, distribution and sale

Goal: To support the local food market, reduce public health disparities and provide job and business opportunities that address current economic inequities

Opportunities

- Large and increasing supply of vacant land suitable for urban agriculture
- Policy change potential at the local, state and federal level
- Re-establishment of the local greenhouse industry
- Shortening links in supply chain between growers and consumers
- Job creation for local residents
- Strengthening communities
- Increased interest in market gardens and community gardens
- Improvements to community security and safety
- Improved networking skills
- Increased access to and affordability of healthy food
- Improved environmental, air, water and soil quality

Issues

- Inadequate understanding of scale and type of agriculture needed for economic viability in Cleveland
- Limited public education regarding economic and business opportunities of urban agriculture
- No citywide marketing campaign for urban agriculture
- No comprehensive database for soil quality
- Lack of water access
- Lack of long-term land access for gardening
- Limited site security for established gardens
- Lack of farmers’ markets in economically challenged neighborhoods
- Inequitable access to nutritious food
- Regulatory processes and codes difficult to navigate
Quick Facts & Figures

In Cleveland, 10.8% of residents have been diagnosed with diabetes and 33.8% are obese. Increasing access to fresh, locally grown and affordable food will have a positive impact on the health of Clevelanders.

Ohioans spend about $43 billion dollars every year on food, with only 3% purchased from Ohio farms. Cleveland’s economy could grow by $116 million dollars annually if 10% of food purchased was from local growers.

Most produce travels 1,500 miles or more from the farm to the marketplace.

Closing the gap between local food production and local consumption by 25% has the potential to create 18,000 jobs in fruit farming, aqua-culture, greenhouse production, poultry & egg production, and vegetable & melon farming in Northeast Ohio.

A food waste audit of Cleveland’s West Side market found that more than 1 ton of food waste is generated per week.
Urban Agriculture Map
The map below illustrates preferred locations for Urban Agriculture opportunities on vacant land in Cleveland. The Urban Agriculture working group identified these as areas where urban agriculture is a preferred use. This determination was made on the basis of a set of equally weighted criteria that are noted on the map.

Urban Agriculture Target Areas & Criteria for Mapping
- **Preferred:**
  - Core development area buffers
  - Historic prime farmland soils
  - Within ¼ mile of transit lines
  - Within ¼ mile of a park
  - Within ¼ mile of a school

- **Excluded:**
  - Core development areas
  - Walkable areas around nodes
  - Existing development projects

- **Least Preferred**
- **Most Preferred**
Keys to moving forward

- Institutionalize recent changes in Cleveland’s Land Bank disposition process that facilitate use of land for urban agriculture in appropriate locations.
- Conduct healthy food education and marketing campaigns, including targeted efforts in neighborhoods with limited access to healthy foods.
- Partner with Ohio State University, Cleveland’s Health Department and others to establish a soil conditions database to assess heavy metal contaminants, soil texture, PH levels (alkaline or acid), active carbon, total nitrogen, organic matter level, and microbial bio-mass on City-owned vacant land.
- Expand business opportunities associated with urban agriculture by developing a program that takes the next step beyond OSU’s market garden class, focusing on how to compete effectively in the regional marketplace.
- Increase demand for locally grown foods by expanding sales outlets through partnerships with corner stores, grocery stores, places of worship, schools, recreation providers, etc.
- Improve community safety and security by establishing urban gardens in areas that have become sites for dumping, vandalism, and illicit activity.
- Strengthen communities by using community gardens to bring intergenerational populations together in a common activity.
- Establish urban agriculture overlay districts to permit larger-scale, more intensive farming and commercial composting operations.
- Explore establishing a relationship with a land trust or other non-profit organizations for the purpose of preserving selected Land Bank lots for urban agriculture use.
- Create a comprehensive user guide describing the process of obtaining permits for community and market gardens, fences, accessory structures, farm stands, fire hydrants taps and other water access, etc.
- Identify locations and characteristics of all community and market gardens, greenhouses and aquaponic operations, and create a system to track citywide agriculture activity.
3

Stormwater Management: Interventions that reduce the quantity and/or increase the quality of stormwater that runs off a site into sewers or streams

Goal: Use vacant land to facilitate sustainable stormwater management practices that address qualitative and quantitative issues related to stormwater

Opportunities

- Increasing supply of vacant land with potential to mitigate stormwater run-off from existing impermeable surfaces
- Significant portion of vacant lots in Cleveland under City ownership
- Local knowledge of emerging “best management practices” for stormwater management
- New funding opportunities at all levels of government
- Match with goals of the Northeast Ohio Sewer District’s green infrastructure program and related federal EPA mandates
- An abundance of sandy soils well suited to stormwater retention
- Reforestation, greenspace, greenways, and green street projects as adjuncts to stormwater management treatments.

Issues

- Lack of clarity regarding locations and scale of interventions necessary to make significant improvements in local stormwater management
- Lack of comprehensive stormwater management strategy
- Lack of currently available funding
- Need to evaluate potential projects on a site-by-site basis
- Need to optimize resources through more collaborative efforts
Quick Facts & Figures

75 Million

75 million gallons of water run off of vacant land in Cleveland during a big storm.

4.7 Billion

4.7 billion gallons of raw sewage is dumped into the Cuyahoga River and Lake Erie in a year.

Trees and other vegetation can absorb up to 90% of rainwater that falls on them.

There are 21,523 acres (43.4%) of impermeable surfaces in the City of Cleveland.

Every drop of water that runs into a drain flows either to a sewage treatment plant or directly to streams, rivers and lakes.
The map below illustrates preferred locations for stormwater management interventions on vacant land in Cleveland. The Stormwater Management working group identified these as areas where stormwater management is a preferred treatment. This determination was made on the basis of a set of weighted criteria that are noted on the map.

**Stormwater Management Target Areas & Criteria for Mapping**

- **Least Preferred**
- **Most Preferred**
- **Preferred:**
  - Well-drained and sandy soils
  - Culverted streams
  - Separate sewer system areas
- **Existing wetlands**
- **Proposed open space**
- **Riparian areas**

**Proposed Open Space**
**Keys to moving forward**

- Train key City employees on “green” stormwater management improvements.
- Establish local regulations to control development along waterways.
- Incorporate stormwater management techniques into standard demolition specifications.
- Incorporate stormwater management techniques into zoning code regulations, including PUD developments.
- Incorporate stormwater management techniques into standard streetscape specifications, complete streets program, and streetscape design guidelines.
- Update regulations to address project-specific stormwater management techniques.
- Establish a mechanism for monitoring and maintaining records of installed stormwater management projects. Facilitate research of best practices.
- Create a Stormwater Management Task Force to work with the Northeast Ohio Regional Sewer District (NEORSD) as the CSO (Combined Sewer Overflow) Reduction and Stormwater Management Plans are created and implemented.
- Review Draft CSO Reduction Plan for consistency with City goals and the Connecting Cleveland 2020 Citywide Plan. Work with NEORSD to insure, where practical, green infrastructure projects are proposed for vacant sites, particularly those that are contaminated.
- Use land banking resources to acquire and hold land for projects identified on CSO Reduction Plan.
- Test the possibility of draining sidewalk and/or streets to tree pits and tree lawns.
- Set up a program to encourage and promote private tree planting.
- Establish a wetland preservation or wetland banking system within the City limits.
/!

<table>
<thead>
<tr>
<th>Greenspace Expansion:</th>
<th>Areas of permanent open space added to the existing network of parks, greenways, bikeways and natural areas, in accordance with comprehensive municipal and county-wide land use and greenspace plans</th>
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</thead>
</table>

**Goal:** Provide high-quality recreation opportunities that meet the needs of residents of all ages, ability levels incomes and interests, while protecting and conserving critical habitat areas, improving overall environmental quality, and providing greenway connections

<table>
<thead>
<tr>
<th><strong>Opportunities</strong></th>
<th><strong>Issues</strong></th>
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<tr>
<td>Increasing supply of vacant land well situated for expansion of greenways and greenspace</td>
<td>Limited resources for greenspace management and expansion</td>
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<tr>
<td>Expanding the variety of green space options in individual neighborhoods</td>
<td>Inequitable distribution of open space resources at a neighborhood level</td>
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<tr>
<td>More equitable access to greenspace resources</td>
<td>Inadequate attention in greenspace planning to flora and fauna - with respect to travel corridors, critical habitat areas, spatial quality and quantity, etc.</td>
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<tr>
<td>Greenspace-related educational opportunities</td>
<td>No comprehensive strategy to correlate water quality improvements with open space improvements</td>
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<tr>
<td>Provision of new critical habitat areas and movement corridors</td>
<td>Need for expanded land conservancy activity in the city</td>
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<tr>
<td>Sustainability improvements as part of greenspace expansion</td>
<td>Limited public understanding of the full range of greenspace benefits</td>
</tr>
<tr>
<td>“Viewshed” preservation</td>
<td>Residents’ comfort level with new “wild” areas</td>
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<tr>
<td>Increased tree canopy</td>
<td>Inadequacy of geographically detailed health data that can be tied to recreation opportunities</td>
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<tr>
<td>Partnerships for greenspace maintenance</td>
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<tr>
<td>Use of open space zoning districts to protect valued green space</td>
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</tbody>
</table>
Quick Facts & Figures

The U.S. Forest Service calculated that, over a 50-year lifetime, one tree generates $31,250 worth of oxygen, provides $62,000 worth of air pollution control, recycles $37,500 worth of water, and controls $31,250 worth of soil erosion.

The National Association of Home Builders found that 65 percent of home shoppers felt that parks would seriously influence their decision to move to a community.

The Connecting Cleveland 2020 Citywide Plan identified 755 acres of greenspace to add to the existing “greenprint” by the year 2020.

A single mature tree can absorb carbon dioxide at a rate of 48 lbs./year and release enough oxygen back into the atmosphere to support two human beings.

The City of Cleveland lags behind its Midwestern peer cities in the number of acres of parkland per 1,000 residents – e.g., Cleveland (6.9), Pittsburgh (8.8), Cincinnati (14.5), Columbus (14.6), & Milwaukee (16.3).
Greenspace Expansion Map
The map below illustrates preferred locations for greenspace expansion on vacant land in Cleveland. The Greenspace Expansion working group identified these as areas where greenspace expansion is a preferred treatment. This determination was made on the basis of a set of weighted criteria that are noted on the map.

Greenspace Expansion Target Areas & Criteria for Mapping
Keys to moving forward

- Identify and hold vacant parcels and acquire additional parcels that intersect with existing or proposed bikeways and greenways or that may be appropriately located for park expansion.

- Partner with organizations involved in vacant land reuse, such as Earth Day Coalition and the Cleveland Botanical Gardens, to investigate and pilot the use of naturalized or environmentally beneficial treatments for Land Bank parcels identified for long-term greenspace.

- Buffer freeways, rail corridors, and industrial areas in proximity to residential areas with natural buffers.

- Amend the Connecting Cleveland 2020 future land use plan to utilize additional vacant land for greenspace expansion, particularly in under-served areas.

- Facilitate economic development and revitalization through strategic investments in pocket parks and plazas, particularly in or adjacent to retail areas.

- Facilitate environmental education opportunities by expanding greenspace in areas adjacent to schools.

- Preserve critical “viewsheds” as naturalized greenspace.

- Implement riparian overlay districts as part of the City’s codes.

- Restrict development in areas with slope instability.
**Alternative Energy**: The use of renewable energy sources such as wind turbines, geothermal wells and solar panels to supply power to an electric grid or a specific onsite use.

**Goal**: Use appropriately located vacant land for installation of alternative energy facilities that utilize solar, wind, waste energy, and geothermal technologies.

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Issues</th>
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</thead>
<tbody>
<tr>
<td>• New governmental mandates for renewable energy generation</td>
<td>• Yet-to-be-determined specific roles of Cleveland Public Power and other local utilities in facilitating alternative energy production</td>
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<tr>
<td>• Local job creation from alternative energy system installation and manufacture</td>
<td>• Lack of available data to inform site decisions for alternative energy installations</td>
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<td>• Public education on the benefits of alternative energy</td>
<td>• High initial cost of alternative energy capital investment</td>
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<tr>
<td>• Improved public information about permit requirements and financial incentives for alternative energy</td>
<td>• Current higher cost of alternative energy versus conventional energy generation</td>
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<tr>
<td>• Existing utility infrastructure as a foundation for alternative energy generation</td>
<td>• Lack of easily accessible information on permitting procedures and the availability of financial incentives</td>
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<tr>
<td>• Existing landfills as resources for methane production</td>
<td>• Lack of clarity in local development regulations regarding installation of particular alternative energy facilities</td>
</tr>
<tr>
<td>• Recent City zoning regulations facilitating wind turbine installation</td>
<td></td>
</tr>
<tr>
<td>• “Evergreen Cooperative” local solar panel installation initiative</td>
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</tbody>
</table>
Geothermal heating is a method of heating and cooling a building by taking advantage of the natural stable warmth stored inside the earth.

In 2007, more than 5,200 megawatts of wind generation, enough to power 1.5 million American households annually, were installed in the United States.

More than 3,500 square miles of federal land are currently awaiting permits for solar power development.

The Intergovernmental Panel on Climate Change (IPCC) suggests that temperature increases above the range of 3.5 to 5.5°F (2 to 3°C) over the next 100 years would dramatically increase the negative impacts of climate change.

Geothermal energy has been around as long as the earth has existed. “Geo” means earth and “thermal” means heat. So “Geothermal” means earth-heat.
Alternative Energy Map

The map below illustrates preferred locations for alternative energy generation on vacant land in Cleveland. The Alternative Energy working group identified these as areas as best suited to alternative energy generation. This determination was made on the basis of a set of weighted criteria that are noted on the map.

Alternative Energy Target Areas & Criteria for Mapping

- **Opportunities for Solar**
- **Least Preferred for Wind**
- **Most Preferred for Wind**

Preferred for Wind Energy:
- Wind speeds of 14 mph or higher
- Major ridges
- Elevations of 800' or higher

Excluded:
- Riparian areas
Keys to moving forward

- Strengthen the City’s ability to provide technical assistance, possibly through an "Alternative Energy Liaison," for those seeking to install alternative energy systems.

- Conduct further research to categorize potential alternative energy sites as either: a) sites with potential to provide service to a clearly-identified end user, such as an adjacent industrial park; and b) sites that are considered "straight-to-grid" utility-based sites.

- Facilitate a dialogue between local utility companies and the Alternative Energy Group to explore practical opportunities for utilizing vacant (and other) land for alternative energy installations, including funding and financing options.

- Examine anticipated large-scale development projects for opportunities to install alternative energy systems.

- Incorporate an alternative energy analysis into the next round of neighborhood and comprehensive plan updates.

- Conduct research on non-site specific issues that could impact alternative energy siting.

- Create a “Green Energy 101” website that acts as a one-stop shop for information on permits, incentives and technical assistance on alternative energy installations.

- Consider establishing local financial incentives to make alternative energy an integral part of all new large-scale and mid-scale development projects.
**Goal:** To assemble land in a manner that facilitates development capable of increasing economic prosperity and stabilizing the local population.

### Issues
- Multiple ownership
- Absentee ownership
- Scattered occupied buildings within largely vacant areas
- Contamination of vacant land
- Need for continual updating of Land Bank “hold area” maps
- Relocation strategies for displacement of residents and/or businesses
- Recent court-imposed restrictions on use of eminent domain for land assembly
- Limited municipal resources to maintain increased supply of vacant land
- Difficulty in locating vacant land owners
- Difficulty working with some banks and other mortgage holders
- Inadequate funding for brownfield remediation of vacant property

### Opportunities
- Large and increasing supply of vacant lots in Cleveland
- Significant proportion of vacant lots in City Land Bank
- Creation of additional vacant lands through foreclosure and condemnation
- Utilization of vacant parcels for development types not commonly found in the city today — e.g., cohousing, single-story senior housing, etc.
- Job creation in new and existing business sectors through the assembly of vacant land
- Acquiring vacant lots to expand community open space
- Utilizing non-profit development corporations as an intermediary to facilitate land assembly
- Improving marketing of vacant land for development
- Holding vacant land for identified large-scale developments, based on established criteria

**Land Assembly:** Acquisition and preparation of contiguous land areas to facilitate larger-scale residential, retail, and economic development projects.
Cleveland is located within 500 miles of nearly half the nation’s population and is served by an unusually strong network of interstate highways, rail lines, Great Lakes shipping, an international airport and a downtown regional airport.

Households near public transit drive an average of 4,400 fewer miles than households with no access to public transit. This equates to a reduction of 223 gallons of gasoline per year for each household.

The largest City-owned vacant Industrial development site in Cleveland is 14 acres, and the average modern-day industrial park is 50-100 acres.

Households with no access to public transit.

The 180,000 students enrolled in northeast Ohio’s higher education institutions, along with 27,000 faculty and staff, create a labor pool to support development of the “new economy.”

A 2003 study showed that $1 billion in retail sales leaves Cleveland and is spent in surrounding communities annually.
Land Assembly Map

The map below illustrates preferred locations for land assembly on vacant sites in Cleveland. The Land Assembly working group identified these as the best opportunities for land assembly, determined on the basis of a set of criteria that focused on the locations of current and anticipated development activity for residential, commercial and industrial uses.

Land Assembly Target Areas & Criteria for Mapping

- **Areas Preferred for Residential Assembly**
- **Areas Preferred for Commercial Assembly**
- **Areas Preferred for Industrial Assembly**
Keys to moving forward

- Prioritize land assembly in areas targeted for near-term development and set annual goals for acquisition of this land.

- Maintain staffing resources that have improved the City’s ability to acquire and reutilize vacant property.

- Utilize the Cuyahoga County Land Bank to acquire vacant buildings located in areas targeted for land assembly.

- Examine options for establishing a fund to acquire available parcels for large-scale development.

- Develop marketing plans to attract investors to targeted development areas.

- Continue progress made in streamlining Cleveland’s permit process and continue monitoring best practices being implemented in other communities.

- Establish guidelines to facilitate local residential and business relocation in large-scale development projects.
**Goal:** Address contamination issues on vacant land that is not slated for near-term development

**Opportunities**
- Contamination remediation needs on most vacant lots
- Addressing environmental health issues, e.g., lead poisoning
- Exploring phyto-remediation, bio-remediation, etc.
- Improving surface and subsurface water quality
- Employment opportunities through remediation activities
- Creating best practices that are replicable models
- Education and collaboration opportunities

**Issues**
- Contamination funding and projects determined primarily by economic development potential
- Lack of detailed data to inform site decisions
- Understanding liability of acquisitions
- Undetermined “end use” as complicating factor in determining required level of remediation
- Complexity of the regulatory process
- Uncertainty of time frame of interim uses of vacant land
- Limited municipal resources to maintain remediated vacant land
- Remediation liability issues affecting the sale and transfer of land
- Capacity of BUSTR to handle research and litigation to enforce responsible party requirements
Quick Facts & Figures

There are 405 EPA-listed Brownfield sites in the City of Cleveland.

According to the Cuyahoga County Board of Health, paint, dust, and soil are the most common causes of elevated blood lead levels.

Testing the soils on a site is the first step towards solving a contamination problem.

There are 163 brownfields within ½ mile of a school or university in Cleveland.
Contamination Remediation Map
The map below illustrates preferred locations for contamination remediation activities on vacant land in Cleveland. The Contamination Remediation working group identified these as areas best suited to contamination remediation. This determination was made on the basis of a set of criteria that are noted on the map.

Target Areas for Contamination Remediation & Criteria for Mapping

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Least Preferred</td>
<td>Risk Factors: Within 500' of a brownfield indicator, Industrial land use, Retail corridors</td>
</tr>
<tr>
<td>Medium Preferred</td>
<td>Exposure Factors: Neighborhood centers, Within 1000' of a school</td>
</tr>
<tr>
<td>Most Preferred</td>
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</tbody>
</table>

Risk Factors:
- Within 500' of a brownfield indicator
- Industrial land use
- Retail corridors

Exposure Factors:
- Neighborhood centers
- Within 1000' of a school
Keys to moving forward

- Undertake a citywide assessment of vacant sites to identify the likely levels and types of contamination and to identify those contaminated sites that are relatively clean.

- Develop post-demolition soil treatment protocols to reduce exposure to lead and other common contaminants and to restore degraded urban soils.

- Begin testing all demolition sites for contamination. Seek additional funding to permit remediation as part of the demolition process.

- Identify and market sites, in accordance with the Long-term Remediation Preferences Map, that can be used for remediation research and testing where such testing will not interfere with near-term development prospects.

- Institute a green holding strategy that uses plants to stabilize and discourage unwanted entry on sites identified as posing risks to human health. Begin with sites proximal to neighborhood commercial nodes, corridors, high-density residential districts and schools.

- Test phytoremediation techniques on sites contaminated with petroleum-based and organic solvents, such as former gas stations and dry cleaners. Begin with sites proximal to neighborhood commercial nodes, corridors, high-density residential districts and schools.

- Leverage the Cuyahoga County Land Reutilization Corporation’s resources to take and remediate potential contaminated properties.
Sustainable Development Pattern: A pattern of land use and density that supports sustainable practices, such as the use of public transit and support of local businesses, given the City’s expected population in the near term, while providing opportunities for the possibility of growth in the longer-term.

Goal: Develop a pattern of built space and open space that supports sustainable practices by enhancing existing patterns of development and preserving opportunities for long-term growth, as illustrated in the Connecting Cleveland 2020 Citywide Plan.

Opportunities

- Influencing state and federal policies that support sustainability in urban areas
- Promoting walkable neighborhoods
- Strengthening the character of neighborhoods
- Making neighborhood services convenient for more residents
- Connecting town center areas in the city via bike paths and transit lines
- Collaborating with the transit authority in promoting transit-oriented development
- Concentrating services around population clusters

Issues

- Development activity often not consistent with sustainability principles and goals.
- Lack of policies/programs in place to support high-density development
- Lack of defined neighborhood character in certain instances
- Insufficient understanding of neighborhood-level land use demand to support informed decisions on issues such as yard expansions
- Lack of transit-oriented development citywide
- Proliferation of scattered retail development along major arterials
- Lack of variety of parcel size and housing unit size/type
Quick Facts & Figures

The 2009 American Community Survey showed that almost 25% of Cleveland households did not have access to a car.

In 2010, budget constraints forced the Greater Cleveland Regional Transit Authority to cut service by more than 10%.

Walking distance is usually defined as 1/4- to 1/3-mile.

Cleveland is encouraging residential patterns that support non-vehicular forms of transportation, such as walking, biking and use of public transportation.

Promoting density around centers of community activity will create vibrant urban districts and attract investment, even with reduced citywide population.
Sustainable Development Pattern Map
The map below identifies opportunities to create high-density, walkable districts clustered around housing, commercial uses, recreation and neighborhood services. The Sustainable Development Pattern working group identified these areas as best suited for intensified development on the basis of a set of criteria that are noted on the map.
Keys to moving forward

- Reserve land bank lots in neighborhood center and walkable areas for infill development, while limiting side yard expansions to fulfilling basic needs, such as for off-street parking.

- Prepare detailed plans to strengthen particular neighborhood center areas, including initiatives for commercial districts and for mixed-use development.

- Target lot stabilization to neighborhood center and walkable areas where the visual enhancement will have the greatest market impact on development potential.

- Prioritize rehabilitation over demolition/deconstruction in neighborhood center areas, except where demolition is intended to create infill development sites or to address imminent public safety issues.

- Target City incentives for development, rehabilitation, storefront renovation and community facilities to strengthen the identified neighborhood center areas.

- Encourage higher-density residential development in neighborhood center and walkable areas, in order to promote walkability and transit use and to strengthen the “sense of place.”

- Prioritize the marketing of vacant lots for development in neighborhood centers and walkable areas targeted for intensified development.

- Target streetscape improvements and “Complete Streets” projects to commercial and mixed-use districts in the identified neighborhood center areas.

- Conduct “area-wide brownfields assessments” along prime development corridors in order to identify near-term remediation opportunities for development sites that require relatively minimal remediation.

- Adopt a Green Design Overlay District in the City’s zoning code and apply it to selected neighborhood center areas.
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Next Steps
In moving forward, this initiative will be guided by the themes of Community, Prosperity, and Health. The working groups will become networks dedicated to implementing the recommendations outlined in each of the eight focus areas.

Community: fostering positive interaction between residents and building neighborhood cohesion and pride.

Prosperity: developing skills, promoting innovation, strengthening markets, and creating wealth.

Health: increasing physical activity, improving eating habits, reducing pollutants, and sustaining local ecological systems.