

# Edible Cities: Urban Farming in Indianapolis

Bob Hersh  
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In many cities, particularly those in the Midwest and the rust belt, planners and community groups are concerned less with Smart Growth than with what some have called “Smart Decline,” the need to plan for “shrinking cities.” One indicator of a shrinking city is the prevalence of vacant land within city boundaries. For example, in 2003, even before the recent wave of foreclosures, one out of every thirty homes in Indianapolis, Indiana—about 6,000 properties—were vacant or abandoned. More recent data suggests the number of vacant residential structures in the city is likely to have increased three fold, to 18,000, while some 4,000 industrial and commercial properties have been abandoned as well.

This phenomenon of shrinking cities is playing out in other parts of the country. Detroit, Cleveland, St. Louis, Youngstown, Buffalo, and Pittsburgh each have lost roughly half of their residential population in the past fifty years. Deindustrialization explains part of this exodus. But the roots of this phenomenon are more complicated. Changes in transportation, mortgage financing, tax policy, and zoning practices, as well as domestic tastes for larger lot sizes and larger houses, have created the vast network of suburbs that ring our cities. In addition, land use policies have extended supply chains with the help of our highway systems, leaving people further from their workplaces, manufacturers further from their customers, and farmers further from their markets. Food products, for example, typically travel between 1,500 and 2,500 miles from farm to plate.

Faced with surplus land and weak markets for real estate development, cities such as Indianapolis have begun to consider a strategy of “re-localization,” where developing local food systems can help extract value from the city’s portfolio of vacant and abandoned properties. This policy brief considers why urban agriculture can be a means to build community assets, particular in poorer, inner-city neighborhoods. It describes how and why in Indianapolis this strategy has begun to emerge, how urban farming policies attempt to build on the city’s community garden efforts, and what challenges community groups, advocates for urban farming, and local government officials have encountered.

The Felege Hiywot Center (Ethiopian for “direction for life”) is one of some sixty community gardens operating in Indianapolis. Founded in 2004 by Aster Bekele, a woman originally from Ethiopia who came to Indianapolis as a graduate student in the mid 1970s, the Center purchased land for a community garden and education center in Martindale-Brightwood, one of the city’s oldest neighborhoods. The history of the neighborhood in many ways recapitulates the larger forces of decline that have led to the phenomenon of shrinking cities.

From the turn of the 20<sup>th</sup> century until the 1950s, the neighborhood served as a hub to four railroad lines and maintenance yards, as well as a number of heavy industries. Like in many such neighborhoods at the time, worker housing was built within walking distance of the factories and rail yards. As more industries located in the area, the spatial pattern of the neighborhood more and more resembled a checkerboard, where housing and factories were interspersed.



*Courtesy of Chris Harrell*

### **Felege Hiywot Center, Indianapolis**

With the departure of the railroads and the construction of Interstates 65 and 70 in the 1960s, many long time residents of Martindale-Brightwood moved to Indianapolis's rapidly growing suburbs, leaving behind a surplus of low-cost and available housing that was soon filled by African-American families. In 1960, African-Americans comprised some 40% of the neighborhood's population. By 2000, when many of the factories and industries in the neighborhood had gone bankrupt or closed, the proportion of African-Americans had increased to over 90%. Currently the neighborhood has a large number of vacant and abandoned residential structures as well as empty lots where the city has demolished houses.

As a community gardening initiative, the Felege Hiywot Center (FHC) uses vacant properties as a tool to address the limitations of our current food system and how in particular it is felt in urban neighborhoods. The loss of full service grocery stores in low-income neighborhoods, such as Martindale-Brightwood, has turned some urban neighborhoods into “food deserts,” which can compromise the health of local residents and neighborhood quality. In many food-desert neighborhoods, residents have to travel much further to find a supermarket than a fast food outlet. And with less access to healthier food choices, in Indianapolis as elsewhere, minority urban households suffer from a disproportionately high level of childhood obesity and poor nutrition. According to a 2005 survey by the Health Department in Marion County, where Indianapolis is the largest city, some 49% of Hispanic children in the county were overweight, as were 42% of African American children and 38% of white children.

The FHC believes its community garden can achieve a variety of community-building goals, beyond improved nutrition and increased food security. By placing food production—albeit at a limited scale—in local hands and by teaching people the value of composting, as well as how to grow and sell crops, the FHC’s efforts can address the linked issues of public health, poverty, environmental stewardship, and skills development.

Currently the FHC’s operation is limited to one lot, but to expand the reach of its programs and the size of its community gardens, it has identified, along with community partners, a nearby former diesel truck servicing station as a potential expansion lot. The abandoned lot, cleared in 2002, has become a target for illegal dumping and a problem site for the community. Under what conditions, however, can community gardens and more extensive urban farming practices grow healthy food on land that may be contaminated with lead and arsenic, as well as other pollutants ubiquitous in our cities? What safeguards and protocols are needed? In this case, the city brownfields program has conducted a Phase I site assessment and will soon begin actual sampling and site characterization as part of a Phase II assessment through EPA Targeted Brownfield Assistance funding. Depending on the results of the Phase II and on available funding, the city could help remediate the site, bring in clean fill or amend the soils through composting, and then lease or grant the site to the FHC.

The FHC example of converting brownfields to community gardens is likely to become more prevalent in Indianapolis. State legislative reforms in 2006 made it easier for local governments to acquire and dispose of tax-foreclosed properties. Under the legislation, not only has the tax sale process for vacant and abandoned properties been considerably shortened to encourage property transfers, but local governments in Indiana have been given the authority to create land banks to exercise greater control over vacant and abandoned properties within their jurisdictions. In Indianapolis as elsewhere, a land bank is a means for local government to acquire and then either grant, sell, or lease the abandoned properties and vacant lots to entities and individuals who have the capacity to redevelop them.

The city expects to transfer some 300 tax-foreclosed vacant and abandoned properties in an upcoming tax sale. According to a city official, eight of these properties are thought to be brownfields, and they are likely to be transferred to local groups for community gardening and urban farming initiatives. These sites include vacant parcels adjacent to a former petroleum transfer site, residential parcels in close proximity to where a lead foundry had operated, neighborhood infill lots in Indianapolis's downtown—where past uses of the property are unclear—and a charter school seeking to create a garden on a plot adjacent to a former automotive manufacturing plant. These eight proposed urban farming sites on brownfields are the ones known to city officials. They are most likely part of a larger universe of community and backyard gardens in Indianapolis where vegetables and other foodstuffs are grown on vacant lots where soil is contaminated. Community groups and local residents in the city have and will continue to engage in what some have called “guerrilla gardening,” where without authorization or any type of land tenure, these groups cultivate untended public or private land.

In a number of instances community gardens make use of soils that may be a rich repository of lead, arsenic, and other heavy metals—the legacy of lead-based paint, leaded gasoline, lead arsenate pesticides, leaching from arsenic pressure treated lumber, and aerosols and dust from smelters and foundries. Hazardous amounts of lead and arsenic have been found in community gardens in a number of cities in the U.S. and Canada. One study in Connecticut, for example, shows elevated levels of lead, arsenic, and other heavy metals in soil samples taken from 12 out of 17 community gardens. In Montreal, eleven community gardens across the city were closed when it was found that vegetables grown in these gardens, compared to store-bought vegetables, contained five to ten times the amount of lead and arsenic. While state regulators and local officials in Indianapolis can urge community gardeners to test their soils, in most instances they can not require them to do so. Evidence suggests that while many community gardeners test the pH and fertility of the soil, far fewer are aware of the need to test their soil for contaminants or conduct a phase I site assessment to identify past uses that might have polluted the land.

EPA and state regulations set residential soil cleanup standards of 400 parts per million (ppm) for lead and 30 ppm for arsenic. What's largely missing, however, is an accessible guide for community gardeners and urban farmers on safe soil protocols that can establish safe levels of contamination—for lead, arsenic, and other heavy metals that are ubiquitous in urban areas—for growing different kinds of food. Furthermore, in some cases local residents create community gardens on sites where homes have been demolished and fill is brought in to re-grade the sites. This fill may be a mix of yard waste and debris from the city's department of public works. Or it may be fill that has been tested and “certified” to meet certain soil compaction guidelines for geotechnical use, but which may contain contaminants.

A safe soil protocol would provide community gardeners with guidelines describing how to ensure fill is “certified clean,” how to construct and use raised beds, and how to improve soil conditions, through composting and balancing the soil's pH, to reduce the bioavailability of lead

and arsenic in fruit and vegetables. A safe soil protocol could achieve two goals: First, it would help ensure that community gardens produce nutritious and healthy food, and that gardeners in the course of tilling, weeding, and harvesting are not exposed to risky levels of contamination in the soil; second, since many community gardens will be leased to the local residents by the city or a private owner, a safe soil protocol might help shield the city or owner of the parcel from liability claims and thus remove a possible disincentive for making land available for urban farming.

These issues of soil contamination, the need for soil testing, certifying clean fill, and developing safe soil protocols apply not only to the small and dispersed community gardens around Indianapolis, but also to an idea the city has on its drawing boards for a more extensive urban farming system. The city has put together a concept plan for a large scale urban farming initiative on a key brownfield property, an abandoned 15-acre rail yard (see below), a few miles north of downtown Indianapolis and easily reached by a bicycle trail, the Monon Trail Greenway. This proposal was influenced by examples such as Greensgrow, a  $\frac{3}{4}$ -acre Philadelphia farm that raises organic fruit and vegetable in hydroponic systems at a former steel galvanizing plant, as well as initiatives in Cleveland, Detroit, and Milwaukee to develop markets for urban farmers and to reduce the costs to farmers of inputs such as compost and water.



*Source: Google Earth*

### **Monon Acres site (former rail yard and roundhouse), Indianapolis**

Previous efforts to redevelop the site have been unsuccessful. The site is known to be contaminated from decades of past industrial use, particularly the roundhouse location where trains were maintained and repaired. Some environmental assessment work has been done, but the extent and severity of contamination across the site has yet to be determined. It should be emphasized that the Monon Acres urban farming initiative is a concept, not a formal plan,

approved by the city. Funding for site assessment and cleanup are necessary; site design and storm water management considerations need to be addressed; and regulators need to determine where and to what depth excavation is required to remove contaminated soils to reduce exposure.

The Concept Plan for the site (see below) incorporates community garden plots, community orchards, and a composting zone that would collect waste food from nearby downtown restaurants, as well as clippings and mulch from the parks department, to enrich the soil. It would provide plots for urban farmers who want to set up community supported agriculture (CSA) schemes in which farmers offer shares of their produce during the growing season to local residents. Residents would typically pay up front to help defray the farmer's upfront costs and in return receive a weekly supply of produce. In the "food desert" neighborhoods around Monon Acres this would provide residents with healthier, fresher food. The concept plan also calls for a green incubator that could provide training opportunities and share material resources among urban farming entrepreneurs. To address contamination issues, the plan would build a sustainability center/outdoor classroom that would also serve to cap the most polluted part of the site, the roundhouse. And finally, the city would bring to the site a restored barn, place it at the center of the property, and use it to create a farmers' market, attracting local residents and those further afield via the bike trail.



Source: Chris Harrell

### Monon Acres Urban Farm Concept Plan

Clearly, the Monon Acres Urban Farm is a compelling and attractive vision. It can improve the health and well being of local residents, address issues of food security, improve storm water management, and reduce the waste stream going into landfills. While Monon Acres is unlikely to create many jobs, it could provide seasonal jobs and help attain modest workforce

development goals. In broader terms it could create the institutional infrastructure to help urban farming gain a foothold in the city by: 1) developing market opportunities for start up operations; 2) subsidizing key inputs like compost; 3) connecting producers to consumers with the CSA. And with the green incubator, it could help urban farmers and community gardeners share tools, experiences and resources, develop value-added processes, extend the growing season, and support food preservation efforts.

Monon Acres Urban Farm may end up being a vital part of Indianapolis's future, but it is nothing more than a concept at this point. To make the concept real, greening initiatives like Monon Acres Urban Farm must address and overcome a number of barriers. These include:

- **Land tenure:** In Indianapolis, the city is exploring the possibility of leasing land to community gardeners and urban farms for five to seven years. It is unclear if this arrangement is satisfactory to community gardeners and potential urban farmers or whether such leasing arrangements would be seen as threatening their investment if the land, after the lease ended, was taken for other purposes. One alternative is for communities to own the land on which they garden. The Southside Community Land Trust in Providence, Rhode Island, for example, has bought some five acres of vacant land over the past two decades and expanded its farming operations on a 50-acre site on the outskirts of the city. Another alternative to leasing is a usufruct agreement between the city and growers which would give growers the legal right to use public or private land as long as they maintain it. This option provides more secure tenure for community gardeners, and for the city it reduces the costs to mow and maintain vacant properties.
- **Quantifying value:** Urban farming initiatives are not driven by traditional economic and real estate goals; nor are they likely to accord with what city planners and others may consider to be the "highest and best use" of a particular parcel. Although there is growing support for urban farming as a highest and best use, particularly on vacant properties and/or brownfields, there are no widely accepted methods for estimating the benefits from urban farming and community gardens. Current appraisal practice still requires that properties be appraised based on their conventional economic use, and it does not adequately quantify such benefits as improved diet and reduced exposure in children to contaminants such as lead. More generally, the focus on "the highest and best use" of a single site does not adequately take into account the area-wide spillover effects generated by a greening initiative like the Monon Acres Urban Farm plan. These can include off-site property value increases, increased capital flows into neighborhoods, and improvements in local and regional environmental conditions (e.g. reducing storm water flows, improving water quality). This question of valuation is important because the Monon Acres Urban Farm conceptual plan will most likely be one of several end uses put forward to redevelop the property. On what basis should city officials and other stakeholders value these competing uses in order to take into account the longer-term, area-wide benefits of each project?
- **Financing site assessments and other start-up costs:** Urban farming on vacant properties and brownfields can have significant start-up costs, particularly for low-income communities. As noted above, a municipality may lease vacant lots to a community group or an urban farmer at a minimal cost, but community farmers/gardeners will need to pay for soil testing,

trucking in clean loam, material costs for raised beds, compost, water, and depending on the size of the enterprise, insurance, marketing materials, labor costs, processing, and packaging. To subsidize part of these upfront expenses, Indianapolis has used funds from EPA's targeted site assessment program to support site characterization at vacant/abandoned properties identified by community groups for urban gardening/farming. In other cases, micro-loans from local foundations or charitable contributions can help low income community groups pay what some have estimated to be approximately nine thousand dollars (for clean fill, fencing, materials, water piping, rototilling, and soil testing) to create a 5,000-square-foot community garden, accommodating some 100 four-foot by ten-foot garden plots. While in the inner city issues of soil contamination, land ownership, and site control are important challenges, many city officials and community garden advocates point to the lack of funding—for site assessments, soil testing, and soil amending—as the single most important barrier to turning vacant properties and brownfields into viable community gardens and urban farms.

Urban agriculture on brownfields, either in the form of community gardens or for commercial urban farms, can be an avenue for community revitalization. By stabilizing vacant lots, by reusing brownfields, by taking surplus land out of the real estate stream, and by providing healthy food to low-income residents, urban farming can advance the cause of environmental justice and become a vital part of the fabric of urban neighborhoods. To achieve these ends in Indianapolis and elsewhere will require a diversified set of planning strategies that identify appropriate land for urban farming initiatives, provide adequate land tenure arrangements, develop markets for locally grown produce, incorporate area-wide evaluative criteria to assess the benefits of urban farming against those of other potential end uses, design financial mechanisms to help fund site assessments and soil testing, and design outreach efforts and technical assistance about safe soil protocols to community groups intending to start community gardens of their own.