

Community Food Security and the Landscape of Cities

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“Cultivating the Field: Linking Urban Agriculture Research with Practice”

Introduction

This project examines strategies and the potential for achieving food security through urban design in a typical North American city. City-building disciplines such as planning and landscape architecture are combined to generate a future vision for the Renfrew Collingwood community in Vancouver, British Columbia, Canada. The vision is spatially specific and indicates that this community could significantly increase market access for residents, produce from five to twenty percent of its fruits and vegetables, and recycle up to one-hundred percent of its organic wastes. The vision also suggests that food security projects can generate a more beautiful, useful, active, and inclusive public realm.

Food and Food Security in North American Communities

As the food and agricultural industries continue to expand into a global system of production and exchange, North American cities are supplied with more food and food choices than ever before. Those who can afford it can eat whatever they want, whenever they want it. Not everyone benefits, however, from this apparent abundance. In Canada, the cost of healthy food is rising while economic assistance to families is declining (Cost of Eating, 2003). The need for food banks grows along with the volume of

global agricultural exchange (Hunger Count 2004). Retail food prices have tripled, even though net farm incomes have declined, and farmland near cities is often worth more as scenery or as future housing 'reserve' (Tait&Qualman, 2004). Supermarkets necessarily follow the money, leaving 'food deserts' in low-income urban neighborhoods as they relocate to the wealthier suburbs.

Community Food Security (CFS) proponents suggest that local food systems, including urban agriculture, can provide public goods and environmental benefits that are unrealized or displaced by the global-industrial food system. CFS specifically uses food and local agriculture as a community development strategy to promote anti-hunger and food security objectives (Winne, 2004). Two goals of CFS are to maximize local food production, and to ensure equitable food provisioning through public or retail markets.

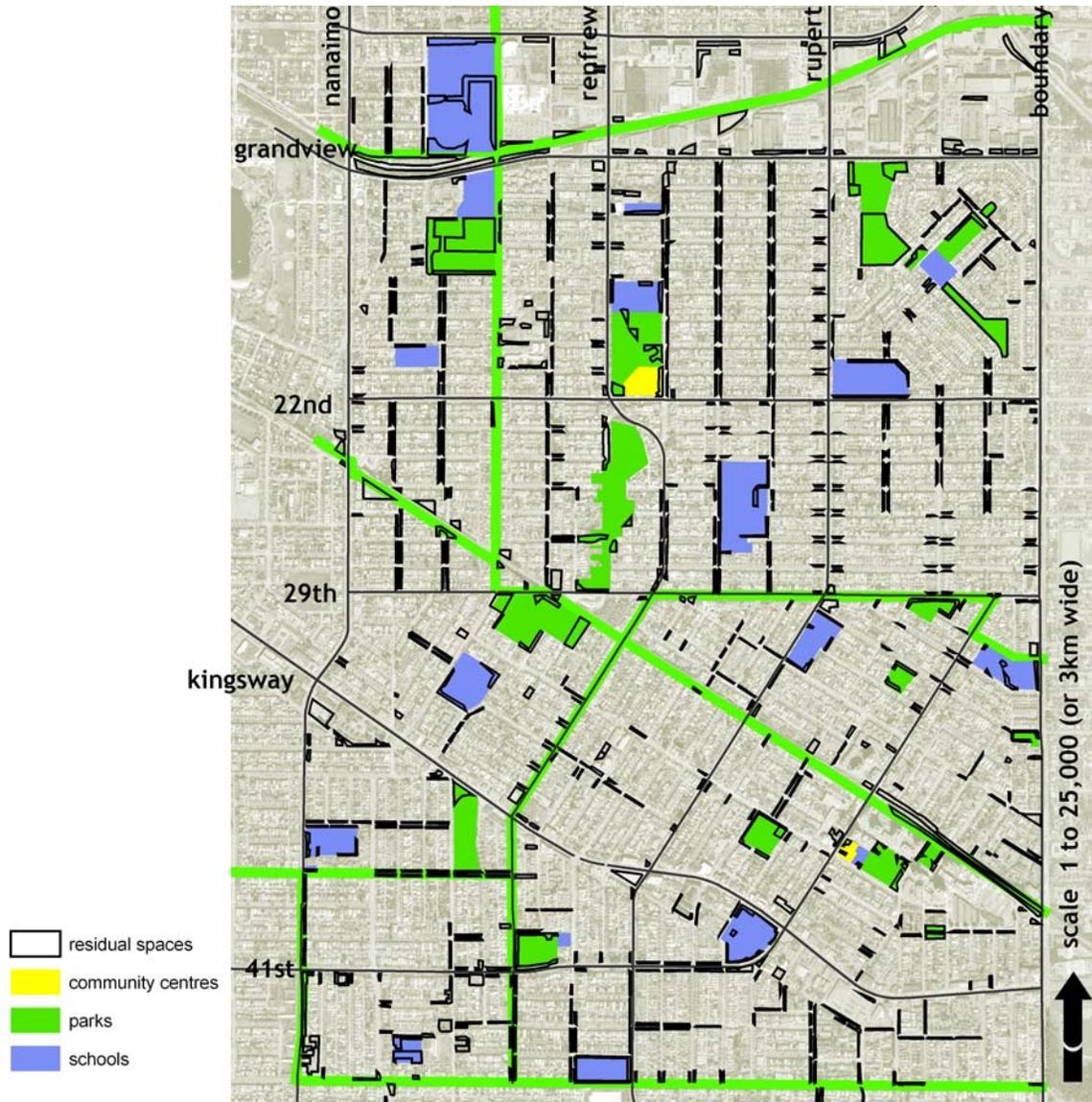
Food and Food Security in Renfrew Collingwood, Vancouver

The Renfrew Collingwood Food Security Institute (FSI) is a community-based non-profit organization that manages several local food projects; including a community kitchen, food exchanges, and a community garden. Their food security objectives are to *increase individual, family, and community capacity to attain food security...by developing community learning, leadership, and networking, around the issues of food sharing, organic growing, and nutrition in the...community* (FSI website). They also emphasize that local food programs provide a tangible outlet for action and contribute to opportunities for social cohesion and

inclusion. FSI's objectives are complemented regionally by the City of Vancouver's Food Policy Council, and staff positions in City of Vancouver's Social Planning Department.

The community itself is an 820 hectare area of eastern Vancouver with a highly diverse population of 45,000 people. Thirty percent of families are low-income, forty percent have limited physical access to food retail outlets (except by car), and there is a relatively high proportion of people employed in the trades and in the food services industry. Two-thirds of the area is composed of compact blocks of single-family housing, with occasional multifamily lots; one-tenth is industrial; and there are several areas with local commercial services. In the currently booming real estate market, there are very few vacant lots and no large areas of abandoned land, but the total area of under-utilized space accounts for ten percent of the entire community (figure 1). Most of these spaces are residual edges of parks and streets, and over half of them are less than 200 square meters in size. The largest of these areas are along the two light-rail transit corridors that cross towards downtown Vancouver.

Figure 1: Residual spaces are outlined in black. Public spaces are shown in green, blue, and yellow.



Creating the parameters for design: A Community Food Program

A *community food program* includes any food related activities that require space within a community.

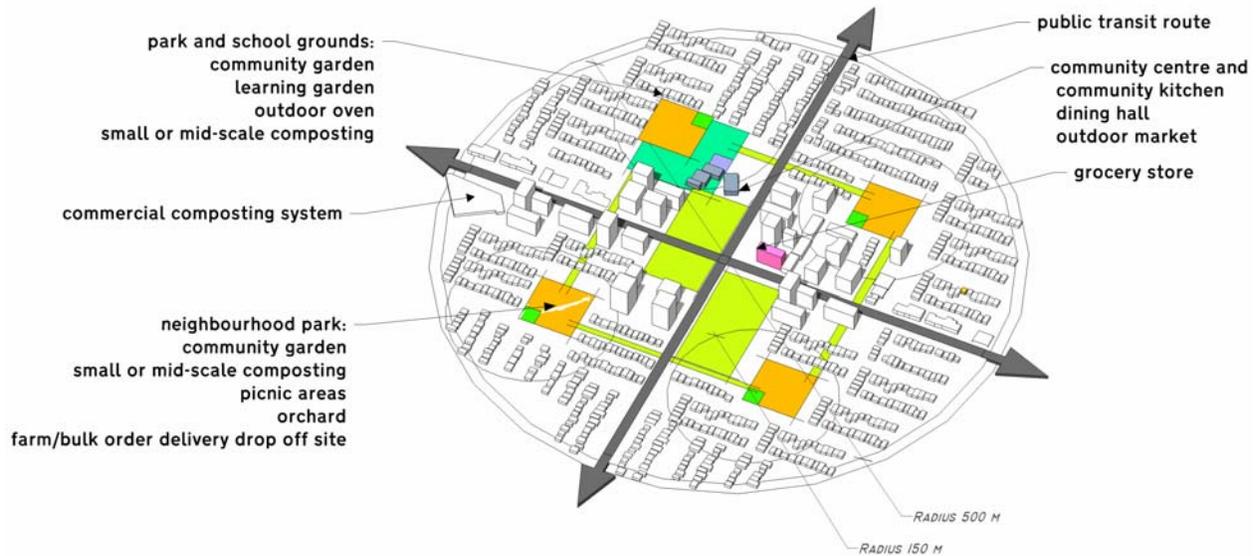
This program includes gardens, farms, kitchens, grocery stores, public markets, and composting systems.

The items on this list are similar to a list of parts for a machine, with instructions for assembly such as ‘put

community gardens within walking distance of the apartment buildings’

Two basic assumptions drive the organization of the program: that a full range of food access options should be within a *5-minute walk of every household*ⁱ, and that there would need to be enough people living within that distance to support about *24,000 square feet* of food retail floor area.ⁱⁱ In the economic context of Renfrew Collingwood, this suggests a population of 7,500 peopleⁱⁱⁱ living on 80 hectares, creating a gross minimum density of 30 dwelling units per hectare. Adding minimum expectations for community gardens (6.5 plots per 1000 residents) and urban agriculture, community kitchens (one per 30,000 square foot community centre), open space (1.1 hectares per 1000 residents), schools (2-3 hectares), and food waste recovery systems (about 3,000 square feet), the program resolves into a mixed-density neighborhood oriented around a social and commercial center, interlaced with a network of open spaces. As housing density^{iv} increases to support food markets, food production opportunities would necessarily be allocated to spaces in the public or semi-public realms (figure 2).

Figure 2: A typical application of a community food program.



The Vision of a Food Secure Community

The vision for Renfrew Collingwood is created by finding the appropriate spaces to locate the community food program (figures 3 and 4). This application includes eleven community gardens located along streets or parks, nine school gardens, a community farm, two commercial production areas, and the development of three retail/service nodes which would provide a grocery store or public market in currently underserved neighborhoods.

The community could produce about five percent of its fruit and vegetable requirements in public and backyard gardens, and could recover up to one-hundred percent of its organic wastes. By converting just ten percent of industrial rooftops to hydroponic production, a twenty percent self-sufficiency rate could be achieved. The remaining demand for produce could be met by about 200 hectares of regional farmland^v. Significantly, the image of the community would be that of a true garden city. The plan

suggests a food producing garden in almost every park and school in the area, located to serve as park entrances or active and interesting park and street edges. Rooftop farms would create gateways into the city for SkyTrain commuters, weekly public markets would animate the streets with vendors and musicians, and the towers and cisterns of composting and irrigation systems would become significant local landmarks. The net result would be neighborhoods in which productive landscapes would contribute to a far more animated and highly differentiated public realm.

Figure 3: In this community vision, project areas are circled in olive, yellow, blue, and green.



Figure 4: A sample design illustrates each place. This is a concept for community gardens in a park.



Roles and Methods for Implementation

The effort to realize this entire vision would require the resources of local governments, community organizations, private enterprise, and the support of residents. Community organizations are well positioned to lead such a vision by working with residents, businesses, and advocating for support from the city.

Typical of food system projects in North American cities, the *Renfrew Collingwood Food Security Institute* (FSI) is the principle agent of change in this project. FSI coordinates, develops, and directs local resources towards food related programs. While advocating for municipal support they are also working to build social capacity, particularly through the planning and implementation of food related projects. In

three years they have built two gardens indicated in the plan, provided meals through their community kitchen projects, and organized food exchanges and food outreach initiatives.

The City of Vancouver has recently formed a Food Policy Council which is coordinating food related programming throughout the city. They and several city staff support the work of the FSI and have specifically provided geographic data, reports and information from previous studies, and have worked to develop or modify policies that support or affect their work. Planning services will be required to implement new market development, and the Parks and Engineering departments will need to support the implementation of community gardens and farms.

In the spring of 2005, a demonstration rooftop garden was built at the Collingwood Neighborhood House community centre, which is the centre of the Food Security Institute's operations. Several landscape architecture students and a professional landscape architect helped the FSI facilitate several design and planning workshops with area residents. The workshops were run as brainstorming sessions in which small break-out groups discussed specific ideas and challenges – such as how to build planters boxes - and then reported their solutions back to the entire group. These events provided an opportunity for the public to participate in the planning process, raise concerns or contribute ideas, and develop a sense of ownership for the project that translated into continuing support. FSI coordinated the participation of over 180 people in planning and building a 150 square meter garden! A similar process was used to start a larger community garden along the nearby rail corridor. At two gardens per year the

proposed community plan would take about ten years to implement.

Other Benefits of the University-Community Partnership

Information supports more effective advocacy. Community groups often do not have the time to efficiently compile information that is relevant to their work, which can be critical when projects require the support of funding or regulatory agencies. Targeted research from this project provides documented information for the Food Security Institute, which gives them a distinct advantage when advocating for change. In this case the research documents the physical and demographic resources and constraints that influence local food system viability.

The future-thinking nature of this research also supports strategic, big-picture planning.

Community organizations focus on starting and managing projects, leaving little time or resources to consider the broader implications of their work.

Conclusion

In the absence of radical changes to land use patterns and food production techniques, it is unlikely that an urban community in North America could ever produce as much food as it consumes. This goal may be more possible when suburban and rural areas are considered within the city's regional area. However, a community food security agenda in neighborhood planning and non-profit projects could increase access to markets and food distribution, provide opportunities for household food security, generate a wonderful and unique complexity in the public realm, and complement more conventional urban planning

goals such as providing housing and public amenities. Moving an urban community towards greater food security requires an integrative process and the coordinated efforts of residents, non-profit organizations, city government, and researchers.

The full report is available at the City Farmer website:

<http://www.cityfarmer.org/DavidLea.html>

and at the City of Vancouver website:

<http://www.city.vancouver.bc.ca/commsvcs/socialplanning/initiatives/foodpolicy/tools/pdf/commfoodsecurity05aug.pdf>

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ⁱ 400 to 500 meters, this is considered a reasonable walking distance for pedestrians to access basic goods and services (Condon, 2002)

ⁱⁱ representing one medium-sized urban grocery store or two to three smaller ones

ⁱⁱⁱ derived from average family income, average food expenditures, and revenue per retail floor area

^{iv} 50-60 units per hectare would be the net average density, i.e. low-rise multifamily housing

^v about 10-15 average sized farms in this region