Center for a Sustainable Future Indiana University South Bend

Growing Food Where it is Needed CSF White Paper No. 2 (August 30, 2010)

Elizabeth A. Radican

Executive Summary

This paper discusses the local government's role in supporting urban agriculture projects and policies as strategies to address pre-existing policy goals while dealing with the growing need for sustainable development and greening initiatives. It focuses on the problem of food deserts and the subsequent community health and food security issues surrounding the phenomenon. It then presents urban agriculture as a framework for alleviating issues of social justice while promoting sustainable land use, community interaction, volunteer involvement, and the development of green spaces. Drawing examples from cities and municipalities around the U.S., it discusses what local governments are doing to plan for and support urban agriculture. The latter part of the paper discusses these issues specific to the city of South Bend, Indiana. It focuses on the ability for urban agriculture to tackle issues of food security and limited access while also running congruent with other policies set forth in the South Bend City Plan. Finally, it urges the city of South Bend to solidify its support of community gardening by adopting a resolution committing to the services it already provides to these initiatives.

Recommendations:

Adopt a resolution to the City Plan to incorporate the support South Bend already offers to community gardening as a way to improve community health, promote food security, increase community involvement and green spaces, and promote economic activity and vocational development. This resolution could include the following commitments by the city of South Bend:

- Provide resources such as on-site water, as well as compost and mulch delivery;
- Implement flexible zoning ordinances that define community gardens as recreational and/or open spaces and allow for the creation of farmers markets in areas where fresh food is scarce;

In addition to city action, this paper recommends that the Health Department of St. Joseph County continue to provide soil testing for heavy metals at potential garden sites

Introduction:

The environmental movement of the 1970s brought awareness to government leaders about the limits of our planet. Human population growth and consumption rates threaten the very resources and ecosystems that support life. This realization represented a new role for governments as they faced the challenges of finding the innovations necessary to sustain growing populations under newly realized constraints. In the developed world, many of the ways we live and power our world are simply unable to be sustained. As a result, the concept of 'sustainable development' was introduced in the 1987 Brundtland Report (United Nations Commission on Sustainable Development, 2007).

Sustainable development was presented as a strategy to address the world's problems with innovation and technology. Also known as *Our Common Future,* the Brundtland Report defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to compromise their own needs". If our species is to perpetuate into the future, sustainable development and planning must be implemented by all governments at all levels of government (United Nations Commission on Sustainable Development, 2007).

An international framework for sustainability was developed and agreed upon by many world governments at the 1992 United Nations Conference for Environment and Development. This framework is called Agenda 21 and it focuses on "combating the deterioration of land, air and water, whilst conserving habitats and their diversity." It also addresses "poverty, over consumption, health and education," while encouraging governments to focus on the roles that everyone must play in the efforts towards sustainable development. In addition, Agenda 21 "Encourages the reduction of environmentally and socially detrimental processes, but within a framework which allows economic success." It stresses the importance of involving both non-governmental organizations and the public in the development process and urges governments to devise plans at the "local, national and international level" (Atmosphere, Climate and Environment Information Programme, 2001).

In the United States, cities and municipalities are the most suitable avenue to undertake sustainable initiatives for two reasons. The first is that local governments are faced with the monetary issues which stem from conflicts between environment and economy, and local authorities are also charged with the task of solving such problems. Second, cities are the best way for community stakeholders to be directly involved in the decision-making process of sustainability initiatives (Saha, 2009). In fact, two thirds of the directives in Agenda 21 are directed toward the jurisdiction of local councils, urging full community involvement. Local authorities are called to talk with their communities to come up with a Local Agenda 21 that suits the needs of their population (Atmosphere, Climate and Environment Information Programme, 2001).

This paper discusses the local government's role in supporting urban agriculture projects and policies as strategies to address pre-existing policy goals while dealing with the growing need for sustainable development and greening initiatives. It focuses on the problem of food deserts and the subsequent social equity, community health and food security issues surrounding the phenomenon. It then presents urban agriculture as a framework for alleviating issues of social justice while promoting sustainable land use, economic development, community interaction, volunteer involvement, and green spaces. Drawing examples from cities and municipalities around the U.S., it discusses what local governments are doing to plan for and support urban agriculture.

The latter part of the paper discusses these issues specific to the city of South Bend. It focuses on the ability for urban agriculture to tackle issues of food security and limited access while also running congruent with other policies set forth in the South Bend City Plan for 2010. Finally, it urges the city of South Bend to solidify its support of community gardening by adopting a resolution committing to the services it already provides to these initiatives.

Sustainable Development:

The guiding framework of sustainable development is to meet our present needs without compromising other generations' abilities to provide for themselves. It is generally understood as development that melds the concepts of economic growth, environmental responsibility, and social equity (Saha, 2009; United Nations Commission on Sustainable Development, 2007). Although environmental and economic concerns have been the focus of most sustainability initiatives, social equity must not be overlooked. In *Empirical research on local government sustainability efforts in the USA: gaps in the current literature*, Devashree Saha (2009) notes that "A truly sustainable community will be one that takes action respective to all three goals" (pg. 19). After all, a society rampant with poverty and social inequality is likely to be neither economically nor environmentally sustainable in the long run as "it is now understood that social justice issues are intertwined with economic and environmental health of the community" (pg. 18).

The problem of social inequality within the framework of sustainable development is twofold: 1) the factors of social justice, environmental responsibility, and economic development are many times in direct conflict with one another; and 2) social equity and justice are not considered an integral part of most cities' sustainability initiatives. The conflicts between the 'Three E's' of sustainability--environment, economy and equality-- exist in the form of a 'development conflict' between equality and environment, a 'property conflict' between equality and economy and a 'resource conflict' between economy and environment. The result, in short, is that issues of social equality and justice take the back seat to environmental and economic policy concerns (Saha, 2009, pp. 18-20).

Food deserts:

The lack of social equality initiatives in local sustainability efforts is illuminated by research on the existence of food deserts. Food deserts describe neighborhoods, rural or urban, that lack access to healthy food options. Food deserts are traditionally low-income to impoverished areas, generally inhabited by non-whites. There are no supermarkets in food deserts, or if there are, they are not in close proximity (i.e. within walking distance). Food deserts are also known for having plenty of fast food and convenience stores selling ready-made meals with poor nutritional value (Guthman, 2008, pp. 431-432; Mari Gallagher Research & Consulting Group, 2006, p. 2; Gray S. , 2009; Shigley, 2009, pp. 28-29).

Food desert neighborhoods do not have access to healthy food options because they do not attract large grocery stores or supermarkets. One reason is that retailers are looking for larger sites than what are available in dense areas. The other reason is the perception that it is not profitable to open a store in an impoverished neighborhood. Shigley (2009) writes, "Grocery store chains demonstrate little interest in poor, urban communities because the demographics do not meet the industry's ideal and because, as noted, the big grocers are looking for big sites. At the same time, fast food outlets pop up everywhere. Researchers say this is a recipe for a public health disaster" (p. 28).

Indeed, much research has shown the detriment of food deserts on the health outcomes of their residents, and the results are astounding. In fact, studies in New York City, Chicago, and California all found that neighboorhoods in food deserts had consistently high rates of diabetes and obesity. All three studies found food deserts to exist in predominantly low income to impoverished communities inhabited by mostly minorities and non-whites. This means a person's community will determine their access and quality of food which will determine their level of health, life span, and overall wellbeing. (Mari Gallagher Research & Consulting Group, 2006; Shigley, 2009).

In the report *Examining the Impact of Food Deserts on Public Health in Chicago*, researchers set about to determine the impact of food deserts on community health. They measured the distance from each neighborhood block to the nearest grocery store. That number was then divided by the distance to the nearest fast food restaurant to come up with the food balance number (higher numbers are worse). They found that residents of food deserts had higher death rates for cancer, diabetes, and cardiovascular disease. Furthermore, those neighborhoods with the worst food balance scores resulted in proportionally worse outcomes. The study also found that African Americans, as opposed to other minority groups, have the least balanced food choices coupled with the worst relative health outcomes (Mari Gallagher Research & Consulting Group, 2006, pp. 22-26).

This issue of access to healthy and nutritious food is a community health concern, as well as a sustainability issue that must be addressed by policy makers. Food deserts represent the failure

of markets to provide a service where it is needed. In such a case where markets fail to reach efficient outcomes¹, appropriate government intervention is warranted to improve the welfare of society (Krugman & Wells, 2009, p. 15). The problem for governments and redevelopment agencies is that it is timely, expensive, and complicated to bring "full-service grocery stores to underserved neighborhoods" (Healthy planning, 2010). Because government intervention cannot essentially offer the needed solutions, "most of these efforts to provision fresh, locally grown food to such neighborhoods are necessarily run by nonprofit organizations and thus take the form of alternatives" (Guthman, 2008, p. 432). Many municipalities are looking to solve these problems through the diversity of applications inherent in urban agriculture.

Urban Agriculture:

Urban agriculture is diverse by definition and can include "community and private gardens, edible landscaping, fruit trees, food-producing green roofs, aquaculture, farmers markets, small-scale farming, hobby beekeeping, and food composting" (Mendes, Balmer, Kaethler, & Rhoads, 2008, p. 435). City planners and local authorities, however, have generally overlooked food policies for a number of different reasons:

First, planners felt that the food system was not their turf, pointing instead to the built environment and land use regulation as their primary responsibilities. Second, many planners perceived the food system to be a rural rather than an urban issue, underscoring the false dichotomy between urban and rural food policy. Third, as public sector workers, planners felt unqualified or unwilling to take the lead on what they perceived to be a private sector issue. Fourth, planners cited a lack of funding to initiate and implement programs and services. Fifth, many planners reported that they did not perceive any problems with the current food system. Sixth, planners said they did not know about community groups they could work with on food system issues. Last, they reported lacking knowledge about food issues (Mendes, Balmer, Kaethler, & Rhoads, 2008, p. 437).

Increasingly, local governments are turning their attention to food policy, and moreover to urban agriculture, as a way to achieve urban sustainability, food security, increased green spaces, "environmental protection, public health and nutrition, poverty reduction, community capacity building, participatory decision making, social inclusion, and community economic development, among others" (Mendes, Balmer, Kaethler, & Rhoads, 2008, p. 437). In this way, food security, community health, economic development, and environmental planning are all achieved under the same policy framework; and that is sound sustainable development planning (Shigley, 2009, p. 29).

Urban agriculture (UA) programs benefit cities, towns and communities by increasing food security and equality, promoting sustainable land use, encouraging community interaction and

¹ Economies are efficient if "they take all opportunities to make some people better off without making other people worse off" (Krugman & Wells, 2009, p. 14).

collaborative planning, improving community health and nutrition, fostering educational and volunteer opportunities, and promoting economic development. In addition to addressing a host of ecological sustainability policy directives, urban agriculture programs and policies also support the elements of equity and economy inherent within sustainable development. For example, UA can mitigate the issue of food deserts by addressing the community health problems related to lack of access to healthy food (Mendes, Balmer, Kaethler, & Rhoads, 2008, pp. 436-437). Moreover, most frameworks for community gardening share an emphasis on affordable, even free food, donating extra harvests to local soup kitchens, food pantries, and charitable organizations.

City plans:

Sustainability is best undertaken at the local level where community interaction and involvement is a vital aspect toward achieving the principles of sustainability. Community gardens are a great way for cities and towns to promote healthy alternatives in areas where there is little to no available fresh produce. The organizational framework for community gardening is very broad and community gardens can take on many shapes. For the purpose of this paper, a community garden will be defined as any area of land that is gardened by a group of people for the provision of food, education, community involvement, green space, and leisure.

The simple answer to the problem of food deserts is more health food alternatives, but the development of grocery stores is not always an affordable or viable option for local governments. Therefore, public-private partnerships have proven to be vital in solving the problems of growing food where it is needed. Many cities around the United States have adopted various frameworks for working with and supporting community gardening efforts. Frequently, gardens will be organized under the umbrella of a non-profit organization or land trust while receiving some support and provisions from local governments and philanthropic organizations. By incorporating into a non-profit organization, community gardens can more easily obtain grants, legal liability protection of board members, and "develop the operational structure provided by state nonprofit corporate law" (Schukoske, 2000, p. 362).

Government support of community gardening can take many forms, but preferably a city or town will commit their support into the city's general plan. Often, municipal support of community gardens is facilitated by partnerships between governmental agencies and nonprofit organizations or non-governmental organizations. These public-private partnerships help to foster community involvement and collaborative democracy. Local governments can also use innovative ways of using zoning codes to support urban agriculture, and offer use of city owned land for use as gardens, generally involving a contractual agreement between the parties.

The cities of Oakland, Washington D.C., Seattle, and Detroit all have thriving community gardening and urban agricultural movements. The first three cities have all adopted policies

supporting community gardening within their general city plans, committing local government support to community gardening (Land use and planning policies to support community and urban gardening, 2008). Detroit, on the other hand, tells an interesting story of both success and opportunity. It has an astounding number of community gardens and urban farms, but surprisingly, it has no governmental policies or ordinances to regulate or facilitate the operation and growth of such a movement.

Oakland, CA:

The City of Oakland, California's General Plan expressly supports community gardening in both its policies for open spaces. Known asthe OSCAR Element (Open Space Conservation and Recreation), it protects community gardens by classifying them as open spaces. Chapter 2 of the city's general plan maintains that community gardens are considered "Land used for the managed production of natural resources," because the gardens are used in the production of food. Policy OS-2.3 of the OSCAR Element commits to "Maintain and support a viable community gardening program to foster an appreciation of local ecology, instill a sense of stewardship and community, and provide a multi-ethnic, multi-generational activity open to all." Additionally, Oakland's Action OS-2.3.1 commits to both funding the community gardening program and a school gardening program while providing assistance from staff at the Office of Parks and Recreation (1996, p. 59).

According to Policy OS-2.6 (Street Closures for Parks, Plazas, and Gardens), the City of Oakland also supports the closure of or limited access to streets in high density urban areas with little to no private yards. These areas could be used for open spaces such as community gardens or parks. Where legally permissible, streets could be narrowed or traffic flow could either be slowed or stopped to make more room for open space. Finally, Oakland is committed to a zero net loss of open space in the community by retaining land trust properties for open space as well as supporting the acquisition of land and use of public land for future garden sights (1996, pp. 59-62).

Seattle, WA:

The City of Seattle, Washington gained its first community garden in 1973. Today, Seattle's municipally run community garden program boasts more than 73 gardens or P-Patches. Seattle's Department of Neighborhoods is responsible for managing the P-Patch Community Gardens Program, a non-profit organization that oversees all of the gardens (City of Seattle, 2010). This program was adopted by the City Council in 1992 as part of the city's Comprehensive Plan. Resolution 28610 commits to support maintenance of the gardens as well as long term expansion of the program and number of gardens (Erickson, Griggs, Maria, & Serebrin, 2009, p. 11).

Specifically, Resolution 28610 commits to five points: 1) the promotion of interagency cooperation between the Parks and Engineering Departments, School District, and the Housing Authority; 2) the recognition of P-Patch Gardens as part of Seattle's Comprehensive Plan while

recommending "ordinances be strengthened to encourage, preserve and protect community gardening particularly in medium and high density residential areas;" 3) the inclusion of the P-Patch gardens as a potential use for vacant city property; 4) the recognition of the economic, environmental and social value of the gardens, and the provision of monies for administering the P-Patch Program; and 5) the promise to extend priority to "low income families and individuals, youth, the elderly, physically challenged, and other special populations" in the "expansion of the P-Patch program and outreach" (Erickson, Griggs, Maria, & Serebrin, 2009, p. 11). With these policies in place, community gardening will continue to flourish in Seattle.

Washington, D.C.:

In Washington, D.C., community gardens are expected to fulfill the policy initiatives of education, career and vocational development, economic development, and food security. The District of Columbia's Comprehensive Plan of 1984 called for the development of the Food Production and Urban Gardens Program which was instated in 1987. The program is responsible for maintaining a land inventory on vacant lots by providing their size, location, and available use dates. It is also responsible for making those records public and for "formulating procedures to donate and cultivate vacant lots." The gardens are also used as an educational tool. The Food Production and Urban Gardens Program partners with the Board of Education to ascertain garden sites that could be used to educate students in "science and gardening that prepare students for related career opportunities such as restaurant produce supply, landscaping, and floral design'" (Schukoske, 2000, pp. 379-380).

Washington, D.C.'s support of community gardens reflects the diverse nature of collaborative democracy that one comes to expect from local sustainability planning. Incorporated into the District's framework policy is the "encouragement of cooperation among the district's cooperative extension offices, schools, nonprofit gardening organizations, employment programs, and produce markets." Cooperative planning in this fashion helps to create community stakeholders which help to ensure the longevity of community garden efforts. Although the gardens are technical assistance and research provided by the University of the District of Columbia, the main aspects that the District's community garden policies lack are specific commitments to the provision of land, water, and other material resources (Schukoske, 2000, pp. 379-380).

Detroit, MI:

Detroit, MI is the picture of a failed American city. The city has been on the decline for decades, suffering from high unemployment rates, failed industry, diminishing population, high rates of crime and murder, plummeting real estate prices, poverty, pollution, vacancies and neighborhood blight. The reimagining of Detroit over the last decade has included a large amount of grassroots efforts, including the use of urban agriculture to reduce crime, vacant lots, poverty and hunger while increasing home values and the aesthetic of neighborhoods (Altman, 2009).

The organizational framework for Detroit's urban agriculture network is a collaborative effort. The Garden Resource Program (GRP), as it is referred to, operates through the cooperation of The Greening of Detroit, Detroit Agriculture Network, Earth Works Urban Farm/Capuchin Soup Kitchen, and Michigan State University. Over the last seven years, for a small fee, GRP has provided support in the form of seeds, plants and educational resources to families, schools and communities interested in starting gardens. As a result, the Detroit area (including Highland Park and Hamtramck) now boasts more than 875 community gardens and urban farms (Garden Resource Program Collaborative Web site, 2010).

The interesting part of this picture is that all of this activity in Detroit is happening with virtually no policy support. In fact, Detroit's City Planning Commission drafted its first Urban Agriculture Policy in March of 2010. The Introduction of the draft policy states the obvious:

Currently, the City neither defines nor sets standards for community gardening or commercial agriculture. Activities currently taking place are 'under the radar,' so to speak. The fact that so much activity can take place citywide, without permits and standards, but also without nuisance complaints or letters of concern to city government attests to the positive impact of urban agriculture. Or, at least if one is not willing to come to that conclusion at this juncture, at least it is apparent there hasn't been a negative impact...However, with the growing number of gardens and the push for commercial operations, clearly there needs not only to be codes and standards to facilitate urban agriculture as a desired and legitimate use for land in an urban area, but a vision, guiding principles and a strategy that states what is to be accomplished through, and what are the objectives of, facilitating and promoting urban agriculture in Detroit, and from that will come the codes and standards (City of Detroit City Planning Commission, 2010, p. 11).

The policy continues to propose 20 expectations the Planning Commissions expects urban agricultural policy to fulfill, including many of the community, environmental, and economic benefits aforementioned in this paper. A work in progress, the draft policy also proposes some specific recommendations for land use and zoning (City of Detroit City Planning Commission, 2010). The story of Detroit, a city with a thriving urban agricultural community with no policy support to speak of, is not an uncommon story.

Local Perspective:

South Bend, Indiana has a newly forming urban agricultural movement that receives support from the local government, but has yet to incorporate its support into the City Plan. Although the City does not formally recognize the value of community gardening efforts, it is working towards greening the community. In 2009, South Bend was voted Indiana's Green City of the Year for its commitment to reducing the causes of global warming (New strategy targets energy inefficiency and conservation, 2010). As a 'Cool City', South Bend is building momentum toward the achievement of sustainability initiatives. There is a growing population of businesses, residents, educators and civil servants who are developing the notion of a sustainable South Bend, and the capacity is building. One such organization is The Unity Gardens, Inc.

The Unity Gardens, Inc. is a "collaborative network of community gardens originated to increase the availability, awareness, and accessibility of healthy, locally grown food." Unity Garden's mission is simply to improve the health of the community physically, socially, and economically. Started and directed by a public health nursing instructor, the organization aims to "reduce chronic illness and obesity within the community via education and increased accessibility of fruits and vegetables." The first three gardens were started in 2008, growing to 14 gardens in 2009, with now more than 30 Unity Gardens in the City of South Bend for 2010 (The Unity Mission, 2010).

All of the Unity Gardens operate under separate frameworks delineated by the gardeners who started them: some gardens rent plots to individuals or families for the season; some grow large gardens in cooperation with other gardeners who share the harvest; some grow food to sell at local markets; some are educational gardens grown by students and children; and some are true Unity Gardens. A true Unity Garden is grown for the purpose of free food for those in need. The gardens are open to the public for anyone who wants to harvest or tend to them. It is important to remember, however, that all of the gardens have a sharing component, donating food to local food banks and soup kitchens (The Unity Mission, 2010).

These donations come at a time when money for local charitable organizations is scarce. In fact, at least three organizations in the South Bend community who receive harvest donations from the Unity Gardens are facing budget shortages. These organizations include: Broadway Christian Parish, a church that runs a food pantry and a soup kitchen, as well as provides hospitality services of laundry and bathing; Our Lady of the Road, which offers a soup kitchen and hospitality services; and the First United Methodist Church, which runs a soup kitchen. Interestingly enough, both Broadway Christian Parish and Our Lady of the Road have Unity Gardens to help increase the amount of food they can provide for the community (Dits, 2010). The food at these gardens, like many of the other gardens around the city, is in high demand with noticeable shortages at times, leaving one to realize that there is still a great need for free and healthy food in South Bend (Stewart, 2010).

The Unity Gardens have made valuable contributions to the sustainability and wellbeing of the community. The support the organization has received from the City, as well as the County of St. Joseph, has been very helpful in the effort. The recommendations of this paper are to adopt a resolution to the City Plan to incorporate the support South Bend already offers to community gardening. The recommendations are as follows: that the city provide vacant lots for the use of community gardening; that the city provide resources such as on-site water, as well as compost and mulch delivery; that the city implement flexible zoning ordinances that define community gardens as recreational and/or open spaces and allow for the creation of

farmers markets in areas where fresh food is scarce; and finally, that the Health Department of St. Joseph County continue to provide soil testing for heavy metals at potential garden sites².

Indeed, the City of South Bend, in the Implementation section of its City Plan for Parks, pledges to "Support efforts of neighborhood groups to create and maintain neighborhood parks and community gardens;" however, there is no mention of community gardens within the rest of the city plan (2007, p. 150). Certainly, South Bend would benefit from having zoning standards regulating what sorts of activities and agriculture can take place. Like Detroit, much of the activity is still 'under the radar.'It is simply good policy to support the existing efforts of citizens who are collaborating to make a healthier and more sustainable community through innovative land use, outreach, education, and food production. After all, as the next paragraphs present, the benefits provided by community gardening already fulfill existing policy directives stated within the South Bend City Plan.

The goal of South Bend's Public Facilities and Services Policies seek to enhance the quality of life in the community. The objective of Policy PF 5.1.7 is to "Partner with neighborhood groups to convert selected vacant properties in the city for park and recreational uses" (2007, p. 59). Community gardens are a great use for vacant city lots and should be considered as a potential use in the appropriation of those lots. As such, these sites also provide for educational, vocational, and volunteer opportunities, complimenting the following South Bend City directives: Policy E 2.2 to "Support more learning opportunities for high school students such as internships and union apprenticeships," Policy E 3.3 to "Encourage the expansion of vocational and trades training opportunities in the community," and Policy CB 2.4 to "Support the expansion of public service and volunteer opportunities for people of all ages" (2007, pp. 116-135).

The benefits of community gardening are also in line with many of South Bend's Health Policy objectives. Policy PF 7.2 sets out to "Encourage the community to pursue a healthy lifestyle," and as this paper has demonstrated, the availability of affordable, healthy food alternatives greatly increase the health outcomes of individuals. Specifically, community gardening can serve the objectives of PF 7.2.5 to "Support organizational partnerships that encourage a healthy lifestyle and help educate the public about the importance of preventative care," and PF 7.3.1 to "Support dynamic, effective health outreach activities that serve difficult-to-reach and underserved populations" (2007, p. 60). The educational aspect of healthy eating as a way to improve community health is definitely inherent in South Bend's community gardening movement. Outreach to underserved communities is apparent as well.

² These recommendations were established from a series of conversations and interviews shared between this author and Sara Stewart, Director of the Unity Gardens, Inc., and Dr. Mike Keen, Director of Indiana University South Bend's Center for a Sustainable Future and Board Member of the Unity Gardens, Inc.

Beyond food production, urban agriculture and community gardens are a way to build economically, socially, and environmentally sustainable communities. The benefits to such practice are numerous and the momentum towards such efforts is growing exponentially. Again, cities can improve community health, promote food security, increase community involvement and green spaces, and promote economic activity and vocational development with simple policies that allow citizens to grow affordable healthy food. As this paper has shown, urban agriculture can fulfill many modern policy initiatives in inexpensive ways through the use of innovation, collaboration, education and the harnessing of volunteerism; and it is a safe assumption that more cities, including South Bend, will adopt policy frameworks to support these efforts.

Works Cited

- (2010). Retrieved August 20, 2010, from Garden Resource Program Collaborative Web site: http://www.detroitagriculture.org/GRP_Website/Home.html
- Altman, A. (2009, April 6). Road to Renewal. Time , 173 (13).
- American Community Gardening Association. (2010). *What is a community garden?* Retrieved August 10, 2010, from American Community Gardening Association Web site: http://communitygarden.org/learn/
- Atmosphere, Climate and Environment Informatin Programme. (2001). *Objectives*. Retrieved August 14, 2010, from Encyclopedia of Sustainable Development: http://www.ace.mmu.ac.uk/esd/menu.html
- Atmosphere, Climate and Environment Information Programme. (2001). Agenda 21. Retrieved August 13, 2010, from Encyclopedia of Sustainable Development: http://www.ace.mmu.ac.uk/esd/Action/Agenda_21.html
- Atmosphere, Climate and Environment Information Programme. (2001). *Local Agenda 21*. (Manchester Metropolitan University) Retrieved August 14, 2010, from Encyclopedia of Sustainable Development: http://www.ace.mmu.ac.uk/esd/Action/Local_Agenda_21.html
- Bentley, M., Conlon Morgan, S., Hamilton, S., & Myrie, S. (2009). Environmental education in Botanic Gardens; exploring Brooklyn Botanic Garden's Project Green Reach. *The Journal of Environmental Education*, 40 (4), 35-52.

Bonfiglio, O. (2009, January 27). Milwaukee's urban farmer. Christian Science Monitor, 101 (42), p. 17.

- City of Detroit City Planning Commission. (2010, March 18). Urban Agriculture Draft Policy. Retrieved 20 August, 2010, from Garden Resource Program Collaborative: http://www.detroitagriculture.org/GRP_Website/Home_files/uaw_official_UrbanAgPolicyDraft1 -1.pdf
- City of Sacramento Parks and Recreation Master Plan 2005-2010. (2004, December). Retrieved June 10, 2010, from City of Sacramento Web site: http://www.cityofsacramento.org/parksandrecreation/masterplan/pdf/policy-revised.pdf
- City of Seattle. (2010). *Department of Neighborhoods: P-Patch Community Gardens*. Retrieved August 3, 2010, from Seattle.gov: http://www.seattle.gov/neighborhoods/ppatch/

City Plan. (2007, January). South Bend City Plan . South Bend, IN.

Damrosch, B. (2010, June 24). Kansas City, still a garden spot. The Washington Post, p. 11.

Dits, J. (2010, April 11). South Bend ministries struggle to keep filling basic needs. South Bend Tribune .

- Dolan, R., & Howard, K. (2010, March 10). Chicago food deserts hit hard at residents' health. *Medhill Reports*. Chicago.
- Ebeling, A. (2010, June 28). The conservationist next door. Forbes, 185 (11), pp. 106-107.
- Erickson, L., Griggs, K., Maria, M., & Serebrin, H. (2009). Urban agriculture in Seattle: policy and barriers. Retrieved August 12, 2010, from Chicago Food Policy: http://www.chicagofoodpolicy.org/Urban%20Agriculture%20in%20Seattle%20Policy%20and%2 0Barriers.pdf

First person: strength in neighbors. (2008, September). Parks & Recreation, 43 (9), pp. 118-120.

- Glover, T., Parry, D., & Shinew, K. (2004). Leisure spaces as potential sites for interracial interaction: community gardens in urban areas. *Journal of Leisure Research*, *36* (3), 336-355.
- Gray, K. (2010, June 24). From the ground up. Issues in Higher Education, 27 (10).
- Gray, S. (2009, May 26). *Can America's urban food deserts bloom?* Retrieved July 28, 2010, from Time.com: http://www.time.com/time/nation/article/0,8599,1900947,00.html
- Guthman, J. (2008). Bringing good food to others: investigating the subjects of alternative food practice. *Cultural Geographies*, 431-447.
- *Healthy planning.* (2010). Retrieved August 18, 2010, from Public Health Law and Policy Web site: http://www.phlpnet.org/healthy-planning/beyond-grocery-stores
- Holland, L. (2004). Diversity and connections in community gardens: a contribution to local sustainability. *Local Environment*, 9 (3), 285-305.
- Kaffer, N. (2010, April 12). Urban farming can succeed in Detroit, panelists say. *Crain's Detroit Business*, p. 18.
- Krasny, M. E., & Schusler, T. M. (2010). Environmental Action as Context for Youth Development. *Journal* of Environmental Education, 41 (4), 208-222.

Krugman, P., & Wells, R. (2009). Economics (2nd Edition ed.). New York: Worth Publishers.

- Land use and planning policies to support community and urban gardening. (2008, July 31). Retrieved June 20, 2010, from Public Health Law & Policy: http://norcalheal.cnr.berkeley.edu/docs/CommunityGardenPolicyInventory_PHLP.pdf
- Librizzi, L. (1999, March 20). Comprehensive plans, zoning regulations, open space policies and goals concerning community gardens. Retrieved August 20, 2010, from Community Gardening.org: http://communitygarden.org/docs/cg_policies.pdf
- Mari Gallagher Research & Consulting Group. (2006). *Examining the impact of food deserts on public health in Chicago*. Chicago.

- Mendes, W., Balmer, K., Kaethler, T., & Rhoads, A. (2008). Using land inventories to plan for urban agriculture: experiences from Portland and Vancouver. *Journal of the American Planning Association*, 74 (4), 435-449.
- Musick, M. (2002, May/June). The food evolution in the Pacific Northwest. *In Business*, pp. 12-13. *New strategy targets energy inefficiency and conservation*. (2010, April 21). Retrieved July 18, 2010, from City of South Bend News: http://www.southbendin.gov/news_detail_T13_R537.asp
- Olopade, D. (2009, September 21). Green Shoots in New Orleans: a frustrating quest for food security has led some residents to grow their own. *The Nation*, pp. 23-26.
 (1996). OSCAR Element: An element of the Oakland General Plan. Oakland General Plan, Oakland, California.
- Saha, D. (2009). Emperical research on local government sustainability efforts in the USA; gaps in the current literature. *Local Environment, 14* (1), 17-30.
- San Francisco Board of Supervisors. (2009). San Francisco General Plan: Recreation and Open Space. Retrieved August 3, 2010, from San Francisco Planning Department Web site: http://www.sfplanning.org/ftp/general_plan/I3_Rec_and_Open_Space.htm
- Schukoske, J. (2000). Community development through gardening: state and local policies transforming urban space. *Legislation and Public Policy*, *3* (351), 351-392.
- Seattle Department of Neighborhoods: P-Patch Community Garden Fact Sheet. (2010). Retrieved August 3, 2010, from Seattle.gov: http://www.seattle.gov/neighborhoods/ppatch/documents/FactSheet2010.pdf
- Shigley, P. (2009, August/September). When access is the issue: what cities are doing to get healthy food into underserved neighborhoods. *American Planning Association*, pp. 26-31.
- Sirianni, C. (2007). Neighborhood planning as collaborative democratic design: the case of Seattle. Journal of the American Planning Association, 73 (4), 373-387.
- Stewart, S. (2010, July 17). Director, Unity Gardens, Inc. (E. Radican, Interviewer) The Unity Mission. (2010). Retrieved 20 August, 2010, from The Unity Gardens Web site: http://unitygardensinc.org/
- United Nations Commission on Sustainable Development. (2007, April). *Framing Sustainable Development*. Retrieved August 15, 2010, from United Nations Web site: http://www.un.org/esa/sustdev/csd/csd15/media/backgrounder_brundtland.pdf

Urban roots revival. (2009, November 13). Planning, p. 14.