RIT UNIVERSITY/COMMUNITY PARTNERSHIPS

FINAL REPORT – AN INQUIRY INTO CITY-OWNED VACANT LAND IN THE CITY OF ROCHESTER, NY

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I. OVERVIEW AND TIMELINE OF RESEARCH ACTIVITIES

This report is a culminating document summarizing 18 months of research carried out by RIT students, faculty, and staff regarding issues associated with city-owned vacant land in the city of Rochester. Collaboration with community partners was a defining feature of the research process.

This research project began with RIT's collaboration with the Marketview Heights Collective Action Project (MVHCAP). RIT has been a collaborative partner with MVHCAP since 2006. During several monthly meetings in 2016, residents raised numerous questions regarding city-owned vacant land in the Marketview Heights neighborhood and sought out research assistance through RIT's University/Community Partnerships. These questions related to purchase of vacant land, city policies regarding gardening permits and restricted activity, and related issues.

In the fall of 2016, students in RIT's *Sustainable Communities* class were tasked to investigate alternative uses for urban vacant land, in the context of urban sustainability and asset-based community development. Alternatives uses, presented to the MVHCAP, included community gardens, rain gardens, nature play spaces and other learning/play spaces, outdoor sculpture gardens, community meeting spaces, storm water runoff mitigation features, a composting facility, and solar power facilities. Students identified the benefits and advantages of these alternative uses and also reviewed case studies where these alternative uses were implemented. Criteria for siting some of these alternative uses were developed and presented to the MVHCAP. Students presented the results of their research to the MVHCAP for review and comment.

In the spring of 2017, students in the *Sustainable Communities* class were tasked with investigating municipally-owned vacant land circumstances and local government responses in several similarly situated cities in the United States. The selected cities were Baltimore, MD; Buffalo, NY; Cleveland, Ohio; Detroit, Michigan; and Pittsburgh, Pennsylvania. An important takeaway from this research was the discovery of the vast array of resources available to residents in these cities to encourage the re-use of vacant land. Some of these resources were developed by local government and others were produced by non-profit and academic partners.

The result of the comparison city research was presented on March 23, 2017 at a neighborhood-wide mini-charrette, held at the Gantt R-Center, attended by 44 residents, government officials, and non-profit representatives. Students presented on each on the comparison cities (see Appendix A for the student reports). Following the presentations, participants were asked to share what information would be most helpful to them in a guidebook for re-purposing vacant lots in Rochester. This information was used to develop a draft guidebook, reflecting alternative re-uses (including estimated costs and benefits), city policies and permit requirements, as well as additional resources and contact information to assist resident decision-making for developing alternative uses. The preliminary draft of the guidebook was reviewed and edited by the MVHCAP and Rochester city officials.

In the spring of 2017, a RIT student piloted an interview project to investigate resident perception of community gardens. This pilot, authorized by RIT's Institute Review Board, was carried out as a continuation of the vacant parcel project. Relying on similar research in the city of Baltimore (Poulsen, et al 2014), the student interviewed both gardener and non-gardener residents in the Marketview Heights neighborhood. As a pilot study, the sample size was relatively small (n=8), but this initial research indicated that residents' perceptions of community gardens, for both gardeners and non-gardeners, are an important indicator of the value of these gardens to a neighborhood. With these preliminary results in mind, the resident perception research was continued in the fall of 2017 and included interviews with resident gardeners involved in the South Wedge Victory Gardens. Partnering with the South Wedge Planning Committee, students interviewed 11 gardeners active with the Victory Gardens.

In the spring of 2018, two groups of students conducted interviews. One group interviewed gardeners from the E.D.E.N. Gardens, affiliated with St. Marks's and St. John's Episcopal Church in the Beechwood neighborhood. A second group interviewed residents involved with Project HOPE and residing in the North Clinton neighborhood. The focus of the Project HOPE interviews was non-food gardening and other re-use projects.

In the summer 2017, RIT students conducted a ground-truthing exercise on vacant lots in Marketview Heights. The purpose of this activity was to test the use of ArcGIS Collector as a data collection method to evaluate specific conditions on vacant lots. While there is descriptive data available regarding these lots through the city's GIS online maps, such as lot size, assessed value, and zoning, other information could be helpful in evaluating appropriate reuse. To do this, characteristics, such as access to water, curb cuts, estimated % of sunny areas, trees, ground vegetation, topography, and soil characteristics, were evaluated. RIT students trained several youths to use the Collector tool and ground-truthing on 30 lots in the Marketview Heights neighborhood was completed. The Collector proved to be a useful, easy to use, mechanism for collecting this data.

Also, during the summer of 2017, a student conducted in-depth interviews with two Marketview Heights residents identified by the MVHCAP who were actively seeking to purchase or lease a vacant parcel for re-use. The interview project was approved by RIT's Institute Review Board. These two parcels, one on Woodward Street and one on Fifth Street, are illustrative of the kinds of issues that arise when residents have an interest in vacant parcel re-use. A long-standing garden is on the Fifth Street parcel and the adjacent owner sought to purchase this property to permanently maintain the garden. The Woodward Street parcel has been the subject of block club discussions on re-using the parcel as a community gathering place, small flower garden, and a children's play space.

This student also completed a revised draft of the resident guidebook. The revised draft was presented to the MVHCAP for review and additional input.

Finally, in the spring of 2018, three RIT graduate students prepared additional detailed reports on vacant land issues and local responses in Buffalo, Cleveland and Pittsburgh.

Participants	Activity	Outcomes
MVHCAP, RIT/UCP	Discussions on various vacant land issues	Collaborative research project developed between RIT/UCP and MVHCAP
MVHCAP, RIT students, faculty, staff	Research on alternative vacant land re-uses	Alternative uses presented to MVHCAP for review and comment
MVHCAP, RIT students, faculty, staff	Research on other cities facing similar vacant land issues	Research presented to stakeholders at a mini-charrette for ideas on resident guidebook alternatives; preliminary draft presented to MVHCAP for review/comment
	Pilot study on resident perceptions of community gardens and community impact	Information gathered indicated resident input on community gardens is a valuable source of data
MVHCAP; RIT students, faculty, staff; neighborhood youth	Testing use of ArcGIS Collector for ground-truthing vacant parcels	30 parcels completed; tool proved to be easy to use and a good data-collecting resource
RIT student; Marketview Heights residents	In-depth resident interviews	Report to MVHCAP on scope of the involved issues
RIT student; MVHCAP	Preparation of the revised guidebook	Revised guidebook presented to MVHCAP for review and input; revised guidebook submitted to Rochester planning staff and staff of the Office of Innovation
Southwedge Victory gardeners, RIT students, faculty, staff; Rochester horticulturist	Open-ended interviews with 9 gardeners	Interview results presented to Southwedge Gardeners for review and comment
E.D.E.N. gardeners (Beechwood); RIT students, faculty, staff	Open-ended interviews with 8 gardeners	Interview results presented to E.D.E.N. gardeners for review and comment
Project HOPE residents/staff; RIT students, faculty, staff	Open-ended interviews with residents and staff involved with vacant land issues	Interview results presented to stakeholders for review and comment
RIT graduate students	Research on similar cities with vacant land issues	Report on three cities: Buffalo, Cleveland, and Pittsburgh

II. Key Findings

- **Gardening is not the only re-use of vacant land residents value; preferred alternatives include community gathering spaces, public art spaces, and children's play spaces; some even suggested orchards and wood lots;**
- **When viewed by residents through the lens of asset-based community development, vacant land becomes a substantial asset rather than a liability;**
- **Residents view re-use of vacant parcels contributing to neighborhood improvement;**
- **Re-use of vacant lots enhances residents' sense of place, social well-being, and attachment to their neighborhood;**

- **Residents place a high value on access for children to outdoor spaces and nature;**
- **Residents involved in community gardens, both food and flower gardens, value the social interactions associated with working with their neighbors on gardening activities; in some cases, this was equally or more important than producing fresh food;**
- **Growing food for food pantries, soup kitchens, and other similar organizations is highly valued by the gardeners;**
- **Gardeners value the sharing that takes place, including sharing knowledge of gardening techniques, sharing seeds and plants, and sharing the food that is grown;**
- **Community gardens provide educational opportunities that may not have otherwise been available - learning how to grow your own food, learning how to prepare foods grown, learning more about their neighbors;**
- **Gardening is often accompanied by complementary activities such as cooking demonstrations, farm markets, and neighborhood celebrations;**
- **Residents strongly value the assistance they receive from local organizations such as the city of Rochester horticulturalist, Cornell Cooperative Extension, and Common Ground Health - Healthi Kids Initiative;**
- **Maintaining resident involvement in caring for the gardens is an issue for the regular and longer-term gardeners;**
- **Residents are frustrated with current city policies involving the re-use of city-owned vacant land, especially the short permits and restrictions for community gardens and the limitations preventing alternative uses beyond gardens.**

III. THE CONCEPTUAL FRAME AND WHAT WE LEARNED (Note: all text in *Italics* are directly from our resident interviews)

A. Legacy Cities

Literature review for this research project was grounded in vacant land issues throughout the United States, with an emphasis on cities that have lost significant portions of resident population through numerous complex processes such as suburbanization, declining household size, outmigration, deindustrialization and loss of economic investment, and implementation of government policies. Interest in cities that have experienced considerable population loss has grown steadily in the last few decades. Many of these cities have experienced a 40% to 60% population decrease. Cities, such as Buffalo, Cleveland, Pittsburgh, are characterized by rapid industrialization in the early part of the 20th century, followed by population decline beginning in the 1950s. For example, Pittsburgh population declined from 676,806 in 1950 to a population of 305,704 in 2010; Buffalo's peak population occurred in 1950 at 580,132 and the 2010 population was 270,240 (2010 U.S. Census Bureau).

Rochester is similarly situated. Recent U.S. Census Bureau estimates indicate that Rochester lost only .8% of its population in the period 2015-2016. However, in the 2000 to 2010 period,

population declined from 219,773 to 210,565. Further, overall population decline has been steady since the peak of 332,488 in 1950.

Several scholars are severely critical of the term "shrinking cities", as it often connotes decay, blight, urban distress, urban poverty and so on (Hackworth 2015; Audirac 2018). Similarly, Hackworth (2015) further suggests that "rightsizing" the postindustrial city that has lost significant population is a weak concept and only superficially addresses the substantive issues of affordable housing, environmental sustainability, and citizen engagement. Shrinking cities, some authors argue, might "offer a paradigm shift from growth-centred planning to a more careful and place-based approach towards more liveable cities" (Herrmann, et al. 2016).

Regardless of the terminology, many planning scholars highlight the critical importance of citizen engagement in the decision-making process involving community sustainability and re-use of vacant land. (Seyfang & Smith 2007; Sarkissian, et al 2009; Dewar & Thomas 2013; Hermann, et al 2016). Many successes associated with reclaiming declining neighborhoods are firmly grounded in resident-led initiatives (Angulovski 2014).

Research clearly demonstrates that grassroots innovation can deliver sustainability benefits where top–down measures are often less successful. This is because "community action utilises contextualised knowledge and implies a better 'fit' of solution"(Seyfang & Smith 2007). Sarkissian, et al,(2009) advocate co-production of solutions and programs and notes that sustainability depends on deep engagement processes like co-production (52). This means achieving sustainability *with* rather than *for* residents, with residents playing a collaborative role with local government representatives and other stakeholders. The "community as expert" is a common theme in much of the literature (see for example, Sarkissian al. 2009; Center for Community Progress 2013).

As one Rochester resident observed:

> *It's important for a healthy community to determine its own fate, if the problems arise, to be able to deal with it on its own.*

B. Urban Sustainability

This vacant land research project built upon theoretical and conceptual scholarship in urban sustainability. Sustainability is often cited as a critical underlying frame for the planning and community development process (Van der Ryn & Calthorpe 1986; Beatley & Manning 1997; Hallsmith 2003; Roseland & Spiliotopoulou 2016). Many, such as Green & Haines (2016), argue that "sustainability should play an explicit role in the community development process" (57).

It is difficult to find a universally accepted definition of community sustainability. Many see sustainability as an "inclusive vision, meaning positive quality of life outcomes… for all people of different means and backgrounds (Herrmann, et al 2016, 912). Scholars and practitioners agree that "communities are the heart and hands of the sustainability movement" (Sarkisian et al, 2009, 6).

Sustainability can be viewed as

> a concept, a method, or even a way of life. It allows communities to sort through development options and arrive at a strategy that takes into consideration the full range of economic, environmental, and social characteristics of a community" (Green & Haines 2016, 58).

Hempel (1999) describes a sustainable community as one in which:

> economic vitality, ecological integrity, civic democracy, and social well-being are linked in contemporary fashion, thereby fostering a high quality of life and a strong sense of obligation among its members (48).

C. Social Sustainability

Early (1970s-1990s) sustainability scholarship and local programs focused on sustainable urban development tended to emphasize the environmental and economic aspects of sustainability. The social aspects of sustainability have only recently received attention. Social sustainability encompasses diversity, inter- and intra- generational social justice, participation and local democracy, health, quality of life and well-being, inclusion, safety, social cohesion, social capital, sense of community and belonging, sense of place attachment, community stability, and physical urban form that promote these characteristics (Beatley& Manning 1997; Landry 2007; Magis & Shinn 2009; Sarkisian, et al 2009; Eisenberg & Jabereen 2017). Social sustainability is often equated to well-being - physical, emotional, and social (Rogers, et al 2012). Further, the convergence of community sustainability and environmental justice has been the focus of recent literature and research (Agyeman 2005; Boone & Modarres 2006; Angulovski 2014).

Our Findings – Social Sustainability

Re-purposing vacant parcels has the potential to significantly contribute to social sustainability. Many of the features of social sustainability can be promoted through alternative uses for vacant land identified by Rochester residents, such as gardens, children's play spaces, and gathering spaces. Residents already recognize this.

> *I would love to see them [vacant spaces] all full of flowers and seating areas, like a patio as well. I think that would be swell, you know? I can picture it, all casual with lighting, everybody talking to their neighbors, a bonfire.*
>
> *A sense of community has been built [because of the gardens].*
>
> *When you're poor, you generally don't feel like you own anything. What I liked was you could plant this flag on a property to create a space for families and kids.*
>
> *You know, their involvement, the kids, that's what's going to make them proud of themselves in a few years when it's done. It shows that it's ours; it shows initiative. You know, and once their done with it, they're not going to let others in and ruin [the park] and damage it because it's theirs. They worked for this, it's their work.*
>
> *[I want to] teach my neighbors that you can beautify your house. We can take care of this garden all together and make our whole neighborhood safe and beautiful.*

We have picnic tables that the city has given us for each of the gardens, and we'll find that people have been sitting there eating lunch or just gathering there.

[Re-using city-owned vacant land] is a point of discussion in retrospect to creating conversations within the community.

I just wish they would put something on them really, you know, it doesn't have to be a garden but like another home or...something nice.

When I first moved in it was very bad. There was a lot of violence. We kinda took over our neighborhood a few years ago, so now we don't have these people hanging out on our streets that we don't know, the drug sales going on. Now we're not having the gang fights and shootings like we were at one point. At one point, yeah, I wanted to vacate the city.

D. Community Capital

Most scholars interested in community sustainability emphasize the importance of adapting a systems perspective to better understand the dynamic interrelationship between humans and the natural environment. With this lens, researchers have identified various types of community capital: environmental, human, social, cultural, public structural, and commercial (Hallsmith 2003; Callaghan & Colton 2009; Beatley & Newman 2013; Green & Haines 2016). Evaluating the various forms of community capital helps to identify the various types of resources upon which community stakeholders rely and "into which all community stakeholders contribute" (Callaghan & Colton, 933).

1. Environmental or Natural Capital

Although urban vacant land is often viewed negatively - abandoned and dangerous -, when viewed as a community asset, vacant land falls within the definition of environmental capital: it can provide ecosystem services and habitat, mitigate the effects of urban heat islands, and protect against soil erosion. Vacant land has the potential to promote ecological diversity and support a wide variety of flora and fauna (Burkholder 2012; Beatley & Newman 2013; Kim, G. 2016; Santo, R. et al 2016; Jennings, et al 2017).

> [V]acant land may… be viewed as valuable urban landscape that provides community benefits and/or opportunities for transformation via community redevelopment, as well as being a potential source of ecosystem services that support the health and well-being of local people" (Kim 2016, 1).

The potential for green spaces to improve the health and well-being of area residents has been extensively investigated (Beatley & Newman 2013; Rogers, et al. 2013; Kim 2016). Exposure to nature can help reduce common health problems such as stress and hypertension. "[There are] positive physical and mental health benefits associated with greenery and green elements" (Beatley and Newman, 2013, 3329). "[We] need nature in our lives; it is not optional but essential" (Beatley 2011, 3).

It is important to recognize that nature abounds in cities and vacant parcels become significant opportunities for interactions between people and natural elements. Sometimes referred to as "green infrastructure", elements include "neighborhood recreational areas, playgrounds, community gardens, trails and greenways, the "urban forest" public landscapes, streetscapes with trees and vegetation, green roofs, *and abandoned land that can be converted to new green spaces"* (Shilling & Logan 2008, *emphasis added*.) "Nature in cities delivers considerable and often underappreciated health benefits, furthering bolstering city's capacity and ability to adapt to stresses and shocks in the future" (Beatley & Newman 2013).

Our Findings - Residents See Vacant Parcels As Potential Community Assets.
Residents are keenly aware of the potential for vacant lots to become community assets. This vision for turning liabilities into assets was a consistent theme within our interviews.

I just wish they would put something on them really, you know, it doesn't have to be a garden but like another home or...something nice.

To watch an empty lot…that had an old broken-down building…and have a beautiful garden that's a combination of flowers and food is so satisfying it gives you a sense of worth because your intention is trying to make things better and it's a visible proof.

[Re-using city-owned vacant land] is a point of discussion in retrospect to creating conversations within the community.

Just being in the garden is a special feeling of being a part of nature and something worthwhile and part of a community of people who are doing the same thing.

The neighborhood is cleaner, people are taking care of things better than what they use to. There's homes that have been remodeled and are looking nice. And we see people taking pride in some flower gardens now, that we haven't seen before…People are buying homes in the neighborhood which we haven't seen before.

If it's vacant, people litter. People come and find that it's a place where they can inject themselves with drugs. Drug dealers find that they can hang out and sell drugs there. So, I feel that we all as neighbors need to take over. I've noticed that, once we started taking over, you can't stand in front of my house. People kept, they had to move, they were finding that "where are we gonna hang out if every neighborhood is saying we can't".

I think that, if we could use the lot for gardening, planting, cutting the grass, if people walk by and see that somebody is working on that lot, that vacant lot, they think "that person has taken over, I can't hang here, it's private property."

We have to be better stewards of the Earth or we won't have much to talk about!

The special importance of connecting children and nature has been well documented (Louv 2008; Kimbro, et al 2011; Murnaghan & Shillington 2016). Residents are especially motivated to bring children into the gardens and the play spaces.

The Children's Garden…was designed to educate [children] where their food comes from, how to grow their own food...and to try to teach the kids how to eat healthy and we've been doing that now about eight years.

We should have more and even if it's not just planting stuff we could have play spaces for kids... on the vacant lots.

If we could spread that enthusiasm [for gardening] to the [younger] people that are out there living in the community, making the decisions, that's what I would change.

We started a Kids Cub so that children can learn about gardening and healthy eating.

I don't know how long that lot was vacant, but we started using it last year for children.

Well, I took the lot over because we had over 2 years ago there was about 20 people hanging out in the lot. There was some drugs, there was music, they were doing things that kids didn't need to see, throwing garbage everywhere. They actually thought, like, bringing chairs and it was just horrible. And I thought "Geez, it would be nice to take this humongous lot and clean it up for the kids to have a safe play area, not just the middle of the street." And so, we started having our meetings there, and everybody started dispersing and leaving. So finally, the lot is empty and last year, we finally did, like, PlayROCs with the kids, an event where we closed off the street, and we had six days and two weeks where we played with them. We had karate, they had Zumba, arts day, game day, um, it was awesome. We had by 10:30 in the morning about 30 kids and by afternoon we had literally like 60 kids. You know, we're prettying it up, we're painting, we're cleaning it. We're planning, um, there's a lot next to my house that's empty too, and this year I'm thinking about, I'm gonna put some plants in the front. I think if people see people taking over these lots, it wouldn't be a place where they would hang out or come and inject themselves.

That [lot] is for the kids in order for them to play. We do movie nights with them. This year I want to do like a meet and greet with the neighbors. I want to do a coffee, maybe social with them. I want, not only to do crafts with the kids, because I want them to feel like the garden is theirs. But I also want them to feel like the whole neighborhood is theirs.

Last year we had playtime for kids. You'd be surprised. We did snacks and we provided lots of them. Some of the kids were hungry, but I mean, just like being around them, and seeing them play, and that smile, keeping them safe, I loved it. By the end of my two weeks, I was hugging all the kids, and smiling with them, doing selfies. And some of them would actually be out so early in the morning, waiting for me to come out. I'd be like "why are you guys so early? Hello."

Yeah, you know, this is about them [the kids], it's about teaching them work, it's about teaching them about the space, and you know, everything that's here.

2. Human Capital

When developed for other uses, vacant parcels become a repository for human capital and a catalyst for building social capital, preserving cultural capital, and renewing community structural capital.

Callaghan & Colton (2009) describe human capital as the skills and knowledge individual members of a community that can contribute to community sustainability (935). Kretzmann and McKnight (1993) describe these skills and knowledge as individual "capacities, abilities, and gifts" (13).

Our Findings – Human Capital

In our interviews we discovered a broad range of skills, knowledge, and expertise that has contributed to the success of community gardens and other vacant land conversions. Experienced gardeners bring their knowledge of gardening techniques, soil amendments, fruit and vegetables that can be successfully grown in our region, composting, integrative pest management, and heritage plants.

Residents also contribute their knowledge of neighborhood conditions. They can identify appropriate sites for alternative uses and the issues or challenges that may be attached to a particular site. They are readily familiar with informal uses already taking place and where certain sites should be avoided due to detrimental or illegal activity or where sites should be re-purposed to eliminate unwanted activities.

> *Vacancy in city plots depends on the area development. The gardens are an amenity that brings people to the community and makes them stay. It made me stay. We do know that not having vacant lots helps reducing crime and increases prosperity in the neighborhood.*
>
> *People threw trash in there…It was not a good spot. Now it's different.*
>
> *A shame that they [vacant lots] were just let go.*
>
> *They [vacant lots] were spots for trouble.*
>
> *That corner was a drug problem, now it's not.*
>
> *[The vacant lots] were spots for trouble in the community. They were full of trash and brought down the value of the area.*

3. Social and Cultural Capital

Human capital and social capital are closely intertwined. Social capital is "[t]he set of relationships that have developed around shared values, norms, and trust" (Callaghan 931). Distinct from financial capital, "social capital refers to the value of support that people provide for each other through their networks, norms, sanctions, and mutual trust" (Schuller, 2007). Others have described social capital as the "glue that helps binds communities together" (Frumkin, et al 2004, 184).

Social capital in communities is developed when residents share experiences, work together on community projects and grow caring and trusting personal bonds. The social capital value of resident-led activities is well documented in other research. Martin, et al (2016) have observed that " urban food-growing is primarily about cultivation of social skills, capabilities, and virtues that can contribute to sustainable urban living, rather than about major additions to food production" (3).

Putnam (2000), describes social capital as "connections among people – social networks and the norms of reciprocity and trustworthiness that arise from them" (19). Putnam lamented the loss of social capital in American communities in his well-known book *Bowling Alone* (2000).

Our Findings - Social Capital

Contrary to Putnam's conclusions, our research revealed strong connections among residents working on community gardens and other projects involving re-use of vacant land. Some of these connections have been long-term and have transcended gardening work or community gatherings.

> *I have learned that... It reinforces the idea that people are inherently good…. The garden is a place where I learned that every person is so genuine: wanting to help you with stuff…the door was always open, it was very inviting….It taught me a little more about the good things we should be looking at as opposed to all those negative things that tend to cloud our vision. It taught me to value that more.*
>
> *As a result of joining the garden, I joined the Southwedge planning committee. So now I am there and it's more than just the garden. It's knowing what's going on in the neighborhoods and community...as a result, it [the garden] launched me into other activities."*
>
> *The gardens are good, it's a very social experience that draws people to it.*
>
> *We have made community gardens a very social event. People brought music, we had work parties. Where you get them to work and dance a little bit. To work more and get a positive dynamic.*
>
> *We can take care of this garden all together and make our whole neighborhood safe and beautiful.*
>
> *What I get most out of the garden is in the interaction with all the other people who are gardening. The community spirit and absolute joy that comes from working with that bunch of people.*
>
> *Coming to the gardens every week gives me a chance to experience the community and share the joy of gardening.*
>
> *I now feel like I am more a part of the community.*

Cultural capital is often ignored in the thinking and research on sustainability, and more difficult to identify than other forms of community capital (Green & Haines 2017, 317). Scholars caution against thinking about culture merely as "high culture" or the arts for the elite and point out that community cultural capital is built on a shared sense of purpose and values that inform action. "It is the context in which we can articulate and manifest social meaning and guide public action" (Sarkisian, et al., 2009, 25). Cultural capital comes from a shared heritage, shared personal and family histories and a respect for the character of those features of a community that "nurture a sense of attachment, to and familiarity with, place" and form the foundation of the social fabric of a community (Beatley & Manning 1997, 32). Cultural capital also is different among different social groups and is reflected in language, rituals, stories, and celebrations that remind a community of its heritage, ethnicity, and diversity as well as providing an aesthetic for the community (Callaghan & Colton, 936). Respecting the cultural roots of a community is critical to community sustainability.

Our Findings – Cultural Capital

Cultural capital is solidly reflected in vacant land re-use in Rochester. A significant example is the Sofrito Garden in Marketview Heights, developed to grow the ingredients in Sofrito, including using heritage ají dulce pepper seeds from Puerto Rico. The making of Sofrito from the ingredients grown in the garden has become an annual event and brings several members of the community together, all sharing in the making. Puerto Rican residents share stories of making Sofrito with their parents or grandparents; residents who do not have Puerto Rican heritage have learned about Puerto Rican foodways, how to cook traditional dishes, and they have gained a better understanding of Puerto Ricans' attachment to their Puerto Rican roots.

Gardeners also revealed their own experience of learning gardening from their ancestors.

> *My father was raised on a farm when he moved here from Ireland. He had a 50x50 foot lot that he grew vegetables on every year.*
>
> *I have always enjoyed gardening since my father had a garden in Puerto Rico.*

Gardeners also have made an effort to grow produce that is reflective of the foodways in the neighborhood and gardens have become spaces within which cultural traditions are shared and celebrated.

> *It was important to us that we, you know, relate to the neighborhood with what people like to eat.*
>
> *I am meeting different people singers, musicians, cultural information, other gardeners. That's important to me.*
>
> *We have traded recipes for traditional foods like salsa and tomato sauce.*

E. Sense of Place and Place Attachment

Sense of Place is not often associated with sustainability, but an attachment to a place based on understanding of ecological and cultural characteristics as well as place history can instill a greater willingness to protect a place and care about its future (Beatley & Manning 1997; Anguelovski 2014). Research has established that gardening is helping people and communities see hope in difficult situations (Hanna & Oh 2000).

Our Findings – Place Attachment

Data from our interviews made clear that residents feel connected to their neighborhood and to their neighbors. Many of those interviewed were second and third generation residents. They value the opportunity to engage with their neighbors and enjoy the familiarity and trust built through working together and having a shared history. They also value the impact the converted spaces have on enhancing a sense of place for their neighbors. Place attachment, community belonging, and place identity are strong motivators for residents to stay actively involved.

I have met new neighbors by being involved in the gardens... Now I talk to all of the people on that street because they are all members of the community garden… It is really easy in an urban environment to just keep to yourself but there are actually plenty of people who live in this neighborhood who are really nice people.

[The garden] gives everyone a sense of pride...It's a clean place, it's a nice place, it's a place where you can come to reflect, it's open to the public. I think that that aspect gives us a lot of pride as a community, especially in the way of being progressive, in saying 'here's what we have to offer. Move to our community, move to our community, and invest in the culture here and invest in what we have here.

Now when you walk down the street, there's flowers, people are picking up their yard, there's people on their porches, and most important to me is there's children playing…it makes me happy! To be able to say "hi" and have the neighbor say "hi" back, you feel safer yourself. Just a sense overall of wellbeing.

You're much stronger when you're together... It's important to have that level of trust with people you live in the community with, and that sense of loyalty to the community.

[The park] is bringing a new life and a new dynamic to the neighborhood.

F. Environmental Justice and Sustainability

Although we did not explore issues of environmental justice per se, environmental revitalization of abandon spaces reinforces a sense of control over the land for those who have been marginalized (Auguelowski 2014, 192). A number of scholars see environmental justice and sustainability as inextricably linked; that is, community sustainability cannot be achieved without addressing environmental justice concerns (Agyeman 2005). Environmental justice is closely aligned with social sustainability principles of social equity and fairness (Beatley & manning 1997). Ageyman, et al (2003) developed the concept of *Just Sustainability* by emphasizing the essential role that justice and equity could and should play in all community sustainability initiatives.

> Irrespective of whether we take a global, statewide, or local focus, a moral or practical approach, inequity and injustice resulting from, among other things, racism and classism are bad for the environment and bad for sustainability (Ageyman 2005, 5).

Lacking control over city-owned vacant land that has been vacant for years is a source of frustration for many residents.

> *Well, I took the lot over because we had over 2 years ago there was about 20 people hanging out in the lot. There was some drugs, there was music, they were doing things that kids didn't need to see, throwing garbage everywhere. They actually thought, like, bringing chairs and it was just horrible… And we started having meetings there, and everybody started dispersing and leaving.*

G. Challenges

Although we heard many success stories, residents have ongoing concerns related to their vacant land conversion efforts. These concerns focused primarily on: 1) sustaining the effort

and work necessary to keep these spaces vital, and 2) frustration with city policies and practices for reusing city-owned vacant land.

1. Our Findings - Keeping the Effort Going

Residents recognize the level of effort necessary to maintain the gardens and other reuses and expressed their concerns on sustaining these activities.

> *We haven't had any real disagreements, but [the gardens] are a real time commitment. Because of that, getting people involved has been challenging.*
>
> *Sometimes it is hard to show the benefit [of the park]to other people in the community.*
>
> *If I could change anything it would be to get more youthful people to join the garden...I found when I joined, it was primarily populated with middle-aged, older people. If we could spread that enthusiasm [for gardening] to the [younger] people that are out there living in the community, making the decisions, that's what I would change.*
>
> *I've seen plenty of people who sign up and then just drop out...this is mostly younger people.*
>
> *More coordinated effort could be worked on to address the gap between the two generations.*

2. City Policies

In all three of the neighborhoods where interviews were conducted, residents expressed frustration with city policies on city-owned vacant land.

> *The city could be using the community gardens as a real highlight [for the neighborhoods], instead there is nothing done.*
>
> *We are always concerned the city will sell the property our garden is on.*
>
> *What we are wrestling with most is these policy issues with the city. You know, why can't we get longer term permits? It's not permanent. It's like how many years does this have to be vacant before you realize nobody is coming… As long as it's dead it's a negative.*
>
> *In March, we were told by the city that they were selling the land to a developer. They would graciously allow us to garden until the end of the season but we pushed it back. We were able to organize and get together. Because of all the civic engagement generated by being in gardens, we were able to go there and talk to the people who worked for the city and talk to them about it. We invested the gardens into our health and life and we cannot let that be taken away.*
>
> *I would like to tell them [city council], you know, make more lots eligible for community-based gardens and other things, you know, they can look at our neighborhood, the lot used to be terrible, so many people hanging out in the lots. But building the garden, it tells them you can't go here, you don't belong here, you can't throw garbage here. These things are important, you know they're vacant, and when things are vacant people abuse it.*
>
> *Well, yeah, you have to be careful you know, there's things that you can't use like uh, you can't put down asphalt, you can't... There's some restrictions, sort of like can I do this, or can I not? So, you know, when some people try to use the lots, some people they try, when*

> *they grow vegetables and stuff they kind of want to close it so nobody, so they don't pick their vegetables or whatever. You know, though it's supposed to be a community garden, supposed to open.*

IV. CONCLUSIONS

Although there were a number of limitations to our research, the data collected suggest that vacant land issues are of vital importance to the residents interviewed. Many residents have actively pursued alternatives to vacancy and remained committed to remedy the negative impacts vacant parcels have on neighborhood aesthetics, sense of place, and community and individual well-being. Much has been accomplished through active volunteer work. The sense of joy and achievement was expressed in all of our interviews. The conversion of vacant parcels for gardens, children play spaces, and gathering places is a high priority for residents.

We hope the data collected helps to shed light on resident concerns and will be useful to all decision makers in addressing the future of city-owned vacant parcels in the city of Rochester.

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Appendices

City reports