Gleaning in the 21st Century: Urban Food Recovery and Community Food Security in Ontario, Canada

by

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Abstract

Gleaning used to be an activity of the impoverished who would glean food from farms for their families. Now, formalized gleaning, which is harvesting food from where it is grown that would otherwise go to waste, is most often undertaken by volunteers whose motivations have been little explored. Groups organizing food recovery activities depend almost entirely on volunteers to do the work in a multitude of contexts such as through urban fruit tree projects. Why do people volunteer their time to make these initiatives successful, and how do volunteers perceive that modern gleaning initiatives contribute to community food security? These questions are explored through five case studies of Ontario gleaning groups, which entailed 16 semi-structured interviews and an online survey with 14 volunteers, group leaders and urban farmers. A primarily inductive, interpretivist, approach was taken for the analysis of the interview and survey data. The top three motivators that were identified align well with the top foci found on organizational websites. They were concerns about food waste, community building and support, and free food. There was a range of additional motivators including various aspects of social engagement, spirituality, and alternative seeking. Several problematic issues that are present in these initiatives are discussed, including scale (pounds harvested), the issue of giving away 'premium products', and supporting emergency food providers through donations. Pounds harvested, when viewed in isolation, seems insignificant in light of the hundreds of thousands of people that access food assistance programs in Ontario. With that said, improving access to fresh, local foods can benefit many people, and in ways that go beyond pounds harvested such as connecting community members, contributing to a healthful diet, and connecting people to their food. With respect to volunteers' perceptions about how modern gleaning contributes to community food security—understood as ensuring access to food through non-emergency sources—volunteers acknowledged the implicit contradiction that the food was being made available through emergency food providers. Nonetheless, many food recovery volunteers feel that these initiatives contributed positively to community food security. This study fills an important gap in knowledge regarding food recovery through gleaning and demonstrates that several of the seemingly contradictory issues can be mitigated to some degree by the positive contributions that these groups make towards achieving community food security.

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Gleaning in the 21st Century: Urban Food Recovery and Community Food Security in Ontario, Canada

1.0 Introduction

Gleaning - the word conjures images of poor peasants hunched over fields holding sparse sheaves of grain. This is due, in part, to the way gleaning has been expressed in 19th century French artwork. One of the most famous images of gleaning is that of Millet from 1857, "Les Glaneuses" (Figure 1). In this painting, three women are seen in an empty field in the foreground, holding a few scant stalks of grain. One of the women is painfully stooped as though having been hunched over for so long has made standing up a slow and difficult process which alludes to the backbreaking nature of this work. Looming over them in the background are mountains of golden grain, contrasting their scant pickings. In the background on the right, there is a small figure on horseback that, despite his small size, still appears to be hovering over the proceedings – likely the property owner or his steward. This interpretation reflects a view of gleaning that is class and gender biased. It is an interpretation entrenched in a culture where these inequalities are addressed by making room for charitable acts while still maintaining acceptable social boundaries.

Figure 1. Jean-Francois Millet. (1857). *Les glaneuses* [Painting]. Retrieved from https://en.wikipedia.org/?title=The_Gleaners

In earlier centuries, long before gleaning was a legislated activity for the poor, it was simply the final phase of the harvesting process. One method used was to glean during the harvest when a specialized group of "rakers" would follow along directly behind the binders collecting all of the fallen grain (Vardi, 1993, p 1429). During the sixteenth century, the French government became increasingly concerned with individual property, primarily for taxation purposes. It was at this time that a new, theologically justified, delineation of who could glean (women, the poor and infirm) and who could not (farmers, able bodied) came to the forefront. Gleaning ceased to be the final step in the harvest, and instead became an act of charity (Vardi, 1993). As Vardi explains, "gathering the fallen grain ceased to be a practical concern, a normal step in the harvest, and became imbued instead with moral imperatives" (p 1428).

Modern gleaning shares both similarities and distinct differences from these accounts. Individuals and groups are freely giving their time to recover food for donation to social service agencies. This suggests a shift away from allowing food insecure people to fend for themselves, towards a more community-based approach, and a larger participatory effort to reducing food waste and food insecurity. Modern gleaning takes place in a multitude of contexts, from the traditional rural farm to urban backyards, farms, and orchards and public spaces where fruit bearing trees grow. Harvesting food is still hard work. These food recovery groups rely on volunteers to pick each fruit piece by piece from where it is growing. Whether crouched in a field or garden, or reaching into the dense branches of a fruit bearing tree, harvesting food is a physically demanding job.

It was late November 2014 and several people could be seen hunched over the spent garden rows on an urban farm that was all tucked in for the cold winter ahead. They were bundled in layers, unwilling to accept that winter had arrived, but still wearing scarves and headbands pulled up over rosy cheeks until only their eyes were exposed. Every few seconds, another sweet, round, white orb was tossed into a basket. Knees and backs complained but the standing and bending helped create a bit of heat to cut through the chill. Even though the snow had yet to come, the sky was a steel grey colour and fingers could only remain exposed for so long before they started to cramp and go numb.

On another day earlier in the season, the air was heavy and humid but the sky was overcast. There were beans to be harvested! Six volunteers hopped into two vehicles after

meeting at the rendezvous point. There was a thread of excitement and camaraderie in the air as they headed out of town for the short ten minute drive to a small organic farm. As they neared the farm, the sky began to look ominous – dark black clouds rolled in, competing for space in a sky already overburdened with grey. As they started working into the rows of beans, the air became a blanket of wet mist. Even though it was quite hot, the humid air against wet, dripping skin quickly chilled all of them and extra layers were procured. And yet, the conversation was lively and upbeat. The beans flew off the bushes and laughter mingled with the sound of the wind and rain.

On another occasion, the heat was so oppressive that even the birds couldn't be bothered to share in the bounty of the Serviceberry trees. A handful of volunteers with the bare minimum of fabric touching their skin made their way into an urban backyard and over to a large tree at the back corner of the lot. The tree was so big that one large, heavy branch overhung the second story balcony of the owner's house, and the shade from the tree provided a small amount of respite from the mid-day heat. In heat this extreme, words are as slow as the beads of sweat that trace lazy trails between shoulder blades. Even in a downtown location, the air was thick with the sound of cicadas. But the conversation picked up – stories were passed around about recipes and canning and all the other things that each volunteer planned to do with their share of the harvest. They had never met before, but they felt like a family as arms reached up and down, up and down, dropping the tangy-sweet berries into collecting buckets.

This is the work of modern volunteer gleaners.

In an age where convenience and fast foods dominate the market, and there is no shortage of canned and processed goods to donate to food banks and other organizations, volunteer gleaners make time to participate in gleaning, gathering and harvesting activities. Many volunteers also participate in associated preparation and preservation techniques such as freezing, dehydrating and canning. While gleaning activities have historically been done by impoverished people, today the act of sharing and donating the harvests suggests a different set of motivations which will be explored in this study.

The objectives of this study are:

i) to profile five urban food recovery groups in Ontario
ii) to understand volunteer motivations for participating in these food recovery efforts
iii) to explore volunteer perceptions of the contributions of these groups to community food security.

There are many organizations, such as the food bank, that rely on food recovery initiatives to provide a much needed source of fresh foods to their clients (Hoisington, Manore, Raab, 2011). The contribution of emergency food providers towards achieving nutritional adequacy for vulnerable citizens has been explored in past research, and most agree that the nutritional quality of emergency food must be improved (Bell, Wilbur & Smith, 1998; Cotugna & Dobbe Beede, 2002; Hoisington, Manore, Raab, 2011; Gany, Bari, Crist, Moran, Rastogi, & Leng, 2013; Wakefield, Fleming, Klassen, Skinner, 2012). Gleaning and gathering of fresh foods in urban spaces is one way to help meet this need.

The global food stage is plagued by food concerns, fears and scandals. Food far removed from its natural form dominates grocery store shelves. Labels with a myriad of claims are competing by catering to the health and ethical ideals of consumers. There are listeria and salmonella scares, and concerns about pesticides and genetically modified foods. All of the labels, claims and concerns can be overwhelming for consumers. For some, the easiest route is to follow the signs and labels. For others, a different response is to find alternatives to the mainstream channels of food procurement. They buy organic food or shop at the local farmer's market. They grow their own food, they dumpster dive, or they become volunteer gleaners.

While historical gleaners could only collect the meagre leftovers of the harvest, today food recovery groups are driven by the bounty of food growing in and around urban spaces that is unused, and by the abundance of food waste from larger producers. In Canada, more than 40% of all the food we produce is wasted each year. The largest portion of this waste comes from household food wastage, and a smaller amount is lost at the source of production. Historical gleaning was very much farm and field oriented in rural spaces. Now, modern gleaning takes place wherever food is grown, in both the urban and rural spheres. Gleaning initiatives may seem small in scale, but they are happening all over the world, and in increasing numbers, especially in

the context of developed countries. Gleaning groups are mostly, or entirely, dependent on volunteer labour which means that volunteers are critical for success. Group co-ordinators can be planning and organizing masterminds, but without a dedicated group of volunteer gleaners to do the work of harvesting, these initiatives would not be possible. Volunteer gleaners are critical to the success of these programs. By understanding volunteer motivations and perceptions, gleaning programs can target their recruitment and retention strategies to create a good match between volunteer expectations and a positive volunteer experience. Without volunteers, there would be no one to harvest the food, and yet, volunteer motivations have garnered little attention.

When gleaning is defined as harvesting food that is not otherwise being used, from where it is grown, modern gleaning becomes inherently linked to urban agriculture. Food recovery initiatives also provide important opportunities for Community Food Security (CFS). This thesis is structured as follows: in Chapter Two, an overview of the literatures on urban agriculture, gleaning, CFS, and volunteerism is presented. Areas for further research are also identified.

This research contributes to a better understanding of how to optimize the current food system by examining the role volunteer gleaners perceive themselves as having in reducing food waste and redirecting edible food to organizations and people who need it. Chapter Two provides some background information on gleaning initiatives in Ontario, including five case studies. The Hamilton Fruit Tree Project, Not Far From the Tree, Hidden Harvest Ottawa, The Appleseed Collective Revival, and The Tri-Cities Gleaners Guild will be described along with a general overview of Canadian food recovery projects. Chapter Three outlines and describes methods used in food recovery research and the chosen methods used for this study. A primarily qualitative, inductive, interpretivist, approach was used. Demographic information of study participants was compared to the broader Canadian volunteer population. Chapter Four provides an overview of the results and a discussion of the information gathered from interviews and surveys followed by a summary of the findings and concluding statements.

Chapter 2. Literature Review

2.0 Setting the Stage for Food Recovery

The term urbaculture has been used sporadically over the past few decades as an abbreviated form of the term 'urban agriculture'. For example, it was used in a government report on the potential effects of climate change on the United States in 1988 (EPA, 1988) and it was also used in an article in *Scientific American* in 1996 (Stix, 1996). In the 1988 report, urbaculture was defined as "the watering of lawns and gardens" (EPA, p 2-28). In the *Scientific American* article, the author describes urban agriculture as the "antonym of the monoculture" (Stix, 1996, p 20). Simply stated, urbaculture, or urban agriculture (UA), is now defined as growing or raising food in cities. UA is a rapidly growing movement in developed countries, particularly in North America. While the possibilities of UA and associated activities attract the attention of researchers, policy groups and the media, one thing is certain: UA has yet to reach its full potential in North American cities.

As it is, the benefits of UA are widely agreed on, such as promoting a healthy lifestyle for improved overall health, a way to improve nutritional intake and improve mental health. More recently, the associated benefits of greening urban spaces have been explored such as reducing the heat-island effect, reducing storm water run-off, microhabitat creation, and esthetic beauty. Another less researched benefit is the growing movement of urban food recovery in the form of urban gleaning. Gleaning is a small branch of food recovery where food that would otherwise go to waste is harvested directly from where it is grown. In this way, it is inherently linked to UA activities because food gleaning requires food production in some capacity. Early gleaning across Europe used to be an activity of the impoverished who would glean food from farms for themselves and their families. Now, as UA activities are adopted throughout urban spaces, so are urban food recovery initiatives. Gleaning and food recovery activities are most often undertaken by volunteers whose motivations have been little explored. Food recovery groups depend almost entirely on volunteers to do the work in a multitude of contexts. Without food recovery volunteers, the hands-on labour of harvesting the abundance of food in urban spaces would be nearly eliminated.

Food recovery has been taking place in different forms for centuries. There are several historical accounts (Vardi, 1993; Badio, 2009; King, 1992), but little has been explored in terms of modern food recovery initiatives, particularly in a Canadian context (Bartlett, 2012). Canada's first formal fruit tree project was founded in 1998 in Victoria, British Columbia, with the purpose of collecting the abundance of excess fruit that was growing in the city and going to waste (Lifecycles Project Society, 2003). Since that time, fruit tree and other food recovery projects have emerged across the country and throughout Ontario. Several of these projects will be described in more detail in Chapter Three.

This area of research is ripe for exploration from a variety of perspectives. Even though gleaning efforts are small at present, food recovery of this kind is situated in a way that can address several pressing issues. For example, greenhouse gases and food waste can be reduced by having less food in landfills. Urban design incorporating food production can lead to innovative urban sustainability planning. Public health outcomes and an improvement in food literacy and food security can also be benefits as discussed in later chapters. Food recovery provides concrete and actionable means of addressing these issues; however, the focus of this study is gleaning as a means of improving CFS.

2.1 Urbaculture – a growing movement

Since urban food recovery projects in the form of gleaning are dependent on the presence of food producing plants, it is important to provide some context for food production in these spaces. In North America, UA has transitioned from simply being a gardening pastime to an activity that has become synonymous with food security (Ruaf Foundation, n.d.; LifeCycles, 1998; Hoornweg and Munro-Faure, 2008; Kortright and Wakefield, 2011; Meenar and Hoover, 2012).While UA activities are still largely hidden in backyards (Mazereeuw, 2005; Kortright and Wakefield, 2011), it has begun to garner attention through the use of formalized food charters and food activist groups such as Food Not Lawns (Hardman and Larkman, 2014).

Urbaculture is manifest in a multitude of ways. McClintock (2014) lists the most common forms of UA as residential, allotment, guerilla, collective, institutional, non-profit and commercial. These categories include growing food in front and back yards, schoolyards, boulevards, parks, and unused spaces. In her paper *Household Gardens: Theoretical and Policy*

Considerations, Ninez writes, "[f]ood production on small plots adjacent to human settlements is the oldest and most enduring form of cultivation" (1987, p 168). Ninez discusses how archeological evidence shows that ancient urban gardens were used as much for their productive value as for their aesthetic beauty. Today, in Canada, around 40% of urban households grow some of their own food. Some examples are Waterloo Region (Ontario) at 38% (Mazereeuw, 2005), Toronto (Ontario) at 40% and Vancouver (British Columbia) at 42% (Cockrall-King, 2012).

Some forms of UA are more widely studied (and supported) than others such as community garden plots (Golden, 2013). While community gardens are a focus of food charters and are regularly incorporated into municipal planning in the form of bylaws or in development plans, it is a relatively small segment of the population that makes use of this type of resource. For example, a 2005 report by Mazereeuw for Waterloo Region indicates that of the 38% of the population that is growing some of their own food, only two percent are utilizing community gardens. There is some indication in an updated report that this disparity exists because there are simply not enough community garden plots to meet the need, rather than from a lack of interest (Region of Waterloo Public Health, 2013).

Food gardens are not new, though the nomenclature has changed over time. Cosgrove (1998) created a modified table of the history of food gardens in the United States and Canada, adapted from the *Report on Community Gardening in Canada* (Quayle, 1986) (Table 1). This summary indicates that utilizing designated space for urban food growing is not new in North American cities, but that the perception of food growing activities has evolved. One of the most current expressions of this evolving perception is the formation of urban food recovery initiatives. Other forms of UA are just beginning to attract attention in the literature and in popular media, such as home food growing, gleaning, and foraging and gathering on public and private land (Mclain, Hurley, Emery and Poe, 2014; Pol, 2014; Taylor and Lovell, 2014).

Table 1.

A brief history of food gardens in the US and Canada.

US	Canada
Potato Patches (1890-1930)	Railway Gardens (1890-1930)
School Gardens (1900-1920)	School Gardens (1900-1913)
Liberty Gardens (1917-1920)	War Gardens (1914- 1947)
Victory Gardens (1941-1945)	Counter-Culture Gardens (1965-1979)
Community Gardens (1980-)	Community Open Space (1980-)

(Source: Quayle, 1986)

The benefits of UA have been widely documented in past research, most recently from a municipal planning perspective. In particular, studies have noted that urban green spaces can reduce the urban heat-island effect, reduce storm water run-off and provide opportunities for increased physical activity (Knizhnik, 2012). The many benefits of UA activities are largely agreed on (Grewal & Grewal, 2012; Hale et al, 2012; Rydin et al, 2012; Golden, 2013). For example, urbaculture contributes to urban health by contributing multifunctional, food producing 'green' spaces and all the associated benefits. A study done in Toronto, Ontario lists some of the additional economic, community, health and environmental benefits in Canada's most populated city (Toronto Food Policy Council, 2012). Some of the benefits listed are economic benefits, community benefits, health benefits and environmental benefits (Toronto Food Policy Council, 2012). And of course, there is the undeniable beauty of fruit tree blossoms in the spring which help to awaken our muted winter senses.

There are some studies whose primary critique of UA is that people who are financially insecure cannot afford to participate due to limited access to the materials and space needed for many forms of food growing. Food recovery initiatives address many of these issues of access, which will be discussed in Chapter Five. Some scholars critique UA as being embedded in, and reinforcing, a capitalist, neoliberal agenda by not addressing the root causes of hunger and food insecurity, and by reinforcing the "classed, gendered, and racialized character of many community food initiatives" (Wakefield, Fleming, Klassen, & Skinner, 2012, p 431; Galt, Gray & Hurley, 2014; McClintock, 2014). But home food growing can be used as a conscious alternative to a capitalist economy. In situations where the capitalist system breaks down, home food growing can provide a viable means of sustenance. Well documented examples include the

North American ‘Victory gardens’ of WWII and the UA initiatives in Cuba during the collapse of the Soviet Union (Miller, 2003; Endres & Endres, 2009; Rydin et al, 2012).

In Russia, before the 1950s, single family homes were few and far between and rarely had access to amenities such as electricity or schools. Most people preferred to live in the free urban apartment housing provided by the government with access to all amenities. During that time, the elite had private summer homes on small plots of land called ‘dachas’. In the 1950s the government began allotting land for “collective orchards” which were to be used for gardening, not for living (Mason & Migmatullina, 2011, pp 321). However, in the 1960s when a two-day weekend was adopted, people started to spend time outside of the cities and started building tiny, often illegal, dwellings on small pieces of land within these plots. In the decade between the 1980s and 1990s, collective orchards grew in number from 189 to nearly 650,000 (Mason & Migmatullina, 2011). In the 1990s most of the land of the collective orchards fell into private ownership, including the legally or illegally severed plots (Ioffe & Nefedova, 2011). Eventually, people were calling their tiny pieces of collective orchards ‘dachas’ as well, since they represented a better lifestyle the way dachas had in the past. They could grow their own food which was a life-saver during food shortages, and they also became members of a new kind of community. Even now, for many people, maintaining and living off their dachas represents a more dignified existence than other people who have bought into the capitalist market economy (Zavisca, 2003, p 788). These dacha communities are “linked by a common sense of place that encompass[es]… residence, land, and shared activities” (Mason & Migmatullina, 2011, pp 321). This example illustrates how UA, and associated activities such as gleaning, can create a communal bond around shared values and priorities.

The popularity of UA has grown exponentially in the past decade. Official documents outlining the need and the potential for UA exist for North America’s largest cities, including New York City (USA), and Toronto, Ontario (Canada) (Ackerman, 2012; Toronto Food Policy Council, 2012). And yet, as is the case in Kitchener-Waterloo, many barriers to UA implementation still exist, often in the form of restrictive bylaws (Marshman, 2013).

COST-Action Urban Agriculture Europe is compiling a dictionary of UA using the feedback and information gathered by its five working groups, and provides a comprehensive definition as follows:

- **“Urban Agriculture** takes place from intra-urban to peri-urban locations. Thus, it does not only refer to activities within the city but on the city’s fringe and in the metropolitan area as well.”

- **“Urban Agriculture** is characterized by both producing agricultural goods (products, mostly food) and/or making use of agricultural techniques and procedures (tilling, grazing, harvesting, recycling). Thus, e.g. nature conservation farms or horse farms are included in UA, but leisure gardens without food production are excluded.”

- **“Urban Agriculture** is not to be considered as a rural leftover but as a result of ongoing interaction between the urban and the agricultural sphere. Thus, the process of adapting to the needs of the urban society is crucial to understand UA, its potentials and types.” (COST wiki, 2015)

Urbaculture manifests in many forms. Growing food in urban spaces is a keystone concept to many pursuant forms of alternative food procurement, including foraging and some forms of food recovery such as urban gleaning. Urban gleaning is inherently tied to each aspect of COST-Action Urban Agriculture Europe’s definition, from participation in urban and suburban locations, to the harvesting of food products in urban spaces, to the ongoing interaction between urban and agricultural spaces - often considered to be incompatible. This clearly situates urban gleaning and food recovery in the urban-agricultural sphere, allowing for a better understanding of the context of these activities in urban spaces. It also clearly demonstrates how entrenched urban gleaning is in the perceptions, practice, and implementation of support systems for UA.

2.1.1 Food charters and urbaculture

There are currently more than two dozen active food charters in Canada, and most of them make reference to supporting and promoting urbaculture in some way (Jaquith, 2011; Kennedy, 2012) (Table 2). Food charters are descriptive statements of guiding principles for food policy, often with a prescriptive vision or statement of values led by an interdisciplinary group from the affected community.

Table 2.

List of many active Canadian Food Charters and whether or not they reference urban agriculture.

Food Charters	Year	References UA
Vancouver (BC)	2007	yes
Kamloops (BC)	2006	yes
Kaslo (BC)	2008	yes
Central Okanagan (BC)	2008	yes
North Okanagan (BC)	n.d.	yes
Shuswap (BC)	n.d.	yes
Victoria (BC)	2008	indirectly
Squamish (BC)	2010	no
Medicine Hat (AB)	2013	yes
Saskatoon (SK)	2002	yes
Prince Albert	2003	yes
Northeast Saskatchewan	n.d.	yes
Manitoba	2006	no
Toronto (ON)	2001	yes
Sudbury (ON)	2004	yes
Guelph-Wellington (ON)	2011	indirectly
Hamilton (ON)	2012	yes
Waterloo Region (ON)	2013	yes
Thunder Bay (ON)	n.d.	yes
London (ON)	2009	yes

(Jaquith, 2011; Kennedy, 2012)

Both Heasman (2007) and Hardman & Larkin (2014) have identified that one of the weaknesses of the food charter is adequately communicating the purpose of the charter to others. If this issue of communication is addressed, Hardman & Larkin contest that food charters are an enabling mechanism to drive UA initiatives, as evidenced by the "dramatic rise in agricultural

activity within cities which have adopted charters" (2014, p 402). The relationship between UA activities and the food charter is a mutualistic one. Not only do food charters act to promote UA adoption and implementation, but UA activities are also a way of visually communicating some of the values expressed in the charters. As UA garners more attention and support through mechanisms such as food charters, activities such as urban gleaning are likely to increase as well.

2.2 Food recovery initiatives

Canadian food recovery in the form of gleaning is a growing trend, particularly in urban areas. These food recovery initiatives vary in scope, from several hundred to several thousand pounds of food recovered each season. Approaches to food recovery in the form of gleaning also vary. Some groups, such as the Ontario Christian Gleaners, rely on donations from farmers which are then dehydrated and donated overseas. Others, such as Not Far From the Tree, almost exclusively glean urban fruit from residential yards. And others such as the Tri-Cities Gleaners Guild will harvest any available fruit and produce, including food from urban farms and community gardens. Urban fruit tree projects that collect fruit that would otherwise go to waste from various urban spaces are by far the most popular model used in Ontario. There is very little in the academic literature on urban gleaning, though it has become quite well covered in popular media as food recovery groups spring up across Canada and the US.

Food recovery can manifest in a multitude of ways from the various forms of gleaning such as post-harvest gleaning or foraging and gathering (Deby, 2013; Poe, McLain, Emery and Hurley, 2013; Mclain, Hurley, Emery and Poe, 2014), to the activity commonly referred to as 'dumpster-diving' (Eikenberry and Smith, 2005; Edwards & Mercer, 2007). Dumspter-diving is a form of food recovery defined as "the act of sifting through commercial or residential waste in mostly urban areas in order to find and reuse waste material—often expired or imperfect but still edible groceries" (Haselwanter, 2014). While other forms of food recovery do exist, urban gleaning is the focus of this study.

In Ontario, food recovery groups manifest in several ways. Workshops and classes on foraging and wild edibles are offered in various locations across the province. Second Harvest, and groups like Food Not Bombs (FNB), make sure that uneaten food from retailers and restaurants gets donated and used. Hidden Harvest Ottawa, along with a myriad of other fruit tree

projects, focuses on harvesting the bounty of urban fruit trees. Groups like Community Harvest Ontario and the Tri-Cities Gleaners Guild harvest food from urban and rural farms for donation. And many other groups and organizations find ways to put food to use that would otherwise go to waste. This quote from a 2009 study frames the issue nicely:

> "In an effort to reduce fiscal deficits, governments have, over the last few decades, slashed social programs that protect the welfare of low-income families in Canada. As a result, the responsibility for providing for the poor is returning to communities and non-profit organizations. Centuries after the undermining of gleaning, communities across North America are reviving and modernizing the ancient practice to tackle one dimension of poverty—food insecurity." (Badio, 2009, p 2)

Existing research on gleaning initiatives is limited. A review of the literature revealed six of the most relevant articles using the search terms gleaning (Hoisington et al, 2001; Edwards & Mercer, 2007), food rescue (Poppendieck, 1994; Schneider, 2013) and food recovery (Eikenberry & Smith, 2005; Phillips et al, 2013). Several different approaches were taken, and several gaps were identified in these studies.

Hoisington et al (2001) used a mixed methods approach: quantifying the harvest and a case study in Pierce County, Washington. They were able to show that gleaning can positively contribute to household food security by improving access to healthy foods. They also identified several gaps including data on how gleaned produce impacts family diets and the need to better understand motivations of gleaners based on various demographic information. Eikenberry and Smith (2005) used a mixed methods approach as well, including focus groups, a survey, and semi-structured interviews in the United States. Their work indicates that dumpster diving is prevalent among low-income urban residents as a way to get food within their communities. They also identified a need for more information on the ways in which low-income people procure supplemental food, especially when their methods are considered socially unacceptable. A 2013 study by Schneider used a historical overview covering a large body of literature on nutrition and health and social development in a primarily European context. He determined that donating edible foods to social service organizations is a well-established food waste preventions strategy, but identified a need to have more data on the amounts and composition of the donations that could serve to assess the environmental and economic impacts of such initiatives.

Phillips et al (2013) took a different approach by quantifying the sustainability of food recovery. They found that food recovery can help to mitigate hunger, as long as there is sufficient participation from donors and enough funding to transporting the food. The also identified that nutrition is an area that need to be addressed.

2.2.1 Food waste

There is a growing literature on food waste in Canada, and it is becoming an increasingly popular topic of discussion in the media. Global attention on the issue has sparked such movements as *Inglorious Food*, started by the third largest grocery chain in France (The Huffington Post Canada, 2014). In this campaign, misshapen or "ugly" food is sold at a discounted price with a message to consumers about not creating food wasted for purely cosmetic reasons. It wasn't long before Loblaw, Canada's largest food retailer, followed suit with their own 'ugly food' campaign, selling imperfect apples and potatoes in stores across Ontario and Quebec. These new marketing techniques suggest that consumers are interested in changing their behaviours in a way that will help to reduce some of the exorbitant food waste that is happening. Clearly, this consumer interest has made retailers take notice.

In Canada, more than 40% of all the food we produce is wasted each year (Gooch, Felfel, & Marenick, 2010). While the largest portion of this waste comes from household food wastage (47%), ten percent is lost in the fields (VCM International, 2014; Uzea, Gooch & Sparling, 2013). Activities that help to prevent wastage at the source, such as field gleaning, could conceivably save over $2 billion annually (Gooch, Felfel, & Marenick, 2010; Gooch & Felfel, 2014).

2.2.2 Food waste and food recovery

Canadian food recovery groups are a growing trend, particularly in urban areas. The degree to which they are perceived by volunteers as challenging or supporting the conventional food system will be discussed in the research findings. Considering that an estimated one-third of food is wasted globally (FAO, 2011), it is somewhat fitting that a common model used by food recovery groups is the thirds model: one-third of the harvest for the property owners, one-third for the volunteers who do the harvesting, and one-third for donation to a local organization that

can use the food (The Apple Seed Collective, n.d.; The Garden of Eating, n.d.; The Halton Fruit Tree Project, n.d.; Not Far From the Tree, n.d.; The Tri-Cities Gleaners Guild, n.d.).

The gathering or collecting of a food product is referred to as gleaning and gleaning is a form of food recovery taking place both in and outside of urban spaces. In agricultural spaces it is defined as gathering food that is left unharvested (Ontario Association of Food Banks, 2013). Food gleaning has been taking place since biblical times, and as so, is deeply rooted in Christianity. In biblical references, accommodating gleaning was a moral imperative, as detailed in this biblical passage:

> "When you reap the harvest of your land do not reap to the very edges of your field or gather the gleanings of your harvest. Do not go over your vineyard a second time or pick up the grapes that have fallen. Leave them for the poor and the alien. I am the Lord your God" (19 Leviticus. 9-10 New International Version, cited in Badio, 2009).

In popular media, there is a focus on improved food security and a decrease in food waste without emphasising the modern motivations of volunteer gleaners. Some studies focus on the recipients of gleaning initiatives, often in terms of the organizations who benefit from such initiatives such as food banks and other emergency food providers (Arasuk & Eakin, 2005; Ontario Association of Food Banks, 2013).

There are several benefits of food recovery programs in Canada. One is a reduction in food waste, or a reduction in the amount of edible food being sent to landfills (Finn, O'Donnell & Walls, 2014). Similarly, food such as fruit from backyard trees can be harvested by these groups and used in a variety of ways. These fruits may not have ended up in a landfill, and are therefore unaccounted for in waste calculations, but the sheer amount of fruit harvested by these groups demonstrates the need for such initiatives (Table 3).

Table 3.

Pounds harvested by several Canadian groups in 2014.

	Victoria, BC	Toronto, ON	Winnipeg, MB	Edmonton, AB	Vancouver, BC	Guelph, ON	Regina, SK	Kitchener, ON
2014 - Pounds Harvested	30,000	18,687	16,786	5,864	5,000	5,000	3,000	750

Source: Beaith, A. and Johnson, M. (2014). How Fruit Rescue Organizations are Redefining Access to Local Food [PowerPoint Slides]. University of Alberta, Sustainability Summit.

Another benefit of gleaning is the opportunity to provide fresh, unprocessed food to vulnerable citizens through local organizations such as emergency food providers (Finn, O'Donnell & Walls, 2014). Organizations such as the Food Bank and local soup kitchens can make use of fresh foods in a variety of ways. Both of these benefits will be explored in more detail in Chapter Five. Other benefits are also realized through these initiatives, such as the reduction of Green House Gasses (GHG) from landfill diversion; however, they are outside the scope of this study.

2.3 Volunteerism

The need to understand volunteer motivations has been identified in several studies. Husbands, McKechnie, and Gagnon (2000) identified several research gaps, including the need for better understanding of "volunteer motivations, recruitment, retention, & recognition" (p 41). They also identified a need for a "better and more up-to-date understanding of demographic factors associated with volunteering in Canada" (p 21). Hill, Russel, and Brewis (2009) identified several research gaps including research on the non-traditional volunteer roles, or those that have lower volunteer rates, such as volunteer gleaners. Bekkers and Wiepking (2000) identify several research gaps including a need to better understand the motives for monetary donations. Monetary donations are outside the scope of this paper, but this point does indicate a need for a better understanding of volunteer motivations in general.

In 2010, nearly half of Canadians were volunteers and the number of volunteers is growing faster than the population (Vezina & Crompton, 2012). These volunteers contributed over two billion volunteer hours, which is equivalent to more than one million full-time jobs

(Vezina & Crompton, 2012). Not all volunteers are contributing the same number of volunteer hours; in 2010 only 10% of Canadian volunteers were contributing 53% of the total hours, and in 2007 the top 25% of Canadian volunteers contributed over 75% of the total hours (Hall, Lasby, Ayer & Gibbons, 2009; Vezina & Crompton, 2012). Top volunteers are defined as the 25% of volunteers who contribute the most hours. They are the people that volunteer-dependent organizations rely the most heavily on (Vezina & Crompton, 2012).

There are several reasons identified in past research for why people volunteer. The biggest reason is, by far, that they believe in the cause supported by the organization (Figure 2) (McClintock, 2004). For those who volunteer very few hours, and for those who do not volunteer, the biggest factor for not volunteering was overwhelmingly identified as a lack of time (Figure 3) (McClintock, 2004).

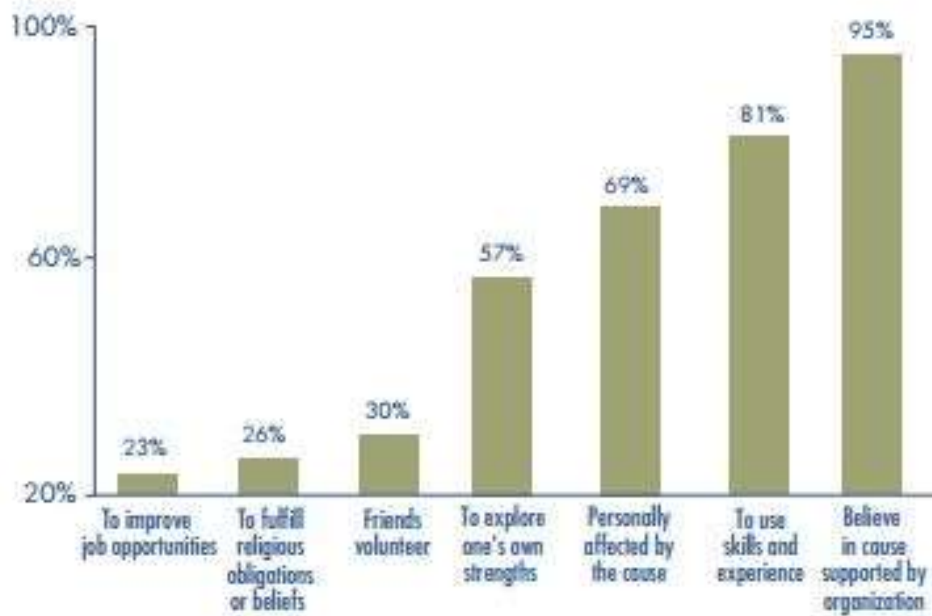

Figure 2. The reasons why Canadians volunteer (McClintock, 2004, p 7).

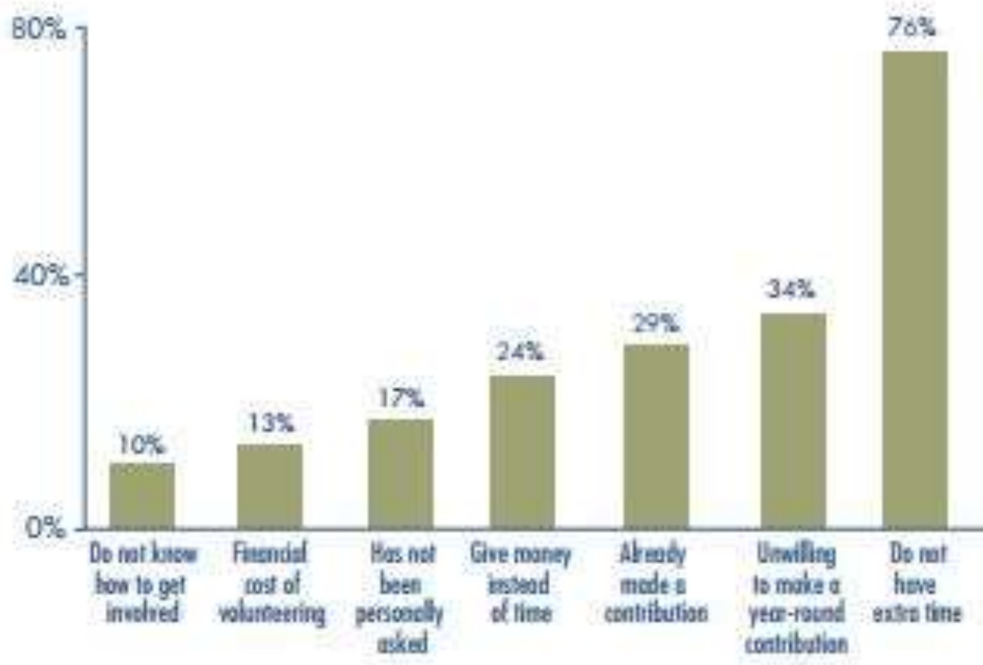

Figure 3. The reasons why Canadians do not volunteer (McClintock, 2004, p 8).

In *Distinguishing Characteristics of Active Volunteers in Canada* (2000), Reed and Selbee's multivariate analysis indicates that volunteers are unequivocally different than non-volunteers, but that the differences vary across regions. They concluded that while volunteers share a number of similar traits, it is also their social context that defines the choice to volunteer (Reed & Selbee, 2000). For example, there is a correlation between a number of childhood experiences and the likelihood of volunteering later in life (Hall, Lasby, Ayer and Gibbons, 2009; Vezina & Crompton, 2012). These childhood experiences include: "having been active in student government (61%); having one or more parents who did volunteer work in the community (58%); having been active in a religious organization (56%); having done some kind of volunteer work (55%); having belonged to a youth group, such as guides or scouts… or a choir (54%); having gone door-to-door to raise money for a cause or organization (53%); having seen someone they admired helping others (53%); having participated in an organized team sport (52%) (Hall et al, 2009). Active civic participation was the most common trait shared amongst

those studied (93%), and one half to one third of those studied shared the traits of ‘informal helping’, ‘social participation’, ‘religion’, and ‘giving’ (Reed & Selbee, 2000, p 8).

Top volunteers share even more common traits. Vezina & Crompton’s work from the 2010 publication, *Volunteering in Canada*, found that people who attend religious services once a week are more than two times more likely to be a top volunteer than those who don’t. They also found that university graduates are twice more likely to be top volunteers than those with less than a high school education. This kind of demographic information is the first step to developing a better understanding of specific volunteer groups, and can better help volunteer dependent programs to understand the needs of their core volunteers.

Showing volunteers how much they are appreciated is an important element of volunteer retention identified by Mcclintock (2004). The identified constraint of time, and the small number of volunteers who contribute the most hours, suggests that volunteer appreciation is a critical component to any volunteer program as a retention strategy. Since volunteers may join an organization for one reason, but remain for different reasons, understanding the unique attributes of the volunteer population is the first step to both volunteer recruitment and retention.

2.3.1. Volunteering and food recovery

In Ontario, organizations utilize 7.8 million volunteers, although this number does not account for the fact that some people volunteer for multiple organizations (Vezina & Crompton, 2012). Volunteer gleaners are unique in that their volunteer hours occur primarily during the growing and harvest season(s). They are also unique in that much of the volunteer work required by gleaning groups takes place outdoors, and requires varying degrees of physical labour (such as repetitive arm movements for picking, climbing ladders, or bending for extended periods of time).

There are 15 categories of volunteers recognized by Statistics Canada for their report on Canadian volunteers. Food recovery is included in the Social Services category, as per a Statistics Canada representative (S. Ir, Statistics Canada, personal communication, June 9, 2015). These categories contain specific activities including environmental protection, and collecting, serving or delivering of food or other goods. In 2010, 28% of all Canadian volunteers were

involved with the collecting, serving or delivering of food or other goods, and 19% of Canadian volunteers were involved with environmental protection (Vezina & Crompton, 2012).

The first National Fruit Tree Project assembly, called *Cross-pollinating Canadian Tree Harvesting Organizations,* was held in Toronto in November, 2014. The primary purpose was knowledge sharing between food recovery groups, and exploring volunteer motivations was a need that was addressed at the meeting. Of the twelve groups present, seven identified the various aspects of volunteer management as one of their main challenges, including recruitment, retention, engagement, coordination and training (Siks, 2014). Hoisington et al (2001) identified the need for further exploration into the motivations for participants of these movements, in order "to maximize participation and the resulting benefits" (p 47). Hoisington et al also state that further research is needed to "explore motivations based on race or ethnic affiliation, family size, and income level" (p 47). Badio (2009) identifies the need for organizations to focus on the recruitment and management of volunteers, since these activities rely so heavily on volunteer labour.

Another issue that was discussed at this assembly was the issue of supply and demand. Depending on the group and the season, there can be a significant mismatch between the volunteers and the amount of food to be harvested. For example, some groups recruit volunteers for specific harvests online. Often, there are a pre-determined number of slots to be filled by volunteers, and the slots fill up quickly, leaving many volunteers without an opportunity for that specific harvest date and time. Other times, there are not enough volunteers, or willing volunteers, for the job. This is more common with the common fruit that is plentiful (which varies by location), and less common with some of the more exotic or uncommon fruit. Finally, even with a lengthy volunteer list, all of the food recovery projects profiled in this study have yet to exhaust all of the harvest locations in their respective cities. Meeting this need would require additional coordination and active volunteers. Each of these issues requires a better understanding of the volunteer population to ensure volunteer retention and a good volunteer experience. Understanding the volunteer population for a specific group can also assist group coordinators with planning, in terms of which trees or locations to accept at any given time.

Husbands et al (2000) identified several research gaps, including the need for better understanding "volunteer motivations, recruitment, retention, & recognition" (p 41). Husbands et

al also identified a need for a "better and more up-to-date understanding of demographic factors associated with volunteering in Canada" (p 21). Hill et al (2009) identified several research gaps including any research on the non-traditional volunteer roles, or those that have lower volunteering rates (gleaning falls into this category).

Bekkers and Wiepking (2000) identify several research gaps including a need to better understand the motives for monetary donations. This is outside the scope of this paper, but does point to a need for a larger research on motivations. Exploring volunteer motivations is the primary purpose of this research, along with identifying perceptions of food recovery and CFS. A comparative analysis of Canadian volunteers and the demographic information for volunteers for food recovery is provided in Chapter Five.

2.4 Community food security

The meaning of food security has been evolving since the 1970s, in some ways broadening and expanding in meaning (Ontario Public Health Association, 2002; McCullum, Pelletier, Barr, & Wilkins, 2002; FAO, 2003; Dieticians of Canada, 2007) and in some ways becoming more refined (Fisher, 1997; OPHA, 2002). It was when the United Nations organized the World Food Conference in 1974 that the global conversation about improving food security through increased food production really began (Adams, Swisher, & Monaghan, 2010; Brinkley, 2013). In the early 1980s, food access was increasingly included in the definition along with food production, and efforts to meet food shortages were made through food banks, soup kitchens, and other short-term oriented strategies (Anderson and Cook, 1999; Brinkley, 2013; Clapp, 2014). It was also at this time that the Food and Agriculture Organization of the United Nations (FAO) outlined a definition with access as a focus:

> "[E]nsuring that all people at all times have both physical and economic access to the basic food that they need" (FAO, 2003, p 27).

Anderson and Cook (1999) describe the next shift in food security thinking as mirroring the divergence in health thinking of the 1990s. For example, according to Anderson and Cook, researchers and practitioners tended to subscribe to health as an absence of illness, or conversely, to health as state of comprehensive well-being. While it may seem like semantics to some, the framing of the two perspectives is in fact very different, and a similar rift was forming between

food security advocates. There were primarily those who defined food security as the "*absence* of household food insufficiency and hunger" (Anderson & Cook, 1999, p 143) and those whose definitions included the *presence* of certain elements, such as enough safe, nutritionally adequate, socially acceptable food (McCullum, Pelletier, Barr, and Wilkins, 2003).

At this time, food security was still strictly focused on alleviating hunger. It was during the 1980s and 1990s that the term Community Food Security (CFS) began to assume more than just the defining features of food security. Achieving CFS became the goal of food security action as well as an analytical tool and a methodology for meeting that goal (The Community Food Security Coalition, 1997). CFS is not only concerned with hunger relief, but also with local, sustainable food production, through the empowerment of marginalized people (Alkon and Mares, 2012). It is the definition by the Community Food Security Coalititon (1997) that is used for the purposes of this study, as an extension to the term food security:

> "[A]ll persons in a community having access to culturally acceptable, nutritionally adequate food through local non-emergency sources at all times." (p 4)

The framing of the concept of CFS came at a time when the environmental concerns of food systems came to the forefront (Dieticians of Canada, 2007; Brinkley, 2013). Environmental health then became one of the primary indicators of CFS, along with sociological indicators (OPHA, 2002). In these ways, CFS is both a refined and an expanded embodiment of the term 'food security'. Refined in that it has become more focused on scale (i.e. community-based) and it *unites* many previously distinct advocacy groups with a common goal (public health advocates, environmentalists, community development groups, farmers, church groups, anti-hunger advocates and more) (Fisher, 1997). It can also be seen as expanded in that it addresses a wide range of issues, beyond hunger, associated with a healthy food system (i.e. environmental, ecological, social, economic, etc) (CFSC, 1997).

It should also be noted that the Community Food Security Coalition was established in 1996, the same year that La Via Campesina defined the term *food sovereignty* at the World Food Summit (La Via Campesina, 2011; Jarosz, 2014). Both the food sovereignty movement, and the CFS movement promote "local production, consumption, and control over food and agricultural systems" (Alkon and Mares, 2012, p 348). La Via Campesina is an international movement that

defends small scale and sustainable agriculture (La Via Campesina, 2011). Food Sovereignty is "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems" (La Via Campesina, 2008, p 2). La Via Campesina has grown into a globally significant presence with 164 member organizations in 79 countries (La Via Campesina, 2013). Other smaller, some might say more radical, activist groups, are also involved with UA and food recovery activities. Often these activities are undertaken by these groups as a form of resistance to conventional capitalist and agro-food systems, which aligns with elements of both the CFS and the food sovereignty movements.

The Resource Centres on Urban Agriculture and Food Security foundation (RUAF) decisively made the link between urban agriculture and food sovereignty in their *Guidelines for Municipal Policymaking on Urban Agriculture* (2003). The document provides five guiding principles for policy makers who want to ensure that the potential for food sovereignty through UA is met. Block et al (2012) also make the link between food sovereignty and UA through a discussion of the community food access activism taking place in Chicago, Illinois. Block et al state that "sovereignty implies particular rights of individuals and communities to define their own food system, to produce food in a safe manner, to regulate production, and to choose their own level of self-reliance" (2012, p 205). Each aspect of this definition was found in Kortright and Wakefield's (2011) assessment of the contribution home food gardening makes to CFS in Toronto, Ontario, which points to the practical relevance of their analysis. Residential yards, where home food gardening takes place, are also the primary sources of food procurement for many urban food recovery groups, particularly from fruit bearing trees and bushes.

Another group of people concerned with some of these issues are people who call themselves Freegans. Freeganism is a term that was coined around the year 2000, but its inception is often credited to the earlier 'voluntary simplicity' movement (Edwards & Mercer, 2007). Freeganism is defined as "people who employ alternative strategies for living based on limited participation in the conventional economy and minimal consumption of resources" (freegan.info, n.d.). Freegans are perhaps best known for their dumpster diving activities, or the act of consuming surplus food that is thrown away by grocery stores (Edwards & Mercer, 2012). This is considered a form of food recovery, one of several forms of food recovery that freegans

are involved in. In terms of UA, freegans will also glean from residential and community gardens, as well as from urban farms and fruit producing trees/plants on municipal land. Due to the unusual nature of some of their activities, such as dumpster diving, freegans tend to occasionally attract media attention and the focus of scholarly research (Skidelski, 2009; Edwards and Mercer, 2007:2012; Nguyen, Chen, and Mukherjee, 2014; Pentina and Amos, 2014; Perkin, 2015). While this sub-set of food recovery activists represents a small portion of all food recovery efforts, they do help to define what food is considered recoverable and they contribute to a wider conversation about how to incorporate and normalize food recovery activities in urban spaces (Edwards & Mercer, 2012). These unconventional methods have attracted scholarly and media attention over the past decade, and now, the motivations of other participants of food recovery groups are beginning to be explored.

2.4.1 Community food security in Canada

The 2004 Canadian Community Health Survey was the first of its kind to use a standardized test to measure food security in the Canadian population (Tarasuk and Vogt, 2009). Results indicated that 9.2% of Canadian households were food insecure in the previous 12 months. Food insecurity in this study is defined as compromised "quality and/or quantity of food consumed among either adults or children in the household because of financial constraints" (Tarasuk and Vogt, 2009, p 184). This number did not include the territories, people living on reserves, or homeless people. Inclusion of these populations would significantly increase this number (Tarasuk and Vogt, 2009). Tarasuk and Vogt (2009) did an analysis of the results of this survey for the residents of Ontario. What they found was that 61% of people receiving social assistance were food insecure, versus the 6.5% of households with salaries that were food insecure (Tarasuk and Vogt, 2009). In 2011, 17.9% of food bank users had a primary income from employment, demonstrating that the biggest predictor of food insecurity is not income source, but poverty status (McIntye, Bartoo, and Emery, 2012; Ontario Healthy Communities Coalition, 2012).

In 2007 the Dieticians of Canada released a position statement about CFS, conceptualizing it as a continuum comprised of three stages: 1) initial food systems change, 2) food systems in transition, 3) food systems redesign for sustainability. They also provided a framework for assessing medium and long-term CFS goals, since longer time frames can be

problematic. When CFS is viewed as a process rather than an outcome, the possibilities for creating alternatives to mainstream food production and distribution become more apparent (OPHA, 2002). The Ontario Healthy Communities Coalition (OHCC) has identified some of these alternatives as follows: buy-local campaigns, food policy councils and food charters, community gardens, food co-ops, gleaning groups, and more (2012). Success is not viewed as reaching the final stage of the continuum, but rather as a process of moving through, and along, the stages.

The Dieticians of Canada state that among a long list of goals, one goal of CFS is to "develop just, sustainable, and diverse food systems" (Dieticians of Canada, 2007, p 2). In order to do this, some of the unintended consequences of the current dominant, industrial food system need to be addressed. This can be done by ensuring that human, environmental and ecological issues are seen as equally important as economic considerations (Dieticians of Canada, 2007).

In their food security continuum, food recovery by gleaning contributes to several of the strategies identified. In Stage 1, there are two activities in which food recovery groups are very active. The first, "educate clients on healthy food and lifestyle options". The second, "support existing charitable/emergency food outlets to provide timely service in a dignified manner" (Dieticians of Canada, 2007, p 6). The ways that volunteers perceived food recovery contributes to these strategies is discussed further in Chapter Four. In Stage 2, the Dieticians of Canada recommend connecting emergency food providers with local food producers and urbaculture initiatives. This is the stage on the continuum that food recovery groups are currently the most actively participating in. In Stage 3, there are several ways in which food recovery groups are actively involved at present. This stage is much more on the policy-making end of the spectrum, but food recovery groups play a small part in several of the strategies from helping to promote and develop food charters, to helping to increase the self-reliance of communities. Even though this is on a very small scale at present, there is a great deal of room for all of the food recovery groups highlighted in this study to grow. This is discussed further in Chapter Four.

Emergency food providers, such as food banks, continue to assist hundreds of thousands of Canadians and close to 400,000 Ontarians in 2011 (HungerCount, 2011). Agriculture and Agri-Food Canada (AAFC) has identified the need for information on Canadian food security, especially quantifiable data (2008). This study is primarily qualitative in nature, but it does

provide a good access point into the contribution(s) of food recovery to food security and CFS in Ontario. While the AAFC report (now in the fifth iteration) commits to improving Canadian food security, there is as yet very little acknowledgement of food recovery and how it relates to food security in the Canadian context within these reports. That is likely to change in future reports as these food recovery groups, programs, and organizations continue to proliferate across the country, and the literature on the topic of food recovery continues to grow.

2.5 Food recovery groups backgrounder

Food recovery has taken on many forms over the centuries, from the biblical, quoted earlier (books of Leviticus, Ruth, Job, Isaiah, Judges, Jeremiah, Micah, and Deuteronomy), to the modern day anti-consumerist, dumpster-diving, movement. Along with the church-mandated approach, and the efforts of 'garbage'-recovering dumpster-divers, food recovery takes several other forms, including the focus of this research, which is urban gleaning.

Gleaning has taken on different social meanings through the centuries. Vardi (1993) gives a wonderfully detailed narrative historical account of the perceptions of gleaning which walks the reader through the various iterations of field gleaning activities. This narrative includes a description of the shift away from the rights of the poor to glean fields after the harvest, to the emphasis on individual profit and property. Modern gleaning has taken on a new form once again; many gleaners participate not to feed themselves, but for other reasons which will be explored in this study.

To date, no context-specific definition for urban gleaning exists. References to gleaning generally use a definition that refers to rural gleaning in farmer's fields. Gleaning must be differentiated from other forms of food harvesting, particularly in the urban setting. A 1990 edition of Webster's dictionary has a very narrow definition of gleaning as follows: "[to] gather, pick up, after reapers in a cornfield" (Webster's, 1990, p 179). A common, and less narrow, definition for gleaning is as follows: "The act of collecting leftover crops from farmer's fields after they have been commercially harvested or on fields where it is not economically profitable to harvest" (Glean Canada, 2015, webpage). While this definition could include urban farms, or urban areas zoned agricultural, it is still missing important aspects of urban gleaning activities. A broad definition found online is as follows: "to gather slowly and laboriously" and

"to gather what is left by reapers" (Dictionary.com, 2015). Again, the reference to reapers implies that the food has been deliberately cultivated and harvested from a farm.

Most definitions reference cultivated crops, either implied or explicitly stated. When gleaning is defined as harvesting food that is not otherwise being used, from where it is grown, the source of 'gleaned' food must be from someplace where the food production was intentional, or deliberate. With that said, urban intentional cultivation can look very different than rural agricultural cultivation. Since very little (if any) untouched green space exists in urban areas, one can argue that most urban food harvesting is a form of gleaning. For example, urban farms, community gardens, and residential food gardens are at one end of the spectrum, being the most obviously cultivated. Trees planted by municipalities in places such as boulevards, school yards, parks and community trails are also deliberately planted. Any food producing plant or tree that was, at any time, intentionally planted, can be gleaned. Other forms of food recovery also take place primarily in urban spaces such as dumpster-diving, described previously. While this is a form of food recovery, dumpster-diving does not fit into this definition of gleaning. This is not to deemphasize the relevance of such practices, or to ignore the possible similarities in motivations between the different forms of food recovery. It is merely a way of providing a working definition for the purposes of this study which highlights one form of food recovery.

A closely-related activity is urban foraging, sometimes called wild harvesting (which can take place inside or outside of urban spaces). This activity includes the collection of uncultivated, or wild, foods such as dandelion, garlic mustard, and fruit producing trees that were planted by wind-blown seeds or carried by animals, birds, and rodents. For the purposes of this study, the harvesting of fruit producing trees in urban spaces is considered gleaning, and differentiated from wild harvesting of edible plants such as dandelions. With that said, some food recovery groups participate in both kinds of activities.

2.5.1 Fruit tree projects

Over the past decade, fruit tree projects have cropped up in Canada's largest cities and there are more than 25 active urban fruit tree projects now in Canada. Nine out of ten of the most populated cities in the country have fruit tree projects (Table 4). The first official fruit tree project in Canada was founded in Victoria, British Columbia in 1998. Last season alone (2014),

the group harvested close to 30,000 pounds of fruit, making them one of the highest yielding fruit tree projects in the country (LifeCycles, n.d.). The first official urban fruit tree project in Ontario was The Hamilton Fruit Tree Project, founded in 2005. Other large urban centres followed suit with Not Far From The Tree in Toronto (2008), Hidden Harvest in Ottawa (2011), the Appleseed Collective Revival in Guelph (2013), and the Tri-City Gleaners Guild in Waterloo Region (2014). Each of these projects will be described briefly in this section, but it is clear that over the past decade, these types of food recovery projects have gained significant popularity.

Table 4.

Fruit tree projects in nine out of ten of Canada's most populated cities.

	Population 2011	Harvest Project Name	Year Started
Toronto	5,583,064	Not Far From the Tree	2008
Montreal	3,824,221	Les Fruits Defendus	2011
Vancouver	2,313,328	Vancouver Fruit Tree Project	1999
Ottawa	1,236,324	Hidden Harvest Ottawa	2011
Calgary	1,214,839	Calgary Harvest	2010
Edmonton	1,159,869	Operation Fruit Rescue Edmonton	2009
Quebec	765,706	N/A	N/A
Winnipeg	730,018	Fruitshare	2010
Hamilton	721,053	Hamilton Fruit Tree Project	2005
Kitchener-Waterloo-Cambridge	477,160	The Tri-Cities Gleaners Guild	2014

(Bartlett, 2012; Coppolino, 2014; Statistics Canada, 2014)

Many of these projects are structured in unique ways; some independently, some under municipal organizational umbrellas, others as part of a larger not-for-profit structure. While the structure varies significantly, the primary reasons for existing are fairly consistent (Table 5). In the '*About*' sections of each of the websites of the fruit tree projects in the nine cities mentioned above, the following values are fairly explicitly identified: waste reduction (9 of 9), community building (8 of 9), improved access to local foods (8 of 9), knowledge sharing (6 of 9), and addressing climate change (2 of 9).

Table 5.

Explicitly identified foci found on organization websites.

	Hidden Harvest	NFFTT	Fruit Defendus	Calgary Harvest	OFRE	Fruit Share	Vancouver	Gleaners Guild	Hamilton
Reducing waste	✓	✓	✓	✓	✓	✓	✓	✓	✓
Improved access / Local food	✓	✓	✓	✓	✓	✓	✓		✓
Community building	✓	✓	✓	✓	✓	✓	✓	✓	
Knowledge sharing	✓		✓	✓	✓	✓		✓	
Addressing climate change	✓	✓							

Waste reduction

Even though the fruit from many urban fruit trees is unaccounted for in landfill statistics, much of it still goes to waste. Available calculations from the ten most populated cities in Canada indicate that nearly 50,000 pounds of fruit was officially recovered in 2014, from these locations alone (Table 6). To put that number in perspective, according to NPR, economists estimate from consumption numbers from the United States Department of Agriculture (USDA) that the average American consumes ~273 pounds of fruit each year (NPR, 2011; USDA, 2014). Using this estimate, 55,000 pounds of fruit could conceivably feed 73,333 people fruit for a day with current consumption trends. In Toronto, households are throwing away approximately 606 lbs of food each year (David Suzuki Foundation, 2014). This means that the current level of food recovery is equivalent to the daily food waste of 27,500 households, or the yearly food waste of 91 households.

Table 6.

Pounds of fruit harvested in Canada's most populated cities in 2014.

City	Pounds harvested in 2014
Toronto	18,687
Montreal	2,723
Vancouver	5,000
Ottawa	~2,000
Calgary	N/A
Edmonton	5,864
Winnipeg	16,786
Hamilton	5000
Kitchener-Waterloo	750*
Total pounds harvested in 2014	54,820

(Beaith & Johnson, 2015)

*Some of this was not from urban fruit trees. For example, in Kitchener-Waterloo, field produce was harvested from farms.

Addressing climate change

Reducing waste is just one of the ways that fruit tree projects in Ontario address climate change. Harvesting and using or donating fruit can reduce greenhouse gas (GHG) emissions by keeping organic matter out of landfills. When organic matter breaks down in landfills, methane is produced, which has a 25 times greater global warming potential than carbon dioxide (EPA, 2015). A new trend in urban planning is something called Urban Food Forestry (UFF), which can provide not only a hyperlocal food source, but also address climate change and other urban issues through the following ecosystem services: improved air quality, water and climate regulation, erosion control, habitat and increased oxygen production (Clark & Nicholas, 2013). Groups such as Ottawa's Hidden Harvest focus not only on harvesting urban fruit, but also on planting fruit producing trees throughout the city. Their goal is to host the largest urban orchard in Eastern Canada (Hidden Harvest, 2012).

Local food access

Following the local food movement of the last 20 years, hyperlocal is now a term being used to identify that which is "oriented around a well-defined community with its primary focus directed toward the concerns of the population in that community" (Wikipedia, 2015). One example of the practical application of this concept is the model used by Not Far From the Tree in Toronto, Ontario and Hidden Harvest in Ottawa. These groups uses city wards to delineate picking boundaries, and volunteers from within the local ward are notified first of proposed harvests. Further, once harvested, Not Far From the Tree donates the allotted portion to the closest neighbourhood organization that can use it, whenever possible.

Knowledge sharing

For the most part, volunteers for food recovery groups are provided with training on how to safely and appropriately harvest the food they are recovering. This contributes to food literacy by improving basic understanding of how and where food grows and reconnecting people with their food. Harvesters are also exposed first hand to the kinds of foods available in their region, and therefore, improve their seasonal/local food literacy. Volunteers who choose to take home some of the harvest may also be exposed to new foods or ways preparing / preserving those foods. Beyond the volunteers, some of the same benefits apply to the recipients of emergency food, particularly through exposure to locally grown, seasonal foods. Food recovery groups can, and do, share knowledge in other ways as well. One group in particular, Hidden Harvest in Ottawa, uses a google group forum called *The Fruit Roll-Up* to communicate and share information with other groups across the country on an ongoing basis.

2.6 Select organizational profiles

Volunteers from several food recovery projects participated in this research. Table 7 outlines some key attributes of the groups, culled from various sources. These examples represent a good cross section of group types and sizes, ranging from under 50 volunteers to over 1000. Volunteers from each of these groups participated in this study, either through an interview or by completing an online survey.

Not Far From the Tree is the largest urban gleaning project in Ontario with over 1000 volunteers. The group harvests food in 14 wards in Toronto and has harvested nearly 91,000 pounds of fruit since they were established in 2008. Ottawa's Hidden Harvest is another great example of an established gleaning group, with the goal of fostering the largest urban orchard in Eastern Canada. They focus on planting and harvesting fruits and nuts in and around Ottawa and host more than 600 volunteers. The Appleseed Collective Revival, the Hamilton Fruit Tree Project, and the Gleaners Guild each have less than 100 volunteers. Both the Appleseed Collective Revival and The Hamilton Fruit Tree Project are registered non-profit groups and harvest thousands of pounds of food each season. The Gleaners Guild is the youngest group, established in 2014 with just over 60 registered volunteers. All five groups have identified their volunteers as their biggest strength, which emphasizes the critical nature of dedicated volunteers to these initiatives. All the groups have vast expansion potential within their cities and each one is working to scale up the amount of food they can harvest each season.

Table 7.

Some key attributes of food recovery groups from which volunteers participated in this research.

	Not Far From the Tree (Toronto)	**Hidden Harvest (Ottawa)**	**Appleseed (Guelph)**	**Hamilton Fruit Tree Project**	**Gleaners Guild (Kitchener)**
Year established	2008	2011	2013	2007	2014
Number of registered volunteers	1200	~609	~75	50	~61
Number of paid staff	2 FT + seasonal PT	2 FT	0	1 PT	0
Status	Project of a Registered Charity (Tides Canada)	Social purpose business	Non-profit	Non-profit	Strictly volunteer
Model	thirds	quarters	thirds	thirds	thirds
Number of registered residential pick locations	1632 trees on 1162 properties in Toronto	140 registered trees	7	31	7 (multiple trees at some locations) + 5 farms
Pounds harvested in 2014	18,687	~2000	~5000	~5000	740
Sell any of recovered food?	Yes	Yes	Yes	No	No
Biggest strength*	Volunteer engagement, community interest, and amount of fruit rescued	Volunteer leaders Online platform	Volunteers come from all sectors of the populace.	Interested and dedicated volunteers.	Volunteer and Community support
Biggest need*	sustainable funding, ever improving efficiency and innovation to keep up with demand	Need more volunteers – was only able to harvest 50 trees in 2014	Logistical support: car pools, etc.	Funding	Partnering with existing groups and organizations to continue to grow
Selected quote**	"Inspiring Torontonians to harvest, share, celebrate, and steward the bounty from our urban forest"	"By …sharing the fruit…around our city, we seek to make good use of local food and inspire community members to plant trees for tomorrow which will feed us as well as mend our environment."	"Shar[ing] the bounty with Guelph soup kitchens and food banks."	"Inspire[ing] people to protect and enhance [the] environment through leadership, education and advocacy"	"Sharing and community building through harvesting surplus food from residential yards, community gardens, and local farms!"

*As identified at the 2014 *Cross-pollinating Canadian Tree Harvesting Organizations* meeting

**Selected by author from group websites

Chapter 3. Methods

3.0 Overview

This chapter will begin by briefly describing the methods used in other studies. Following that, the methods chosen for this study will be discussed, concluding with a detailed description of how this study was carried out and analysed.

To begin with, a review of the literature on food recovery and gleaning took place. The following table presents the results from a PRIMO search using three separate search terms: 'gleaning', 'food recovery', and 'food rescue'. These articles span the time period between 1994 and 2013 and are not exhaustive of the research conducted on each topic. Instead, they are a sample of articles where these specific terms are utilized. With that said, the research utilizing these three search times is not extensive. Several of the qualitative methods described in these examples are utilized in this study, and the rationale and methodology chosen are explained in detail.

Table 8.
A sample of results of peer-reviewed, academic articles from PRIMO search using the three search terms: gleaning, food recovery, and food rescue.

Primo: Gleaning				
Study	**Researcher Field**	**Method**	**Contribution**	**Gaps identified**
Edwards & Mercer (2007). Gleaning from gluttony: an Australian youth subculture confronts the ethics of waste. *Australian Geographer*, 38(3), pp 279 – 296.	Geography (food waste)	Qualitative, ethnographic/phenomenological study and Interviews with 30 participants	Described and analyzed the Freegan subculture	The future of Freeganism; other forms of Freegan activities
Hoisington et al (2001). Field gleaning as a tool for addressing food security at the local level: Case Study. *Journal of Nutrition Education*, 33(1), pp 43-48.	Public Health	Mixed methods: Case Study – Pierce County Quantifying the harvest	Gleaning as an approach to household food security is successful: improvements in food access and dietary adequacy for participants.	Data on how gleaned produce impacts family diets. Motivations based on race, ethnic affiliation, family size, income.

Primo: Food Recovery				
Study	**Researcher Field**	**Method**	**Contribution**	**Gaps identified**
Phillips et al (2013). Understanding the sustainability of retail food recovery. *PLOS one*, 8(10), p e75530.	Computer Science	Quantitative: quantifying the sustainability of food recovery.	Food recovery can help mitigate hunger, as long as there is sufficient participation from donors and funding to perform pickups of food.	Need to address nutrition
Eikenberry, N. and Smith, C. (2005). Attitudes, beliefs, and prevalence of dumpster diving as a means to obtain food by Midwestern, low-income, urban dwellers. *Agriculture and human Values*, 22(2), pp 187 – 202.	Food Science and Nutrition	Mixed Methods: Focus groups with low income consumers. Survey, and semi structured interviews.	A major finding of this study is that dumpster diving is prevalent among low-income urban dwellers as a way to obtain food within their communities	Information on the ways in which low-income people procure supplemental food, especially when such ways are socially unacceptable.
Primo: Food Rescue				
Study	**Researcher Field**	**Method**	**Contribution**	**Gaps identified**
Schneider, F. (2013). The evolution of food donation with respect to waste prevetion. *Waste Management*, 33(3), pp 755-763.	Waste Management	Qualitative: Historical overview based on a review covering a large array of literature from nutrition, health and social development, primarily European	The donation of edible food to social welfare services is a well-established food waste prevention measure	Data about amounts and composition that could be used for assessing the environmental or economic impact.
Poppendieck, J. (1994). Dilemnas of emergency food: A guide for the perplexed. *Agriculture and Human Values*, 11(4), pp 69 – 76.	Sociology	Qualitative: Interviews and participant observation from 12 states.	Explores history of advocates' involvement with emergency food, assesses the strengths and weaknesses of emergency food programs from a social justice standpoint, and offers some guidelines for action.	

3.1 Methods used in other studies

Edwards and Mercer (2007) performed an ethnographic/phenomenological study. Ethnography is about telling an authentic story through the cultural lens of a group or community

(Fetterman, 1998). An ethnographer observes and describes the shared experiences and behaviours of these groups (Creswell, 2013; Reeves, Kuper and Brian, 2008). This often involves participant observation where the researchers immerse themselves into the lives of the participants, often over an extended period of time (Creswell, 2013). This immersion into the setting of the participants is a great advantage to researchers as it can help to build a very rich understanding of the social context that may be hidden from the general public (Creswell, 2013; Reeves, Kuper and Brian, 2008). Phenomenology describes the essence of an experience by describing what all participants have in common, therefore defining a 'phenomenon' (Creswell, 2013). In interpretive phenomenology, the researcher interprets the experiences of the participants and tries to uncover deeper meanings from their narratives (Maggs-Rapport, 2000).

Narrative research is often research that is exploring the life of one individual, event, or series of events, such as in a biography. Data collection can occur through interviews with the subject of interest and others. Other resources can be used to help deepen the understanding of the subject and is presented as a 're-storying' of the themes and stories that were revealed (Creswell, 2013, p 79). Most often, data is presented temporally with the goal of understanding how humans 'enact their lives through stories" (Sandelowski, 1991, p 163).

A case study approach examines one or more examples or cases in a bounded system, and often involves multiple sources of data. Using this approach, the research can either be centred on the case itself or on an issue that is explored through the case study. This type of research is often analyzed through detailed descriptions of the case(s) (Creswell, 2013). Ethnography is an example of one approach to conducting a case study.

The literature on food security and emergency food providers is extensive but there is far less research exploring the food recovery groups who provide food to these institutions. In November 2014, the first official meeting of Canadian fruit tree projects took place called *Cross-pollinating Canadian Tree Harvesting Organizations*. Representatives from twelve fruit tree projects were in attendance, as well as representatives from one U.S.-based group. The purpose of the meeting was to share knowledge and information about coordinating and managing these sorts of food recovery projects. Some of the project founders and coordinators felt that there was enough interest from new projects, and enough experience from established projects, to be able to really benefit from a knowledge-sharing session. The event resulted in many of the project

representatives becoming members of the online knowledge sharing forum, *The Fruit Roll-Up*. This forum is designed for ongoing inter-group communication, and was also offered as a platform for participant recruitment for this study.

3.2 Methods used in this study

This section will describe the methods used to help meet study objectives: i) to profile five urban food recovery groups in Ontario and ii) to understand volunteer motivations for participating in these food recovery efforts and iii) to explore volunteer perceptions of the contributions of these groups to CFS.

True ethnographic research would have required extensive participant observation during gleaning activities. Due to the timing of the data collection (winter / off-season) this was not possible. With that said, this study seeks to understand the motivations of volunteers and their perceptions of the ways that food recovery groups contribute to CFS. In this way, the off-season timing was not a significant limitation.

For this study, a case-study approach profiling volunteers from several organizations in the province of Ontario was the method chosen. This was done using a primarily inductive, interpretive phenomenological approach. To better understand volunteer motivations, it was important to explore the experiences and perceptions of the volunteers. According to Smith and Osborn (2008), this involves a double hermeneutic where "the participants are trying to make sense of their world [and] the researcher is trying to make sense of the participants trying to make sense of their world (Smith & Osborn, 2008, p 53). The 'interpretive' aspect comes into play when attempting to find meaningful themes and interpret deeper meanings within the texts. A good interpretive phenomenological analysis asks the question, "Do I have a sense of something going on here that maybe the participants themselves are less aware of?" (Smith & Osborn, 2008, p 53).

Data collection took place from January 2015 to March 2015. All study materials and methods were approved by the University of Waterloo, Office of Research Ethics. In order to meet the second objective: to understand volunteer motivations for participating in these food recovery efforts, volunteers needed to be recruited and interviewed. Using a purposive sampling strategy, the first recruitment call was sent via email to food recovery group coordinators for the

following groups: The Appleseed Collective Revival, The Halton Fruit Tree Project, The Hamilton Fruit Tree Project, Hidden Harvest, and Not Far From the Tree. Volunteers for the Tri-Cities Gleaners Guild were emailed directly. Next, a shortened version of the recruitment letter was posted using social media with an invitation to connect for more information about being interviewed.

Data were collected in the form of interviews with 11 volunteers, one program manager, one dumpster-diver, and three farmers. Fourteen of the interviews were done in person (six in Toronto, and eight in Kitchener), one interview was done over the telephone (Hamilton), and one was done via email exchange due to interviewee preference. One of the respondents was not a volunteer for one of the aforementioned food recovery groups, but identifies as a 'dumpster-diver'. She heard about the research through social media and wanted to contribute. She was included after some consideration because dumpster-diving is a form of food recovery and her testimony provides valuable insights into food recovery motivations and contributions to CFS.

During this recruitment period, further data was collected in the form of an online survey hosted by Survey Monkey® consisting of primarily demographic information. Several open-ended questions were posed at the end of the survey to get basic information about motivations for volunteering for a food recovery group from people who were unwilling to be interviewed, but who were willing to complete a survey. Due to financial constraints, a longer, more in depth survey was not possible.

Demographic information is an important dimension of this research. The demographic information is used to compare volunteers to the *General Social Survey - Giving, Volunteering and Participating* that is carried out by Statistics Canada every three years. This is one way of identifying whether there are any defining characteristics for food recovery volunteers that differ from the general Canadian volunteer population. The survey link was distributed in the same way as the initial request for volunteers for interviews (email, social media). For in-person interviews, participants completed a hard copy of the same demographic information survey.

In-person interviews were conducted in the location of choice of the interviewee, arranged by phone or email correspondence. Interviews in Toronto took place in four public cafes, one at Ryerson University and two in the homes of participants. Kitchener interviews took

place as follows: two in public cafes, three in the homes of either the researcher or the participant, and two on the University of Waterloo campus.

With the exception of the email interview, participants were not given the questions in advance. A semi-structured approach was undertaken, with a list of questions in no particular order. The conversation was allowed to flow naturally, rather than in a prescribed manner. In this way, the order of the questions varied from person to person, but every participant was asked roughly the same set of questions by the end of the interview.

Data from the hard copies of demographic surveys from in-person interviews was promptly filed in an excel spreadsheet on the researchers computer and wav files were downloaded from the Smart Phone to a laptop computer. Interviews were dictated using the voice recognition software and reviewed for accuracy. Demographic information was compiled in excel.

A mixed methods approach was used for data analysis. Demographic information was compared to the *General Social Survey – Giving, Volunteering and Participating* to determine similarities and differences of study participants to national volunteers (Statistics Canada, 2009). Based on the small sample size, it is somewhat artificial to use percentages which imply a certain degree of generalizability. With that said, results are provided using “N” for the total number of participants for a given question and “n” for the number of respondents in any sub-category or theme. Percents are provided only as a means of illustrating responses within this small group of volunteers, and are not meant to be used as a generalization of all food recovery group volunteers.

For text analysis, four categories were used to group interview questions prior to conducting the interviews: motivations, volunteer experience, food literacy and learning, and perceptions/contributions of food recovery. These categories helped to refine the interview questions to best meet the study objectives.

During transcription, key themes were identified. These themes were used to group together statements and ideas throughout each interview. Categories and themes are explored in detail in the next chapter. Motivations and volunteer experience are analyzed as key

contributions to the recruitment and retention of food recovery volunteers. The theme of motivations is one of three primary objectives of this study and contributes to the understanding of both recruitment and retention. Since these initiatives depend almost entirely on volunteers to be successful, it was felt that exploring the volunteer experience to some degree would provide some insights about volunteer retention. The themes of food literacy and learning, and perceptions of food recovery, are explored in detail to establish any commonalities amongst volunteer perceptions. These questions were designed to help understand volunteer perceptions of how their food recovery groups contribute to CFS. A detailed description of the coding process is described below.

3.2.1 Coding methods

According to Hay (2010), semi-structured interview questions should be content focused. In this case, interview questions were created and categorized to maximize the potential to meet research objectives (Appendix A). The four categories used were motivations, volunteer experience, food literacy, and perceptions of food recovery. These categories were initially used to help conceptualize both the motivations for volunteering and volunteer perceptions of the contributions of food recovery to CFS.

All respondents were given an alphanumerical code before proceeding to code transcript text. Questions were colour coded by their pre-determined categories (motivations, volunteer experience, food literacy, and perceptions). Using the theme '*motivations*' as an example, all text from the transcripts that was related to question one was highlighted in grey. Then, all the grey text was copied into a separate document, using the assigned alphanumeric codes to keep quotations separated by respondent. Once the new document with all *motivations* text was completed, the grey highlighting was removed.

The next step was to begin to unveil themes from within the text. For example, if a respondent said 'I grew up on a farm' or 'I grew up with a huge garden', that text was highlighted with a unique colour. A new colour of highlighting was used for each theme that emerged. Once the entire document was coded by colour for each unique theme identified, the number of unique respondents per theme was tallied (Appendix B). Each of the remaining categories (volunteer experience and food literacy) was completed as a separate document (Appendices C, D). For questions six through ten, a similar colour coding process was used for

each question to address the third research objective: to explore volunteer perceptions of the contributions of these groups to CFS (Appendix E).

3.2.2 Triangulation

Triangulation in human geography helps to alleviate bias, and allows a better degree of confirmation and completeness in the data analysis (Fetterman, 1998; Yeasman & Rahman, 2012). A weak methodological triangulation is used through a comparison of themes expressed in the interviews and online surveys. These themes were also compared to organizational websites to see if organizational messaging is aligned with volunteer motivations. Transcript verification was also used with several volunteers who were given their selected quotations to verify their accuracy.

3.2.3 Dissemination

The completed thesis will be shared via email with all research participants who requested a copy. It will also be posted in the 'Local Research' section of the Waterloo Region Food System Roundtable's website. An edited version will be submitted to appropriate journals for consideration for publication. There is also the potential for paper or poster presentations at various applicable future events such as research forums and conferences.

3.3 Limitations

Access to the volunteer population of food recovery groups for the groups listed above was limited to those with email access and/or social media accounts. This seemed a small limiting factor because each of the food recovery groups profiled uses email as their primary source of communication with their volunteers. With that said, this type of communication can ultimately exclude some of the more marginalized members of a community who do not have regular or consistent access to computers or social media.

Unfortunately the number of respondents was small – 16 interviewees and 14 survey respondents in total. This limits the kind of analysis that can be done and also limits the generalizability of the results. While this study provides a glimpse into the volunteer experience, a true ethnographic study spanning an entire harvest season would likely result in a richer narrative on the nature or typology of those participating in food recovery in the form of gleaning.

Chapter 4. Results and Discussion

4.0 Making Meaning of the Findings

As urbaculture activities grow and expand throughout urban spaces, urban food recovery also increases in popularity, including gleaning. There are other forms of food recovery, such as dumpster diving, and initiatives which rescue food from restaurants and retailers that would otherwise go to waste such as Second Harvest in Toronto and Food Not Waste in Kitchener-Waterloo. Beyond such extremes as dumpster diving, there is an ideological middle ground that constitutes the majority of gleaners today.

In the following chapter, the data from the interviews and surveys is outlined and discussed. First, the demographic information for all respondents (interview and survey) is described. Demographic characteristics are reviewed to compare the differences between this group and the general Canadian population of volunteers. Following the demographic comparison there is a discussion about the study findings on the motivations of volunteers. Finally, there is a discussion about how this study contributes new knowledge about the contributions of food recovery groups to CFS. This discussion includes a section outlining some of the apparent contradictions that are present when viewing food gleaning as a way to improve CFS. 'Contradictions' in this context refers to those actions or activities that aim to accomplish something positive, but may be having another undesired affect or impact. For example, some food recovery groups aim to support and improve the food security status of their communities by donating a portion of their harvest to emergency food providers and social service organizations. And yet, accessing food through emergency food providers is in direct conflict with the definition of CFS which is: "[A]ll persons in a community having access to culturally acceptable, nutritionally adequate food through local non-emergency sources at all times" (Community Food Security Coalititon, 1997, p 4). This is just one of several apparent contradictions discussed later in the chapter.

4.1 Demographics

A total of 16 interviews were conducted from January 2015 to March 2015 with the following informant types: 11 volunteer gleaners, three farmers, one dumpster-diver, and one

program coordinator. One farmer preferred to answer interview questions in written format rather than in-person. Survey data (mostly demographic) was also collected from an additional 14 volunteer gleaners (surveys and interviews, N=30). One farmer did not provide any demographic data (demographic date, N=29).

For the surveys, six males and eight females participated. This was more evenly distributed than the in-person interviews, of which five of the participants were male and 11 were female. The age distribution has representatives from every age group; however, the 35-44 year old group is the dominant group at n=11 (38%) of the participants (Figure 4).

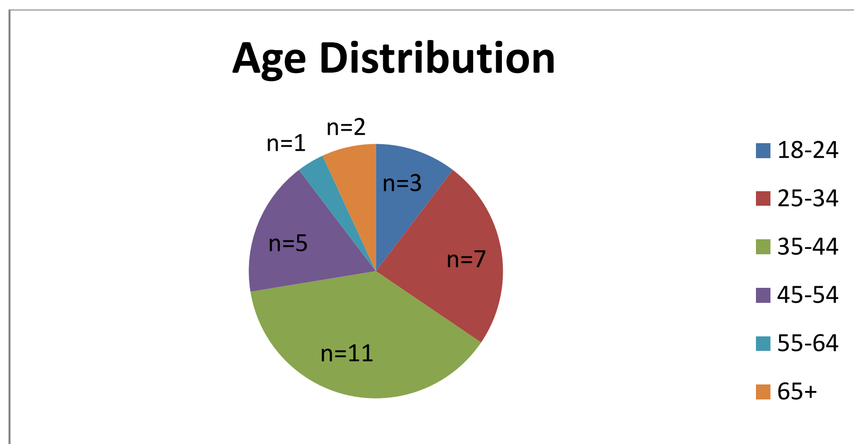

Figure 4. Age distribution of the 29 participants who provided demographic data.

The relationship status and number of children in the home of all participants are outlined in Figure 5. Married or common law dominated with n=16 (55%), followed by single or never married at n=8 (28%), and separated or divorced at n=5 (17%).

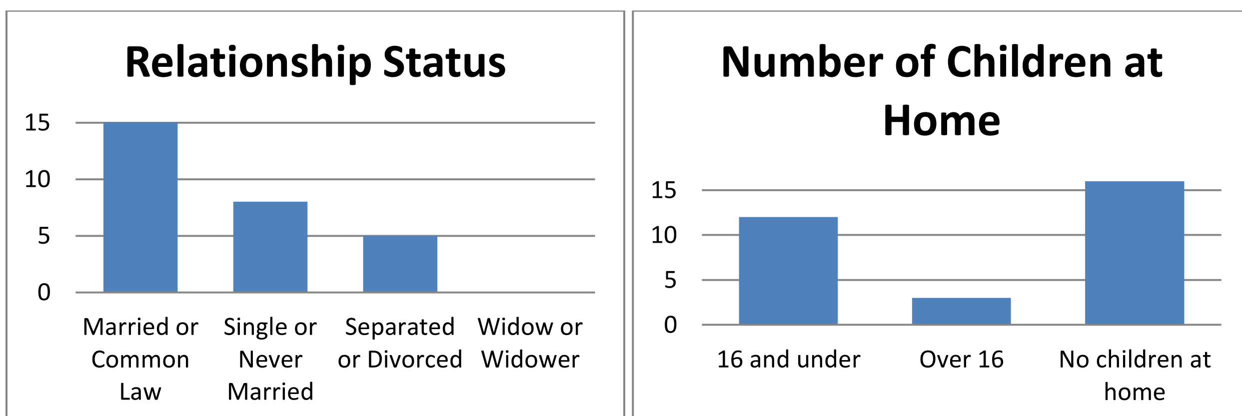

Figure 5. Relationship status and number of children in the home for each of the participants.

Participants were overwhelmingly university educated (n=19 or 66%), followed by some post-secondary education (n=6 or 21%), and the remaining n=4 (14%) with a post-secondary diploma. Household income also varied, with the $60,000-80,000 income being the dominant category (n=8 or 28%), followed by the $20,000 – 40,000 thousand category (n=7 or 24%), $40,000 – 60,000 thousand (n=6, 21%), over $100,000 thousand (n=5, 17%). Finally, the less than $20,000 thousand category and the between $80,000 – 100,000 thousand category came in last at n=2 and n=1 respectively (Figure 6). In terms of religious attendance, 93% (n=27) of respondents do not attend, whereas only one respondent replied yes to 'attended occasionally' (4%) and one respondent replied yes to 'mostly weekly' (4%).

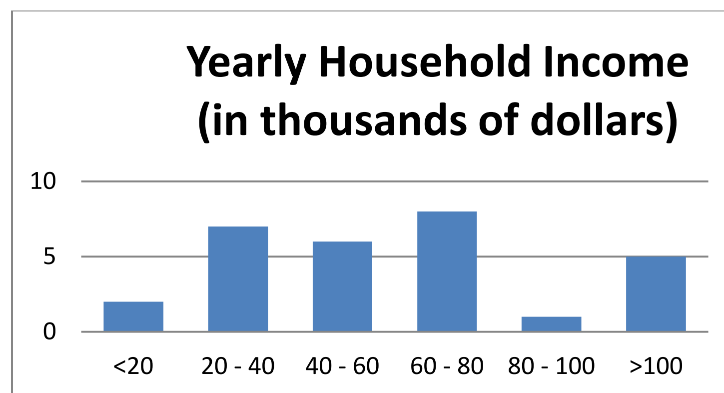

Figure 6. Number of respondents in each category of 'yearly household income', in thousands.

While this study does contribute new knowledge towards understanding volunteer motivations for joining these initiatives and their perceptions of the contributions these groups makes, it is not a representative sample of food recovery volunteers and therefore the following comparison applies only to the study participants. With that said, the volunteers who participated in this study share similarities with the majority of Canadian volunteers, but they also present a few key differences. According to the 2007 report released by Statistics Canada, **"**the highest rates of volunteering [in Canada] were found among young Canadians, those with higher levels of formal education and household income, those with school-aged children in the household, and the religiously active" (Statistics Canada, 2009, p 10). Results from the survey completed by Statistics Canada in 2010 and 2013 revealed the same patterns (Vezina and Crompton, 2012; Statistics Canada, 2015a). The ways in which these volunteers are similar to the Canadian volunteer population are: level of education and employment status.

There are 15 categories of volunteers recognized by Statistics Canada for their report on Canadian volunteers. The highest rates of volunteering in Canada occur in the following four sectors: sports and recreation, social services, education and research, and religion. The top three sectors with the most volunteer hours are: religion, sports and recreation, and social services. Food recovery falls primarily under the category of social services (S. Ir, Statistics Canada, personal communication, June 9, 2015). Even though social services is a top category for Canadian volunteers, food recovery is not a well-attended area. Of the nearly 5 million volunteers in Ontario in 2007 aged 15 and over, less than 1,800 were volunteering for the five food recovery organizations profiled in this study, or 0.05%. Further, 62% of social services organizations report difficulty in recruiting volunteers (Imagine Canada, 2006). With such small numbers of volunteers and with the difficulties of recruiting and retaining, a positive volunteer experience becomes even more critical.

One of the biggest differences between food recovery volunteers and the general Canadian volunteer population is religious attendance. Canadians who attend weekly services are more likely to volunteer, and to volunteer more hours, than those who do not. Of the food recovery respondents, 93% (n=27) do not attend religious services. Religion and spirituality were not explored in this study, but it could be an interesting area for future research since this demographic appears to be so different from the general Canadian volunteer population.

Interview questions were divided into pre-determined categories to best meet the research objectives. The pre-determined categories are: volunteer motivations, volunteer experience, food literacy and learning, and perceptions of food recovery groups as they pertain to CFS.

Only one of the five ‘perceptions’ questions was asked in the survey. The farmers and program coordinator responses were only included in the ‘perceptions’ results, since their respective roles (between volunteers, farmers and program coordinator) were felt to be too different to compare in other areas. Eleven volunteers and one dumpster diver were included in the section on motivations.

4.2 Volunteer Motivations

All interviewees and survey respondents were asked about their reasons for volunteering for their respective food recovery groups (N=26). This question was designed to meet the second

objective of this research: to understand volunteer motivations for participating in food recovery efforts. A summary of the motivational themes identified by food recovery volunteers is provided in Table 9.

Table 9. A summary of the motivational themes identified by food recovery volunteers.

	12 Interviews	**14 Surveys**	**TOTAL of all respondents (N=26)**
MOTIVATIONS: Concerned about food waste / environmental concerns*	n=10	n=10	n=20 (77%)
Community building/support*	n=6	n=6	n=12 (46%)
Free food*	n=4	n=5	n=9 (35%)
Social aspects	n=7	n=3	n=10 (39%)
Childhood farm/garden	n=6	n=1	n=7 (27%)
Childhood volunteering	n=6	n=0	n-6 (23%)
Skill building/ job related	n=4	n=1	n=5 (19%)
Personal responsibility	n=4	n=1	n=5 (19%)
Had the time	n=3	n=1	n=4 (15%)
Needed an alternative	n=4	n=0	N=4 (15%)
Traditional skills	n=3	n=0	n=3 (12%)
Local food	n=2	n=0	n=2 (8%)

* Top three motivators with near consensus between interviewees and survey respondents.

In the wider Canadian volunteer population, the following reasons were most frequently cited as reasons to volunteer: “to make a contribution to the community, to use skills and

experiences, and having been personally affected by the cause the organization supports" (Statistics Canada, 2009, p 10). Some additional reasons were to "explore strengths, to network with or meet people, or because friends volunteered" (Statistics Canada, 2009, p 10). Several of these examples are also primary motivators identified by food recovery volunteers (Table 10).

The following motivations were identified by food recovery volunteers in this study: concerns about food waste and the environment, community building and support, free food, social engagement, childhood experience of food growing and/or volunteering, skill building and job prospects, personal responsibility, having time to fill, regaining traditional skills, seeking an alternative, and interest in local food. None of the respondents had a single motivating factor, but rather, several factors which all contributed to their choice to volunteer for a food recovery group.

The three motivators that had the most consensus between interviewees and survey respondents were concerns about food waste, community building and support, and free food (Table 10). These motivations are aligned with the top foci found on organizational websites: waste reduction, community building, improved access to local foods (Table 5). The extent to which volunteers have responded to organizational messaging versus how much the websites cater to the existing inclinations of the volunteers is unclear. In any case, volunteer motivations appear to be well aligned with organizational priorities.

Concerned about food waste / environmental concerns

Even though respondents all had multiple motivators, a concern for food waste or the environment was overwhelmingly the most widely cited. A total of 20 respondents (ten of 12 interviewees, and 10 of 14 survey respondents) stated that they were concerned about this issue, meaning that 77% of participants were motivated by a concern about food waste or a concern for the environment.

> A2: "I think it's kind of obscene, we have so much food and there's people going hungry, and kids going to school without breakfast, you know, it's just not right… I think it's a really neat idea the [food recovery group] has the idea to glean to make use of all the food that's produced and goes to waste."

> A4: "The idea of making the most of what we have, there's so much food that just goes to waste, and people not making use of food that's in their very own backyards… I would say food waste was the biggest reason why I wanted to take part."

> A7: "I was living at a friend's home and he had a crab apple tree and, you know, we would always just clean up the yard, and I thought, 'what can we do with these crab apples?' and so I recommended that he register his home as a candidate for [food recovery group]…"

> A9: "I just thought it was an excellent way to stop waste in the city."

> A11: "…going on farms and collecting leftover food and then finding of ways of using it, that was the first time I heard of it and I think it's a really good idea."

> A13: "I got involved in dumpster diving it was shocking to see how much food there is, and I was like, there's so many hungry people… how can we be throwing…away so much food, and how can we have so many hungry people in the community? Both don't make sense individually, but then together I was like, are you kidding me?"

> A26: "the great good sense of harvesting and distributing food that would otherwise go unused…"

> A28: "Lots of fruit, veg going to waste, not only in city, but surrounding region that supplied the city."

Several people who were concerned about food waste explicitly stated that they were attracted to the idea of having the surplus food donated to people who need it. There are several other alternative uses for gleaned food. People could simply glean food for themselves, or the unused food could be used as animal feed or compost.

> A3: "[T]he fruit would all come at once and it just rots on the tree which is a shame and it's a waste… I don't think I knew about the charitable aspect I guess the thing that spoke to me initially was that the fruit wouldn't go to waste 'cuz it just seems like a real shame you know there are people who are hungry in the city."

> A8: "…gleaning and recovering food that would otherwise go to waste was worthwhile… there's this huge amount of edible food that appears and disappears without people realizing that it's there at all… so harvesting some of that and putting it to use either for ourselves or for people that might not get fresh fruit and vegetables otherwise, certainly appealed."

> A20: "I love going on picks, and I love that we are reducing waste and feeding people, and ourselves, in the process."

Several respondents commented on the condition of some of the food that they believe is getting wasted, and how food doesn't have to be visually perfect to be worthwhile. This speaks to a broadening awareness of food marketing and aesthetics that have little to do with quality or nutritional content. In part this is due to the influence of some European countries, such as France, who began the 'Inglorious Food' campaign in early 2014 (The Huffington Post Canada, 2014). This movement sells imperfect looking fruit and vegetables at a reduced cost so that they are consumed rather than thrown out.

> A17: "I am quite concerned about food waste, and although I understand that it is a difficult problem, I believe that it is one that can be partially addressed through volunteers… since getting involved with community gardening, and volunteering at some local farms, I have become aware of the enormous waste in our food system. We grow imperfect vegetables at our community garden, but they are still edible and tasty. But similar food in the commercial market gets discarded. I do not necessarily believe that this food needs to go to charity; I just feel it should not go to waste."

> A10: "[I]t bothers me that it'll just get thrown in the garbage when it's perfectly acceptable food…"

Three of 12 interviewees and one of 14 survey respondents (n=4 or 15%) specifically cited a concern for the environment as a motivating factor for volunteering with a food recovery group. Food waste (as an environmental concern) was the main indicator for one of them.

A1: "When we are outside, we have a chance to develop an environment awareness of the things around us. It is also very educational and if there is a good leader you can learn a lot about the food you are harvesting."

A10: "… so I do have a feeling about environment and how we should not be doing things like throwing things out the window just because it's in the car and we want a neat car, so the environment aspect of it… global warming denial all that kind of stuff just bugs me, so concern for the environment [is a motivator]."

A13: "…and you know like here we are contributing to like a better environment because this isn't riding in a landfill."

A17: "…concerns about the environment…"

Support/ build the community

Community building and support was the next most widely cited motivating factor. A total of 12 respondents (six of each interviewees and survey respondents), or 46%, said this was a personal concern or priority.

A3: "… it is community building and it is teaching about sustainability and self-sufficiency."

A6: "… and I liked that people just came together too … [it] sounds really cheesy but I really like doing things for my community… bettering the community."

A7: "…because I was aware that a portion of the food goes to the homeowner [and] a significant portion goes to the community food banks…"

A19: "… the fact that we help people in need while sharing important know-how with people in the community."

For some, the desire to give back to the community was based on personal experiences of being in need. For others, it was knowing that they had the means to give back and so they did so by giving their effort and time. And for others, there was a connecting element for them; in other

words, they felt more connected to the people around them as a result of volunteering for a food recovery group.

> A2: "…more involved with your community, more involved with your food, more involved with our impact as humans on our community… and then to my understanding a lot of it goes to places like soup kitchens or whatever so it's sort of like a kind of double win type of situation."

> A9: "…I was poor white trash and northern Manitoba and I think that's why a lot of us in my family do community work, it's because we've been on the other side of it where we've been poor, you know, so if you're poor it changes your perspective."

> A13: "… it broke out some of the barriers of what I thought volunteering with, like, I always thought it was 'us helping them', but, like, I realized it wasn't. It was more of a community thing. It's like, everybody has to recognize and address the problem of poverty and hunger, so for me it actually did the total opposite of what I expected it to do and challenged and made me want to do more."

> A26: "… the orientation of the volunteers toward social justice… to increase food security and sovereignty in our community."

The thirteen identified motivating themes are divided into intrinsic and extrinsic factors (Table 10). An intrinsic motivator is one that provides satisfaction, enjoyment or meets some other inherent interest; in other words, "the absence of an external award" (Finkelstein, 2009; Cecere, Mancinelli and Mazzanti, 2014, p 164). An extrinsic motivator is one that provides some external value or reward. Based on these definitions, two of the top three motivators are intrinsically based (community building/support, concerns about food waste) and one is extrinsically based (free food). In the case of 'needed an alternative', respondent comments identified both intrinsic and extrinsic factors. For example, respondent A3 said, "I was sick of the corporate world." In this case, this is an intrinsically motivated activity, or an activity that provides an internal satisfaction or enjoyment rather than an external reward. On the other hand, respondent A9 is extrinsically motivated as evidenced by the statement, "it's because people

actually want to be active about what they put into themselves". This statement suggests that they expect an external reward of food that they deem to be acceptable.

Table 10. Comparing Food Recovery volunteers to the Canadian volunteer population, and displaying motivators as intrinsically or extrinsically driven.

Motivations of Food Recovery Volunteers	Motivations of Canadian Volunteers	Extrinsic	Intrinsic
Obtaining free food		X	
Enjoying the social aspects	Friends volunteered	X	
Skill building/ job related	Network with or meet people Explore strengths	X	
Re-skilling / Learning traditional skills	Use skills and experiences		X
Had the time / needed something to do			X
Concerned about food waste/ environmental concerns			X
Childhood connection to volunteering			X
Childhood connection to farm/garden	Having been personally affected by the cause the organization supports		X
Felt a personal responsibility			X
Supports local food			X
Community building/support	Make a contribution to the community		X
Needed an alternative		X	X

Understanding what drives volunteers to take part in these initiatives is an important way for organizations to target their messaging and goals. Balancing messaging aimed at intrinsic factors such as personal responsibility and contributing to your community, with external recognition and rewards, could be the key to recruiting and retaining critical volunteers. In order

to accomplish this and to create an effective recruitment and retention strategy, organizations need to find a way to understand their unique volunteer demographic. The five food recovery organizations profiled in this study seem to have effectively targeted their website messaging which very closely aligns with the motivations of volunteers that were identified. These food recovery groups are also uniquely positioned in that they all provide the volunteers with part of the harvest which for some, acts to satisfy their extrinsic motivators.

There are a number of other motivating factors identified by respondents which are outlined below. They are: social dimensions, childhood connection to volunteerism, childhood connection to growing food, skill building and job prospects, feeling a personal responsibility to contribute, having time, looking for an alternative, regaining lost skills, environmental concerns, and an interest in local food.

Social dimensions

A total of 10 respondents (seven interviewees, and three survey respondents), or 39%, were motivated by some sort of social factor. For most of the volunteers, the motivator was the opportunity to meet people. Volunteering for a food recovery group is not the only way to meet new people, so this need to connect with others is combined with other motivating factors such as a concern for food waste. These activities are still, in many ways, fringe activities, utilizing a very small percent of the volunteer population. And yet they are taking place all over the world and increasing in numbers, especially in the context of developed countries. The need to connect with others socially over food and food related activities suggests that these volunteers are creating a new food culture. This new food culture is one that challenges the modern realities of sitting in front of a computer all day and eating prepared foods in front of the television all evening. It is a way of rebelling against our modern culture which, in many ways, promotes isolation from other people.

> A2: “I wanted to meet some different people ‘cuz I'm pretty isolated sometimes and my work.”

A4: “I needed something to do and I needed something outside of the house, but not just outside of the house, I needed something outside of myself, and what I had normally done, and outside of the people that I had normally worked with…”

A5: “… it's really interesting to me to meet different people.”

A6: “I do like meeting people… I do really like the social aspect.”

A7: “…living in Toronto I found that… it’s difficult to meet neighbours when you're not outside, so when you're outside for an extended period of time, people will want to chat with you, like, I used to meet my neighbours by shoveling the walkway.”

A9: “But it was a great way to socialize… the thing is at 30 [years old] you don't want to go to the bar, so if like, I would rather go and talk to somebody about making pies.”

A10: “I really enjoy working with people, old farts like me getting in with the young stuff is kind of what I enjoy.”

Free food

A total of nine respondents (four interviewees, and five survey respondents), or 35%, stated that they were motivated in part by the fact that they knew they would be able to take some food home after the harvest or that they would be saving money because they would be getting some of the harvest. As mentioned previously, taking home some of the harvest acts as an extrinsic motivator. Often, the volunteers know what is going to be harvested and can choose to participate based on their personal preferences. This adds an additional element of choice or control that is not part of other types of volunteering.

A5: “…I kind of knew that the crop got split with the homeowner and the volunteers…”

A6: “I would say food waste was the biggest reason why I wanted to take part … and getting some food for myself was a bonus.”

A9: “… saving us money and it was doing good deeds…”

A13: “… it's delicious and it's free.”

A18: "[T]here's a measurable benefit to volunteering with [food recovery group]. I get fruit. Free fruit in exchange for my volunteer work."

Childhood connection to growing food

A total of seven respondents (six interviewees, and one surveyee), or 27%, had some sort of childhood connection to food production or farming.

A4: "[I] grew up in southern Saskatchewan in a small town there, and growing up, my dad always had a huge garden… if I had the space to grow a big garden, I would, because I've seen it… my dad does it now… when we were kids [the garden] was feeding a family."

A9: "I was in charge of the garden when I was growing up, that was my thing, you know, I had a quarter acre of garden and from the time I was about six, I was doing stuff in the garden. I'm from the last of the big Prairie farm people, we lost our farm in '57."

A10: "I grew up on a farm … so it does take me back to my farm boy days."

A11: "I have all kinds of memories of collecting [food] even from when I was a kid on my own, collecting those little apples, little crab apples… so I have personal experience doing that… I was also born in a part of Russia where there's a lot of wilderness and people still do some of the traditional things that they did in the past when it comes to food, they still have some traditional food sources… the other thing is my grandfather would often go to …the forest in Siberia to gather mushrooms, and I still have, like, memories of being a kid and he would come back with these huge bags of mushrooms, wild mushrooms… and then he would dump them in the bathtub and my grandmother would wash all of them so I remember the smell and the little bugs and stuff, so there's that. It's a really good memory [nods] It's a really good memory."

These memories place food growing at the heart of a cultural heritage that is slowly being lost. Between 1951 and 2001, the average farm size more than doubled in Canada from 100 acres to nearly 250 acres (Canadian Agri-Food Policy Institute, 2005). By 2011, this number increased to an average farm size of 778 acres (Statistics Canada, 2015b). Huge tractors work hundreds or thousands of acres of land where the family used to work together along the rows. Even though

the landscape has changed, the memories remain, and a certain kind of romanticism has replaced the reality of hard physical labour. Milk, meat and vegetable producers are all using this romantic notion to sell their products. They use the picturesque farm scene on the front of their packaging: the peaceful looking cows grazing lazily in the sunny, green pasture or the smiling farmer holding a pitchfork gazing proudly at his fields of lush produce while plump chickens peck the ground around his feet.

These images connect us to more than the idea of hard work in the hot sun, bending and hauling heavy containers of field produce. The images help us recover the idea of something that has been largely lost over the years: fundamentally connecting with our food through hands-on experiences, connecting with each other without the modern mess of gadgetry, and breaking bread with loved ones. By purchasing these items with idyllic scenes on the packages, we get a taste of the 'good old days' without the hard work or worries. These are the values that are implicit in modern marketing, and the marketing techniques that foster a kind of nostalgia for some people. For other people, these images paint an idealized picture that represents the opposite of the modern realities faced by most farmers. Modern gleaners, whether a primary motivation is childhood memories or not, are moving past milk carton imagery and participating in activities which satisfy some element of the needs described above.

There are some other reasons people volunteer for these groups which align with the broader Canadian population, such as early volunteering exposure, developing skills, and volunteering out of a sense of personal responsibility.

Childhood connection to volunteerism / grew up with volunteering

A total of six respondents, or 23%, had a childhood connection to volunteerism, grew up with someone in the household volunteering, or started volunteering at a young age.

> A2: "I was really young when I started volunteering."

> A3: "When I was growing up my parents did a lot of volunteering. It wasn't like "okay we're going to the food bank, we're going to serve food", it wasn't like that. My parents were very involved in the … community… so when we were little, I noticed that "oh, they're volunteering", but I thought "oh well, they're not getting paid for this, they're just

doing it for some invested interest", and I think that became part of my learning. That's just what you do, if you were interested in something then you get involved."

A5: "[W]ell my mother always volunteered, we grew up with an understanding that when you know, when you have, well I wouldn't say a lot, it's not that we were wealthy or anything, [but] when you're comfortable you almost have an obligation to give back right…so we grew up with it."

A6: "I guess I grew up going to camp and I volunteered to be a counselor in training and then I guess from there that instilled a kind of want to volunteer and do things to support the community."

A9: "[O]ur family was always very big into church and stuff like that and… it was very traditional in many ways, why not give back?"

A10: "[I]ts in the genes from a very young age… I joined Cubs, and mom was on the auxiliary."

Skill building / job prospects / short term commitment

A total of five respondents (four interviewees and one surveyee), or 19%, used their volunteer experience as a way to gain employable skills, or investigate the organization without a long-term commitment, or for future job prospects.

A3: "… to start building a resume… networking but also putting it on my resume… I was looking for a job."

A4: "[It was an] opportunity to… develop leadership skills."

A6: "I was just trying to make connections, get more involved with people that are actually working in the organization, keep doors open for if I wanted to work for them."

A7: "… being able to explore different options, it was just being able to try new things that I wouldn't normally have access to… volunteering for me just opened up new possibilities to see what was out there without as much of a commitment as if you were to

say, ‘this is what I'm going to train for to do for the rest of my life’… it's partly to build my skills and repertoire.”

A18: “I was looking for a chance to volunteer with an organization that didn't require a long term commitment.”

Responsibility / the right thing to do

A total of five respondents (four interviewees and one surveyee), or 19%, cited feeling a personal responsibility as a significant motivator for volunteering, including one survey participant who felt “middle class guilt” was a motivator.

A2: “I guess I feel that I'm pretty privileged to live in a country where there's a lot of disparity between people who have and have not, and so it's sort of like, it felt like a good thing to do.”

A5: “… when you're comfortable you almost have an obligation to give back, right?”

A7: “I think in the long run, and this is just, like, a personal belief, I think in the long run it's a responsibility of all of us, like our government and our community, is to make sure that we're all taken care of.”

A11: “I feel like it's my responsibility… but then I feel like the way that most people live their lives is very individualistic… Well I think two things, like, over the years that I've really internalized… how I think and feel and who I am… we're all equal and we're all connected, and I think when you really feel that way, you feel a responsibility.”

While the numbers are smaller for the following motivations, some volunteers chose their respective food recovery groups because they were trying to meet a personal need or because they were looking for an alternative to the status quo. Some of the responses were rife with emotion, particularly for those seeking an alternative.

Had time / out of work / needed something to do

A total of four respondents (three interviewees and one surveyee), or 15%, cited having extra time or the need for something to do as a significant motivator for volunteering.

A4: “I was fairly miserable. I hated my job, uh… pretty depressed, and… then I…. let’s see now, almost 2 years ago, I was laid off, and I lost my job… and just something completely different, and because I had been sort of following [food recovery group] for awhile, I was on their email list, and they were looking for a blogger… I was miserable and depressed for a long time and there was this inkling, like ok, maybe if you volunteer somewhere, and just go with something that’s completely outside of yourself, maybe that will make you feel better. And, I mean, it really did, it made a HUGE difference.”

A3: “… fills a creative need that I have.”

A5: “[I thought] this is such a great idea and it looks like so much fun… I finally have time in the day to do this, so why not?”

A18: “I was also under-employed at the time I started volunteering…”

Looking for an alternative

A total of four respondents (15%), expressed a need to contribute to an alternative to the current system, or to their current situation(s).

A3: “I was sick of the corporate world.”

A9: “… it's because people actually want to be active about what they put into themselves and I think there's also a huge paranoia about food issues, like, people have food issues right now, like saying, ‘oh I'm celiac’, and it's like, a lot of people get into this really big health thing, where it's actually not very healthy, like, I look at a lot of people and they're not eating food, they’re *drinking* their food, and I'm like, what's wrong with you?”

A11: “… if you're really critical of this [system] you need solutions and alternatives, and so naturally, it would lead you to that [gleaning] as one of the alternatives to obtaining food in a way that doesn't contribute to the capitalist system, in a way that's free, in a way that doesn't create so much damage, in a way that you feel where your right to food is respected because food is a right, it’s not a privilege, but right now it's treated as a f****privilege.”

> A13: "People always say food security, really, we have more than enough food to feed people, we just don't have the right distribution systems, and for me that was like, the real thing. How can we change the distribution system how can we make it more equal?"

The last two categories that were identified had the least number of respondents. The people who did respond had a lot to say about gleaning as a way to regain lost skills, and about local food, respectively, and their responses were contemplative and spoken carefully.

Regaining lost skills

A total of three respondents (16%), expressed the desire to learn or regain traditional skills that have been lost as motivators for volunteering with a food recovery group.

> A2: "I guess I believe that we evolved on this planet along with all other life forms and uh, our sort of, proficiency with tool use and so on, has allowed us to sort of, separate ourselves more and more from nature, but, like, I think we're losing something in that process or have lost a lot."

> A4: "…and recently my fiance and I have started making vegetable stock because as I said, instead of cutting off the end of celery and put[ting] it in the garbage, I put it in the bag and put it in the freezer, and when I get enough I can use this to make something else that I can eat… you know, all these skills that are grandparents, somehow in a matter of two decades, are just completely wiped out, so I think a lot about that… [it's] just difficult and that at a certain point this notion of buying is better, it's just going to exhaust people, and I think it is exhausting people …because people are just tired, and tired of this constant barrage of 'you have to buy you have to buy you have to buy."

> A7: "… it's just something I'm interested in… especially now that I'm learning more about gardening and seed saving, it's partly to build my skills and repertoire in these areas that I don't think we're really taught anymore… we put so much emphasis on having specific skills in this day and age, but where are we if we can't grow our own food? And so that's part of the motivation of why I wanted to garden and do this [volunteering]."

Local food

Two of 29, or 8% of respondents, mentioned locally sourced food as a personal priority.

> A5: "… but you know we also get an organic food delivery every couple of weeks, as locally grown as possible… we just kind of like that… [The food recovery group] is concerned with harvesting fresh healthy food locally, and then getting it, at least part of the crop, to people who are in need, whereas the big food companies are not at all interested in any of those things."

> A10: "I like the local food business, and I bought knockdown priced food at grocery stores because it bothers me that it'll just get thrown in the garbage when it's perfectly acceptable food, and so the local, helping the local farmers."

Summary

Volunteer motivations are far more complex than simply checking off items in a list of possible motivators. In some cases, responses are imbued with strong emotions, particularly for the top motivators (concerns about food waste, connecting with the community and the social factors) and for those seeking an alternative. All respondents have a web of motivations that led to their decision to volunteer for a food recovery group, and the top motivators are aligned nicely with the messaging on group websites.

4.3 Volunteer Experience

Beyond the initial reasons for volunteering, the volunteer experience is a critical component of volunteer retention. More than half of social services organizations report difficulty in retaining volunteers (Imagine Canada, 2006). Even though there appears to be a good match between what motivates volunteers to participate and organizational messaging, volunteer retention relies heavily on a positive volunteer experience. Eleven interviewees were included in this section about the volunteer experience (N=11). Two of the interviewees were dissatisfied with their volunteer experience. While they still considered themselves volunteers for their respective food recovery groups, they had yet to volunteer again after their initial unsatisfactory experience. Along with the quotes below, volunteers also expressed frustration with the timing of harvests. They stated that most harvests happen on week days during work hours which makes it difficult for them to participate.

A6: "… it was a small turnout and it was kind of overcast, and it was a little bit of rain… I was kind of hoping for a bigger group, so I'm sure on another [pick] I would have, I would say exceeds expectations."

A7: "… my expectation of what it would be like to be there picking was different than what it really was, and it may have just been the combination of people that were there, but it seems like people didn't really want to talk to each other. I think the other volunteer, she was new, it was maybe her second pick… the person leading the pick was a little bit distracted, she was taking some personal phone calls… she did all of her duties… but it just felt like everyone was kind of doing something separate and it wasn't actually very much fun… there was no signage to advertise why we were there, what we were doing, and … I wondered if people thought we were allowed to be there, so I don't know, I guess I was thinking of that, just how it appeared to people on the street."

The other themes for the volunteer experience that were identified from the interview manuscripts are: social dimensions, physical and outdoor dimensions, free food, and spiritual dimensions. Similar to motivations, there was no single factor in any of the volunteer experiences, but rather, several factors which all contributed to a primarily positive or negative impression of their experience as a food recovery volunteer. Even the two food recovery volunteers who had unsatisfactory experiences had something positive to report about their volunteer outing. And yet, the aspects of their experience that they reported as not meeting their expectations seem to have influenced their willingness to return to volunteering, which suggests that a disappointing experience may overshadow any positive aspects experienced. Other volunteers, those who were primarily satisfied with their experience, also had difficulty scheduling volunteer hours on week days during work hours, but they found ways to make it work.

Questions aimed at exploring the volunteer experience(s) were designed to help meet the second research objective by addressing the issue of volunteer retention within food recovery groups. Volunteers may return to an organization repeatedly for different reasons than they originally signed up. The social dimensions are the biggest element of the positive volunteer experience, with 73% (n=8) citing some social factor. The next most cited element of the volunteer experience was the positive physical or outdoor dimensions of the experience, at 55%

(n=6). For 27% of respondents (n=3), taking home some of the harvest was the best part of the experience. Two respondents, or 18% (n=2), spoke about a spiritual element or dimension to their experience. Table 11 provides a summary of responses pertaining to the volunteer experience.

Social dimensions

A total of eight interviewees (73%) reported some sort of social dimension to their volunteer experience, five of which were motivated by social needs to volunteer for a food recovery group. The other three respondents were not initially motivated by social needs, but the social elements were a big component of their positive experience.

> A3: "… while we were picking we shared stories…"
>
> A4: "I just enjoyed it so much… everyone just kind of goes into a sort of meditation I guess kind of state, and they're just quiet and picking and picking and picking and … you're just here for fun, so do what you are comfortable with… and you pick away, and conversation's always kinda lively at first, people exchange recipes or ideas."
>
> A5: "… so they were maybe three of us on the ground moving the sheet around to different places, it was very funny, it was memorable! [laughing]."
>
> A6: "… myself and the other picker introduced ourselves and started talking and then started clipping off the grapes… it was something to do while you're getting to know other people, it also kind of makes pauses in conversations, it takes the pressure off, I get very anxious about meeting new people when I'm by myself, and just to be able to do something that helps the conversation flow… and getting to know other people were the best parts."
>
> A8: "We had some conversations among the different people as we were harvesting, and it was just a pretty decent day out."
>
> A9: "… it was much less sexist than a lot of other organizations… but it was more inclusive, they didn't really care about gender or anything like that, you were just there to

pick you know, and it didn't matter if you were older either… yeah, it felt more inclusive."

A10: "I really enjoy working with people."

A12: "It also provides a great opportunity for sharing – sharing with our communities on many levels – the farmers get to share with us, we get to share with each other, and we get to share with the community… we didn't get many berries at the end, but it was really fun and nice to be outside."

Physical / outdoor dimensions

A total of six interviewees (55%) mentioned a physical and/or outdoor dimension to their volunteer experience.

A1: "My first harvest was a warm sunny day, the leaves were green, the sun was shining. There was a little confusion at the start because we had to find a different harvest location because the place where we met had no more berries. It was a great experience with happy, interesting, people. Everyone seemed comfortable with each other and we were excited to pick berries. We didn't get many berries at the end, but it was really fun and nice to be outside."

A2: "… it was later in the fall so was rather cold, and I remember there was definitely life in the soil because quite a few of the turnips we're scarred by bugs or whatever…"

A3: "We went into the back and we could see this huge tree and you could see, like fruit, like, red, bright red fruit on the tree, and I felt really excited and I thought 'Wow! This is a thing and this is happening!" and everyone was like wow, wow, wow."

A4: "… it's probably a combination of the colors of everything and the sounds that the plants make in the wind and just that whole kind of experience and no doubt for anything as outside being out in the sunlight it just calms you down and it's just this wonderful [laughing] experience."

A8: "… with the gleaning you wind up out of your own space and out of your own head a little bit, where a lot of other volunteer situations you're still going into houses or into a

> rec center or a defined space, or into your fairly typical environments. With the gleaning, you end up being outdoors and sort of in natural spaces more, even in a farmer's field is considerably more natural when you've got the wind and whatever the lighting is doing based on time of day… whether it's raining, all of that stuff is taking you outside of your day to day life… even if you're picking apples in somebody's yard you're still outside, you're still going through motions that you're not normally, so it sort of takes you away from normal 9 to 5."

These responses indicate that there is a sensory element that may be unique to this kind of volunteering. There is a sense of wonder in some of the responses as though their volunteer experience reminds them of some of the sensory pleasures of being outside that have been forgotten. Gleaning is an immersive experience and some responses indicate an awe and respect for the bounty that nature provides.

Obtained 'free' food

A total of three interviewees (27%) felt that a big part of their volunteer experience was that they got to take some of the harvest home with them. Two of these respondents had 'free food' as an initial motivator for joining a food recovery group.

> A3: "… we started picking and right away I tasted one and it tasted like candy and it was warm in the sun that was just so great and everyone was super excited to be picking… it's the tangible things like you will get free fruit…"

> A5: "… apples are really good. I'm very fond of apples [laughing] there's a lot you can do with apples you know you can bake them, you can put them in pies, you can make apple crisp, you can make applesauce… you know those kinds of things… we actually got a lot of mulberries… it was amazing."

> A6: "… towards the end of stuff we divided it up… I was surprised by how much we got."

Spiritual dimension

Two respondents felt there was a spiritual dimension to their volunteer experience.

> A2: "… it's hard to even explain, but I think for me it's [pause], there's some sort of {pause], something spiritual about the natural world. I know a lot of people wouldn't agree with it, but I'm not particularly religious, but I feel it."

> A4: "…I find that very much with being just outside in general, um, more specifically outside where I can be kinda surrounded by plants, and then in the maintenance and growing of plants I find it's just a really nice way to [pause] to calm down… I guess, I don't know, I guess I just, over the years I just got tired of the rat race… and then at some point… I was like, 'what am i doing, I actually hate all this' and so that's the long way of saying, yeah, that's sort of what brought me to something like [food recovery group] because it's taking city life and making it more substantial."

Table 11. Themes derived from volunteer experiences.

Themes
• 73% (n=8) reported some sort of social element to their volunteer experience.
• 55% (n=6) reported a physical and/or outdoor element.
• 27% (n=3) felt that a big part of their volunteer experience was that they got to take some food.
• 18% (n=2) felt there was a spiritual element to their volunteer experience.
• 18% (n=2) reported that volunteering did not meet their expectations.

4.4 Food Literacy and Learning

The interview and survey questions related to food literacy were designed to address the third objective of this study: to identify some of the perceptions of food recovery efforts as they pertain to CFS. Using an inductive approach, responses were grouped into the themes described below. A total of 11 interviewees and 14 survey respondents were asked these questions (N=25). Four respondents (16%) stated that their volunteer experience did not result in new knowledge or

new thinking. All four of these respondents stated that they had significant prior experience with food or agricultural production and this was linked, in part, to their motivation to volunteer. Instead, they felt that it was their prior knowledge or way of thinking that led them to volunteer with a food recovery group. Table 12 provides a summary of the food literacy and learning results derived from participant responses.

The two questions that were specifically related to food literacy were: 1) Have you learned anything about food since you started volunteering, and 2) Has volunteering for this group made you think differently about food?

> A2: “Well, probably not… but you have to remember I've had a lot of exposure to agriculture so I'm probably more familiar with agricultural production than a lot of people, you know? I guess what I took away from it was it was interesting to see people actually doing something.”

> A10: “No it was probably my thinking about food, my making the call to do the volunteering.”

> A11: “… it didn't make me think differently about food, no, because all of these ideas are already in me, so like the fact of me going out and volunteering is reflective of the fact that, it’s an action that resulted from thoughts that were already in my head.”

> A17: “I do not know that I think about food that much differently after volunteering for the group than I did before. However, years of gardening and volunteering at farms really made me appreciate how difficult it is to grow food effectively, and as a result to appreciate the food that I do get.”

Even though these respondents stated that they had learned nothing new from their volunteer experience, three of them described specific areas of new knowledge later in their interviews, suggesting that they did learn from their time volunteering, but were perhaps not aware of the connection between their volunteer position and the new knowledge they acquired.

> A2: “It was interesting to see those market gardens, I've never really been in or seen one before… never seen those kind of Chinese turnips before, that was a first for me.”

> A10: “I learned some more things about food preparation, yeah that's probably the one reason [my wife] stays with me is because I do the cooking [laughing].”

> A11: “I would say I've learned more about self-sufficiency [and about] the whole homesteading movement and being able to produce for yourself and not have to rely on outside sources.”

New skills / habits

A total of 14 (56%) respondents (9 interviewees, and five survey respondents) claimed to have learned some kind of new skills, or changed their habits, as a direct result of volunteering for a food recovery group.

> A1: “I learned about these kinds of programs, and the leader was very knowledgeable about edible plants, so she talked a lot about the plants around us and how we could eat them which was really interesting.”

> A3: “I try to make a lot more rather than buy a lot more, so… I try to waste a lot less…”

> A4: “… there's just a very, oh I hate to use a buzz word, but there's a very sustainable effort that's running through [food recovery group] … it's a big part of it, and just sort of getting out of the grocery store and getting back to our roots.”

> A5: “… in terms of preparing food I guess, but I did learn, I went and looked up recipes when I went to that mulberry pick [laughing] … we had this really good mulberry salsa, it was really good… I learned about these different techniques and used different equipment that I had never seen before, so that was kind of interesting.”

> A7: “[W]e put so much emphasis on having specific skills in this day in age but where are we if we can't grow our own food?”

> A9: “I learned a little bit about tree maintenance which is really, really, important…
> I learned how to tell when fruit is ripe as opposed to just taking those pears down and waiting for them to ripen.”

A24: “I learned a lot about harvesting fruit -- had read about it, but no practical experience.”

A25: “[I learned] Lots! How to prune and thin apple trees…”

A26: “[I learned] lots about trees, organic orchards, tree stewardship...”

Learned about local food production and waste

Considering a concern for food waste was the primary motivator for respondents to volunteer for a food recovery group, it is not surprising that 40% of respondents learned something about local food production and food waste as a direct result of volunteering. A total of 10 respondents (four interviewees, and six survey respondents) learned more about local food production, waste, or started to see their urban environment in a different light.

A4: “I think a lot more about what I am putting into myself and a lot about the waste that comes off of it.”

A6: [I learned about] the diversity of the food that is growing in [the city] in people's backyards.”

A9: “I didn't know that you could grow certain fruits in [the city], I mean I'm from the prairies, I mean who would think that you could have cherries and plums and pears and peaches in your backyard?”

A18: “I hadn't realized how many fruit trees are located in [the city], and how much of those fruit trees wouldn't be tended to unless [food recovery group] was involved.”

A19: “[I learned about] new food sources [and now] I see food (wasted) everywhere in my neighbourhood.”

A21: “Local foliage isn't just for decoration.”

A24: “Now I see orchards in empty fields, and fruit trees in sunny spots.”

> A27: "… lots of different types of fruit and nut trees grow in our neighbourhood …and [I] learned about all kinds of fruit trees."

Learned a lot, from multiple sources concurrently

Similar to the four respondents that felt they did not learn anything new from their volunteer experience, three respondents, or 12%, were unable to directly associate their new knowledge with their volunteer experience alone. These respondents felt they had learned a lot since volunteering, but felt the learning came from a number of sources or experiences, of which volunteering was just one.

> A6: "[My] interests have been gearing more towards food security issues in the city but I don't know whether that is directly influenced by [food recovery group]."

> A7: "I think they were just happening concurrently, there was an event from [food recovery group] to celebrate the year-end harvest… and it was there that I specifically spoke to someone from the seed saving library, and so I got a little bit more information about it I collected some seeds from him, and I'll be starting some seeds in my garden."

> A8: "I've learned quite a bit about the how the food production system works but I'm not sure how much I can attribute to just [food recovery group] and how much of it is coming from other sources as well… I'm not sure how much is a direct result of [food recovery group] and how much of it is the result of the other day-to-day activities."

Awareness / spiritual dimension

Two respondents commented on an awareness or spiritual element gained from their volunteer experience.

> A4: "[I've learned a lot as a volunteer] … not to get too 'hippie' on you, but I think that a lot of things in our lives, we just know if we just shut up and let our being do the talking… it's kinda this, I don't know, a zen exercise really. You're constantly working, by the end of it your neck's sore, your arms are a little sore, and, yeah, I find that very much with being just outside in general, um, more specifically outside where I can be

kinda surrounded by plants, and then in the maintenance and growing of plants I find it's just a really nice way to …. [pause] to calm down, and to actually [contemplative] … we have a lot of messages of 'you have to do something great for yourself', and these great things are always sort of external, like vacations… and buying a nice shirt… all these things that are external stress, that are supposed to make us feel good and define us, but when you start taking care of and growing plants… you can actually make this little life… and then at the end of it not only are you creating and developing this life, but that life is also really sustaining you"

A10: "… probably all I can really offer is just it reinforces to me how cut off we are from where our food comes from, and then further to that, how cut off we are from nature and like, where we come from, and it's you know, living the way we live it's pretty crazy the disconnect… I guess just getting out there and seeing again how food is grown yeah it's there's… there's no grocery fairy that comes around."

Learned about organizations that use the food

Two respondents also learned about the organizations who receive the food from food recovery groups.

A8: "Well I think certainly one thing is that I'm dropping off food that has been harvested at the various organizations that can make use of it and I see that it can be used by these organizations in an effective way, even quantities of food that I might have previously considered too small… the way that they deal with some of these foods, and in fact the manpower that they have, sometimes even if they got large quantities… they might not be able to use it on a given day, just because their constraints in terms of volunteers, because it does take a certain amount of labor to prepare the food but seeing the people's reaction to it, and hearing that a lot of time… all of the food that they're serving has to be extracted with a can opener."

A19: "[I learned about] the conditions under which organizations accept donated fresh food."

Table 12. Summary of responses to questions pertaining to food literacy directly resulting from volunteering for a food recovery group.

11 interviewees and 14 surveyees responded to these questions (N=25)
• 56% (n=14) claimed to have learned some kind of new skills or changed their habits
• 40% (n=10) learned more about local food production, waste, or viewed the urban environment in a different light
• 16% (n=4) either did not learn anything new about food or did not think differently about food
• 12% (n=3) felt they had learned a lot since volunteering, but felt the learning came from multiple sources or experiences
• 8% (n=2) commented on an awareness or spiritual element gained from their volunteer experience
• 8% (n=2) learned more about the receiving organizations

4.5 Perceptions of Food Recovery

Each of the five interview questions (questions six through ten) in this section is addressed individually because each examines a different element of the perceptions of food recovery as it relates to CFS. This section helps to meet the third objective of this study: to identify some of the perceptions of the contributions of food recovery efforts to CFS and of the underlying contradictions. The responses of all participants (N=30) are included for question six. For the remaining four questions, the 14 survey participants were not included because those questions were not part of the survey. This section is divided into two parts: contributions to CFS, and underlying contradictions.

4.5.1 Contributions

Following the responses to the questions on food literacy and learning, the responses to question six revealed the ways in which respondents feel food recovery differs from other types of volunteering. Three themes were identified from interview and survey transcripts, all of which contribute positively to CFS. The three themes identified are: connecting community members,

connecting people to their food, and food recovery as a means of meeting a basic need. Table 13 summarizes the responses to question 6.

Interview Question 6: How do you think volunteering for a food recovery group is different from other types of volunteering? (N=30 respondents)

Connecting community members / diversity & responsibility

A total of eight respondents (27%) felt that food recovery groups bring together community members and encourage diversity, responsibility and acceptance among community members.

> A6: "…with food, people just really want to get to know each other, there's more of a, I guess, just different kind of people, I found food people that are more, it seems, more personal."

> A11: "… if you have a good responsible and knowledgeable person that's leading everything, they could make sure to make it a priority to not take very much, to take very little, and be very sporadic for wild foods, whereas an individual's there only answering to themselves, you know, what I mean, there's nobody looking down on them."

> A22: "…more diversity of people [with food recovery groups]."

> A25: "… the work directly benefits Guelph in so many respects - nutrition and health, anti-poverty, connecting people now for resilience in the future, and we come away with fruit for our own use!"

> A27: "… it's a very diverse crowd of people who I meet harvesting."

Connecting community members contributes positively to CFS by building relationships and creating a cohesive environment. A 2012 study in the province of Quebec showed that social deprivation and low social cohesion increased the likelihood of food insecurity by 45 – 76%, independent of other factors (Carter, Dubois, Tremblay and Taljaard, 2012). A lack of formal and informal social networks can decrease access to resources such as food or information about local food programs. According to the 2012 Quebec study, low social cohesion can reduce

neighbourly support and create a reduced capacity to address food security related issues (Carter, Dubois, Tremblay and Taljaard, 2012).

A 2010 study in Toronto explored whether neighbourhood social capital, or "perceptions of social cohesion and trust in one's community", had any bearing on food insecurity (Kirkpatrick and Tarasuk, p 1140). The study found that when social capital was perceived as being low, there was a greater chance of being food insecure. However, when sociodemographic covariates were applied, this relationship became less apparent, pointing to a need for more research in this area. With that said, Walker et al (2007) demonstrated an inverse relationship between social capital and food insecurity, and Martin et al's data (2004) demonstrates that an increase in social capital is associated with a decreased risk of hunger. In this way, developing community relationships and fostering awareness and acceptance can contribute a great deal to increasing the capacity for CFS.

> A12: "I think in some other sectors the volunteers are like, the do-gooders, and the others are the receivers… I think that hero complex division is there sometimes [with food recovery]… it was the first time that I had volunteered somewhere I felt like I was volunteering <u>with</u> who I was volunteering <u>for</u>…"

> A13: "… it broke down some of the barriers of what I thought volunteering was, like I always thought it was "us helping them", but like, I realized it wasn't… it was more of a community thing… it's like everybody should recognize and address the problem of poverty and hunger so for me it actually did the total opposite of what I expected it to, but it challenged me and made me want to do more."

Hands-on / connecting people to their food / education

A total of six out of 30 respondents (20%) felt that food recover is more hands-on, connecting people to their food and educating people in a unique way.

> A7: "… whereas when I think about volunteering at a food bank, it's that food has gone through so many layers in the system that I don't feel connected to it anymore… I mean, I

still participate, like, I still donate to food drives, but I don't think for me participating as a volunteer in those organizations would fulfill what I think food reclaiming organizations do."

A8: "A lot of what is going on is effectively physical labour, you're going into the field and you're harvesting whatever needs harvesting, and so as opposed to some of the other volunteer opportunities I think a fair number of the volunteer opportunities involve interacting with people who need help… so either that's volunteering with groups that do something like English as a second language, or with the groups that deliver food, hot meals to homes… or things like that - a lot of those are interacting with people as part of the actual volunteer effort directly - where gleaning… you're doing something that the eventual recipient doesn't necessarily know anything about the people who are doing the volunteering."

A 2005 report by McCullum et al proposes three stages to building CFS. Included in the first stage is conducting research (such as this study) to inform subsequent stages, as well as providing consumer education. Respondents of this study indicate that they believe food recovery is a way to gain hands-on experience and as a way to educate about food.

A5: "… well in the hands-on way it's different because you're getting your hands on the food! [laughing] … this was very hands-on, like, really hands on [laughing] like, stained hands-on [laughing]."

A15: "It's a great form of education, actually, because [home owners] are not realizing what trees and bushes they have."

Along with learning about what grows locally, gleaners are in a unique position to learn from those with more experience, such as urban farmers. They may learn about seasonality, food harvesting and more. They may also learn about some aspects of organic food production such as the idea that an unusual looking food item, or one with blemishes, does not equate to lesser quality.

> A16: "We might get someone who says "Oh, the [food]… had some bug holes in it" … and that's a teaching moment … and I think it's about having those points of access."

Meets a basic need

A total of five respondents (17%) feel that food recovery groups are meeting a basic need. In the 2005 report by McCullum mentioned above, the second step identified includes several strategies, including connecting emergency food providers with urbaculture initiatives (McCullum et al, 2005). One of the primary activities of food recovery groups is donating part of their harvest to community organizations that can make use of the food, such as food banks and soup kitchens. Not only are these food recovery groups situated in such a way as to provide fresh food directly to these organizations, but they can also provide food directly to their volunteer harvesters, bypassing any third party organization. Conceivably, this means that food insecure people could volunteer their time in exchange for fresh food directly.

> A1: "Food is a basic need for everyone, we all need to eat."

> A3: "I think the food ones, like, the societal problem that they are trying to solve for is hunger, and so that is a lot more relatable then say, sight impairment. I don't have a sight impairment so I don't have a personal connection to that, like Movember, for example, prostate cancer, I don't have a connection with that. Um, So I think it has to do with the global relativity of it and so I'd say that yeah, food has to do with hunger which is something that can potentially exist with everyone."

> A11: "I just feel like there are certain things that are, like, just basic rights …you have a pyramid, so the needs at the bottom are your most basic needs: food, air, water …so I would say, like, from a certain perspective, like, anything that has to do with protecting the environment and protecting your right to your most basic needs to survive, and to live like, a healthy life – food, air, water, and just basic freedom - I would say it's more important… you can't live without food it's your most basic need and it's real… once those needs are met then everything else is possible."

A12: There are a lot of overlaps one thing that's unique about not far from the tree and I think it might relate to food volunteers in general is that you get food out of it… the biggest one seems to be getting the free food."

A28: "… some volunteers with [food recovery group] genuinely need to do this to eat."

Table 13. Summary of responses to: How do you think volunteering for a food recovery group is different from other types of volunteering?

• 16 interviewees and 14 surveyees responded to this question. (N=30)
• 27% (n=8) felt that food recovery groups have a positive impact on communities.
• 20% (n=6) felt that food recovery was a hands-on way of educating and connecting people to their food.
• 17% (n=5) felt that food recovery groups are meeting a basic need.

Summary

This question did not elicit a strong response, which is interesting given that volunteers made a conscious choice to volunteer for their respective food recovery groups over other types of volunteering. With that said, none of the participants said that other types of volunteering had benefits beyond what food recovery volunteering could offer them.

Interview Question 7: Do you feel like food recovery groups are working with, or working against, the current food system? (n=16 respondents)

Complementary / supports

A total of five respondents (31%) feel that food recovery groups support or are complementary to the current dominant food system. Table 14 summarizes the responses to question seven.

A2: "… my position is that it's more working with the existing system, probably for me the more sort of interesting part is it's affecting change by the idea of [pause] people volunteering to perhaps help people who are less fortunate, and the idea of being respectful and grateful for the incredible abundance of food that we do have."

A4: "… yeah, I would say with right now, I would say it's kind of side by side, still growing, I don't know, maybe there's a bit of a counterculture thing in there, yeah for sure there is, but it's just complementary. Yeah, complementary… I think complementing at least right now it's more of a complement 'cuz we're still very, very, much dependent on the grocery store, so I'm going to speak specifically for living in the city and living in small spaces, I live in an apartment, I can fill up my balcony with as many pots as I want, I can go on as many picks as I want, it's not enough, you know? I still have to… go to my grocery store."

A6: "I think it probably is supporting the conventional food system… it's there for emergencies but we've come to rely on it [emergency food providers] as a backup, where we should be putting in systems that start getting communities out of relying on that."

A8: "If you are not turning under thousands of pounds of food then you're making better use of what you've grown, and so from that perspective it's helping the conventional food system, but the problem with saying that is that the conventional food system is all about making money, and so if you're taking something that the conventional food system says has no value and doing something productive with it, I'm not sure whether that actually counts as helping the conventional system or working against it. I think that the whole idea of gleaning and food recovery is maybe an extension of the conventional food system."

A10: "I think it creates a certain amount of public awareness and support for local food preparations… I think that has helped, like, I think it's an increased awareness of that kind of thing that made Loblaws go in the direction that they're going, and I think if there hadn't been these kinds of things happening, I don't think Loblaws would ever have started this, but I think the public has changed its views."

Challenges / provides an alternative

A total of five respondents (31%) feel that food recovery groups challenge or provide an alternative to the current dominant food system. Two of them were motivated to volunteer because they were looking for an alternative, either in their lives, or to the current dominant food

system. One of the five respondents felt the challenge was indirect in that a change in consumer behaviour can influence the direction of conventional production and marketing.

> A3: "Not directly, I don't think any of our gleaners are going to pick fruit and then subsidiz[e] what they're buying from the grocery store, for example, the people that come to the picks are already very engaged, they're sort of in that mindset of being an informed consumer, they're probably not going to Loblaws and buying a bag of cherries from Chile, they're going to the farmer's market and buying Niagara cherries in season… all the volunteers tend to be people who are getting organic delivery and are already really engaged… what would be good is if it changes the way the conventional system works, if they did source more locally even though it might be more expensive and then that would in turn makes eating locally…less expensive…"

> A5: "it's really quite tragic the way we treat food in our culture, and the people who really suffer are the food insecure people because what their limited amount of money will buy is that [cheap] stuff that's not that nutritious, so I see [food recovery group] as quite different from that system because it is concerned with harvesting fresh healthy food locally, and then getting it, at least part of the crop, to people who are in need, whereas the big food companies are not at all interested in any of those things."

> A11: "They are challenging it, yeah they are challenging it in two ways I guess, like in the practical way, like as an alternative, foods are literally, the person could put it in their mouth and not have to pay money or not have to pay so much money for it… on a philosophical or theoretical and political level it challenges the very idea of having to pay money for food."

> A12: **"**I don't think we're hurting the conventional food system, but I think we're challenging it in a way to get people to think a little differently about it, so … I don't think there are any farmers or grocery stores that are like, 'our profits are down this year in fruit sales', but I do think that we are trying to get people to think differently about how the food system works, and depending on how …we like, communicate our

message, and how we run our programming we could do a better or worse job at getting people to challenge it and I think we definitely want people to challenge it."

A15: "I think if they had more publicity, it would be challenging the current food system… cuz there's an enormous amount of food waste, right? It's a solution to a problem at the farm level, which, we'll always have that problem…"

Neither / outside / alongside

A total of five respondents (31%) feel that food recovery groups neither challenge nor support the current dominant food system, but rather, exist outside of it or alongside it.

A7: "…my perspective on it is just like any other not-for-profit or charity, it's still a really private enterprise or private activity because it's outside of the regular structure… it's a way for people to feel that they're contributing, some people choose to give their time and some people choose to give their money, they give their resources, it's just another resource that someone can give, and that's how I think of it… I don't really think it's a big contribution to what's happening in the mainstream, I think it's just feeding a need that, a real or perceived need, that exists in our food distribution system."

A13: "I think there's becoming more, like, especially if you look at stuff in the UK all the stuff that they're doing is really progressive, and that's become part of their mainstream culture with, waste free grocery stores, ugly fruit and vegetable campaigns, good lord, they're just so on top of it, I think that's great, so I think there's potential to become part of the conventional food system but right now it's not yet… I think food recovery right now is really grassroots… in Ontario, so I think it's kind of maybe running parallel … but also just kind of slightly, it's one step behind. I think if we can just make that leap forward that we will be able to work with the current system and I think there's a lot of things being done even if you look at WRAP, waste reduction alliance, they're looking at how they can reduce food waste by teaching about packaging, so that's really cool…so there is ways that it is slowly getting involved in mainstream, but I think ultimately what we have to do is re-educate consumers, and if we don't do that, then nothing's going to take hold. I think that's the biggest barrier."

> A14: “I guess my opinion is what I said earlier, that they probably don't have a huge impact on the food system. I think from a farmer's perspective, ideally, they would be able to sell all of their produce and not have a huge excess of edible food that gleaners could take. And, if [food recovery group] is like other gleaner groups… they were trying to get it to people who don't have access to fresh, local vegetables and fruits, like, people that wouldn't be buying it anyway. That way, they are not taking away from the farmers' customers. I guess harvesting fruit trees in urban areas, parks or people's back yards, is even another story. I would encourage people to do that...”

> A16: “I think any group that’s educating themselves, and their volunteers, around those sort of consumers habits, and what consumers habits might be detrimental, or where consumers might best vote with their dollars sort of thing… I mean I think any group that’s engaged in that sort of learning is contributing towards the overall trend. It might be small, but any little bit is, sort of, helpful. So, I don’t know that food recovery groups are situated in such a way that they can affect , you know, massive change… I don’t know, but yeah, I think it’s just baby steps.”

It is worth noting that one of the respondents was included in both the *complementary / supports groups*, and the *neither / outside / alongside groups*. Their responses indicate that food recovery groups support the dominant food system by making it more efficient, but that gleaning will not become a true alternative unless they are able to compete by taking away profit from conventional markets.

> A8: “I think what food recovery does is it makes it [the conventional food system] more efficient because less stuff is going to waste… the food that is being recovered, its food that currently is outside the … conventional food system, so the only way to compete with the conventional food system is if that food that was recovered took away customers or caused a reduction in price of the product that they were selling …so I don't see in general this stuff really working for or against the conventional food system.”

Both Challenges and Supports

Only one respondent felt that food recovery both challenges and supports the current dominant food system.

> A9: “I think they're [food recovery groups] probably doing a combination of both [supporting and challenging], they're bringing the food system to the media, so like, social media is talking about it more, it's kind of like bullying, so they're bringing it forward so that people can do something about it, it’s still really early in the game, it hasn't really become overly sexy… there's a certain perception you know, like, there's also that whole thing, ‘well they haven't taken care of the trees, you don't know if you have worms’ and blah blah blah blah blah. Well you know that worms aren't that bad, that's all there is to it, it is what it is. And you're not serving the whole apple you're cutting up the apple, you can make it work, it might be a little more labor intensive, but it's so much better! So it's partially you have to get people into the whole buy-in.”

Table 14. Summary of responses to: Do you feel like food recovery groups are working with, or working against, the current food system?

• 16 interviewees were given this question. (N=16)
• 31% (n=5) say food recovery groups support or compliment the current system.
• 31% (n=5) say food recovery groups challenge the current system or provide an alternative.
• 31% (n=5) say that food recovery groups neither challenge nor support the current system.
• One respondent felt that food recovery both challenges and supports the current dominant food system.

Summary

Respondents have provided some insight into how food recovery in the form of gleaning can contribute to CFS. Connecting community members, connecting people to their food, and food recovery as a means of meeting a basic need were all themes that were uncovered.

4.5.2 Contradictions present

The question of the scale of these projects is evident in the small numbers of volunteers and relatively small amount of food harvested. The question of the effectiveness of donating food to emergency food providers is also unavoidable when the definition of CFS is considered. Along with these two issues, the issue of donating what is usually considered a premium product is discussed. Local and organic products are often sought after by retailers and high-end restaurants. Food recovery groups collect local and often organic products and give them away for free to emergency food providers. This puts into question the value that is placed on purchased foods that bear these labels. Respondents were asked for their thoughts on this interesting, but apparent, incongruity.

Interview Question 8: Part of the definition of community food security is that people have enough healthy food that isn't from emergency food providers. Most, if not all, food recovery groups donate some or all of their harvest to emergency food providers. What do you think about that? (n=16 respondents)

Improves food security

A total of seven respondents (44%) feel that food recovery groups help improve food security, even though they are donating to emergency food providers.

> A3: "…that's why [food recovery groups] exist. There's lots! If you're going to complain that there's not enough food, then look out the door… I think there's plenty of food to go around."

> A12: “[I]f there are spots being opened up that are involved in the actual harvesting, so if the people who are picking the fruits are gaining access to food, then I think it is improving their food security.”

> A15: “… you’re giving that food to people in the community who are benefitting from it, so you’re helping their food security as well as the volunteers in your group by giving them a share.”

Several volunteers specifically mentioned the improved access to fresh foods, rather than canned or processed foods which dominate food bank shelves.

> A5: “It's helping people who have time to go pick the fruit and get a little part of it and enjoy maybe new fruit that they haven't tried before, and then the donation aspect of it is meeting the needs of people who don't otherwise have food. Especially fresh food.”

> A7: “From what I understand about the kind of food that's available to … food banks is that the food is typically highly processed or not fresh and that's the areas that most people are lacking.”

> A16: “Loblaws can donate a lot of hot dogs or something, it’s not exactly your healthy uh… so if we can get more healthy food, healthy vegetables to them, then I think that’s a good thing. And I think it’s something that, we talk a lot about accessibility to healthy food, [but the food isn’t] necessarily accessible to everyone.”

> A8: “If your entire experience with doing food preparation…is opening cans, when you get a load of squash or a load of tomatillos, then you're sitting there looking at it going, ‘ok, what is this and what do I do with it?”, and so there are people… who oversee the kitchen that actually can say, ‘okay this is this, and this is what we can do with it, and this is how we can turn it into food that people will like’, and that whole transformative effect on fresh food, seeing that first hand, makes it much more likely that those people will at some point then be able to say in the grocery store, ‘oh, squash, I know what to do with this, and it's on sale, and it's only this much, and I remember that being pretty good so I'll

get some of that and take it home and make it.' [I]f you can get people to do that even once a month versus not doing it at all the effect that you're having on their ability to get better nutrition into themselves is substantial I think."

Good resources management

A total of six respondents (38%) feel that food recovery groups are a way to ensure good resources management. This can happen in a number of ways. First, food is utilized that is already being grown, often with no labour or inputs (such as backyard fruit trees). These fruit bearing trees often require no inputs whatsoever, other than the labour to harvest them. With that said, they can be extremely prolific and provide a great deal of food. In the case of gleaning on urban farms, the opposite is true – the labour and inputs have already been put into the food, so it is better if the food gets used. If food on farms is not used, not only does the food itself get wasted, but all the inputs (water, labour, etc) are also wasted.

A5: "… better for it to go to a food bank, even if the food bank isn't the best alternative, than go in the green bin where it would be wasted, because we're trying not to waste. [Food recovery is] meeting the needs of the homeowners who, otherwise, what are they going to do with all that food?"
A7: "I think it's a better way to spend [pause], it's not even spending a resource, it's a better way to redistribute a resource that is being wasted, and I think that's the piece that also spoke to me about food recovery programs, is that it's just wasted, so it's not like we're generating anything new…the food would be wasted otherwise, it's not like we're making more to fill a need, we see an abundance here, and the deficit here."

A9: "… the City of Toronto b**** and complains about the fact that there is an overuse of water in the city, they pay money to people to cut the grass and water the grass, then they cut off the water because we've run out of water and the grass dies… if we made all of these areas into community gardens, people could eat whatever they want."

A13: "People always [talk about] food security, really we have more than enough food to feed people, we just don't have the right distribution systems, and for me, that was like

the real thing. How can we change the distribution system how can we make it more equal?”

A16: “We don’t want to see it just, sort of, wither in the field. We’d rather that somebody enjoy it.”

No alternative

A total of six respondents (38%) feel that there is no alternative at this time (as previously quoted). Table 15 summarizes the responses to question eight. People having enough food that is not provided through emergency food providers is part of the definition of CFS. Pursuant to this point are questions nine and ten.

Table 15. Summary to the responses to question 8.

• 16 interviewees were given this question. (N=16)
• 44% (n=7) feel that food recovery groups help improve food security.
• 38% (n=6) feel that food recovery groups are a way to ensure good resources management.
• 38% (n=6) feel that there is no alternative at this time.

Interview Question 9: What do you think the perceived value of a donated food is vs a store bought food? (n=16 respondents)

All of the food recovery groups profiled in this study donate food to local social service organizations that can use it, such as food banks, soup kitchens, and others. Therefore, in the context of this study, donated food refers to all the food that is donated from gleaning activities.

Negative associations with donated food

A total of nine respondents (56%) feel that there are generally negative associations with food that is donated. Interestingly, several interviewees wanted to clarify to whom the question was directed. For example, was it the perceived value according to the person donating the food, the organization receiving the food, or to the final recipient or consumer of the food? Clarification

was not provided, and interviewees were asked to comment on any or all of those perspectives. Table 16 summarizes the responses to question nine.

> A2: “I don't know where it comes from but there seems to be this idea in our culture, in Western culture, that everyone has an equal opportunity to do just fine and people who aren't doing just fine, well it's because they screwed up, and that they’re somehow lesser, and I think that's a very flawed judgement, but I think that that's where the perceived lesser value comes from.”

> A4: “I started foraging recently and [my fiancé] won't touch some of it… I think a lot of it goes back to just, I don't know what era it would be, maybe post WW2 when people in marketing and corporations we're like starting to take off, and we got all these messages about easier life, this is what you do if you're poor and no one wants to be associated with being poor and being low class, and so I think that those associations are still very strong, perhaps even stronger now since we live in this world of ‘gotta have more, gotta have a lot, gotta be styling, what's your personal brand”, and so there's this idea that if you buy it, it is better than if you go out and find it, even if it’s the same thing or even if it's better.”

> A6: “Because you have to pay for something at the grocery store you put a value on it, whereas if something is donated it's kind of a feeling like it doesn't have as high a value, I guess. I'm also thinking of it in terms of a dollar value, whereas if it's the same apple it's worth the same amount…”

> A7: “I think some people might wonder about quality, and I think it would also depend on who you're asking, because I think there might be a perception out there that things that we purchase in the store are more regulated than things that you can grow yourself, or that is donated.”

> A8: “I'm not sure that people in general perceive a difference in value weather it’s donated or whether it's from a store. I think people, and this is unfortunate for farmers, people perceive it based on appearance, and so if you bring in a load of green peppers

that are the perfect shape, whether they come from a store or whether they come from donations, people are going to perceive those as being high value versus if you bring in a load of misshapen peppers, even though the nutritional content and the taste and everything is as good or better then what you can buy in the store… I suspect that what winds up happening is that because a lot of the foods are not perfect they're probably is a lower value perceived."

A9: "I don't have a differentiation between donated food [and store bought food] because I think of donated food as growing up in the prairies and going to pick Saskatoons in the bush that were free, or picking mushrooms with my parents or whatever, 'cuz that is donated food, it's free food. I think the perception might be that there's some spoilage, but I think people are lazy, I think it's lazy and it's not sexy and it doesn't have a Starbucks logo on it, so we don't shop there. If Starbucks made it sexy, then they would do it. If some yoga place made it sexy, they would do it."

A11: "…[Some people are of the opinion that] if you're a person that works, so in order to get your food you give away precious hours of your life in order to go to the grocery store and be able to afford food, so why is it that you should have to work for it and give away precious hours of your life in order to afford vegetables, whereas some other people now can just do nothing and just show up at a place and get it for free? I understand where they're coming from, and they're right, everyone should have the right to free food, that's what they're right about, that's what it comes down to, that everyone should have the right to free food or food that they get from putting work into growing it themselves, but not based on how much money they have, so they are right about that… there's, like, this idea of, 'well if you put in the effort, if you work hard enough, and if you think positive enough, then you'll be able to achieve anything in life' and you know it's such a position of privilege [to think that way], but the reality of it is that the system doesn't work for everybody."

A13: "I think it's definitely seen as having less value if its donated, to be honest, I think that when we buy food it says something about [pause], we make the decision to buy that instead of being given, or only having a choice of certain things that are being donated, so

buying definitely does have a different value than donated food, it's definitely more valuable. [It] makes me think about the value of Dumpster food, you know, and some people will be like 'that's disgusting' and other people are like 'free chocolate, that's the best thing of my life!' So I think it's a hundred and fifty percent up to the individuals themselves, I think maybe it's also how it's given. When I spread dumpster dived food on the table, and people can choose what they like, and there's nobody there regulating, it's an open system, there's nobody saying 'here's your chocolate bar' or 'this is all we have today'. That's probably part of it."

A15: "I think probably people value the one that's donated less … maybe not the people eating the apple… say it's the organization you're donating it to, I think they value it a lot, because it's money they don't have to spend for food they need. I think the person who donated it probably values it a lot, they want it to go somewhere where it won't just be turned to waste, and I don't know how the people receiving it feel, um, they might feel it's not as good, so they donated it because it's not the same quality as you get in a store, and I don't want to speak for people who use services like that, but maybe they're used to getting the cheap, basic, stuff that people donate, if you ever look at those, like, donate $10 at the grocery store and we'll give you this bag of stuff, it's *crap*. I wouldn't want that stuff! And I'd feel terrible if that's what I was given, you know? So, maybe they're almost being trained to think that way from the quality of food they've been donated in the past. So we're conditioning them to be like, here, this is the stuff that we don't want because it's cheap."

Positive associations with donated food

Although the dominant opinion was that donated food is generally perceived negatively, a total of six respondents (38%) feel that there are generally positive associations with donated food. Several respondents also seemed to use the terms 'donated' and 'free' synonymously.

A2: "I guess…from a spiritual kind of place…people have made an effort to salvage this food, so it goes to feed people. To me, it makes it seem like it's worth more than stuff that's mass produced because there's been some intentionality there… I just know that

people are pretty fussy at grocery stores and they care about marks on their food…but it's still good food, and I feel that putting a certain amount of care into it makes it worth more."

A3: "There's the novelty factor … I put a lot of value on it… every year if I go strawberry picking …how cool is that that we can go to a place and pick food off the ground? It's novel to me."

A5: "Certainly for me, being part of a pick and then making something with the fruit that I pick with my own hands, that's really fun, so for me that's a much more enjoyable experience than going to the grocery store and buying a thing of raspberries."

A7: "I also think that there's an intentionality when someone elects to donate their tree for picking so I think I think that makes a difference."

A10: "… I would tend to be more worried about foods that are processed by big companies because of the, you know, the tainted meat things that have happened."

A12: "I think there's something about the value of donated food, like, I want to say it is TLC involved with it, there's some care and some support involved with it. …[W]e shared a ton of fruit with …a men's shelter and …when they found out where it came from, they kind of felt like, 'oh there's people in the neighborhood that care enough to give', and there is something about the tangible gift that can be so much more meaningful than the monetary…[T]there's also the value of it being local, its nearby and there's something in there about the feeling of self-dependence [and] the understanding that we can grow food in our community."

Table 16. Summary of responses to question 9.

• 16 interviewees were given this question. (N=16)
• 56% (n=9) feel that there are generally negative associations with donated food.
• 38% (n=6) feel there are generally positive associations with donated food.

Interview Question 10: Local and organic are often considered "premium" products. Yet these groups are harvesting and recovering one or both of these types of products, and giving them away. What do you think about that? (16 respondents)

More than one person stated that they had not thought of the food they harvested in those terms before. Organic and / or local food is often sold at a premium price in grocery stores, speciality shops and at farmers markets. And yet these so called premium products are being harvested by food recovery groups all season long, and then given away for free to volunteers and emergency food providers. While not everyone feels that these characteristics are significant in this context, others feel that it is a great way to make these sorts of products more accessible to everyone, regardless of food security status. Table 17 summarizes the responses to question ten.

Makes access to these products more equitable / should be the norm

A total of four respondents (25%) feel that food recovery groups make what would normally be considered a premium product more accessible for people who might otherwise not access them, or that this equal access should not be out of the ordinary.

> A2: "… it's kind of cool and trendy to grow artisanal organic food and sell it to like, shi shi restaurants, whereas, collecting the same food for emergency food supply, we have different sort of connotations around that, you know, I don't think it's right."
>
> A7: "[I] think it is weird that people generally perceive local and organic to be outside of the norm because that's how it [all] used to be."
>
> A11: "What do I think of that? I think that's BS basically, the fact that you're even calling it a premium, like a premium product, is something that I feel is a way of thinking about it that's being…imposed on you, you're being manipulated into talking and thinking about it that way by the big system because they want you to think that it's not your right."
>
> A12: "[There's] this interesting thing that happens in society where it's like, certain things are considered valuable and they go to the people that arguably are considered valuable, but who decided? And then the things that don't cost much money, there's this

> other market, and they're going to the people that are considered less valuable by a lot of people… I think one of the challenges that a lot of people have with the typical farmers market, especially in Toronto where they're very expensive, it's so inaccessible. I find it hard to feel good about shopping at a farmers market when it’s so expensive, and so exclusive, and so it makes me feel weird. I still like shopping at it, I want to support local farmers, but it's this weird tension, and I think a lot of people feel that, and so this is sort of like changing things. It doesn't have to be as inaccessible… The reality is that a lot of times, local and organic food is more expensive because it costs more to produce, and for this, it doesn't cost anything to produce so that's kind of that's the difference.”

Not important in this context

A total of 3 respondents (19%) feel that local and organic are not important indicators in this context.

> A3: “There's no difference it's just the marketing, it’s the merchandising, which goes a long way… I think it has a lot to do with labeling and marketing I never thought of…that stuff as organic…it's just stuff that I got from the tree as opposed to stuff that I went to the store and got…”

> A10: “Well I don't put much stock in the whole organic thing because it's sort of like, what's the restaurant that advertises that their meat is hormone free? Well my understanding is that all beef produced in Ontario is supposed to be hormone free, so I see a lot of hype that's unnecessary. Its hype and…I don't put much stock in it.”

> A15: “[Organic] worth 40% more than your conventionally grown ones, yeah. I don’t know if people in need of food care. Does local and organic matter if you’re starving? I’ve heard stories of homeless people rejecting food donations because it wasn’t up to their standards, so…I don’t know. If I was needing a vegetable, I wouldn’t care where it was from I think, if the other option was scurvy. I don’t know, I don’t think I’d care if it was GMO and grown in California.”

Table 17. Summary of responses to question 10.

• 16 interviewees were given this question. (N=16)
• 25% (n=4) of respondents feel that food recovery groups make what would normally be considered a premium product more accessible for people who might otherwise not access them, or that this equal access should not be out of the ordinary.
• 19% (n=3) of respondents feel that local and organic are not important indicators in this context.

In terms of scale, what is the real impact of the contribution these groups make currently? One respondent felt that is it naïve to believe that these groups can make a big difference.

> A3: "…so if anyone has the idea that doing something like picking fruit from urban trees is going to make a big difference I think that's completely naïve."

This same interviewee went on to say that although the groups may not provide vast quantities of food, there are other benefits that the groups can provide.

> "At the same time, I still think it's really valuable because it is community building, and it is teaching about sustainability and self-sufficiency, and also a love of nature, and just like, the wonder that there's food on the trees and in your yard so I think it's valuable… but I think it's naive to think that it's making a big difference. [Pause] It's making a big difference, but on an individual level, more on a spiritual level I would say, but as to whether it can really change things I don't know, I don't think so."

The idea that the benefits go beyond pounds harvested was referenced by more than one respondent. Another respondent also had something to say about it, stating that consuming fresh foods in some amount is better than none at all.

> A8 “[I]f you can get people to do that even once a month versus not doing it at all the effect that you're having on their ability to get better nutrition into themselves is substantial I think.”

If scale were the biggest contributor, then pounds harvested would not be the best argument in support of these groups - but it is also not the best argument against them. The organic movement started off as a fringe trend, predominantly after World War II. The interest in organic food has now grown to such a degree that Loblaw, Canada’s largest food retailer, and Walmart, the largest food retailer in the United States, now both have their own organic brands.

There is a great deal of potential for these groups to *scale up*. The Tri-City Gleaners Guild currently has more volunteers than harvest locations, which means most volunteers still haven’t had an opportunity to do a harvest. And yet only seven residential homes have registered a tree with the group, which means that continued growth will lead to more opportunities for volunteers. Municipal property is also a large untapped resource. Fruit bearing trees along boulevards and public trails are abundant. In Toronto, there is an estimated one and a half million pounds of fruit growing throughout the city, and yet, less than 17,000 lbs of fruit was harvested in 2014 (Cole, 2015). This indicates that there is a lot of room for scaling up these activities, which would provide not only the benefits discussed earlier, but also change the scope of the food assistance provided to social service organizations.

Chapter 5. Conclusion

5.0 Modern Gleaning and Food Recovery

Food recovery in the form of gleaning is a growing movement across Ontario. When gleaning is defined as harvesting food that is not otherwise being used, from where it is grown, gleaning is inherently linked to urbaculture activities and becomes an important element of the urban landscape. Organizations such as food recovery groups who are taking part in gleaning activities are largely dependent on volunteers to do the work of harvesting the food. Having a better understanding of volunteer motivations to join and remain with these groups is critical to their success.

Results of this study indicate that the recruitment and retention of volunteers entails different motivations and experiences. A negative experience, or one that does not meet volunteer expectations, can lead to a loss of volunteers even if there were some positive elements to their experience. These groups utilize such a small portion of the entire volunteer community that it is important to ensure they are satisfied with their experience and want to continue to provide volunteer support. At present, volunteer motivations seem to be well aligned with messaging from food recovery group websites, which can help ensure a good match between volunteer expectations and the volunteer experience.

Gleaning organizations continue to crop up across the country and existing groups continue to grow. In order to maintain momentum, food recovery initiatives need to ensure that organizational priorities remain aligned with volunteer motivations. Logistically, the planning and organizing of such initiatives is extremely time consuming. Beyond understanding volunteers, these groups require the staffing and funding to be able to focus their attention where it is needed. Part or full time coordination takes time, effort, patience, skill, and organization. A source of funding to retain this kind of staff could be the key to scaling-up these initiatives.

Further, efforts should be made by food recovery organizations to be more inclusive of marginalized or at-risk populations who may not have access to popular methods of communication such as social media. These marginalized people could arguably benefit greatly benefit from participating in these initiatives, and yet, they may be excluded due to the current

methods of communication and information dissemination. More research in this area would be helpful for program coordinators to determine the best ways to ensure that food recovery programs are inclusive of all community members.

Food recovery in the form of gleaning can contribute significantly to improving CFS. Even though the scale of the impact may be questioned, there are other contributions beyond pounds harvested which are also important contributors to improving CFS. All the food recovery groups highlighted in this study can be scaled up in terms of the volume of food that they harvest. None of them have come close to exhausting all potential harvest locations at present. According to the volunteers who are doing this important work, other contributions include: increasing food literacy, food reskilling, food awareness including a greater connection to our food, and bringing community members together.

This study contributes a better understanding of the volunteers who are critical to the success of these groups, and provides some insight into the ways that these food recovery initiatives can contribute positively to CFS. Interviews and survey data indicate that volunteers may join a group due to several motivating factors, but remain because of a positive experience that meets or exceeds expectations. The motivations and elements of the volunteer experience revealed through the interviews and surveys contribute to a broader knowledge on the driving forces behind these organizations.

This study also addresses several contradictory elements that exist within these groups as they pertain to improving CFS. For example, supporting emergency food providers through food donations conflicts with the definition of CFS which does not include food from emergency sources. The act of giving away what are usually considered to be premium products also puts into question how we assign value to certain labels such as ‘local’ and ‘organic’. This study has demonstrated that several of the seemingly contradictory issues can be mitigated to some degree by the positive contributions that these groups make towards achieving CFS.

Further qualitative research is needed to capture a wider volunteer base to determine the homogeneity of group volunteers. It would be interesting to have a better understanding of where volunteer gleaners situate themselves on the food activism spectrum. It would also be interesting to have an understanding of how many volunteer gleaners identify as food insecure, or use

emergency food providers themselves. Understanding how the connections are made between food insecure people and these types of community initiatives could be a useful tool for food activists and program coordinators. Future quantitative research should aim to quantify the contribution of these groups to emergency food providers, as well as to the contribution to meeting the nutritional needs of both participants and recipients of the harvests. It would also be useful to explore any changes to the diets of participants and recipients when engaged with these groups.

5.1 Personal Reflections

I have been working in the healthcare system since 1998 in a variety of roles. As a Registered Nurse, I saw first-hand some of the consequences of poor diets and poor health. When I made the decision in 2011 to return to University to complete a second undergraduate degree in Environmental Studies, it was my way of taking a step back to begin to approach health from a different perspective. Few things affect our health the way food does, and so I began to learn more about food and food systems.

In the spring of 2014, I co-founded the Tri-Cities Gleaners Guild, a food recovery group for Waterloo Region. Since completing my senior honours thesis on the barriers to urban agriculture in Waterloo Region, I have been interested in starting an initiative like this. I was inspired, in part, by groups like Not Far From the Tree in Toronto, and the Appleseed Collective Revival in Guelph. These groups, along with the coordinator at the Hamilton Fruit Tree Project, were extremely helpful in the early planning for the Gleaners Guild.

We live in a climate where many fruits can grow throughout the growing season, and much of it is going to waste. This is partly due to the lack of naturalist knowledge of consumers. For example, we have trees growing all along the boulevard of the street we have lived on for ten years. The neighbours frequently complain about the mess the berries make on the sidewalk. For years it did not occur to us to investigate what kind of berries were growing in front of the house. We just assumed that they were a good source of food for the many birds in the neighbourhood, including a flock of Cedar Waxwings that migrates through every year. When we first started to get interested in wild-crafting and gleaning, we discovered that the berries growing along the length of our street, and directly in front of our house, were Serviceberries! All those years had

gone by without realizing, or even considering, that the berries were edible, let alone delicious and packed full of nutrients. This is the kind of simple knowledge sharing that happens between gleaners, especially when there is an experienced group leader. It is just one small part of the role that an organized gleaning group can play in the much larger picture of CFS. A good harvest leader can teach volunteers about what is growing all around them, discuss seasonality and responsible harvesting practices.

When we first started gleaning, the expectation was that we would be harvesting fruit from residential yards, similar to what the groups mentioned above do, but this was not to be the case. Most of our harvests were taking place on local farms, both urban and rural. This was a welcome surprise, even though harvesting in rural locations poses unique logistical issues such as transportation. Harvesting from farms gave us access to larger quantities of food, primarily fresh vegetables. We also did some harvesting in public spaces and in a few residential yards in our first season, but the non-farm locations resulted in much smaller yields.

Harvesting food is not always easy and does not always take place in ideal weather conditions. There was an immediate response when the Gleaners Guild started, with most of the volunteers who are currently on the list signing up early on. Our story was covered in local blogs, journals, and on the radio. The few volunteers who actively came to the harvests seemed quite diverse and eager. It became increasingly apparent that groups such as the Gleaners Guild would not be able to exist without the commitment of dedicated volunteers who are interested in doing the work. I began to wonder what attracted people to volunteer for these kinds of groups. What did they perceive the benefits to be, for themselves and for their communities?

My personal motivations for starting the group are as varied as the volunteers I interviewed. First and foremost I was interested in making use of the abundance of food already growing in and around our urban areas. There is a term called “fruit goggles” that I first heard from the founder of Not Far From the Tree. The term means that once you become aware of how much food there is growing all around, you begin to see it everywhere, including in places you thought you were familiar with (such as right outside the front door!). The trees lining the boulevards, your neighbour’s yard, your children’s schoolyard, and public trails are all potential sources of fresh food.

Gleaning is a way of helping people connect not only with their food, but also with the environment outside their front doors. Adequate sun exposure, physical activity, sharing, community interactions and interactions with the natural environment are all critical components of personal health. Learning about local food, and understanding that local often means seasonal, can help people make educated decisions about what to eat. Gleaning gives access to what are often considered premium products – local and organic – to anyone who has the time to volunteer. Through donations to social service agencies, gleaning also gives access to others who might not otherwise eat those foods, such as people who make use of emergency food providers. There are several access points for consumers to benefit from gleaning initiatives.

Personally, I also enjoy participating in harvests with people who have similar interests. Not everyone is interested in talking about when the leaves of the Linden tree stop being edible in the late spring, or about how you can eat every part of the dandelion plant from flower to root. Gleaning groups create a great knowledge sharing forum for learning, teaching, and sharing information and ideas. I learned a lot from volunteers and I also had the opportunity to share my own knowledge which was good for building confidence in my naturalist knowledge. At the end of the day, good, fresh food gets delivered to a local organization which is an experience in itself. I never had a boring 'drop-off' – often chatting with some of the people who would later be eating the food.

These are some of my personal thoughts about gleaning but I did not want this study to be about my own experiences. I was asked several times about why I chose to write in the third person in a somewhat detached 'voice', given my 'insider' position as a gleaning group co-founder. I wanted the voice of volunteer gleaners to be heard, and I wanted gleaners to speak for themselves and let the power of their personal experiences be felt. During the interview process I was acutely aware of my position as the interviewer. I made it clear to all interviewees that this research was about volunteer gleaners and not for my personal benefit or solely for use by the Gleaners Guild. My desire to understand the motivations of volunteer gleaners was driven, in part, by the fact that I am a group co-founder and coordinator, but it was my hope that some of the discussions and insights would benefit a wide range of gleaning groups. I tried to maintain a balance between relatability as a gleaner, and objectivity as an interviewer. I believe I succeeded,

for the most part, but interviewing is a skill that requires practice and fine tuning, and is one that is developed over time. I will continue to develop this skill moving forward.

The biggest thing I would change is the timing of the data collection. Doing an ethnographic or phenomenological study of this volunteer population would be great if it was conducted during the harvest season. I also believe this change in timing would have resulted in a larger pool of interviewees as I would have been engaged with volunteer gleaners during harvests. I believe direct engagement during harvest activities would have resulted in not only a larger pool of interviewees, but also a more diverse group as well. With that said, I would have likely been restricted to one or two groups using this method, whereas with this study I was able to access volunteers from several gleaning groups which is also valuable.

Overall, I am pleased with the results of this study. It was an absolute pleasure talking with each of the interviewees, several of whom I have stayed in touch with. Every interaction builds a new connection that helps bring people and communities together to form larger networks. This network continues to grow, reaching outward like the branches of an apple tree – beautiful, fruitful, and productive.

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Appendices

Appendix A: Interview and Survey Questions by Category

Interview

MOTIVATIONS
1: Up to and including (group name), how did you first became interested in volunteering?

VOLUNTEER EXPERIENCE
2: I'd like to hear about what you do with the group, what your role is.

3: In as much detail as possible, can you describe a volunteer outing?

FOOD LITERACY
4: Have you learned anything about food since you started volunteering?

5: Has volunteering for this group made you think differently about food?

PERCEPTIONS
6: Do you think volunteering for a food recovery group is different from other types of volunteering?

7: Do you feel like food recovery groups are working with, or working against, the current food system?

8: Part of the definition of community food security is that people have enough healthy food that isn't from emergency food providers. Most, if not all, food recovery groups donate some of all of their harvest to emergency food providers. What do you think about that?

9: What do you think the perceived value of a donated food is vs a store bought food?

10: Local and organic are often considered "premium" products. Yet these groups are recovering one or both of these types of products and giving them away. What do you think about that?

Survey

MOTIVATIONS
1: Which food recovery group do you volunteer for, and how did you first got involved?

2: What inspired you to start volunteering with them?

3: What attracted you to the group?

4: What was your primary motivation for joining the group?

FOOD LITERACY

5: Have you learned anything about food since you started volunteering with the group?

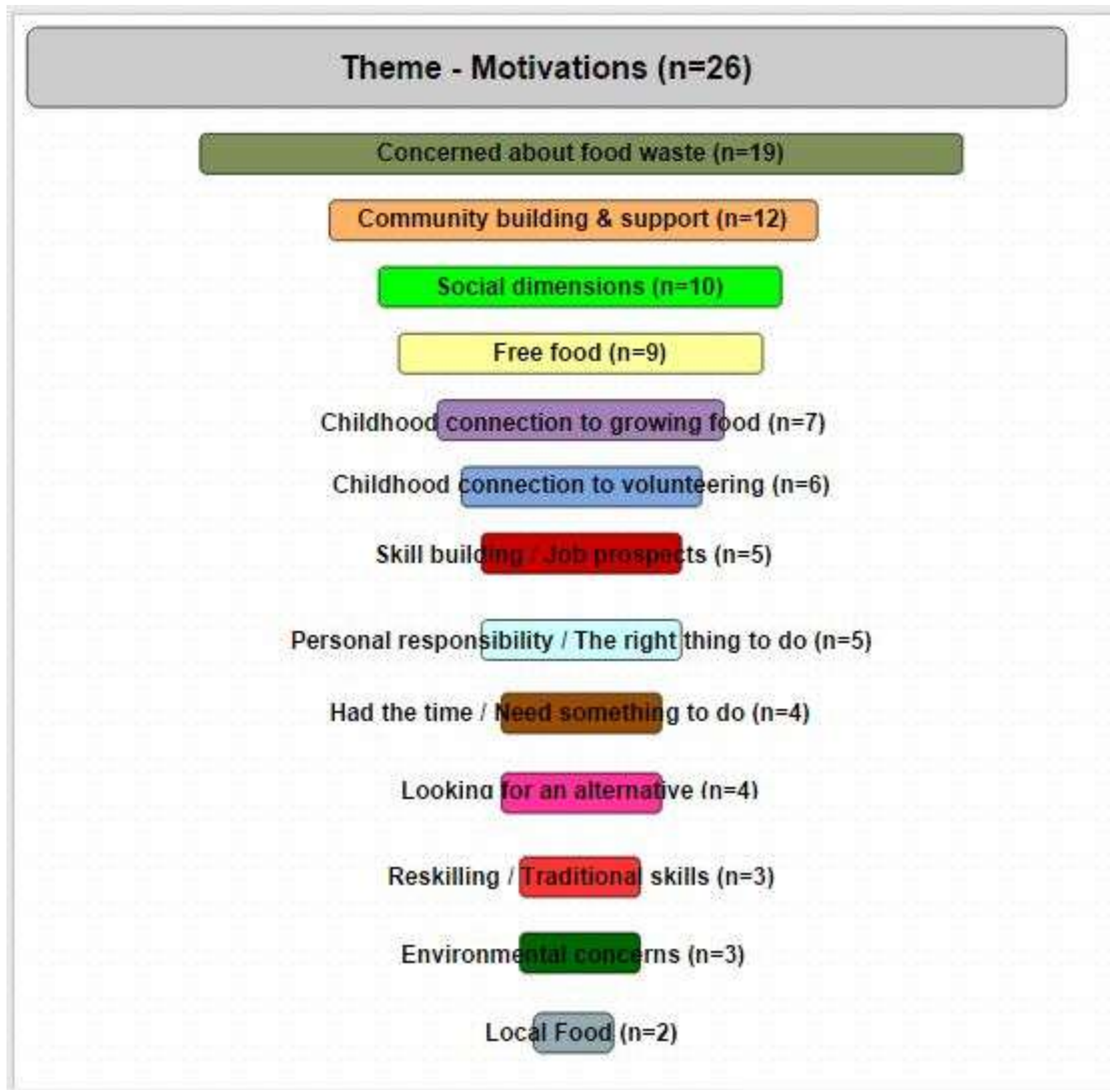
6: Do you think differently about food since volunteering with the group?

PERCEPTIONS

7: Is volunteer work for a food-related group different from volunteering for a non-food related group?

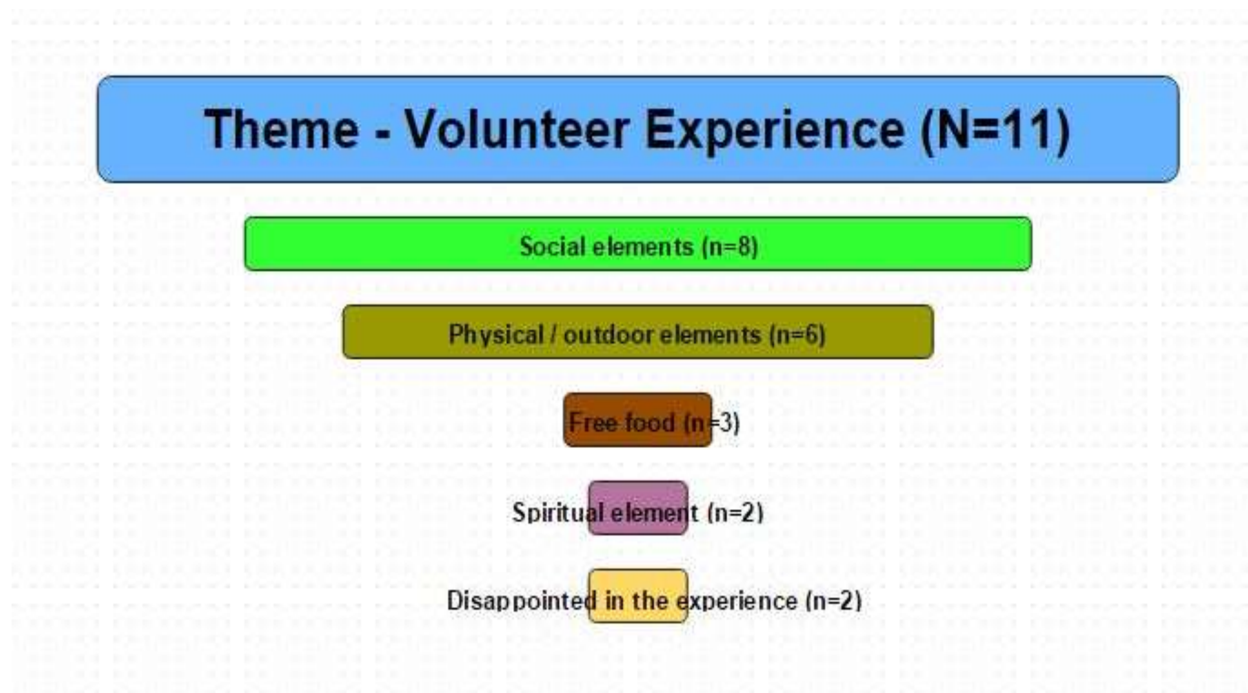
Appendix B

Colour Coding for Theme: Motivations



Appendix C

Colour Coding for Theme: Volunteer Experience



Appendix D

Colour Coding for Theme: Food Literacy and Learning

Appendix E

Colour Coding for Theme: Volunteer Perceptions