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Food Rescue in Baltimore City: Assessing Current Landscape and Potential Growth

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ACKNOWLEDGMENTS

EXECUTIVE SUMMARY

This report, "*Food Rescue in Baltimore City: Assessing the Current Landscape and Potential Growth*," explores the capacity of Baltimore City's food rescue landscape and opportunities to strengthen it. The report comes at a time when food insecurity rates in Baltimore City are nearly double the national average and the volume of donated food remains comparatively low. A significant gap remains between food assistance needs in the community and donated foods flowing through Baltimore's food rescue system. Less than 10% of food donations coming into Baltimore are currently sourced from businesses and institutions located within the city.

A range of food rescue organizations, Baltimore FoodPAC (Food Policy Action Coalition) members, food business trade associations, city staff, funders and other stakeholders contributed their perspectives on the assets, challenges, trends and opportunities in Baltimore City's food rescue landscape. Survey data from 40 food pantry clients was also gathered and analyzed.

Baltimore City's food rescue ecosystem has a solid foundation and several emerging initiatives. Surplus food is being donated and distributed to food-insecure Baltimoreans daily. However, the system that was built over the past 40 years — when food banks and food pantries first emerged and homeless shelters proliferated — is not the same system that will be needed over the coming decades.

The following five overarching categories have been identified as areas in which Baltimore City's food rescue efforts can grow or be improved through the collaborative effort of key stakeholders and city government:

1. **Take action at the city level** through policies and programs aimed at strategic growth of food donation and efforts that make the food rescue system more efficient, effective, responsive to community needs and better able to handle healthier foods;

2. **Enhance coordination** among food rescue organizations and Last Mile Organizations[1] (LMOs) to support greater cohesion in the non-profit community and heightened impact;

3. **Expand client voice** in designing solutions to improve food rescue efforts;

4. **Secure in-kind and financial support** to expand physical infrastructure and "people" capacity in the food rescue system; and

5. **Engage and support prospective food donors** (e.g. institutions and retailers).

Given the centrality of food insecure Baltimoreans (or "clients") in this assessment, this report begins with a snapshot of hunger in Baltimore City, followed by input received from clients about their experiences with the current food rescue system. The report then moves to trends and key observations in the city's food rescue landscape and concludes with suggested recommendations. Specific recommendations are summarized in the chart below. This assessment is an integral part of NRDC's Food Matters" collaboration with the City of Baltimore which aims to prevent food from going to waste, expand food donation, and enhance food scrap recycling in the City.

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[1] Last Mile Organizations (LMO) is a term that refers to any entity (e.g. shelters, soup kitchens, pantries) that distributes donated food to food insecure individuals.

SUMMARY OF RECOMMENDATIONS

		City Action	Client Voice	Food Rescue Coordination	Infra-structure and Capacity	Food Donor Engagement
1	Stakeholders in Baltimore City's food rescue system should convene on a regular basis to support relationship building, strategic planning for the system's future, and implementation of the recommendations in this assessment.	X		X		
2	Food rescue organizations should report the aggregate amount of food donations received from local sources each year to support progress tracking under the City's "Baltimore Food Waste & Recovery Strategy."	X		X		
3	Building on the 2018 "Baltimore Food Waste & Recovery Strategy," stakeholders should collectively develop a three- to five-year strategic plan for expanding food donations and strengthening Baltimore's food rescue system.	X		X		
4	Obtain resources to hire a food "sourcer" to cultivate relationships with prospective food donors, focusing on business and institutional sectors with the strongest potential to donate proteins, fresh produce and quality prepared foods.				X	X
5	Develop and disseminate user-friendly food safety guidance for licensed food facilities from the Baltimore City Health Department. Incorporate food donation into inspection visits to the extent practical and hold periodic trainings on food donation for new inspectors.	X				X
6	Assess the need for and develop policies and programs that incentivize food donation and publicly recognize businesses and institutions that donate appropriate foods.	X				X
7	Distribute educational materials on liability protections and tax incentives to food donors. Evaluate opportunities to provide re-usable packaging to LMOs and donors.					X
8	Develop a city-wide strategy to recruit the next generation of food rescue volunteers and support the effective training, management and retention of volunteers in Baltimore's food rescue system.			X	X	
9	Create a coordinated strategy to engage Baltimore's philanthropic and business communities in mobilizing financial support for LMO infrastructure, staffing and other rescue ecosystem needs.	X		X	X	
10	Identify organizational development resources to strengthen LMO capacity for fundraising, management, governance, communications and other key functions.				X	
11	Evaluate the need and strategies for making donated food more geographically accessible to clients through expanded mobile distribution, home delivery and/or distribution strategies that are closer to where clients work, live and obtain other services.			X	X	
12	Evaluate the need for and potential options for technology solutions to connect LMOs and food donors.				X	X

13	Elevate the voices of food assistance clients by including them in advocacy activities, volunteer opportunities, and community outreach.	X	X	X		
14	Secure funding to gather input and feedback from clients on an on-going basis via surveys, focus groups and other mechanisms as appropriate.		X			
15	Conduct a more detailed study of the specific food security-related needs of people living with disabilities that impede their access to food assistance.		X			
16	Expand outreach to clients on ways to access food assistance through an expanded website, cell phone app and/or printed communications as appropriate.		X			

SNAPSHOT OF HUNGER

Both in Baltimore City and nationwide, food assistance is increasingly a long-term reality that is not reserved for emergency situations. Entrenched poverty, low and fixed incomes, low labor force participation, and wage stagnation force many people in Baltimore City to routinely rely on food pantries and other sources of food assistance to supplement their diets.

> **Food security** means "access by all people at all times to enough food for an active, healthy life." (*The United States Department of Agriculture,* 2018)

Baltimore City has the highest rate of food-insecurity in Maryland at 22.2%, based on Feeding America's standard food-insecurity measure. The City is followed by Somerset (19.3%) Dorchester (14.5%), and Allegany (12.5%) Counties.

According to Feeding America data nearly one in five Baltimore City residents, including children, are food insecure and don't always know where their next nutritious meal will come from[2]. Baltimore City also has the highest child participation rate in the K-12 free and reduced-price meal (FARM) program in the state at 86%.

Contributing to the city's persistently high food insecurity rates are perennially high poverty and unemployment rates – both of which are well above the state average:

	Baltimore City	Baltimore County[3]	State of Maryland
Poverty Rate	22%	8%	9%
Unemployment Rate	6%	4%	4%
Food Insecurity Rate	22%	11%	11%
Annual Household Income	$46,641	$71,810	$78,916

Table 1: Baltimore City vs. the State of Maryland Poverty Profiles[4]

According to the National Low-Income Housing Coalition, a worker in Baltimore City needs to make $23.69 per hour in order to afford the fair market rent and utilities of a two-bedroom apartment without spending more than 30% of their income. Unfortunately, many city residents do not make this hourly rate. The United Way of Central Maryland's ALICE (Asset Limited Income Constrained Employed) report defines a survival budget as a bare-minimum budget; one that does not allow for any savings or financial indulgences, leaving households vulnerable to any unexpected expenses. On average, a Baltimore City household with two children allots 30% of their monthly budget to shelter and an additional 28% to child care. After other necessities, this leaves less than 14% of their monthly survival budget to spend on food[5].

With food as the smallest line item on their survival budget, and with the consistently rising cost per meal in Baltimore City (currently: $3.28/meal vs. a state average of $3.12/meal per Feeding America[6]),

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[2] Based on Feeding America's *Map the Meal Gap* (2015), using data from U.S. Department of Agriculture, U.S. Census Bureau, and U.S. Department of Labor Statistics. http://www.feedingamerica.org/hunger-in-america/hunger-studies/map-the-meal-gap.aspx

[3] Baltimore County has been included because residents and clients move across county lines to work, shop, seek food assistance, etc.

[4] Data compiled from Feeding America (2015); US Census Quick Facts; and the Department of Labor (2018).

[5] Additional Survival Budget expense categories include: transportation, technology, health care, taxes.

[6] Feeding America, Map the Meal Gap, 2015

households are often forced to choose between the quality and quantity of food or between food and other basic needs, like rent, utilities, and/or medication.

Unfortunately, opting for food quantity over quality to stretch one's monthly budget has deep, long-term implications. There is an abundance of peer-reviewed literature supporting the adverse connection between food insecurity and health, academic performance, workforce participation, and strong, stable communities. For example, children growing up in food-insecure families are more vulnerable to poor health and stunted development from the earliest stages of life than their food-secure peers. Food insecurity has also been associated with a range of chronic illnesses across all ages, including diabetes, obesity, hypertension, hyperlipidemia, and cardiovascular risk factors.

According to the latest Feeding America's Meals Per Person in Need (MPIN) MPIN report, the efforts of the Maryland Food Bank and its network is meeting 77% of the need within Baltimore City[7], while other rescuers contribute to meeting these needs as well. But MPIN and other Feeding America reports paint only a partial picture of Baltimore City's food insecurity issue. For instance, they look only at county-level data and are tied to measures of income that are well-below a realistic survival budget, such as poverty level, Supplemental Nutrition Assistance Program (SNAP) eligibility, and/or Free and-Reduced Meal (FARM) Program eligibility. The real need is likely higher than Feeding America's data suggests.

> **Did you know?** Data from the United Way of Central Maryland's 2-1-1 assistance program indicates they receive the highest call volumes for requests for helping finding food.

As part of this assessment, a survey of 40 end-users was also conducted. Finding are provided in Appendix A.

It is also essential to note that donated food alone is not a long-term solution to ending hunger and it does not address the underlying conditions that drive food insecurity and poverty. That said, it is one important strategy within a broader vision of creating a food secure Baltimore and it is in that light that we explore here the potential to strengthen Baltimore's food rescue ecosystem.

BALTIMORE CITY'S FOOD RESCUE LANDSCAPE: AN OVERVIEW

Information captured on food rescue activities taking place in Baltimore City revealed that the landscape is led by one very large, well-established player — the Maryland Food Bank[8]. A small number of other rescue organizations tend to be volunteer-led and handle pick-up (and in some cases, distribution) managing smaller quantities of food. These include organizations such as Baltimore Food Rescue and the Food Recovery Network (which rescues food at two colleges in Baltimore County), Helping Up Mission, Paul's Place, The Franciscan Center and for-profit commercial ventures such as Hungry Harvest. An estimated 11.5 million pounds of food was rescued and distributed to food-insecure Baltimoreans last year. This occurred through two main pathways. First, the Maryland Food Bank partners with 227 food pantries, school pantries, pop-up food distributions, meal programs, and senior programs within

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[7] MPIN is calculated by taking the total pounds of food distributed (including meals from SNAP) and dividing this number by the number of food insecure individuals in a service area (based on Map the Meal Gap).

[8] The Maryland Food Bank is a hunger relief nonprofit that provides food assistance to clients in 21 counties and Baltimore City. In addition to its headquarters in Baltimore County, the Food Bank has two branches: in Salisbury, serving Maryland's Eastern Shore, and in Hagerstown, serving Western Maryland.

Baltimore City. This number represents both existing organizations that source food from the Maryland Food Bank and programs that the Food Bank created and currently manages as shown below.
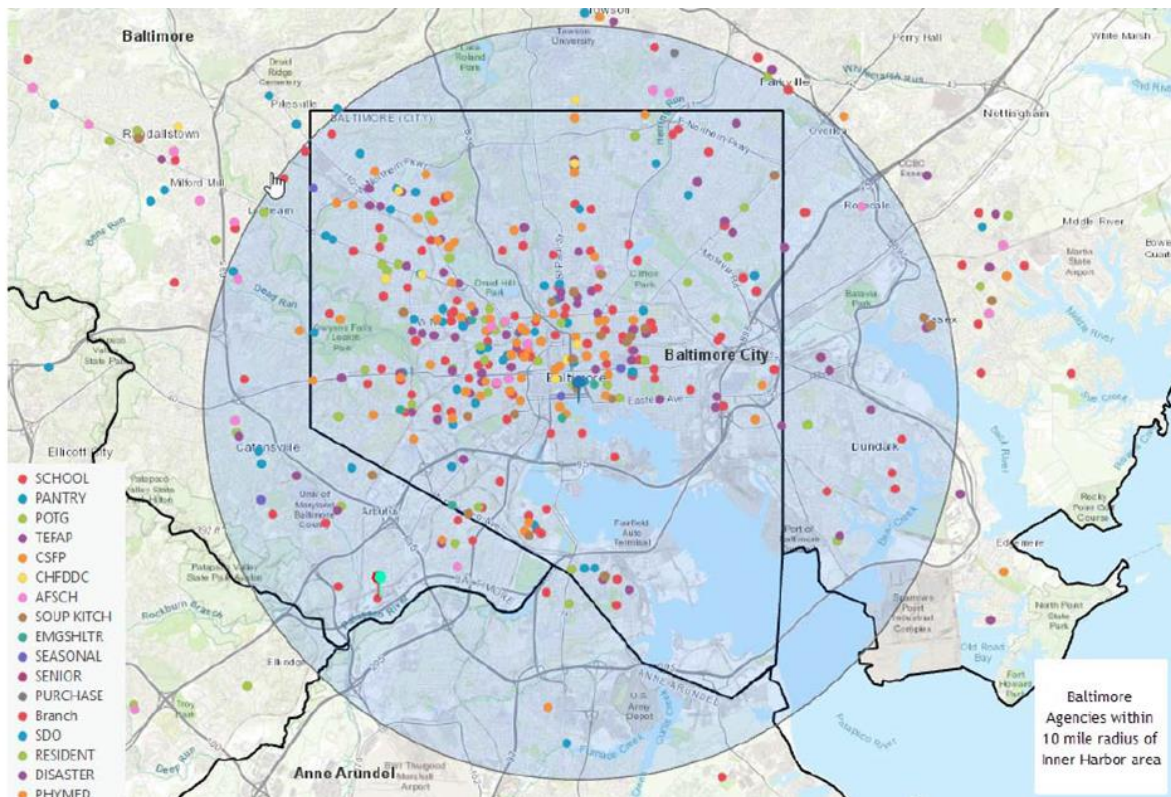
Figure 1: Current Maryland Food Bank Partners inside Baltimore City[9]

Through these and other partners, the Maryland Food Bank distributed more than 10.5 million pounds of food through its network of programs in Baltimore City last year. This food is a combination of food that is donated and food that MFB purchases to distribute.

Second, Baltimore has a significant, although not well documented, number of homeless shelters, on-site meal programs for seniors, children, working families and others, food pantries and other food distribution points that are not affiliated with the Maryland Food bank. While efforts to collect data from such organizations proved challenging, the consultants estimate that less than 1 million pounds of food was rescued by the rescue organizations mentioned above and distributed through these channels last year.

The 10.5 million pounds of food distributed by the Food Bank reaches clients through a range of channels including:

- **Pantries**: Food distributed through traditional food pantries;
- **Mobile**: Fresh produce distributed through mobile, pop-up food distribution events (Pantry on the Go);
- **Community:** Food distributed through shelters, soup kitchens, and other community-focused organizations;

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[9] The black outline designates City limits.

- **Disaster**: Food distributed through one-time emergency events;
- **Hospital Programs**: Food distributed through food distribution events hosted at area hospitals;
- **Schools:** Food distributed through school-based pantries (School Pantry Program).

Below is a year-over-year look at growth in food distributions by the Maryland Food Bank, by channel. (Note that similar data was not available across the full array of other rescuer organizations.)

FOOD DISTRIBUTION 2016 TO 2018
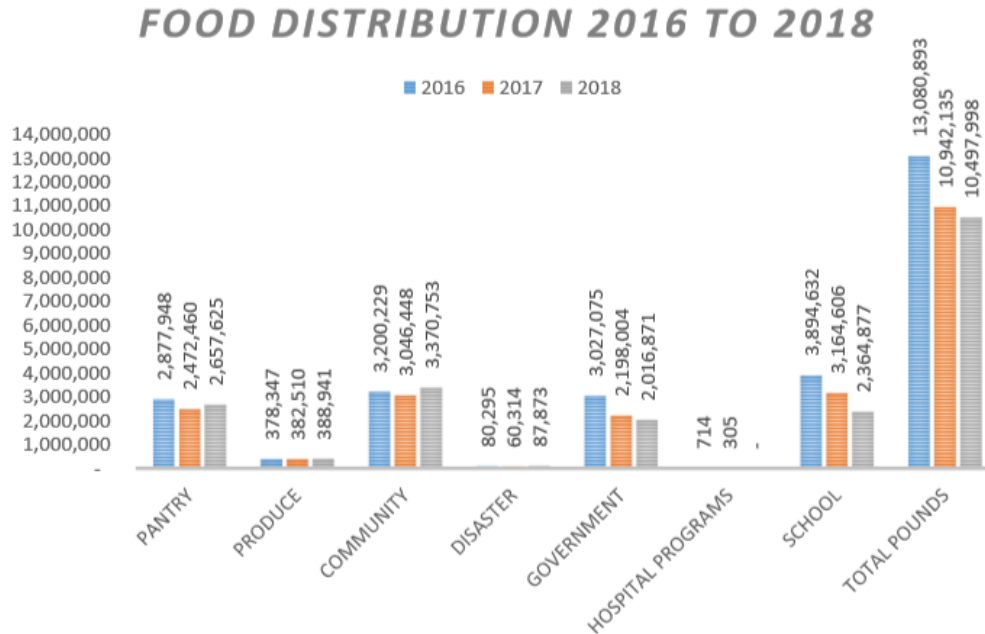
Figure 2: Growth of MFB's Distribution Efforts in Baltimore City

(Pounds, July 1, 2015 – June 30, 2018)[10]

The Maryland Food Bank's food distribution program in Baltimore City spiked in 2016 due to an excess of federal food product from The Emergency Food Assistance Program (TEFAP). This program has since been reduced to financially sustainable levels by the food bank. MFB's School Pantry program has also continued to diminish in overall poundage as the food bank has increased emphasis on the nutritional quality of the food distributed to Baltimore's children. This trend is expected to continue with the decision in 2018 to eliminate all sweetened drinks and candy from the School Pantry program in collaboration with Baltimore City Public Schools Food & Nutrition Services.

Notably, while the food bank distributed more than 10.5 million pounds of food in Baltimore City, only 700,000 pounds of that were sourced from donors located inside the city. This is reflective of the relatively small number of full-service retail grocery stores in Baltimore, the small base of food manufacturers, distributors and processors, and an almost complete lack of fresh produce from farms located within the City limits. The balance was sourced from food retailers, manufacturers, distributors, and farmers across Maryland, as well as in neighboring states, through the Feeding America network of food banks and food donors.

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[10] Note: 2016 volumes were high, influenced in part by excess donated USDA food that year.

These numbers suggest that just 7% of the food distributed by MFB in Baltimore in FY18 was food sourced from food donors located in Baltimore. The remaining 93% of MFB's distributions was comprised of food sourced from non-local sources.

Current donations from within Baltimore are split roughly equally between grocery retailers and food distributors. Donations from restaurants and foodservice institutions such as colleges, hotels and hospitals are currently quite modest. The food bank anticipates an overall increase in poundage for FY19 and expects its distribution efforts in Baltimore City to exceed 10.5 million pounds. Organizations like Baltimore Food Rescue are also experiencing an upswing in the scope of their operations.

TRENDS, KEY OBSERVATIONS, AND RECOMMENDATIONS

Through conversations with more than 20 food rescue organizations, trade associations, and other key stakeholders, the consultants gleaned the following trends, challenges and observations about Baltimore City's food rescue ecosystem, divided into four key stakeholder groups: City Government, Food Donors, Last Mile Organizations, and Clients.

I. BUILDING COLLECTIVE ACTION

Baltimore City has a solid foundation to work from in future efforts to strengthen the city's food rescue ecosystem while ensuring that surplus food does not go to waste. Initiatives to date include an array of related commitments, plans and actions including the "Baltimore Food Waste & Recovery Strategy"[11] released by Mayor Catherine Pugh in September 2018, the City's Baltimore Food Policy Initiative[12], the "Healthy Food Environment Strategy"[13], convening through the Baltimore Food Policy Action Coalition[14] (Food PAC), the Resident Food Equity Advisors[15], extensive food systems research, community mapping[16] and related efforts[17].

Established in 2010, the Food PAC works to improve food access and the overall food system. Food PAC now has more than 60 members including nonprofits, universities, farms, businesses, hospitals, and residents. Facilitated by the Baltimore Food Policy Initiative, Food PAC provides opportunities for collaboration and idea sharing around food-related organizations in Baltimore. Members are invested in issues ranging from food policy, food justice, childhood hunger, food access, nutrition, obesity, food retail, and research in food systems.

The City's Food PAC has three overarching goals:

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[11] Office of Mayor Catherine E. Pugh, Mayor Pugh Announces Plan to Reduce Food Waste in Baltimore
https://mayor.baltimorecity.gov/news/press-releases/2018-09-05-mayor-pugh-announces-plan-reduce-food-waste-baltimore
[12] Baltimore Department of Planning, Baltimore Food Policy Initiative https://planning.baltimorecity.gov/baltimore-food-policy-initiative
[13] Baltimore Department of Planning, Healthy Food Environment Strategy, https://planning.baltimorecity.gov/baltimore-food-policy-initiative/healthy-food-retail
[14] Baltimore Office of Sustainability, Food Policy Action Coalition https://www.baltimoresustainability.org/projects/baltimore-food-policy-initiative/food-pac/
[15] Baltimore Department of Planning, Food Equity Advisor https://planning.baltimorecity.gov/resident-food-equity-advisors
[16] Baltimore Department of Planning, Food Environment Maps https://planning.baltimorecity.gov/baltimore-food-policy-initiative/food-environment
[17] Baltimore Department of Planning, 2018 Food Environment Brief
https://planning.baltimorecity.gov/sites/default/files/City%20Map%20Brief%20011218.pdf

- **Goal 1:** Food PAC members identify and inform the Baltimore Food Policy Initiative (BFPI) of food policy barriers in order to collectively address the policy issues from an organizational, city, state, or federal level.
- **Goal 2:** BFPI informs Food PAC members on city, state, and federal policy implications that impact the food environment of Baltimore City.
- **Goal 3:** Food PAC members collaborate to increase knowledge and to break down silos in order to be more effective in addressing food access and local food systems.

Additionally, in collaboration with the Natural Resources Defense Council and with support from the Rockefeller Foundation, Baltimore City was chosen as one of two priority cities in the United States to participate in NRDC's "Food Matters" initiative to develop a wide range of strategies to prevent the generation of food surplus, advance food rescue, and recycle food scraps at the municipal level.

Financial resources provided through NRDC have enabled the City to hire a new staff member dedicated to food waste issues and building on the City's Food Waste Recovery Strategy. These efforts offer a compelling opportunity for Baltimore City to provide wide leadership on this issue.

Recommendation: Convene Food Rescue Stakeholders

It was noted at every stage of this research that there is insufficient connectedness among the wide range of food rescue-related stakeholders and initiatives currently underway in Baltimore City. The need for a centralized mechanism for relationship building, shared planning and dialogue is more compelling than ever before with the advent of greater public awareness, the growing array of organizations in the food rescue space, and unabated food insecurity challenges. Effective food rescue and distribution requires a complex array of players working in concert with one another. Existing nonprofit efforts to provide guidance or foster collaboration among food assistance organizations (such as the Maryland Food Bank's Network Partner Area Councils) are limited and under-resourced.

> **Recommendation 1:** Stakeholders in Baltimore City's food rescue system should convene on a regular basis to support relationship building, strategic planning for the system's future, and implementation of the recommendations in this assessment.

Also, in addition to the food rescue and food distribution organizations that have historically populated this arena, more for-profit entities have emerged in the past few years that are either taking a commercial approach to food rescue or selling surplus foods that might otherwise have been donated. New opportunities are emerging with rescue of prepared foods and agricultural surpluses from nearby farms. All of these challenges and opportunities highlight the need for greater cohesion within the community of stakeholders that support food donation and rescue in Baltimore.

To support more coordinated action, we recommend that food rescue stakeholders convene on a regular basis to solve problems and eliminate obstacles toward to stronger food rescue ecosystem in Baltimore City. We believe the Office of Sustainability is well-positioned to provide this initial leadership, building off the Food PAC and related initiatives in Baltimore's food system. Key stakeholders include food donors, rescuers, LMOs and clients themselves.

Furthermore, stakeholders should include food waste processors and haulers in discussions to "close the loop" in discussions. Food waste and food rescue efforts are food system issues that can be solved in tandem. By working more closely together, stakeholders can actively link various aspects of the food system to make it more sustainable and equitable.

Through regular convenings, this group could help develop the strategic plan for Baltimore's food rescue system discussed in recommendation #3 below and serve as a primary entity for prioritizing, advancing and providing accountability for progress on the other recommendations in this report.

Recommendation: Food Insecurity Milestone and Opportunity Report

To date, Baltimore has not had a city-wide system for tracking the amount of food being donated by local businesses and institutions, or a vehicle for evaluating the degree to which food donations are meeting local needs. To address this data gap, we recommend that stakeholders collectively help identify and develop a reporting mechanism to capture data on food donation from local sources, compare donations from various business sectors to local needs, and identify opportunities for expanded food rescue.

> **Recommendation 2**: Food rescue organizations should report the aggregate amount of food donations received from local sources each year to support progress tracking under the City's "Baltimore Food Waste and Recovery Strategy."

The report could include updated facts on food insecurity city-wide and the impact of food donations in addressing community needs and reducing waste. It could be shared with existing and potential food donors, the corporate and institutional funding community, LMOs, and Baltimore residents. This report, combined with other publicity efforts, could provide a much-needed incentive for decision makers inside businesses to start or increase donation of healthy foods.

Recommendation: Develop Strategic Plan for Expanding Food Rescue City-Wide

We recommend that a three- to five-year strategic plan be developed to expand donations from area businesses and institutions and strengthen the food rescue system so that it is more efficient, effective, responsive to community needs and better able to secure and distribute healthy foods to the community. This planning process could be used to raise attention to the need for food donations, secure buy-in from key stakeholder groups and lay out an action plan addressing the recommendations in this report and others that may be identified through continued community dialogue.

> **Recommendation 3**: Building on the 2018 "Baltimore Food Waste & Recovery Strategy," stakeholders should collectively develop a three- to five-year strategic plan for expanding food donations and strengthening Baltimore's food rescue system.

I. FOOD DONOR ENGAGEMENT

A Mixed Picture for Food Donations Among Baltimore Businesses

An array of forces are buffeting the trajectory of future food donations in Baltimore. This includes forces that are putting downward pressure on available food supplies and others that offer new opportunities. On the down-side of that equation are:

- Tight profit margins and the drive for supply chain efficiencies aimed at reducing food surpluses that could potentially be donated. Retailers, manufacturers, distributors, and processors are being pressured to match the "Amazon Effect" of real-time inventory, which is characterized by fewer mistakes and fewer overages, resulting in less food being moved into the charitable food donation stream. Having better technology to manage item movement, sales, and buying patterns also decreases food donations.   While it's good business to prevent food waste, it does mean less food available for donation.

- The limited number of businesses within Baltimore city limits that produce, distribute, manufacture, or grow food.

- Misinformation or a lack of information among food businesses about liability issues related to donated food and a lack of awareness about applicable tax incentives for food donors.

- A lack of autonomy for local staff working for large corporate entities, difficulty training staff to institute new practices and relentless staff turnover in the foodservice industry.

- The significant operational challenges of capturing potential donations from the restaurant sector given the relatively small potential quantities spread across a large number of disparate locations.

- It is conceivable that the industry-led trend toward streamlined date labelling on food (e.g. "best if used by" and "use by" dates) and the advent of new FDA Nutrition Label requirements also set to roll out in 2020 could reduce food surpluses and thus the quantities available for donation.

These factors are having a direct impact on food donations in Baltimore. For instance, Maryland Food Bank data from 2015 to 2017 shows a drop of nearly 25% in the annual, average pounds donated by Baltimore grocery retailers when measured on a per-store basis. Fortunately, the Food Bank has been able to counter the per-store reduction by enlisting additional retail locations to donate.

Trends in support of expanded donation include:

- The potential to expand perishable food donations — specifically meat, produce, dairy, and deli foods that tend to be highly valued by clients —from food retailers.
- The positive impact of more frequent grocery pick-ups, which results in more donated food, and better-quality food. For instance, in 2017, MFB met its pick-up schedule for retail donations 66% of the time (statewide average). In 2018, that "on time" rate jumped to 93% due to better use of technology and an enhanced focus on this key performance indicator. As a result, nearly 18% more food was donated and distributed.
- An array of large commercial foodservice operations within the city, such as hotels, stadiums, restaurants, and colleges. Many have had little involvement with food donation to date,

suggesting room for significant growth with donation of prepared foods that can be useful for homeless shelters and other on-site feeding programs. The Baltimore Convention Center, Oriole Park at Camden Yards and M&T Bank Stadium actively donating food now and could potentially provide a compelling example for other institutions.

- The World Wildlife Fund provided training in 2018 to Baltimore's hospitality sector on food waste reduction, including encouragement for hotels and other businesses to donate surplus foods. Now completed, that initiative provides a foundation for continued engagement with Baltimore's hospitality sector on food donation issues.
- Potential for increased donations of fruits and vegetables from Maryland farmers.
- Opportunities with large commercial food producers that have ties to Baltimore, or to Maryland, but sit outside the City's limits.

A modeling effort by NRDC shows that more food could potentially be sourced from donors inside Baltimore City, with the largest untapped area being retail grocery. NRDC also found potential among convenience stores, healthcare facilities and the hospitality industry (mainly hotels). A separate analysis by the Maryland Food Bank found significant potential among convenience stores, grocery retail and food distribution (the latter being a sector not evaluated by NRDC). Details of both studies are available in Appendix A.

A Word on Respectful Language: Language is important. Terminology such as "food waste" or "ugly produce" implies that lower quality products are acceptable for those who cannot afford to buy food. As a result, we refrain from using those terms in this report when referring to foods that are re-directed to people in need.

It is also important to note that many Baltimore neighborhoods are without grocery stores. Corner stores, convenience stores, carry outs, fast food, and drug stores largely fill the gap. While there is potential for growth in donations from "convenience retailers," it is important to note that these potential donations, while providing caloric foods, may not provide the most nutritious options.

Even with large institutions, donations can be highly variable and often require considerable resources to collect. For example, last year's annual Natural Foods Expo at the Baltimore Convention Center yielded two tractor trailer loads (64,000 pounds) of donated food but required 25 volunteers, each working eight hours, to collect and load the food into Food Bank vehicles. Oriole Park at Camden Yards donates roughly 35,000 pounds of food annually that consists of breads, produce, and other perishable items from April to September. While sizable, these donations are only available when the team plays games at home.

As rescuers work to enlist new food donors and expand donations from the donors they have, purchased foods are playing an increasingly important role in the food banking system around the country. At the Maryland Food Bank, approximately 25% of the food distributed is purchased with funds raised through philanthropic efforts. The percentage of purchased food is expected to continue to rise as sourcing more donated food, and more nutritious food, will become increasingly challenging. This highlights the need for both expanded financial resources and food donations if the gap in food assistance needs is to be met.

From an operational standpoint, three important considerations regarding the potential for expanded food donation include:

1. **Rescue Capacity.** To increase food rescue and distribution, rescuers and LMOs would need more financial, human resources, and materials to handle more food. The Maryland Food Bank can assist in identifying LMOs that are in a position to accept/pick up additional donated food as well as organizations that with some additional investment, could participate more broadly.
2. **Food Quality.** The quality of food provided to food-insecure Baltimoreans matters. Many individuals who utilize food pantries have ready access to unhealthy, processed foods, but lack access to more nutritious foods like milk, meat, and fresh produce.
3. **Geographic Need across the City.** While there are instances where an existing LMO has the capacity to receive more donated food, there are geographic areas of the City that are underserved by organizations that can effectively distribute food to clients and where the need is more acute.

Recommendation: Resources to be Obtained to Hire a City-wide Food Sourcer

Aggressively expanding the ranks of food donors in Baltimore will require additional human capital. Donor recruitment is very relationship-intensive and requires deep knowledge of operational practices with the focal business sector, pragmatism, tenacity and the capacity to stay at the table to help prospective donors get over the inevitable hurdles of initiating or expanding a donation program.

> **Recommendation 4:** Obtain resources to hire a food "sourcer" to cultivate relationships with prospective food donors, focusing on business and institutional sectors with the strongest potential to donate proteins, fresh produce and quality prepared foods.

To cultivate more donations of nutritious food, it is recommended that resources be obtained to hire an individual to recruit and manages relationship with prospective business and institutional donors in priority sectors (1 FTE). Hiring such a food "sourcer" is estimated to cost roughly $55,000, plus benefits.

The sourcer's time should be dedicated to cultivating donations of fresh produce, protein and other healthy foods that are all too often a luxury that City residents can't access or afford. A strong majority of the clients surveyed through this research were satisfied with the protein/produce quantity they receive; however, room for improvement remains for increased quantity and quality. The sourcer could also play a much-needed role in educating food donors about what foods are most needed (e.g. frozen meats and produce) and those that are less appropriate for donations (such as desserts, candy, sugar sweetened beverages and bread).

Ideally this individual (or perhaps a cluster of part-time individuals) would be housed within a food assistance organization(s) that have a foundation of existing relationships, food safety systems, data tracking, transportation services and the ability to support relationship-building between the donor and appropriate Last Mile Organizations. While more focused analysis would be needed, likely sectors to prioritize would include grocery retail, hospitality, colleges and healthcare.

Recommendation: Develop and Disseminate Food Safety Guidance

Although often unrecognized, city sanitarians who regulate and inspect licensed food facilities provide a critical link to potential food donors. Because they regularly visit facilities in person and have deep food safety knowledge, they can be critical resources in ensuring that donors donate food safely.

However, in many communities, food businesses have the perception that their city health department discourages food donation, that donation is prohibited, or that they will be fined for donating. The fear of making a mistake can curtail a business' nascent interest in starting a food donation program.

> **Recommendation 5:** Develop and disseminate user-friendly food safety guidance for licensed food facilities from the Baltimore City Health Department. Incorporate food donation into inspection visits to the extent practical and hold periodic trainings on food donation for new sanitarians.

The Baltimore City Health Department, with input from relevant stakeholders, should develop and disseminate user-friendly food safety guidance to licensed food facilities. The guidance should be distributed in print and through the Department's website and translated into multiple languages as appropriate. Food donation education should be incorporated into inspection visits to the extent practicable. Training for sanitarians can be integrated into existing activities and new staff orientations.

Work on this recommendation is already underway. NRDC and the City have conducted a training for the sanitarians about their role in fostering safe food donation. NRDC has also approached the sanitarians about developing guidance on safe food donation for prospective food donors. This effort would be similar to the approach used by NRDC with health departments in Minneapolis, Nashville, and Denver. It is worth noting that California also uses food safety inspectors to communicate with food facilities about safe food donation.

Recommendation: Financial Incentives and Public Recognition Programs for Food Donors

Incentives can be a meaningful way to get businesses to look at donation with fresh eyes. Incentives can take many forms, beginning with financial incentives. They could also include participation in activities that 'do good' locally and public recognition for the donation of appropriate foods. To convey the city's interest in food donation and foster greater participation, the city should:

> **Recommendation 6:** Assess the need for and develop policies and programs that incentivize food donation and publicly recognize businesses and institutions that donate appropriate foods.

- Explore the feasibility and potential impact of a city-level tax credit for donation of appropriate foods;

- Actively communicate the city's concerns about food insecurity and the need for expanded food donations to area businesses and institutions;

- Recognize participating business and food donors through Mayoral recognition[18], business challenges, or other strategies. The Food Recovery Verified program run by the Food Recovery

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[18] This recommendation was inspired by the USDA's 2015 efforts to recognize "Food Waste Champions."

Network could also be a potential partner for monitoring donation activity by participating businesses and recognizing food donors.

Other Resources for Donors

One of the keys to enlisting new food donors is eliminating barriers to donation. In Baltimore, as is the case nationally, many food businesses lack knowledge of the federal liability protection granted under the Bill Emerson Good Samaritan Act and are wary of perceived liabilities if a problem occurs with the food they have donated. Businesses contacted for this research often cite concerns about liability as a reason not to donate. Baltimore City legislators are also currently pursing legislation to extend liability protection to nonprofits that sell donated food at a low cost to cover some of the costs of processing or handling.

Similarly, federal law provides substantial tax incentives for food donation. Eligibility for these tax breaks was extended to all tax-paying businesses in 2015, although too few businesses are aware of this opportunity. Numerous user-friendly outreach materials on these topics are currently available and could be readily adapted for use in Baltimore. Food rescuers are well-positioned to disseminate these materials. Collaborators could potentially include the Greater Baltimore Committee, the Restaurant Association of Maryland or Baltimore City's Chamber of Commerce.

> **Recommendation 7:** Distribute educational materials on liability protections and tax incentives to food donors. Evaluate opportunities to provide re-usable packaging to LMOs and donors.

Similarly, prospective donors may be deterred by the prospect of paying for the packaging in which foods are donated (such as deli containers or foil hotel pans). CityHarvest in New York has found success by supplying donors with sturdy aluminum pans. Similarly, NRDC research in Nashville, TN has found that packaging is often a concern for donors and Last Mile Organizations (LMOs) alike. Recent research from NRDC also found that re-usable metal hotel pans are by far the most economical choice over the long-term, but that up-front costs need to be overcome to shift away from more resource-intensive and costly single-use containers. A program to provide re-usable containers to donors and LMOs that have the capacity to clean and return containers is worth exploring.

II.   LAST MILE ORGANIZATIONS

Expansion of Human Capital, Infrastructure and Financial Capacity Among Last Mile Organizations

Last Mile Organizations (LMOs) such as food pantries and on-site feeding programs provide a critical link in the food rescue system by distributing donated food to food insecure individuals. While LMOs exist on a spectrum of various management styles, sizes, and maturity, there are some common traits among the City's smaller LMOS: many lack adequate financial support, lack infrastructure to distribute perishable product, and/or are run by an enthusiastic but aging population of volunteers.

Through its relationships with more than 100 LMOs inside Baltimore City, the food bank has seen that many are not capable of receiving, storing, or distributing more food than they currently do due to a lack of staff/volunteers, storage space and finances. When approached to participate in this research, many organizations that might appear to be active in this work were unreachable and unable to respond to email, web, or phone inquiries. Many of those that were able to respond had difficulty providing reliable data about their current activities. This highlights the widespread need to deepen capacity among LMOs so that they can be a more effective conduit to clients.

Recommendation: Develop A City-wide Strategy for Recruiting, Training, and Managing Volunteers to Manage LMOS.

> **Recommendation 8:**
> Develop a city-wide strategy to recruit the next generation of food rescue volunteers and support the effective training, management and retention of volunteers in Baltimore's food rescue system.

Lacking resources to hire paid staff, most LMOs are highly reliant on volunteers. People and vehicles are needed to transport food from Point A to Point B and distribute it effectively. This raises two challenges.

First, volunteer efforts require extensive support and training to be effective. At scale, the recruitment and deployment of volunteers numbering in the hundreds must be professionally managed. If the volume of donated food is to be increased significantly, more volunteers and stronger recruitment, training, and retention capacity will be needed. In Baltimore, however, most LMOs are fending for themselves in recruiting and managing volunteers and few systems exist to support their efforts.

Second, many of the individuals currently managing or supporting day to day operations of food assistance organizations are volunteers, and most are senior citizens who move into these roles in retirement. LMOs in Baltimore City (and elsewhere) face a looming crisis regarding the aging of their senior corps of volunteers. As seniors age out, they typically leave a vacuum in their wake. Ultimately, local food assistance networks could become weakened or defunct if additional volunteers are not ready to take over.

To address this, we recommend the following:

- Use existing organizational structures to facilitate stronger volunteer management, potentially building on existing organizations that already manage robust volunteer programs (e.g., Maryland Food Bank, Business Volunteers Maryland, Jewish Volunteer Connection, or other similar organizations). These structures can provide knowledge, structure, credibility, and accountability.
- Use education and marketing campaigns to assist with recruiting more – and younger - volunteers.
- Partner with City-run youth programs to recruit younger residents to get involved in LMO management/volunteerism.

Two potential sources for youth engagement include the Mayor's Office of Employment Developments Youth Opportunity (YO) and the YouthWorks Summer Jobs. Both entities could provide opportunities for

young people to get involved in food rescue by helping to manage LMO food distributions and/or food rescue from area farms in exchange for workforce development training.

Another opportunity is to invite clients of food assistance programs to serve as volunteers. Anecdotally, this often happens currently. Many food-insecure individuals — adults and children — initially come to food pantries to volunteer as a stigma-free way to receive food assistance. Welcoming clients as volunteers also ensures that food assistance recipients are aware of, and have access to, all the services provided by a food pantry or assistance program, thus quickening their transition to food security.

Recommendation: Increase Support for LMO's Physical Infrastructure and Human Capital

Even small LMOs need certain capacities to distribute food effectively, including refrigerators, freezers, storage space, transportation capacity (often in the form of volunteers' personal cars) and equipment for moving food. Particularly with growing emphasis on healthy, perishable foods like fruits, vegetables, meat and dairy products, LMOs need appropriate infrastructure to maintain food safety and quality. Some common capacity needs of LMOs to store and distribute more perishables include freezers ($582/unit); thermal blankets ($73/unit), lift gates ($2,000 - $9,000/unit), and/or infrared thermometers ($70/unit).

> **Recommendation 9:** Create a coordinated strategy to engage Baltimore's philanthropic and business communities in mobilizing financial support for LMO infrastructure, staffing and other rescue ecosystem needs.

Similarly, as noted above, most LMOs are highly reliant on volunteers. As a result, they lack the paid staff needed to raise additional funding, engage in more proactive outreach and expand their operations. Many LMOs are now maxing out their operating capacity and would be hard pressed to ramp up donations of perishable foods, in particular. As a result, we recommend that the City help engage the philanthropic sector and local business community to mobilize financial support for paid staff, other operating costs and capital investments at the LMO level.

Pantry on the Go

The Maryland Food Bank partners with community organizations to host mobile pantries, providing supplementary food assistance in areas most affected by food insecurity. Thousands of pounds of food are delivered to each site by truck, and immediately unloaded and distributed directly to clients.

- **Healthier Foods:** Pantry on the Go (POTG) allows for quick distribution of large quantities of fresh produce that could otherwise spoil, as well as other high-quality, nutritious foods.

- **Simplified Process**: MFB does all the heavy lifting for partner sites, making it easier for LMOs to meet local needs.

- **Improved access:** Pantry on the Go helps reduce transportation barriers for individuals without easy access to brick-and-mortar food pantries and/or who are in underserved geographic areas.

In FY18, the food bank distributed 1.7 million pounds of food to Baltimore City residents through POTG.

Recommendation: Identify Organizational Development Resources to Strengthen LMO Capacity

> **Recommendation 10:**
> Identify organizational development resources to strengthen LMO capacity for fundraising, management, governance, communications and other key functions.

Many LMOs could benefit from professional training, coaching and other services to strengthen their capacity with:

- fundraising,
- board development,
- governance,
- strategic planning,
- communications and
- volunteer program management.

Universities, retired executives, pro bono consultants or others – could potentially be mobilized to provide this type of assistance. Support from foundations or the business community could be used to fund trainings as well.

Recommendation: Explore the Need to Improve the Geographic Accessibility of Food Assistance for Clients.

Food assistance is most effective when it is easily accessed by those who need it. Of clients who participated in our survey, 40% identified transportation as a significant barrier to accessing food assistance. Thirty percent (30%) indicated that they have a disability that impedes access to their food pantry. The majority, 82%, of those surveyed indicated that they walk to their food pantry, suggesting a very high reliance on walking and the need for food distribution points to be near where clients work, live, obtain other services and conduct their daily business.

> **Recommendation 11:**
> Evaluate the need and strategies for making donated food more geographically accessible to clients through expanded mobile distribution, home delivery and/or distributions strategies that are closer to where clients work, live and obtain other services.

We recommend that additional research be undertaken (building from the city's existing Food Environment Maps) to evaluate areas of the city where additional food distribution points are needed. These could include new brick-and-mortar locations, perhaps co-located with health facilities or other places where clients already go, or more flexible options like mobile distribution or even home delivery, particularly when addressing the needs of community members with disabilities and other barriers.

Recommendation: Explore Technology Platforms to Connect LMOs and Food Donors

Another potential way to facilitate food donations and better leverage the human resources of LMOs is through technology. A range of food rescue matching tools has emerged around the U.S. within the last five years. Web-based software and mobile apps can now match businesses and institutions that wish to donate food with LMOs that can pick it up and get it to people in need. Some tools even provide a three-

way match with volunteers to transport the donated food. For-profit start-ups are active in this space as well and food delivery companies like Door Dash and PostMates have begun offering free app-enabled deliveries in some areas of the country.

Interviews with stakeholders uncovered a few matching tools currently in use within Baltimore City, including MEANS Database, FoodBridge, FoodtoDonate.com and others, though no predominate player has yet risen to the top. Some software is free, others are subscription based, and others charge food donors as their business model to offset costs.

In addition, the Maryland Food Bank is currently participating in a Feeding America pilot project called "Middle Mile." This is an on-the-ground trial of Feeding America's app, Meal Connect. The app connects food donors that the food bank would not traditionally engage with (due to small volume of food) with LMOs in Baltimore via a network of volunteer drivers. There are six other food banks across the country also participating in this pilot program. MFB will gladly share the research results once they are available.

> **Recommendation 12:** Evaluate the need for and potential options for technology solutions to connect LMOs and food donors.

It is important to note that successful introduction of such apps requires significant engagement of food donors and training for LMOs. It also takes a sufficient volume of food being posted on the app to drive LMOs to use it. Also, apps in themselves are not a substitute for building relationships, particularly with businesses that are new to food donation (especially with prepared foods from restaurants and foodservice institutions where the utility of an app is likely to be greatest). That said, an assessment of the need for tech-enabled connections between donors and rescuers should be conducted along with an evaluation of available technology solutions for small-scale food rescue.

III.   CLIENTS

Increasing the Voice of and Responsiveness to Clients

Food assistance solutions must include the voices of people who rely on the system. As Judith Poey, Project Manager of Older Adult Services Hub/Health Program Officer at the United Way of Central Maryland said in an interview,

"Long gone are the days where we're going to tell you what we're going to do for you. Make sure that the community's voice is heard, adhered to, and is guiding our efforts. This is key to anything that we do. There is already a great strength at the community level. We are not trying to take what is there, but rather lift up success. This is a very important distinction."

Interviews conducted through this research reflected the commitment of many stakeholders in Baltimore's food rescue ecosystem to being more inclusive of client voices. Many examples are available within the state and nationally for creating inclusive, closed-loop systems that effectively engage clients and help food rescue systems become more responsive and effective.

Recommendation: Empower Clients in Shaping the System's Future

Explicit efforts should be made to expand the voice of clients in assessing how well Baltimore's food rescue system is meeting their needs and empowering them as catalysts in shaping the system's future. Individual rescue organizations and LMOs should expand their commitment to this within their own operations and a range of city-wide strategies should be identified and considered. Initial options for consideration could include:

> **Recommendation 13**: Elevate the voices of food assistance clients by including them in advocacy activities, volunteer opportunities, and community outreach.

1. Create an **advisory board** (or link/expand existing efforts) through which clients can help shape public policy, set priorities, take an active role in advocacy activities, and provide guidance to food assistance organizations.

2. The City or LMOs could host ongoing, **facilitated design-thinking seminars** with people experiencing food insecurity to design new services, strengthen ongoing efforts to improve impact, and learn how to better communicate about food assistance services.

3. LMOs should invite clients of food assistance programs to **serve as volunteers** while receiving services as a recommended best practice.[19]

4. Train clients to do **community outreach** about local food assistance programs while building skills in advocacy, marketing, and customer service.

5. The City could include food program participants in developing and advancing advocacy, including providing input on how geographic accessibility, food type and quality, and other aspects of the food rescue system can be improved.

Recommendation: Establish Systems for Regularly Gathering Client Input

To complement the channels above, surveys, focus groups and other such vehicles can be a helpful way of gathering quantitative and qualitative input from large numbers of clients on an on-going basis. A follow-up survey of 1,000 clients, commissioned by the Natural Resources Defense Council, will take place in spring / summer 2019 and will serve as one vehicle for gathering more input.

> **Recommendation 14**: Secure funding to gather input and feedback from clients on an on-going basis via surveys, focus groups and other mechanisms as appropriate.

Thereafter, funds should also be obtained to continue gathering input from clients on an ongoing basis and used to evaluate how well the system is functioning from their perspective and fuel new strategies that respond to community concerns.

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[19] Through the food bank's experience, we know anecdotally this is happening. Often, clients approach Last Mile Organizations asking to volunteer. Once they volunteer, they feel more comfortable accepting food for themselves and/or their families. While this recommendation may seem to under value their time, it is based on preserving dignity – which is important to do, considering the stigma often associated with accepting food assistance.

Recommendation: Understanding the Unique Needs of the Disabled Population

While the initial client survey conducted as part of this assessment was small, it found that 25% of clients surveyed said they live with a disability that makes it "very difficult" to get food assistance at the pantry they use. An additional 5% say the disability they live with makes it "sometimes" difficult to get food assistance from pantries.

This is consistent with findings of NRDC's recent survey work in Denver. Of nearly 1,100 clients surveyed in Denver, 40% said they or another adult in their family had some type of disability.[20]

This suggests a strong need to further assess the food security-related needs of Baltimore's disabled population and identify strategies to ensure that their needs are being meet.

> **Recommendation 15**: Conduct a more detailed study of the specific food security-related needs of people living with disabilities that impede their access to food assistance.

Technology Offers Potential Solutions for Clients Seeking Food Assistance

Our initial survey found that nearly 95% of survey respondents learned of the food pantry they use through word of mouth. Data from the United Way of Central Maryland's 2-1-1 assistance program indicates they receive the highest call volumes for requests for helping finding food. Maryland Food Bank's *Need Food?* webpage receives hundreds of requests for help finding food assistance inside Baltimore City each week. This suggests that more needs to be done communicate with clients about when, where and how they can access food assistance.

Recommendation: Area Nonprofits and LMOs should Expand Outreach to Clients about Accessing Food Assistance

For clients with access to the web, consultants suggest exploring clients. This app would be accessible in multiple formats to cover a wide range of user abilities, including:

- An upgrade/further development of a **centralized website and/or app** to map food assistance locations citywide. This app can be queried to help clients find convenient locations and times that work for them.

- **Printed brochures** in **multiple languages** by zip code with locations, times, and kinds of food assistance available (e.g., hot meals, groceries, client choice pantry, etc.).

> **Recommendation 16:** Expand outreach to clients on ways to access food assistance through an expanded website, cell phone app and/or printed communications as appropriate.

The Maryland Food Bank has a custom page on its website "Need Food?"[21] to direct callers or website visitors to MFB-affiliated programs and partners across the state and in Baltimore City. The site is designed to be fully functional on mobile devices. Further exploration is needed to assess what would be required to make this a more robust resource to Baltimore City.

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[20] *"Strengthening Denver's Food Rescue Ecosystem"*, Natural Resources Defense Council, October, 2018.
[21] See https://mdfoodbank.org/find-food/.

Also, the New York-based food bank CityHarvest has collaborated with organizations in New York City on development of the "Plentiful" app. The app enables clients to make appointments to pick up food, obtain information on what food is available and potentially share information about their needs and preferences via their mobile phone. While the app is not yet ready for deployment in other communities[22] it is a resource that should be considered by stakeholders in Baltimore.

CONCLUSION

This report seeks to provide key stakeholders with actionable recommendations to improve Baltimore City's food rescue landscape and reduce food insecurity for Baltimore City residents. Food rescue has broad environmental and social benefits, particularly when all too many Baltimore residents go without. Food is being donated and distributed to food-insecure Marylanders every day. However, the system that was built over the past 40 years — when food banks and food pantries first emerged and homeless shelters proliferated — is not the same system that will be needed over the coming decades.

Baltimore City leadership is facing a tremendous opportunity and an urgent need. This is a vital moment to act with urgency and change the future for Baltimore residents.

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[22] Personal communications, Kate MacKenzie (City Harvest) with JoAnne Berkenkamp (NRDC), January 16, 2019.

APPENDIX

A. CLIENT SURVEY

As part of this research, the consultants also sought input from food-insecure Baltimore residents about their experiences with the city's food rescue system. A preliminary survey of individuals who receive food assistance, referred to in this assessment as "clients", was conducted. In-person client surveys were conducted at three local food pantries (representing both client choice and pre-bagged[23] approaches to food distribution) in three Baltimore City neighborhoods[24].

It is important to note that this initial survey is too small to be considered representative of all Baltimore City food pantry users and it does not address clients who receive food assistance from sources other than pantries. NRDC is now contracting with the Maryland Food Bank to conduct a larger survey of 1,000 additional clients. That expanded survey will be informed by the findings of this assessment report, enabling deeper analysis of key issues identified here.

Demographics

The three neighborhoods chosen for the survey (Brooklyn, Cherry Hill, and Charles Village) range in median household income, percent of households living below the federal poverty line, unemployment rates, and racial diversity, as seen below:

Pantry Partner	Neighborhood	Households	Median Household Income	% of Households Living Below Federal Poverty Line[25]	Unemployment Rate	Racial Diversity Index[26]
Women Empowering Women	Charles Village	6,552	$34,642	26%	9%	68
Baltimore Dream Center	Brooklyn	4,812	$38,604	26%	17%	71
Cherry Hill UMC[27]	Cherry Hill	3,060	$23,585	41%	15%	25

Table 2: Client Survey Locations

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[23] At client choice distributions, clients select which of the food items available they would like to receive given their taste preferences and capacity to store/prepare food. At pantries using a pre-bagged approach, clients accept a bag of food (produce, proteins, and shelf-stable products) that has been pre-bagged by volunteers.

[24] . Surveys were administered by Maryland Food Bank staff using a paper survey tool to conduct on-site intercept surveys. An online survey portal was not used for two reasons: 1) Many of the food bank's smaller community food distribution partners are not equipped with WiFi access, and 2) Computer literacy was an assumed barrier to clients' completion of the survey. If clients identified/suggested experiencing barriers to completing the survey (e.g., mobility, vision, or literacy), food bank staff read the survey aloud, and helped clients complete the survey form.

[25] Federal Poverty Line, U.S. Department of Health & Human Services, https://aspe.hhs.gov/poverty-guidelines.

[26] The Racial Diversity Index, as defined by the Baltimore Neighborhood Indicators Alliance, is "the percent chance that two people picked at random within an area will be of a different race/ethnicity. This number does not reflect which race/ethnicity is predominant within an area. The higher the value, the more racially and ethnically diverse an area."

[27] United Methodist Church.

The survey respondents self-identified as follows: 78% African American; 0% Asian; 8% White; 5% Native American; and 10% "Other."

Food Habits and Preferences

Clients were surveyed about their level of satisfaction with the food assistance they receive, barriers to receiving food assistance and other issues. Overall, clients appeared satisfied with the amount, quality, shelf life and selection of food available at surveyed panties, with satisfaction ratings of 60 – 80% across various indicators as shown below. There remains room for improvement, however.
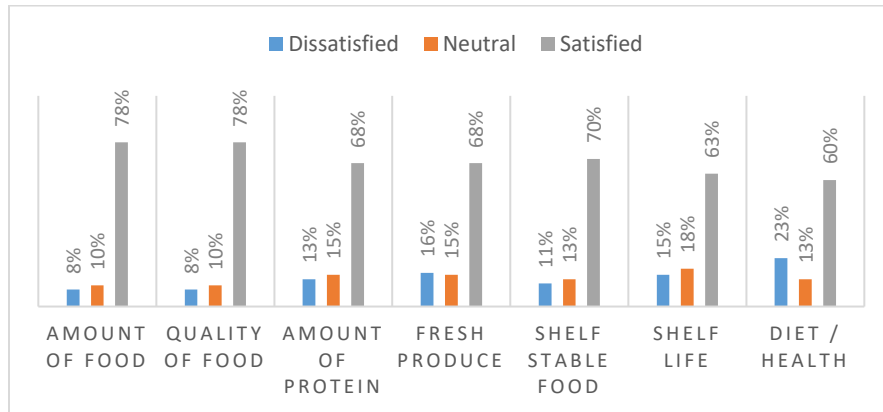
Figure 3: Satisfaction with Current Food Assistance (client choice and pre-bagged combined)

When this data is parsed out to compare clients of client-choice and pre-bagged distribution efforts, the division shows a sharp contrast between the two models. Clients receiving food assistance through a client-choice pantry were:

- 48% happier with the **amount of food** they received than clients receiving food at bag programs;
- 36% happier with the **shelf-life** of the food they receive; and
- 28% happier with the food's reflection of their household's **diet/health needs**.

This suggests that continued adoption of the client choice model could be instrumental in better meeting the needs of food insecure residents. In addition, 66% of both client-choice and bag program clients reported they were mostly satisfied with the hours of operation at the pantry.

Outreach

Where communications are concerned, nearly 95% of survey respondents learned of the pantry through **word of mouth (meaning a friend, family member, church member, or other community member)**. The remaining clients reported learning about the food assistance source through advertisements, flyers, or the internet.

This statistic could be interpreted in multiple ways. It may suggest food assistance efforts are not being effectively publicized through formal communication channels. The data may also reflect that food pantries are nestled inside tight-knit neighborhoods where people are taking care of one another, making word-of-mouth communication a powerful tool for linking clients with food assistance. This

statistic is worthy of further investigation to inform future efforts to communicate about food distribution points within the City.

Clients were also asked if they needed outreach **materials in languages other than English**: 90% said no.

Barriers to Food Assistance

Regarding barriers to food assistance, it is most notable that **25% of clients surveyed said they live with a disability** that makes it "very difficult" to get food assistance at the pantry they use. An additional 5% say the disability they live with makes it "sometimes" difficult to get food assistance from pantries.

Survey participants were also asked about barriers **to preparing the food at home**. Food preparation was not identified as a significant barrier for most clients: in fact, 73% of clients reported they know how to cook the food they receive, an encouraging sign that foods being provided are largely compatible with the clients' know-how and access to food prep and storage facilities.

However:

- 20% of clients reported they have **no time/limited time** to prepare the food they receive;
- 13% reported they're **don't know how to cook/prepare** the available food;
- 10% reported they **don't have the resources** to prepare food (e.g., refrigeration, limited kitchen, electricity, etc.); and
- 5% said mobility or vision impairments prevent them from preparing food they receive;

Geographic Barriers

"Transportation" was reported as a top barrier to food assistance: **40% said transportation is always a barrier**, and additional 5% said it's sometimes a barrier.
About half of respondents said it takes between **10-20** minutes to get to the food assistance. Eight percent of clients need more than 30 minutes to reach food assistance.

Perhaps most notably, **82% of clients reported that they walk** to get food assistance. There reflects a very localized level of need, and additional survey work is needed to understand the geography of those in need relative to existing brick-and-mortar distribution points and mobile distribution services.

Initial recommendations for amplifying client voices and reaching people where they are is provided later in the report.

B. NRDC's Rescue Potential Summary

In 2017, NRDC released a new methodology for estimating how much food could potentially be sourced from food businesses and foodservice institutions in Denver, New York City and Nashville, TN.[28] In late 2018, NRDC also applied that methodology to Baltimore City. The estimates below for food donation potential are based on national data sources for actual food donations in various sectors of the food economy, modelled around "ambitious" and "maximum" scenarios.

The analysis highlights opportunities in the retail grocery sector, in particular. In most other sectors, the potential tends to be much more modest and/or spread across a large number of disparate locations.

Sector	Number of sites per sector	Donation Potential under **Ambitious Scenario** (Tons/Year)	**Potential per site under Ambitious Scenario** (Tons/Year)	Donation Potential under **Maximum Scenario** (Tons/Year)
Retail Grocery	67	2,126	31.7	2,657
Convenience Stores	515	315	0.6	2,524
Healthcare	63	186	2.9	557
Hospitality	85	126	1.5	377
Full Service Restaurants	1,252	50	0.04	491
Universities & Colleges	8	40	5.0	120
Caterers	56	28	0.5	83
K-12	389	27	0.07	212
Coffee Shops	140	15	0.1	177
Limited Service Restaurants	321	7	0.02	65
Total		**2,915**		**7,245**

Figure 4: NRDC Rescue Potential Summary

A portion of the tonnages above are already being donated, particularly from retail grocers. The NRDC research did not address food manufacturers or distributors and metrics derived from national data sources were not adequately detailed to assess the particular food types or quality of food that could potentially be rescued from food businesses in Baltimore.

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[28] Modeling the Potential to Increase Food Rescue: Denver, New York City and Nashville, Natural Resources Defense Council, October, 2017. https://www.nrdc.org/sites/default/files/modeling-potential-increase-food-rescue-report.pdf

In a separate analysis, the Maryland Food Bank estimated amounts that could potentially be recovered, per week, though more dedicated attention to Baltimore City food retailers. If these donations were realized, it would amount to an estimated 1,035,528 additional pounds of rescued food annually.

Sector	Number of sites	Potential Pounds Rescued Per week
Carryout/ Gas / Corner Store	1,022	2,160
Restaurant	847	1,770
Grocery / Deli / Supermarket	612	10,750
Food stands at stadium/ sports arena	246	461
Caterer	231	800
Café / Coffee Shop	129	450
College	41	150
Hotel	34	100
Cafeteria	13	50
Correctional Facility	8	50
Warehouse / Distribution (Amazon)	4	3,173
Vending Machine	4	0
Food Processing	2	0
TOTAL	**3,193**	**1,035,528**

Figure 5: Maryland Food Bank: Potential food rescue per week by establishment