









Livable City Year 2018–2019 in partnership with City of Bellevue www.washington.edu/livable-city-year/



The Livable City Year Student Team: Jonathan Chen, Samara Kleinfinger, and Nola Liu (left to right) with Project Lead Benjamin Wright (on right) at the LCY year-end celebration and poster presentation in Bellevue City Hall. LCY STUDENT TEAM

ACKNOWLEDGMENTS

We would like to thank the following individuals and organizations, without whom the work completed on this project would not have been possible.

First we would like to express our sincere gratitude to our Project Lead Benjamin Wright, Right of Way Engineer with the City of Bellevue Department of Transportation, for providing his instrumental guidance throughout the project and for providing a space to learn experientially.

Second, we would also like to extend our gratitude to all the supportive City staff, community organizations, and food truck operators who have either participated in our interviews, served as a subject matter expert, or assisted in reviewing our work. Their invaluable expertise and insight provided breadth to our project.

Bellevue Downtown Association is a member services organization established in 1974 that has a mission to strengthen the economic and cultural vitality of Downtown Bellevue.

Patrick Bannon, President, was interviewed as a stakeholder.

Augusta DeVries, Director, Membership and Community Development, was interviewed as a stakeholder.

City of Bellevue Department of Development Services

Matthews Jackson, Neighborhood Development Planning Manager, attended and provided feedback to our final LCY presentation.

City of Bellevue, Department of Transportation

Chris Iverson, Transportation Engineer, answered questions and provided information around curbside management in Bellevue.

Marie Jensen, Public Involvement Manager, attended and provided feedback for stakeholder engagement to our mid-LCY presentation.

Rick Logwood, Right of Way Manager, attended and provided feedback to our final LCY presentation.

Mark Poch, Assistant Director of Traffic Management, attended and provided feedback to our final LCY presentation.

City of Bellevue Utilities, Solid Waste Division

Jennifer Goodhart, Environmental Conservation and Outreach Program Administrator, was interviewed as a stakeholder

Stephanie Schwenger, Solid Waste Program Administrator, was interviewed as a stakeholder

Food Rescue Organizations: *Replate* and *Food Rescue US* use a technology platform to manage food donations of businesses with surplus food.

Charlotte Blumenthal, Community and Support Coordinator, Replate, provided specific case examples for this report.

Mallory Mackey, Operations and Strategy Manager, Replate, provided specific case examples for this report.

Melissa Spiesman, National Site Director for Community Plates, Food Rescue US, provided specific case examples for this report.

Food Truck Operators were all interviewed as stakeholders and served as subject matter experts for the food truck industry.*

Grecia Carrero, Paparepas

Chris Kim, ToPo's

Reis Llaneza, The Box

Misa, Qt Food Truck

Todd Nishikawa, A Bit of Aloha

Octavio Ortega, MexiCuban

Stephano Theo, Theo's Gyros

Greg Wagner, The Ultimate Melt

Alaska Weathervane Scallops

Suriya Yunusova, Tabassum

Zytoona

*Not all names of food truck operators interviewed were captured.

Public Health — Seattle & King County, Environmental Health Services Division

Henry Doan, Health and Environmental Investigator II, was interviewed as a stakeholder.

Eyob Mazengia, Health and Environmental Investigator IV and Instructor at the University of Washington, was interviewed as a stakeholder and served as a faculty advisor.

Shelters: The Sophia Way (for women) and Congregations for the Homeless and Eastside Men's Shelter (for men), are located in Bellevue and provide services to individuals experiencing homelessness.

Sarah Bustad, Volunteer Relations Manager, Congregations for the Homeless and Eastside Men's Shelter, was interviewed as a stakeholder.

Mary VonRanker, Operations Manager, The Sophia Way, was interviewed as a stakeholder.

Transitions2earth offers eco-conscious cutlery, serving utensils, and plates for restaurants, catering, foodservice, food trucks, hospitals, churches, and camps.

Ammi Borenstein, Chief Executive Officer, was interviewed as a stakeholder.

Washington State Food Truck Association is an advocacy organization established in 2015 that aims to advocate on behalf of all mobile food members in the food service industry.

Lori Johnson, Executive Director and Board Advisor for the National Food Truck Association, was interviewed as a stakeholder and was a key subject matter expert for the food truck industry.

Everyone's time, energy, and compassion motivated us to continue to work hard on this project through its completion.

A Note on Anonymity

We would also like to acknowledge that while we recognized all the interviewees in this section of the report, any direct quotes or information pulled from these interviews will not be connected to specific names. We wish to maintain anonymity throughout this report out of respect for our stakeholders' willingness to share their thoughts, opinions, and experiences surrounding our research. The purpose of our report is to provide a transparent overview of all the different challenges and opportunities surrounding our project topic. We wish for readers to view our findings holistically, rather than associate specific pieces to certain individuals or organizations.

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ABOUT LIVABLE CITY YEAR

The University of Washington's Livable City Year (LCY) initiative is a partnership between the university and one local government for one academic year. The program engages UW faculty and students across a broad range of disciplines to work on city-defined projects that promote local sustainability and livability goals. Each year hundreds of students work on high-priority projects, creating momentum on real-world challenges while serving and learning from communities. Partner cities benefit directly from bold and applied ideas that propel fresh thinking, improve livability for residents, and invigorate city staff. Focus areas include environmental sustainability; economic viability; population health; and social equity, inclusion and access. The program's 2018–2019 partner is the City of Bellevue; this follows partnerships with the City of Tacoma (2017–2018) and the City of Auburn (2016–2017).

LCY is modeled after the University of Oregon's Sustainable City Year Program, and is a member of the Educational Partnerships for Innovation in Communities Network (EPIC-N), an international network of institutions that have successfully adopted this new model for community innovation and change. For more information, contact the program at uwlcy@uw.edu.



ABOUT CITY OF BELLEVUE

Bellevue is the fifth largest city in Washington, with a population of more than 140,000. It's the high-tech and retail center of King County's Eastside, with more than 150,000 jobs and a skyline of gleaming high-rises. While business booms downtown, much of Bellevue retains a small-town feel, with thriving, woodsy neighborhoods and a vast network of green spaces, miles and miles of nature trails, public parks, and swim beaches. The community is known for its beautiful parks, top schools, and a vibrant economy. Bellevue is routinely ranked among the best mid-sized cities in the country.

The city spans more than 33 square miles between Lake Washington and Lake Sammamish and is a short drive from the Cascade Mountains. Bellevue prides itself on its diversity. Thirty-seven percent of its residents were born outside of the US and more than 50 percent of residents are people of color, making the city one of the most diverse in Washington state.

Bellevue is an emerging global city, home to some of the world's most innovative technology companies. It attracts top talent makers such as the University of Washington-Tsinghua University Global Innovation Exchange. Retail options abound in Bellevue and artists from around the country enter striking new works in the Bellwether arts festival. Bellevue's agrarian traditions are celebrated at popular seasonal fairs at the Kelsey Creek Farm Park.

Bellevue 2035, the City Council's 20-year vision for the city, outlines the city's commitment to its vision: "Bellevue welcomes the world. Our diversity is our strength. We embrace the future while respecting our past." Each project completed under the Livable City Year partnership ties to one of the plan's strategic areas and many directly support the three-year priorities identified by the council in 2018.



BELLEVUE 2035: THE CITY WHERE YOU WANT TO BE

Food Trucks in Public Right of Way: Best Practices for Developing a Permitting Process Using an Equity and Environmental Sustainability Lens supports the Bellevue: Great Places Where You Want to Be target area of the Bellevue City Council Vision Priorities and was sponsored by the Department of Transportation.



BELLEVUE: GREAT PLACES WHERE YOU WANT TO BE

Bellevue is the place to be inspired by culture, entertainment, and nature. Learn, relax, shop, eat, cook, read, play, or marvel at our natural environment. Whatever your mood, there is a place for you in Bellevue.

From the sparkling waters of Meydenbauer Bay Park, you can walk or bike east, through Downtown, across the Grand Connection to the Wilburton West center for business and entertainment. Along the way you enjoy nature, culture, street entertainment, a world fusion of food, and people from all over the planet.

For many of us, Bellevue is home. For the rest of the region and the world, Bellevue is a destination unto itself.

The arts are celebrated. Bellevue's Performing Arts Center is a success, attracting the best in onstage entertainment. Cultural arts organizations throughout the city are supported by private philanthropy and a cultural arts fund. Arts and cultural opportunities stimulate our creative class workers and residents, whether they are members of the audience or performers. The cultural arts attract Fortune 500 companies to our community, whether it is to locate their headquarters or visit for a convention.

The past is honored. Residents experience a sense of place through an understanding of our history.

Our community buildings, libraries, community centers, City Hall, and museums provide places where neighbors gather, connect with each other, and support our civic and business institutions.

Bellevue College, the Global Innovation Exchange (GIX), and our other institutes of higher learning are connected physically and digitally from Eastgate to Bel-Red, Downtown, and the University of Washington in Seattle. We've leveraged our commitment to higher education into some of the most successful new companies of the future.

From the constant beat of an urban center, you can quickly escape into nature in our parks, streams, trails, and lakes. You can kayak the slough, hike the lake-to-lake trail, and have the opportunity to enjoy the latest thrill sport.

BELLEVUE 2035: THE CITY WHERE YOU WANT TO BE

Bellevue welcomes the world. Our diversity is our strength. We embrace the future while respecting our past.

The seven strategic target areas identified in the Bellevue City Council Vision Priorities are:



ECONOMIC DEVELOPMENT

Bellevue business is global and local.



TRANSPORTATION AND MOBILITY

Transportation is both reliable and predictable. Mode choices are abundant and safe.



HIGH QUALITY BUILT AND NATURAL ENVIRONMENT

From a livable high-rise urban environment to large wooded lots in an equestrian setting, people can find exactly where they want to live and work



BELLEVUE: GREAT PLACES WHERE YOU WANT TO BE

Bellevue is a place to be inspired by culture, entertainment, and nature.



REGIONAL LEADERSHIP AND INFLUENCE

Bellevue will lead, catalyze, and partner with our neighbors throughout the region



ACHIEVING HUMAN POTENTIAL

Bellevue is a caring community where all residents enjoy a high quality life.



HIGH PERFORMANCE GOVERNMENT

People are attracted to living here because they see that city government is well managed.

For more information please visit: https://bellevuewa.gov/city-government/city-council/council-vision

EXECUTIVE SUMMARY

The city's culturally diverse, rapidly growing resident population and a substantial influx of commuters coming into the city during the workday lead to considerable demand for diverse, highquality, and convenient food options.

Bellevue offers a unique environment and opportunity for food trucks to thrive. The city's culturally diverse, rapidly growing resident population and a substantial influx of commuters coming into the city during the workday lead to considerable demand for diverse, high-quality, and convenient food options. Food trucks are one mode of meeting this demand. As the number of food trucks in Bellevue increases, the number of locations hosting them and the public consciousness around the use of food trucks increase as well. However, Bellevue has no formal permitting process for food trucks to make use of Right of Way (ROW) parking spaces, such as curbside parking. This limits food trucks operations to private property. In partnership with the Department of Transportation's Right of Way Division, the goal of this project is to offer a set of best practices and recommendations for equitable permitting, food recovery, and waste reduction-related activities to support the City of Bellevue in creating a public ROW permitting process for food trucks.

The student team carried out a literature review, conducted key informant interviews, and reviewed a prospective neighborhood as a case study. From the literature review, they gathered insights about how food trucks contribute to neighborhood livability and pulled information from existing food truck programs about equitable permitting, food recovery, and waste reduction. Key informant interviews supplemented findings from the literature review and were used to identify common themes, capture valuable feedback, and understand the unique needs of Bellevue regarding food trucks. The case study provided a lens to identify any additional elements to consider regarding the three overarching themes. Combined, these research activities helped create a set of recommendations for the City to consider as it creates a public ROW permitting process for food trucks.

THREE OVERARCHING THEMES DISCUSSED IN THIS REPORT

Equitable
Permitting:
regulatory
mechanisms,
communication,
and
implementation
strategies for food
trucks

Food Recovery: feasibility of a food recovery program as a strategy to minimize the amount of food waste produced by food trucks

Waste
Reduction:
areas of
improvement
where waste of all
forms can be
managed
sustainably

LCY STUDENT TEAM

RECOMMENDATIONS

The following chart summarizes the project group's recommendations for each of the three overarching themes: equitable permitting, food recovery, and waste reduction. The City may choose to consider these recommendations as it plans to pilot its public ROW food truck permitting program.

RECOMMENDATIONS UNDER THREE OVERARCHING THEMES



EQUITABLE PERMITTING



FOOD RECOVERY

- 1.Identify adjacent brick and mortar businesses in the immediate vicinity of proposed parking zones and engage with these businesses before launching the program.
- 2. Reach out to nearby office buildings and/or residents in the area to build awareness, excitement, and demand.
- 3.To assist in reviewing and selecting parking locations, capture physical characteristics of identified parking zones through photos or virtual mapping.
- 4. Allow food trucks the flexibility to rotate locations among permitted parking zones.
- 5.Create an up-to-date online portal for customers to actively check to see where food trucks will be operating Food truck operators should be given access to update as well.
- 6.Develop a phone application or texting notifications among food truck operators, the City, and regulators for regulatory reminders, updates, and clarifications to create accountability across all parties.
- 7.Develop feedback channels to capture best practices and lessons learned from key stakeholders (i.e. food truck operators, customers, and brick and mortar restaurants).
- 8.Engage with the general public before, during, and after launching the food truck program to gauge perceptions and demand for food trucks. This information should always be collected and stored for future reference.

- 1.Explore adopting an existing food recovery model to pilot in the city.
- 2.Develop a food truck food recovery or have food trucks participate in a broader city-wide program to provide a transportation mechanism between food trucks and donation sites.



WASTE REDUCTION

- 1.Require all participating food trucks to have appropriate garbage, composting, and recycling waste receptacles available for staff and for customers. This can be especially helpful in areas that do not have publicly-owned waste receptacles.
- 2.Require all participating food trucks to use compostable or recyclable packaging, with public compost receptacles available for disposal. It is recommended for food trucks to use one main packaging type instead of mixed packaging types for ease of disposal.
- 3.Incentivize use of sustainable packaging and waste reduction practices by implementing a green/sustainability certification that food truck operators can display.

LCY STUDENT TEAM

INTRODUCTION

Although many cities have taken notice and have begun updating regulations regarding mobile food vendors, there are still untapped opportunities to leverage mobile food vending as a design method and policy tool that can improve city streets and help build forms of community.

WHY FOOD TRUCKS MATTER

Street food has been hailed as one of America's most popular culinary trends, with delicacies ranging from Korean barbecue and curries to lobster rolls and tacos (National League of Cities 2013; Kock 2016). Aspiring chefs and established restaurateurs are pioneering new business models, launching new markets, and seeking out new spaces in the city to vend — defined by cities as mobile food vending. In the US, mobile food vending has quadrupled in revenue stream in recent years, from approximately \$650 million in annual revenue in 2012 to \$2.7 billion in annual revenue in 2017 (U.S. Chamber of Commerce Foundation 2015). Food trucks are especially popular since they offer greater flexibility to vendors who may wish to journey greater distances to serve a range of locales and communities. Although many cities have taken notice and begun updating regulations regarding mobile food vendors, there are still untapped opportunities to leverage mobile food vending as a design method and policy tool that can improve city streets and help build forms of community (National League of Cities 2013).

The benefits of food trucks convey the theme that good food is key to creating livable, vibrant cities. The usage of food trucks is expanding rapidly across the nation due to a number of reasons, including:

- Consumer desire and demand for an overall package of novelty, convenient, and quality food; and a preference for small and sustainable business
- Financial appeal to business owners and entrepreneurs as a low barrier-to-entry business model, with starting costs averaging \$40,000 relative to \$100,000+ for starting costs of brick and mortar restaurants
- Additional opportunities to expand economic capital and enrich communities by improving access to different food options
- Awareness of food trucks as social justice mechanisms that increase visibility for underrepresented cultural and ethnic communities (National League of Cities 2013; Agyeman, Matthews, and Sobel 2017)

WHAT IS MOBILE FOOD VENDING?

Mobile food vending refers to preparing and selling food out of a portable vehicle or structure (Office of Economic Development 2019). Mobile food vending comes in various forms. The most common types are identified below (Washington State Department of Labor and Industries n.d.):



Food trucks are licensed and motorized vehicles that are used for selling food items to the general public. Typical sizes range from 14-30 feet long.



Push carts are towed by a vehicle and are typically dropped off for the time they are permitted. Typical sizes range from 120-200 square feet.



Food Trailers are towed by a vehicle and are typically dropped off for the time they are permitted. They vary in size, but are significantly larger than push carts and slightly smaller than food trucks.



Food stands are typically temporary, standalone structures. They also vary in size.

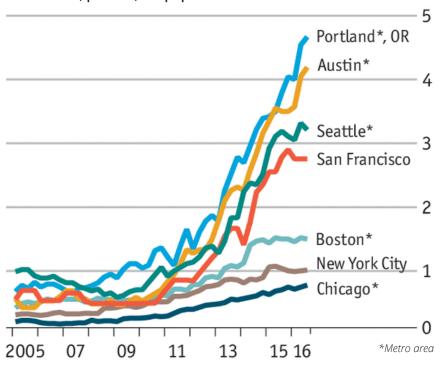
Food trucks tell a larger story about how good food is key to creating livable and vibrant cities.

As food trucks become increasingly common in the US, many city governments are struggling to keep pace with regulations, and often find themselves under pressure to both nurture and restrict this trend (National League of Cities 2013). Cities often have ordinances that were written decades ago for limited mobile food vendors such as ice cream trucks and hot dog carts. However, this industry is quickly evolving beyond these traditional mobile foods. Regulations, especially around appropriate permits, are crucial in shaping public spaces and forms of public life (Agyeman, Matthews, and Sobel 2017). An ideal set of regulations can:

- Provide the best enforcement mechanisms to ensure fair competition among food trucks
- Support a sustainable and clean environment
- Promote walking and physical activity
- Add vitality to the street
- Protect public health and safety

FOOD TRUCK GROWTH IN MOST POPULOUS US CITIES

Food trucks, per 100,000 population



US CENSUS BUREAU, THE US BUREAU OF LABOR STATISTICS



Street food truck festival in Cincinnati 5CHW4R7Z

FOOD TRUCKS IN WASHINGTON

Hundreds of food trucks are operating in at least 27 cities across Washington state (Roaming Hunger 2019). According to the Washington State Department of Labor and Industries (L&I), a food truck is defined as a licensed vehicle from which food is sold at temporary sites. In order to be considered a food truck and not a commercial coach or a modular building, workers work inside the food truck and the public stays outside. A food truck can be no more than 8.5 feet wide and must have at least one of the following: an electrical system, a water or drain system, or a propane gas system (Washington State Department of Labor and Industries n.d.).

Across different jurisdictions, similar procedures are required for operators to start and maintain their food trucks. These procedures include: putting together a business strategy and menu; finding a vehicle and equipment; navigating the rules of public health, business, taxation, and fire and safety; and finding spaces to operate.

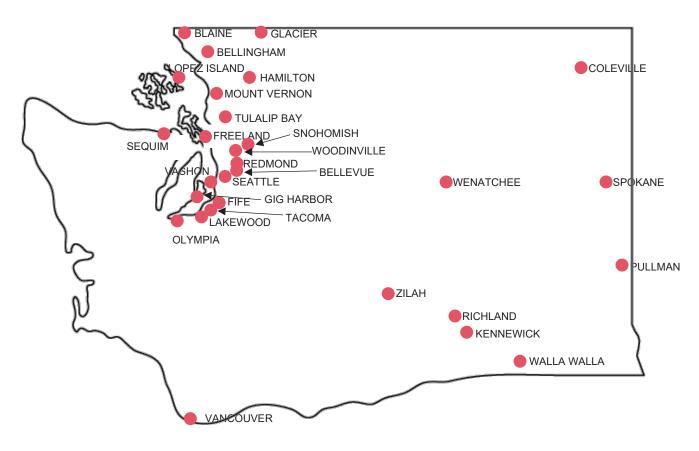
Public Health Requirements: In order to serve food, food truck operators must be approved by L&I before obtaining a permit from the local health department and a Washington State food handler's card. Health departments require detailed plans to minimize the risk of foodborne illness. Certain food items may be exempted from food permit regulations. Most food truck operators must obtain approval when they wish to operate in a new county (Office of Economic Development 2019). However, there are exceptions. Snohomish Health District indicated in 2017 that it would not require plan review from operators who have current permits in King or Pierce counties (Snohomish Health District n.d.). The State of Washington Food Code requires food truck operators to have access to an approved commercial kitchen or commissary, prepare food and wash dishes before they go mobile, and operate within 500 feet of a usable restroom (Office of Economic Development 2019).

Business License Requirements: Similarly to other businesses, a food truck is required to have a Washington State business license. In addition, cities also require their own city licenses to operate businesses (Office of Economic Development 2019). Some cities, such as Wenatchee, provide temporary business licenses at a reduced cost to vendors who seek to do business in the city for a limited period of time (Wenatchee City Code 2019).

Fire and Safety: Food trucks need to have a permit and inspection from the Washington State Department of Labor and Industries. Also, specific plans must be submitted if food trucks have certain items, including: fuel gas piping, fire suppression, commercial venting hoods, and electrical systems over 30 amps or 120 volts (Office of Economic Development 2019).

Parking Permits: Food trucks can park on either two areas: private property or public Right of Way (ROW).

CITIES WITH OPERATING FOOD TRUCKS IN WASHINGTON STATE



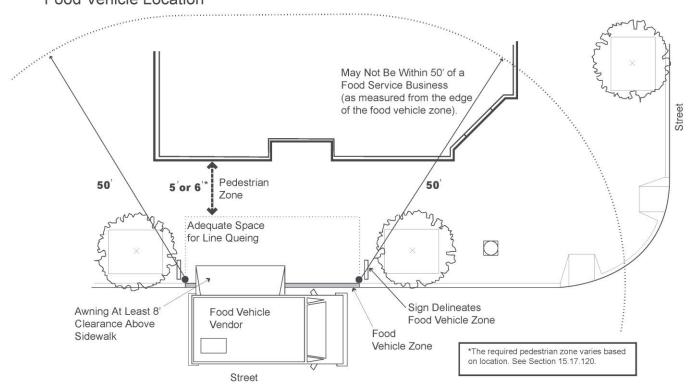
^{*}This map may not include all operating locations. Exact locations are estimated on this map.

LCY STUDENT TEAM

7 | LIVABLE CITY YEAR

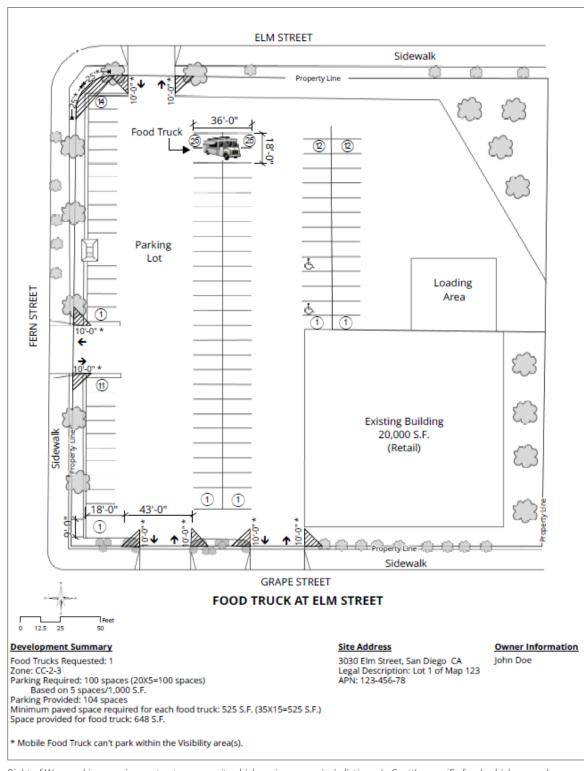
EXAMPLE OF PRIVATE PROPERTY PARKING

Exhibit A for 15.17.120: Food Vehicle Location



Operating on private property generally does not require any formal permits. This arrangement is usually an agreement between the food truck operators and private property owners, and sometimes middle management organizations also play a role in arranging access agreements with private property owners. Shown here: San Diego mobile food vending site plan for private property parking. CITY OF SAN DIEGO DEVELOPMENT SERVICES DEPARTMENT

EXAMPLE OF PUBLIC RIGHT OF WAY



Right of Way parking requires a street use permit, which varies across jurisdictions. In Seattle, specific food vehicle zones have been created to designate locations for operators to select during the application process. Seattle Department of Transportation has dedicated "food vehicle zones" with certain requirements in Right of Way. SEATTLE DEPARTMENT OF TRANSPORTATION

FOOD TRUCK POLICY IN WASHINGTON

The Washington State Food Truck Association (WSFTA), a regional association of the National Food Truck Association, plays a major role in advocating and supporting food truck operators. Its goal is to not only support food truck operators, specifically those in the early stages of operation, but to also act as a singular point of contact for the public. Member dues are \$240 per calendar year and provide food trucks with opportunities to gain access to events, public lots, and one-on-one consulting. This association has been actively involved in pushing legislation and working with many cities to implement pilot programs that would reduce or eliminate some of the burdensome restrictions on the mobile vendors, including where they can park (Washington State Food Truck Association n.d.). It has assisted many cities in expanding food truck operations. For example, in May 2019, the City of Bellingham passed a new ordinance allowing mobile vendors to access public property and the ROW through street permits (WSFTA 2019).

Recently, the Washington State Legislature passed and is in the process of passing a number of bills that can further support efforts to create an accessible and equitable operational process of food trucks. *Listed in order of effective dates*.

SHB 2639 (Legislature of the State of Washington 2018): Mobile food units may be exempt from using commissary kitchens if certain circumstances are met. This exempts food truck operators from state board and local health jurisdiction requirements to have a separate brick-and-mortar kitchen for preparation and storage of their food.

Passed in March 2017 Effective February 14, 2018

CR-103P (Washington State Board of Health 2017): Mobile food units adopted a change of maximizing distance from accessible restrooms from 200 feet to 500 feet.

Passed in November 2017 Effective January 1, 2019

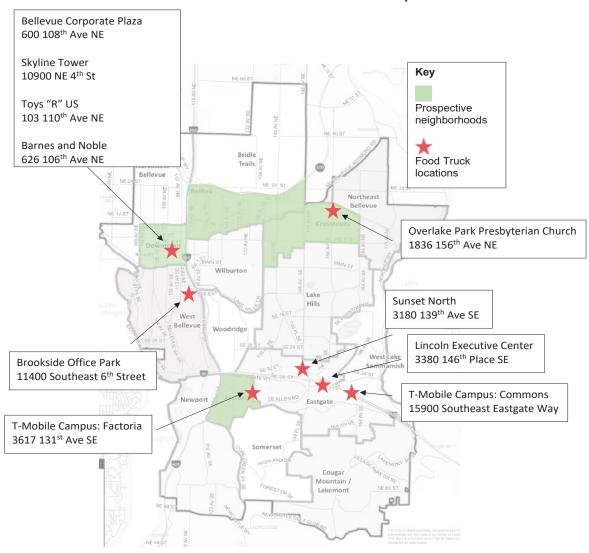
SB 5218 (Senate Committee 2019): Mobile food units can apply for secondary permits in other counties without having to repeat the plan review portion of the health permit process if certain requirements are met.

Passed in April 2019 Effective May 1, 2020

FOOD TRUCKS IN BELLEVUE, WASHINGTON

To operate in Bellevue, food truck operators must first have a City of Bellevue business license that is valid for the life of the business (City of Bellevue 2019b). Food trucks must also hold a current King County health permit and be in good standing. To park in Bellevue, food trucks can only park on private property, and for a limited duration of up to four hours. At this time, no formal process exists in Bellevue for food trucks to make use of public ROW parking.

MAIN FOOD TRUCK LOCATIONS IN BELLEVUE, WASHINGTON



Currently, Bellevue has at least 11 food truck locations, with each location accommodating one to six food trucks. The City is interested in expanding food truck operations in the following neighborhood centers shaded in green, based on population density and projected growth: Downtown, Bel-Red, Crossroads, and Factoria. [Locations were found on seattlefoodtrucks.com] LCY STUDENT TEAM

PROJECT PURPOSE STATEMENT

In partnership with the Department of Transportation's Right of Way Division, the goal of this project is to offer a set of best practices and recommendations for equitable permitting, food recovery, and waste reduction-related activities to support the City of Bellevue in creating a public ROW permitting process for food trucks.

The three themes of equitable permitting, food recovery, and waste reduction were chosen for the best practices guide for two main reasons. First, Bellevue's Comprehensive Plan includes the City's commitment to neighborhood development in providing a healthier, greener, and more sustainable future for generations as the city continues to grow (City of Bellevue 2015a). Food recovery and waste reduction, especially, are applicable to the City's sustainability commitment. Second, these elements, especially equity, are often considered but overlooked in the planning process. Having these themes considered from the start will encourage greater incorporation in initial stages of planning.

THREE OVERARCHING THEMES DISCUSSED IN THIS REPORT

Equitable
Permitting:
regulatory
mechanisms,
communication,
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strategies for food
trucks

Food Recovery:
feasibility of a
food recovery
program as a
strategy to
minimize the
amount of food
waste produced
by food trucks

Waste
Reduction:
areas of
improvement
where waste of all
forms can be
managed
sustainably

LCY STUDENT TEAM

DEFINING PUBLIC RIGHT OF WAY FOR FOOD TRUCKS

Public Right of Way (ROW) is any form of land that can rightly be used by all members of the public, such as sidewalks and highways (Institute of Transportation Engineers 2018). In this report, curbside space currently designated as parking is the main ROW asset identified for food truck operation. Curbside space is limited in Bellevue, making it a valuable public asset (Bellevue Department of Transportation 2019). However, this curb space has the potential to serve many purposes throughout the day and can be used not only as car parking and loading, but also as a front stoop, sidewalk café, transit hub, freight delivery zone, taxi stand, rain garden, or trash collection area. Curb space has historically been a reliable revenue source for municipalities through the collection of parking fees, and is a key indicator for real estate and retail value (Institute of Transportation Engineers 2018). Food trucks will not be the only sector wanting to use this space, so integrating specific food truck parking areas to be cohesive with existing and future curbside plans is crucial.



Example of a food truck parked on the curbside, shaded in red NACTO

Equitable Permitting: Regulations are crucial in providing structure, accountability, and responsibility; however, the design of the permitting process can create inequities that make it difficult for all food trucks to participate. This may include discrepancies in information access, food truck type (specifically, different types of food truck cuisines may succeed better in particular locations than others), and familiarity with the process (National League of Cities 2013; Agyeman, Matthews, and Sobel 2017). Later in the report, food truck operators also note the burdensome process to obtain business licenses from different jurisdictions in which they would like to do business (U.S. Chamber of Commerce Foundation 2015). While many of these factors cannot be changed immediately, the first step is to gather feedback directly from food truck operators. By improving communication between food truck applicants and those implementing and enforcing the permitting process, a two-way accountability process can be developed.

Food Recovery: The US exists in a paradox between the ever-increasing number of people with food insecurity and the substantial amount of food waste it generates. In 2013, one in six Americans lacked access to enough food for an active, healthy life (Coleman-Jensen et al. 2011; Coleman-Jensen, Gregory, and Singh 2014). And yet, despite the millions of people that face food insecurity in this country, Americans still throw out more than 400 pounds of food per person per year. If one-third of wasted food in the US were redirected to people struggling with hunger, every American would be fed (Hall et al. 2009). Cities can address this disparity by promoting food rescue and food recovery. Food rescue offers a solution to minimize the amount of organic waste disposal. As more businesses recognize the environmental and social cost of food waste, organizations and companies are developing technological tools to reduce food loss and facilitate the ease of food recovery. These methods are explored in this project.

Regulations are crucial in providing structure, accountability, and responsibility; however, discrepancies in regulations could create inequities for all food trucks to participate.

A STATEWIDE CALL TO REDUCE FOOD WASTE

State of Washington Substitute House Bill 1114 requires the "state to reduce fifty percent of the amount of food waste generated annually by 2030" (Legislature of the State of Washington 2019).

Washington State's Waste Characterization study that took place in 2015 determined that the three largest categories of waste produced were organics at 28.5% of all waste, paper at 14.9%, and plastic at 10.2% (State of Washington Department of Ecology 2018). In 2018, King County performed a similar waste characterization study and found landfill-destined waste was comprised of 31% organics, 13.8% paper, and 9.2% plastic (Otten et al. 2016). These findings illustrate the impact that food waste (organics), as well as paper and plastic packaging, has on our waste stream.

EPA'S FOOD RECOVERY HIERARCHY

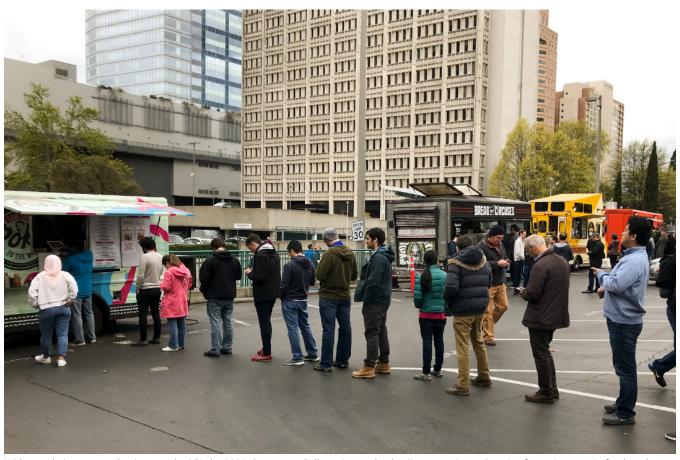


The EPA's food recovery hierarchy prioritizes actions to prevent or divert food waste from ending in landfills. EPA

Waste Reduction: A well-designed and efficient waste management system can increase the use of reusable materials and the production of renewable energy while reducing greenhouse gas emissions and landfill sizes (EPA 2018). Implementing sustainable waste management practices for food trucks is especially important and perhaps challenging because (1) food trucks are portable kitchens, so ingredients are often overordered to avoid depletion, and (2) almost all food truck customers have to-go orders, so plastic packaging is a large source of waste. Food truck waste can be broken down into Pre-Consumer, which is mostly excess food and bulk food packaging, and Post-Consumer, which is mostly food scraps and to-go plastic packaging (Mobile-Cuisine n.d.). All of this waste can be either composted or recycled, but is likely landfill-destined.

POTENTIAL CHALLENGES AND BARRIERS TO REDUCE WASTE IN BELLEVUE, WASHINGTON

Bellevue, like many other jurisdictions, does not make it mandatory for businesses, such as food trucks, to recycle/compost. Unless these food trucks take the initiative, all of their waste ends up in the trash and is sent to a landfill. Bellevue also does not have publicly owned composting and recycling bins on its city streets and does not require food trucks to provide trash/recycling/compost bins, so customers do not have the option to sort their waste when eating at food trucks (City of Bellevue; Republic Services of Bellevue 2014).



With population expected to increase by 25% by 2030, Downtown Bellevue is seen by the City as a primary location for an increase in food trucks. |AMIE MERRIMAN-COHAN

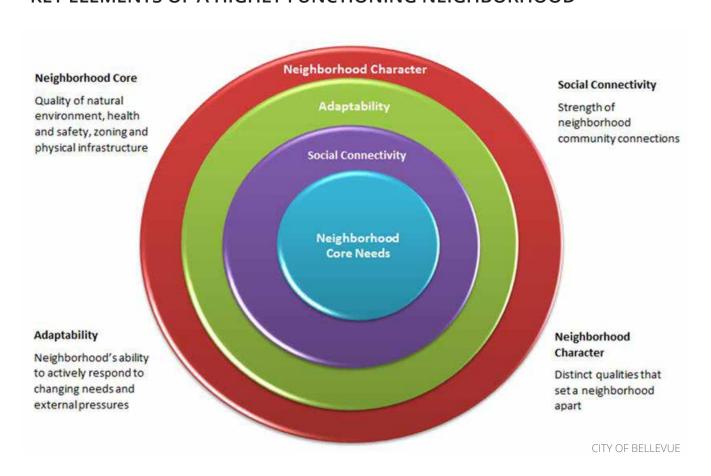
METHODS

CONCEPTUAL FRAMEWORK

Bellevue takes pride in its reputation as "a City in a Park" (City of Bellevue 2018). To maintain this reputation, growth in Bellevue is focused on dense mixed-use centers in specific neighborhoods, while maintaining the city's outstanding natural environment. In Bellevue's Comprehensive Plan, four factors shape neighborhood quality, and we used these factors to initially conceptualize a food truck's role in Bellevue (City of Bellevue 2015b).

Using this existing framework and the three main themes assessed in this report, a new conceptual framework was developed to understand, in detail, how food trucks fit into the food system at the neighborhood level.

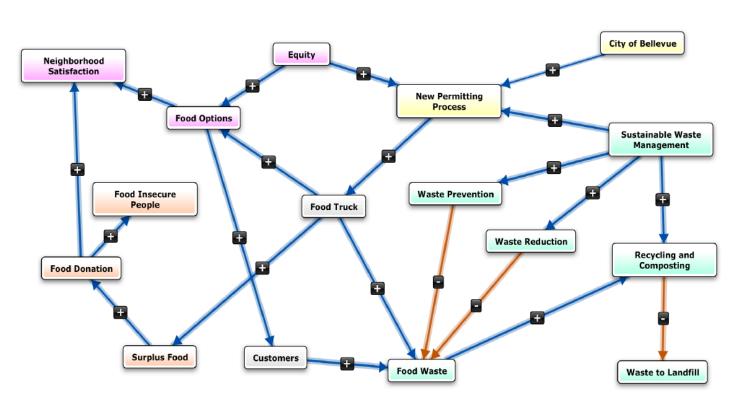
KEY ELEMENTS OF A HIGHLY FUNCTIONING NEIGHBORHOOD



LITERATURE REVIEW

The project team reviewed available peer-reviewed and gray literature from existing food truck ROW permitting programs, as well as food truck-related food recovery programs and waste reduction strategies that have been implemented in other cities. Each student on the project team was responsible for one of the three focus areas. This data was gathered and summarized to present the City of Bellevue with successful case examples and best practices. A summarized version of the most important findings is included in this report.

HOW DO FOOD TRUCKS FIT INTO A CITY?



The framework is color-coded based on the three overarching themes, stakeholders directly affected, and overall desirable outcomes. The arrows represent how each piece is connected, with food waste and landfill waste being the least desirable. LCY STUDENT TEAM

STAKEHOLDER ENGAGEMENT

Semi-structured key informant interviews were conducted to collect diverse perspectives on equitable permitting, food recovery, and waste reduction. The themes that emerged from our conversations from the stakeholders supplement findings from the literature and ultimately inform the final set of recommendations. Stakeholder groups were identified using our conceptual framework and from stakeholders identified in the literature.

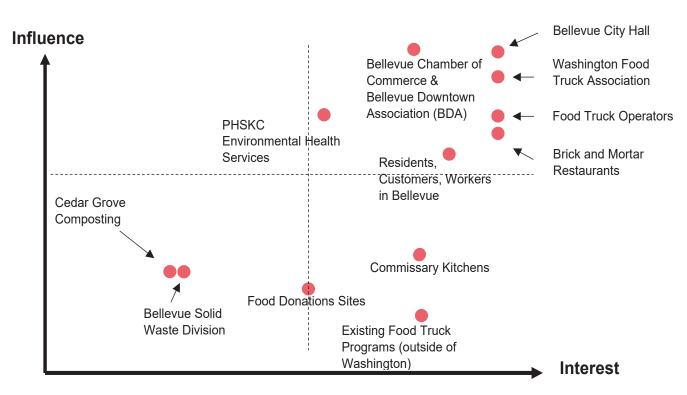
Due to limited time to interview all identified stakeholders, primary stakeholders were narrowed to those who have the greatest influence on the formation of the food truck permitting program: those being directly affected by the program, and those who are directly relevant to the three overarching themes. Primary stakeholder categories were identified as 1) Food Truck Operators, 2) Regulatory Agencies, 3) Supportive Business Organizations, and 4) Food Recovery Organizations.

Interviews were recorded or transcribed if audio recordings took place. Interview notes were coded using Microsoft Word within the three thematic areas: equitable permitting, waste reduction, and food recovery. Quotes, overarching values, concerns, and suggestions were identified for each focus area. Although saturation, the absence of new information, was achieved with our engagement, the small sample size is not necessarily reflective of all stakeholders who fall within the four stakeholder groups.

CASE STUDY

Lastly, a case study was conducted in Downtown Bellevue, which was expressed as a priority location in launching a pilot for the ROW food truck permitting program. The case study, which included a physical site visit, photos, written observations, and stakeholder questions regarding the neighborhood center, provided an additional lens to identify other elements to be taken into consideration around the three themes.

INTERNAL STAKEHOLDER ANALYSIS BASED ON PERCEIVED INFLUENCE OF POWER AND INTEREST



This graph includes all identified stakeholders for this project. Not all stakeholders were interviewed during the time period of this project. LCY STUDENT TEAM

FINDINGS

EXISTING FOOD TRUCK PROGRAMS

Food Truck Nation, developed by the US Chamber of Commerce Foundation, created the largest comprehensive report that ranks 20 food truck programs across the US's most populous cities based on three criteria: obtaining a permit and license, complying with restrictions, and general operation costs (US Chamber of Commerce Foundation 2015).

The cities ranked in this report were further reviewed according to the three themes and relevancy to the Bellevue landscape. Equitable permitting focuses specifically on other ROW permitting programs. Food recovery focuses on any donation programs that are established in partnership with any food businesses. Waste reduction focuses on any sustainability practices around recycling, composting, and waste prevention among food businesses.

COMMON ROW REGULATIONS AMONG FOOD TRUCK NATION IDENTIFIED CITIES

Location Restrictions:

- Food Truck vending may not occur within a certain distance (ranges from 100-250 feet) from a restaurant, sidewalk café, or any fixed-location of a competing nature
- Food Truck vending may not occur within a certain distance from any public library, park grounds, school grounds during school hours, or stadium grounds when events are happening unless permission is granted from the organizer (ranges from 250-500 feet)

Public Safety:

- Food Truck vending may not obstruct or impede the pedestrian path of travel or traffic flow and should allow a certain distance for pedestrians on sidewalks (ranges from 4-6 feet). Any applicable law (i.e., Americans with Disabilities Act) that requires greater distance shall apply.
- All points of sale shall occur on the curbside side of the street.

SUMMARY OF FINDINGS FROM 20 FOOD TRUCK NATION CITIES

CITY	EQUITABLE PERMITTING	FOOD RECOVERY	WASTE REDUCTION
Portland, Oregon		✓	✓
Denver, Colorado			✓
Orlando, Florida			√
Philadelphia, Pennsylvania		√	
Indianapolis, Indiana			
Houston, Texas			✓
Austin, Texas	√		
Los Angeles, California			✓
New York City, New York	√		
Nashville, Tennessee	✓		
Raleigh, North Carolina	\checkmark		√
St. Louis, Missouri			
Chicago, Illinois			
Phoenix, Arizona			√
Columbus, Ohio	√		√
Minneapolis, Minnesota	✓		
Seattle, Washington	✓	✓	✓
San Francisco, California	✓		
Washington, D.C.	√		
Boston, Massachusetts	√		

City order is based on overall Food Truck Nation ranking. Unfilled sections within each city do not necessarily mean that these cities do not implement activities under these three themes; rather, these sections may reflect that information could not be found or is not relevant to the project.

LCY STUDENT TEAM



EQUITABLE PERMITTING

Among the 20 cities, two cities recently implemented a pilot program for ROW permitting. In 2012, Nashville, Tennessee launched a Mobile Food Vendor Pilot Program that designated two specified zones under a temporary permit for ROW parking for existing loading or parking areas. Specific criteria included considerations around the safety of vehicle and pedestrian traffic; convenience for and to downtown workers, visitors, and residents; and proximity to streetscape elements such as parks. Food truck parking operated on a first-come, first-served basis with no reservations allowed (Metropolitan Government of Nashville 2019). In 2016, Raleigh, North Carolina launched a six-month pilot program to operate on the street under four designated areas. This process was also first-come, first-served, but food truck operators were restricted from booking consecutive days in order to provide customers a variety of cuisine types. In addition, when food truck operators cancel, they are held responsible to find replacements prior to canceling, so spots will not be wasted (City of Raleigh 2019).

Houston, Texas and Orlando, Florida were the only cities that explicitly did not allow ROW operations for food trucks. Among cities that already have existing ROW permitting, two cities implemented inclusive and distinguishable categories for permits or zones that allowed for a broad range of food truck types. In New York City, the NYC Health Department issues six different types of mobile food vending permits, each with a different set of regulations. The permit types include a citywide permit, temporary (seasonal) permit, borough-specific permit, fresh fruit and vegetable (Green Cart) permit, restricted area permit, and a specialized vendor permit (NYC Health 2017). The city of Boston, Massachusetts developed a program with three different zone sites ranked on traffic, competitiveness, and fee rates, allowing food trucks the ability to pick areas within their feasible financial range (City of Boston 2019).

Lastly, many cities have also implemented unique ways of selecting food truck applicants. Raleigh, North Carolina and Columbus, Ohio both use an online application called StreetFoodFinder which is managed either through each City's website or through a secondary organization (City of Raleigh 2019). Boston implements an annual lottery process where food trucks can apply for a slot for one year, but have an opportunity to drop a site without penalty each quarter, giving them flexibility to test a site location. Any of the dropped sites are returned to a mini-lottery for other food trucks to apply for (City of Boston 2019).

POLICIES PROTECTING AND INCENTIVIZING FOOD TRUCKS TO PARTICIPATE IN FOOD RECOVERY

- Good Samaritan Food Donation Law (Feeding America 2018b):
 - » Protects donor from liability when donating to a nonprofit organization
 - » Protects donor from civil and criminal liability should the product donated in good faith later cause harm to the recipient
 - » Standardizes donor liability exposure. The donors or their legal counsel do not need to investigate liability laws in 50 states
 - » Sets a floor of "gross negligence" or intentional misconduct for persons who donate grocery products.
- Section 170(e)(3) of the U.S. Tax Code (Feeding America 2018):
 - » Stipulates that businesses are eligible for enhanced tax deductions, up to 15% of their taxable income. In many cases, businesses can claim additional tax deductions when donating surplus product beyond the tax shield that is earned from simply liquidating or disposing of the goods.



FOOD RECOVERY

Food recovery programs, specifically for food trucks, were not found among the 20 cities selected by Food Truck Nation. However, the city of Durham, North Carolina has a program dedicated to reducing food truck waste that will be described in the next section. During our conversations with stakeholders, it appears that food trucks typically do not produce a significant amount of food waste. This does not mean that food waste should be overlooked. Food trucks have the potential to produce food waste, and options for food trucks to properly dispose or donate their food should be available. Among the 20 cities, two cities have resources available for businesses. In Portland, Oregon, the City provides personal expert assistance and a guide for businesses to donate food to help food service businesses (Oregon Metro n.d.). In Pennsylvania, 412 Food Rescue is a statewide food recovery program that designed an online transport and distribution model, which connects donors to nonprofit distribution partners. So far, this program has rescued 5,630,746 pounds of food and has placed more than 100,000 people within a 15-minute walk of food access due to the influx of food access points (412 Food Rescue 2018).

Many organizations work with cities across the nation to increase food recovery. Food recovery mobile applications are abundant and are probably the best tool available to assist food truck programs in tracking food waste.

- Food Rescue US: This food-sharing application prevents food
 waste by connecting restaurants and organizations that have a
 surplus of food. The application allows donors to pick delivery
 times that work with their schedule, and a Food Rescuer is able to
 assist by delivering the donated food to a community kitchen or
 food pantry (Food Rescue US n.d.).
- **Food Connect App:** Food vendors use the Food Connect application to schedule a pickup, while hunger relief organizations can use the Food Connect Integrations to help with logistics and transport (Food Connect n.d.).
- **Food Rescue Locator:** This online directory identifies organizations across the US that rescue, glean, transport, prepare, and distribute food in their communities (Food Rescue US n.d.).
- Whole Earth Calculator: This online tool helps calculate the CO2 offset achieved through food donation. The tool is used to convert total pounds of donated food into meal equivalents and carbon dioxide averted equivalents (Whole Earth Calculator n.d.).

COMMON WASTE REGULATIONS AMONG FOOD TRUCK NATION-IDENTIFIED CITIES

- Mobile food vending operators must supply, in a prominent location, trash and recycling containers sufficient in size to collect all waste and recyclables generated by customers and staff.
- All trash and debris generated by customers and staff shall be collected and removed by the food truck operator before leaving location.
- No liquid waste or grease may be poured into any tree pit, storm drain, gutter pan, sidewalk, or any other public space.



LCY student researcher Jonathan Chen (left) discusses his team's research at the LCY year-end poster presentation at Bellevue City Hall.

TERLITHOMSON RANDALI



WASTE REDUCTION

A unique feature in many of these cities is the availability of a sustainability or "Green" certification program for businesses, including mobile vendors. Generally, these programs offer different levels of certification to recognize a business's positive impact on the environment.

The application typically includes a checklist of actions to be completed at each level. Some examples of actions to be completed include the following:

- Food scraps are monitored and actions are taken to reduce food waste
- Purchasing decisions (food and beverage, office supplies, and décor) take environmental impact into account
- Sustainability practices are communicated to customers through website and signage
- Twenty percent or more of employees walk, bike, carpool, or take transit as their primary commute
- The majority of cooking equipment is Energy Star qualified

Most cities also provide free tools, resources, and best practices on waste prevention and waste reduction. In Portland, Oregon, the City includes a section on the website called "Tips from your Peers" which features eight restaurants, bakeries, and breweries that have found ways to minimize food waste through tracking, transforming trim into new ingredients, and educating customers (City of Portland 2019).

EXAMPLE OF SUSTAINABILITY AT WORK CERTIFICATION LEVELS FOR PORTLAND, OREGON



complete
12
Actions



complete
25
Actions



complete 45

Actions

Portland's Sustainability at Work Certification offers three levels of certification to recognize a business' positive impact on the environment and the community. The application includes a checklist of actions to be completed at each level. SUSTAINABILITY AT WORK

THE "DON'T WASTE DURHAM" SUSTAINABLE FOOD TRUCK CERTIFICATION PROGRAM



DON'T WASTE DURHAM

The "Don't Waste Durham" Sustainable Food Truck certification program recognizes and promotes food trucks that commit to low-waste, sustainable practices. This program helps operators achieve and maintain practices with tools, including connecting them with local resources that support sustainability and providing information and training to food trucks on how to save money and reduce waste. The eighteen requirements for food trucks include using all reusable or compostable service-ware (though recyclable products are acceptable if reusable and compostable alternatives are not feasible), providing compost collection bins outside their truck at all events, and ensuring that their compostable items get commercially composted.

SOLUTIONS TO TRACK FOOD TRUCK WASTE

MOBILE-CUISINE

Pre-consumer

- » Track pre-consumer food waste at the time of disposal. Record the waste in the logbook immediately after placing it in the trash.
- » If you have set up an agreement with a local food bank where your excess food can be donated, record these donations in your waste logbook immediately after dropping it off.
- » Record the type of food and the reason why it is being discarded in the logbook.

 These are the two most important pieces of information that will reveal opportunities for change.
- » Operators or truck managers should review yesterday's waste logbook at the beginning of the following day's shift.
- » The top 5 waste items should be discussed with the team at pre-shift meetings. Ask the team for ideas to reduce the waste.
- » Review progress on the Top 5 items every week until the amounts drop.

Post-consumer

- » Post-Customer Food Waste should be tracked periodically, usually once per month.
- » Post-Customer food waste includes many different foods as well as the food containers and utensils; it will not be possible to track specific amounts of foods or loss reasons unless you separate your trash. Instead, track the number of trash bags used per shift. If you only use one trash bag, throw it on a scale and weigh it.
- » Keep a record of total weight or count of post-customer food waste
- When tracking post-customer waste, always do it on a busy day and track future measurements on the same day of the week. Using this approach, you will have comparable data.
- » Make sure to look at the food in the garbage and note any trends. There may be items that customers do not like which should be removed from the menu. In other cases, you may find portions need to be adjusted to avoid waste.



Among Bellevue's neighborhoods, Downtown currently hosts the largest number of food trucks, with at least four private property sites. |AMIE MERRIMAN-COHAN



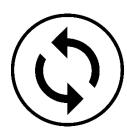
CASE EXAMPLE: SEATTLE, WASHINGTON

Seattle is the largest food truck participating city in Washington and is the closest model, geographically, for Bellevue to follow. However, Seattle has not always been this popular for food trucks. In the early 1980s, the city had extraordinarily tight restrictions on which foods vendors could sell. During that time period, vending was curtailed as part of efforts to correct "downtown blight" and aesthetically align downtown streets and sidewalks with the "neat and orderly mentality" of the residents (Agyeman, Matthews, and Sobel 2017). According to Public Health Seattle and King County, Seattle now hosts more than 316 mobile food vehicles (PHSKC 2019).

Vending permits are acquired through the Seattle Department of Transportation's (SDOT) online portal. Within the portal, operators are able to select locations for street-use parking and can select the specific permit type and code (paid curb space vending or non-paid) on the Vendor's Bulletin, a new tool to find information about permit status. Currently, there are specific "Food-Vehicle Zones," which are portions of public space designated by a sign or other traffic control device that are reserved for the exclusive use of food vehicles that are permitted to vend. However, vendors are not restricted to locations on the Vendor's Bulletin. New locations can be created per the requirements of the different street use permits. Operators are responsible for searching for their own locations and applying for the appropriate permit(s) for locations (Seattle Department of Transportation, n.d.).



Food vehicle parking should prioritize pedestrian safety and be mindful of other brick and mortar businesses.



A Seattle Food Committee map is available to help donors find a food bank nearby. In addition, there are four local food recovery programs in the area:

- **Seattle Food Rescue:** A community-driven and volunteer-led organization, with over 98% of its redistribution efforts powered by bicycles to redistribute wasted food from businesses to charities and hunger agencies (Seattle Food Rescue n.d.).
- **Food LifeLine:** Partners with members of the food industry (including grocery stores, farmers, food manufacturers, and restaurants) to rescue food (Food Lifeline n.d.).
- Northwest Harvest (NWH): A nonprofit food bank distributor
 that distributes food to over 370 food banks, meal programs, and
 high-need schools statewide. NWH accepts donations of fresh
 fruits and vegetables as well as anything considered shelf stable
 (Northwest Harvest n.d.).
- **Food Donation Connection:** Creates and maintains an efficient communication and reporting network that links available sources of food to those in need (Food Donation Connection n.d.).



SDOT has Waste Stream Management in place, as well as the Seattle Public Utilities Envirostars Certification Program that offers free tools and assistance to help businesses in Seattle conserve resources and prevent pollution. For example, businesses are able to request a waste reduction site visit, where a technical assistant visits the business or facility to identify opportunities to cut costs and to increase recyclable and compostable materials (Seattle Public Utilities n.d.). Seattle also has recycling and packaging regulations that are strongly enforced to hold businesses accountable. Seattle's ban ordinance of recyclables and compostable items in the garbage allows Seattle Public Utilities to give warning notices for garbage containers that contain recyclables or compostable items. For each warning, the property will receive a tag on the container, and a notice will be mailed to the account. After two warnings, properties may receive a \$50 fee on their waste bill for recyclables placed in the garbage (Seattle Public Utilities n.d.). Packaging regulations also make it illegal in the City of Seattle for any restaurant, café, grocery store, coffee shop, cafeteria, or other food service business to sell or provide food, for consumption on or off premises, in expanded polystyrene (EPS "Styrofoam") containers. Any person or business violating the ban on Styrofoam containers is subject to a civil penalty of up to \$250 for each violation (Seattle Public Utilities n.d.).

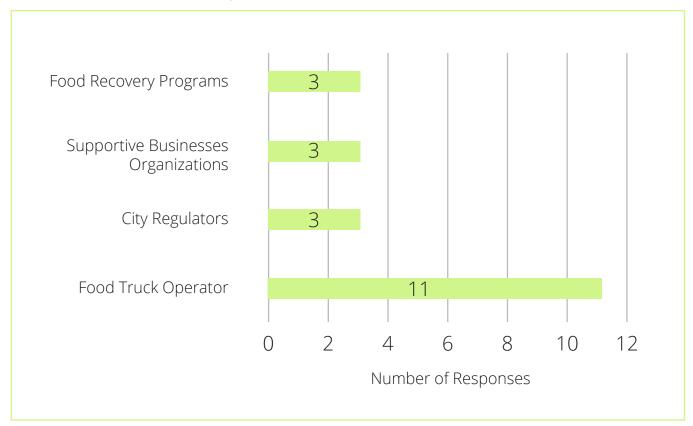


LCY student researchers Samara Kleinfinger and Jonathan Chen (first and second from right) discuss their research with community members at the LCY year-end poster presentation at Bellevue City Hall. TERI THOMSON RANDALL

STAKEHOLDER FINDINGS

A total of 20 interviews were conducted in person and/or by phone in May and June of 2019. Some interviews were audio-recorded with the permission of the interviewee. Interviews were designed in three ways: survey format, open-ended questions, and open-ended script with broad themes to cover to complement the variety of stakeholders, especially those who do not fit into easily-defined survey populations. Full interviews can be found in **Appendix A**.

NUMBER OF RESPONSES, BY STAKEHOLDER CATEGORY



LYC STUDENT TEAM

FOOD TRUCK OPERATORS

A total of 11 food truck operators were interviewed for this project. Seven of these food trucks operate in Seattle and only two food trucks currently operate in Bellevue on private property. The majority of the food trucks operate in multiple locations, including Kirkland, Tukwila, Redmond, and Bothell. All of the food trucks operate partly or exclusively at private property locations for daily street vending or special events. Five food trucks also operate in ROW curbside parking. Seattle's Department of Transportation (SDOT) was the most frequently mentioned program in relation to curbside parking. The most common hours of operation are afternoons from 11 AM - 2 PM and evenings after 3 PM. Two food trucks operate all day.

The food truck operators interviewed vary in their business experience, with the most experienced having operated for 10 years and the least experienced having just opened in April 2019. Their reasons for starting their businesses vary:

"Honestly, I have been involved in the food industry for the past 20+ years and I have always wanted to open a small restaurant. I found a partnership that was interested in opening up a food truck last November 2018, and we decided to mesh our ideas."

—Food Truck Operator

"[lt] was born as an idea of our eldest son to help his father and me (his mother)."

—Food Truck Operator

"[We] got started cooking in [the] Microsoft kitchen, [then] we decided do our own thing and make really good food. We were ready to be our own bosses."

—Food Truck Operator

"We started a food truck because we did not have enough finances to open a restaurant."

— Food Truck Operator

"I'd always love[d] the social atmosphere of restaurants and bars, [then] I saw the food trucks coming up a few years ago."

—Food Truck Operator

"This region of cuisine hasn't been well represented in PNW."

—Food Truck Operator

Overall, food truck operators find that navigating the permitting process is not necessarily difficult, but many operators expressed that the process is time consuming and repetitive.

"Each city wants it's own permits, each county also, each fire department wants us to take out their permits, at the end, sometimes it seems like one works to pay for permits and other things that the authorities demand."

—Food Truck Operator

The process can be especially costly for food trucks that work in multiple locations. One food truck operator expressed that since the beginning of this year, 2019, he already spent \$50,000 for fees for events and parking. Another food truck operator also said that the process can be very slow, with sometimes little to no communication of whether the permit has been accepted. Food truck operators generally viewed both types of operating locations, public and private, as having their own advantages and disadvantages.

"Curbside parking makes it easier to load in and out; private parking makes it easy to move wherever you like."

—Food Truck Operator

Aside from three food trucks, all expressed interest in participating in a public ROW permitting program. One food truck operator did not express interest because the operator had secured parking with a private landowner, and two did not express interest because of the desire to be as close to their commissary kitchen as possible, which is not in Bellevue. Food trucks that have never operated in Bellevue also expressed interest in having an opportunity to come to Bellevue.

"Curbside parking makes it easier to load in and out; private parking makes it easy to move wherever you like."

—Food Truck Operator

"Bellevue is a very important city in King County, and many of our clients and friends live there. Currently, it is very difficult to get a location in downtown."

—Food Truck Operator

"It is safe. Fast growing. Very diverse area."

—Food Truck Operator

Equity between vendors who are new to the industry and experienced vendors is an important consideration in designing the selection process for the program.

One food truck operator expressed that in parking lot locations, biases occur based on seniority of food truck operation or established relationships with the landowner, which creates difficulty for new businesses to enter the market. The desire to develop a program that is accessible for all types of food trucks is also expressed.

"I've been wanting to come to Bellevue, but it's hard because veteran trucks have seniority of what's going on, which is understandable, but it is good to jump in some new trucks."

—Food Truck Operator

"I've been wanting to come to Bellevue, but it's hard because veteran trucks have seniority of what's going on, which is understandable, but it is good to jump in some new trucks."

—Food Truck Operator

INFORMANT SUGGESTIONS

When choosing curbside parking locations, food trucks consider specific factors. The process of choosing priority locations was frequently emphasized during interviews. Food truck operators commonly share four characteristics:

- Population Density/Foot Traffic: a demand for food trucks and an existing dense population makes an ideal location for food trucks to operate. One food truck operator expressed preference to park in locations "that have at least 1000 tenants." Another food truck operator created a formula, stating that "based on the population density at any place we go to, there's about 10-20% [of the population] at that location that will come to the truck." In addition, one food truck operator expressed the value in "knowing if people leave their offices or not for lunch," as some office buildings have a café and food trucks would ideally like to not compete with the café.
- Physical Attributes of the Location: Food trucks ideally want to be in a parking location that
 is at a flat or level spot for the truck. One food truck operator said that it is "crazy to try to
 cook for 3 hours when you're on a slant." In addition, one food truck operator expressed
 also looking to see if "there's room in between planted trees to open windows or for the
 hood of the food truck to be up and open for operation." Finally, food trucks consider the
 safety of their staff and customers and want to find a location that is easily accessible and
 safe for both parties.
- Presence of Restaurants: there were mixed reviews among the considerations of other brick and mortar establishments. Some food trucks are more careful of other restaurants to not overlap in cuisine type. Others find locations with plenty of businesses and many food establishments that can generate overall greater foot traffic for both food trucks and brick and mortar restaurants creating a win-win situation.
- Cost: Food trucks that work in multiple locations often find that the process can be quite costly. One food truck operator said that since the beginning of this year, 2019, \$50,000 had been spent in fees for events and parking.

There is a demand for increased public awareness and visibility for food trucks, especially in new locations.

"Street vending can be more difficult as compared to special events, because you must wait for customers to come rather than them already being there."

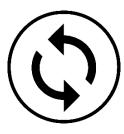
—Food Truck Operator

In order for customers to come, many food truck operators expressed support for advertising and raising awareness. One food truck operator suggested developing a marketing plan before the launch of the public right-of-way permitting program in Bellevue to let prospective customers know that food trucks are coming. Another food truck operator expressed a need for developing an updated central online location for customers to track where food trucks will be located and when they will be operating. For one food truck in particular, the operator thinks about the types of people who will be present and alters the menu to accommodate the demographic.

Flexible parking or the ability to rotate locations is ideal. Four food truck operators expressed a desire for a program to offer flexibility in parking. One truck operator said signing up for an entire year and a particular day of the week for one consistent location is risky because if the spot does not work well, then it is a huge cost for the food truck. One truck operator expressed interest in having the ability to sublet the spot to other trucks. Another truck operator expressed the importance of ensuring that there are specific food truck zoned areas, so other vehicles will not park during times of operation. This truck operator said that in the past, other vehicles parked in and ignored regulations for zones intended for food trucks only.

"There's more diversity to create 4-5 stops in any of these locations. I just know that from our experience trying to work that if we're not at the same location every single week, I've noticed our sales are a lot better and don't go down. I've been hearing from word of mouth from customers and seeing emails back and forth from other food trucks that the same trucks keep going to the same locations, and customers are tired and food truck sales are going down...we don't mind showing up every other month or week to a location. It's great to broaden the variety of trucks to come in. Everybody would profit better than they would now."

—Food Truck Operator



Due to the minimal amount of food waste, many food truck operators have not considered food donations. Despite this, seven out of the 11 food trucks expressed an interest in donating. Three food truck operators said that time was the biggest constraint. One food truck operator expressed that food donation can be possible if someone could come and pick up surplus food. Only two food truck operators said they track uneaten food, but information about how the food is tracked was not captured.

Two food truck operators said that they already donate if there is a lot of food waste.

"When we have a lot of food waste, we actually show up to Seattle City Hall, park, and feed people there. One or two events a month."

—Food Truck Operator



Overall, food waste is not a primary concern among food truck operators. Food trucks seem to be very mindful of the amount of food that needs to be prepared, and the majority of the food is completely utilized to minimize possibilities of food waste. According to food truck operators, the most common sources of waste were to-go containers, gloves, cardboard, and plastic wrap. Two food truck operators stated that they sometimes have leftover food, and one truck operator described how used oil is disposed in the commissary kitchen. Nine out of the 11 food trucks compost any food waste, and half of the food trucks already use compostable packaging. Two food truck operators partially use compostable packaging. Although some operators expressed interest in using compostable packing, they also expressed uncertainty of where to start, and some cited costliness as a factor. One food truck operator expressed that when having to choose between a \$100 compostable versus a \$60 non-compostable product, the operator would choose the product with the lower cost.

In addition, two food truck operators stated that reliance on a commissary kitchen for waste disposal can be a challenge with having to make multiple trips back to their commissary.

"The commissary is a challenge, especially for grey water disposal. We had a grease trap installed in our unit, so this made it a lot easier."

—Food Truck Operator

INFORMANT SUGGESTIONS

Not many suggestions were made regarding improvement of waste reduction, but one food truck operator expressed an interest in seeing a program be created for food truck operators.

"We would also like there to be a program that would collect that food, since there would be many people with limited resources who could benefit from it."

—Food Truck Operator

"The commissary is a challenge, especially for grey water disposal. We had a grease trap installed in our unit, so this made it a lot easier."

—Food Truck Operator



REGULATORY AGENCIES

We interviewed a total of three individuals from regulatory agencies. Two individuals are part of the Environmental Health Division within Public Health Seattle and King County. One of the two individuals participate directly in food truck health inspections. The third individual interviewed is from the Bellevue Solid Waste Division.

Three main topics were discussed within this stakeholder group: messaging, regulations, and public safety. One individual said that communication to find prime locations and proper messaging when launching a food truck permitting program is a crucial component to achieving equity.

"Finding prime locations assumes that everyone has similar set of information — somebody with a lot more information and a lot more connections gets the best sites and succeeds in their business and will probably claim that area forever, until they no longer are interested."

—Regulatory Agency

From the interviews, it is apparent that email and text are commonly used to reach out to food truck operators. Between the two methods, they found texting to be more successful.

Two individuals expressed concerns around the ordinance regarding restroom access requirements for food trucks. They find meeting that requirement to be a potential limitation to selecting operating locations. It was suggested that private restroom use is most likely to happen because public restrooms are much harder to arrange due to limited hours of operation and general availability. In addition, one individual said that evening hours would not be ideal for food truck operation, at least for the beginning of the program, because most restaurants limit restroom access.

If food trucks "move around freely and go to multiple locations, that means [they] have to have an agreement with every one of these nearby businesses, and that's an added cost."

—Regulatory Agency

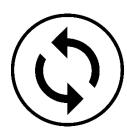
INFORMANT SUGGESTIONS

Few suggestions were made regarding improvement of waste reduction, but one food truck operator said that making the use of compostable packaging a requirement for the city could encourage more food trucks to practice sustainability.

Regulatory agencies also address public safety. One individual explained that in the "City of Seattle, [food truck] operators are expected to remind customers to queue along the sidewalk, rather than across the sidewalk and obstructing sidewalk traffic." While it was said that there has not been much of an issue with public safety, considering this aspect is highly encouraged in the development of a public Right of Way program.

"If food trucks move around freely and go to multiple locations, that means they have to have an agreement with every one of these nearby businesses, and that's an added cost."

Regulatory Agency



Main concerns with donating surplus food are based on proper food handling and food temperature safety. Interviewees said that in general, food trucks have limited space, which can hinder proper food handling after vending hours end. Maintaining food at the proper temperature is seen as the largest barrier if food is to be dropped off to a donation site.

"If the food truck operator is a responsible individual, and able maintain proper food temperatures, then donating leftover food is a great solution. Many food trucks do have the capacity to maintain proper food temperature, but often, they do not want to take on the liability aspect. A concern from a food safety perspective is the operators must understand proper food safety, and have adequate equipment to maintain proper food temperature for safety. As long as the foods are properly handled, I don't see why operators can't donate their food."

—Regulatory Agency



Structural barriers may hinder the development of adopting food sustainability practices among food truck operators. The interviews and literature reflect that Bellevue does not have public recycling or compost bins available on its city streets, complicating matters of waste sorting and compostable packaging. Additionally, there is really no incentive or requirement for food trucks to collect and dispose of their waste properly. A lack of information surrounds how food trucks operating in Bellevue are currently disposing of their waste, but interviewed individuals claim that disposal likely occurs at the commissary. From a customer viewpoint, disposal is not a problem since food is often taken "to-go" and consumed at a different location from the truck. However, interviewees said that the interior of the trucks could present a challenge for food sustainability, since the small space inside the trucks prevents having three separate bins for trash, compost, and recycling.

INFORMANT SUGGESTIONS

- Develop communication channels and messages that are appropriate to food trucks
- Form relationships and agreements with nearby businesses for restroom access
- Formally convey that food truck operators are expected to remind customers to queue along the sidewalk

INFORMANT SUGGESTIONS

 Have adequate equipment for maintaining proper food temperature so that food is eligible for donation

Another concern is ensuring that food truck operators use proper commissary kitchens to prepare food. One individual expressed the personal belief that "there is a good percentage of food trucks [that] are preparing food in their home or garage; these trucks often list their friend/associate restaurant as a commissary kitchen."

A final concern is the improper disposal of wastewater. Interviewees are concerned about where wastewater is disposed, particularly whether disposal takes places at the commissary kitchen or into the ground or storage drain, which can have environmental health consequences.

"A concern from a food safety perspective is the operators must understand proper food safety, and have adequate equipment to maintain proper food temperature for safety. As long as the foods are properly handled, I don't see why operators can't donate their food."

-Regulatory Agency

INFORMANT SUGGESTIONS

- Leverage nearby businesses in Bellevue such as Amazon and REI that have zero waste policies
- Work with waste management or Republic Services to contract bin collection

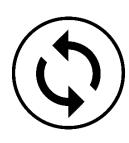
FOOD RECOVERY ORGANIZATIONS



The City of Bellevue has three identified meal program sites. These sites, The Sophia Way, Congregations for the Homeless, and Eastside Men's Shelter, all participated in our stakeholder interview process. Their addresses and donation times are listed in the table to the right.

No feedback was received pertaining to this theme.

Interviewed stakeholders expressed that a surplus of salad, salad dressings, and bread are often received. The majority of donated food is pre-prepared. One donation site only has premade meals due to limited temperature control equipment (e.g., refrigeration) available. At times, catered food is delivered to these donation sites.



Food recovery organizations were open to the concept of accepting leftover food from food trucks due to the potential increased diversity in food options for their clientele. However, stakeholders within this category all expressed that food truck donors must deliver the food because of the limited capacity to pick up food on their end. Those that want to donate must also ensure they have current food handler permits (a general health department requirement that donation organizations verify prior to accepting donations).



Interviews revealed the great benefit that all food recovery organizations provide tax write-offs at the end of the year using a donor tracking system.

Among donation sites, a common barrier to receiving food is the limited.

Among donation sites, a common barrier to receiving food is the limited refrigeration and freezer space. This capacity constraint restricts how much food can be received and re-distributed. In addition, within meal programs, composting can be a challenge, leaving most unused or expired food landfill-destined.

FOOD RECOVERY ORGANIZATIONS IN BELLEVUE

Meal Program Name	Address	Days and Times to Accepting Donations (Amount accepted regularly)		
The Sophia Way	11061 NE 2nd St #223	10:30–11 a.m. (40+ meals) 6–6:30 p.m. (21+meals)		
Congregations for the Homeless	515 116th Ave NE	Differs depending on the time of year, but food cannot be accepted from 3–7 p.m. when the shelter is closed (N/A)		
Eastside Men's Shelter	515 116th Ave NE	Differs depending on time of year (Unlimited supplemental dinner food is accepted because they have a high attendance)		

LCY STUDENT TEAM

INFORMANT SUGGESTIONS

- Develop a food recovery program (or use an existing application described in Findings section of this report) that connects food trucks with food donation sites
 - » Tools to use: Signup.com is an online volunteer donation system interface

SUPPORTIVE BUSINESS ORGANIZATIONS

Three supportive business organizations were interviewed, each representing different support systems for food trucks. The Washington State Food Truck Association serves as a strong advocate and information liaison. The Bellevue Downtown Association acts as a moderator for all business developments. Transitions2earth is a packaging supplier and offers sustainable packaging for businesses such as food trucks.

Among supportive businesses, the urgency in establishing relationships and communication channels with neighboring brick and mortar businesses was expressed the most.

"Food Trucks are good. It's definitely a balancing act: we don't want them everywhere, we don't want them to be priced out of the market, we want people to be happy. Right price, right location, limitations."

—Supportive Business Organization

In addition, interviewees expressed the importance of having written and saved documentation of the people who are demanding and asking for food trucks to come into the area in order to track requests and to have as supportive records on file. Finally, additional physical elements such as curb parking space width could be a barrier in certain areas. Most food trucks are built to be 19-20 feet and never wider than 8.5 feet; however, some curb spaces may not accommodate these measurements.

In general, food recovery has not been established to include food truck operators.

"Nobody's put in the effort to develop a program to get back to the commissary and have whatever is left over passed over to a food recovery site."

—Supportive Business Organization

Conversations with stakeholders revealed that converting to sustainable packaging supplies seems to involve some potential challenges.

"Yes, usually it's cost that is the biggest barrier and that's a tough one to overcome. Also, just a lack of motivation to make that change unless something is pushing them to."

—Supportive Business Organization



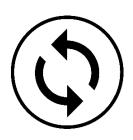


- Develop standards that are fair (being mindful of requirements for brick and mortar businesses) but still aligned with the uniqueness of food truck operations
- Have a platform for all stakeholders to feel heard and respected. Keep brick and mortar businesses informed of the process
- Make composting and recycling a requirement in

 Bollows
- Develop a food recovery program for food trucks

"Food Trucks are good. It's definitely a balancing act: we don't want them everywhere, we don't want them to be priced out of the market, we want people to be happy. Right price, right location, limitations."

—Supportive Business Organization





CASE STUDY: DOWNTOWN BELLEVUE

CITY OF BELLEVUE

Downtown Bellevue is the second largest city center in Washington. In 2016, Downtown Bellevue was ranked #4 among the "Top 10 Downtowns in the US."

Population: More than 53,000 employees and 14,000 residents are housed downtown.

By 2030, growth forecasts predict 71,000 downtown employees and 19,000 residents by 2030.

Land Use: 410 acres

- -4.5 million square feet of retail and entertainment uses
- -9.9 million square feet of office space

Accessibility: Downtown has an average Walk Score of 94 and a Transit Score of 60. By 2023, Sound Transit's East Link Light Rail will open two stations downtown, and a third station in close proximity.

Food Truck Landscape

With growth forecasts expected to increase population density by 25% by 2030 (City of Bellevue n.d.), Downtown Bellevue is seen by the City as a primary destination for the growth of food trucks. Of Bellevue's neighborhoods, Downtown currently hosts the largest number of food trucks, with at least four private property sites. All sites include rotations of different food trucks except for the Toys "R" US site, which typically has the same food truck.



Downtown Bellevue is projected to have an increase in population density and food trucks. CITY OF BELLEVUE



NE 6TH ST

Toys "R" US



Barnes and Noble "Pod"
626 106th Ave NE
Time of Operation:
11 a.m.-2 p.m.
Number of Food trucks: 4-6

SEATTLE FOOD TRUCKS





Skyline Tower

10900 NE 4th St

Time of Operation:

10:30 a.m.-2 p.m.

Number of Food trucks: 1-2

THE BOX FOOD TRUCK





Toys "R" Us

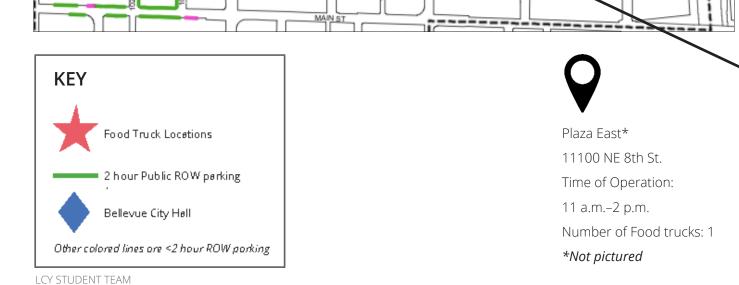
103 110th Ave NE

Time of Operation:

11 a.m.–2 p.m.

Number of Food trucks: 1

CITY OF BELLEVUE



NEXTRIST.

Skyline Tower_

NE 4TH ST

NE 2ND PL

55 | LIVABLE CITY YEAR

NE 1ST ST

FOOD TRUCKS | 56

Site Considerations

The case study of Downtown Bellevue provides a lens to identify additional elements to be taken into consideration regarding the three overarching themes. In summary, all but three food trucks in the stakeholder group expressed interest in participating in Bellevue. One food truck did not express interest because it has secured parking with a private landowner, and two did not express interest because of the desire to be as close to their commissary kitchens as possible. Food trucks that did not operate in Bellevue also expressed interest in having an opportunity to come to Bellevue.

"Bellevue is a very important city in King County, and many of our clients and friends live there. Currently, it is very difficult to get a location in downtown."

—Food Truck Operator

In addition, restroom access and publicly-owned waste receptacles may also create structural barriers to obtaining ideal locations. Finally, the most pressing revelation is that in the next five years, future development will continue to remove existing private property food truck parking opportunities. This increases the urgency for ROW parking as an option to make up for this loss of space in order to maintain and grow food truck culture downtown (City of Bellevue 2019).

"Bellevue is a very important city in King County, and many of our clients and friends live there. Currently, it is very difficult to get a location in downtown."

—Food Truck Operator

LOCATION CONSIDERATIONS FOR DOWNTOWN BELLEVUE

LOCATION CONSIDERATIONS

Site

- Population Density/Foot Traffic
- Physical Attributes
- Restaurant Presence/ Cuisine Type
- Future Developments

Characteristics

- Rotating locations
- Cost
- Publicly-owned waste receptacles

Requirements

- Composting and Recycling
- Marketing before launch
- Community feedback channels





Information gathered from literature review, stakeholder interviews, and phsyical site visits found additional elements that need to be taken into consideration when choosing locations for food trucks to park. A summary visual of Downtown is shown above. Examples of different factors to be considered are written on the lefthand side. LCY STUDENT TEAM

DISCUSSION

RECOMMENDATIONS

The student team carried out a literature review, conducted key informant interviews, and reviewed a prospective neighborhood as a case study. Combined, these methods inform the following set of recommendations for the City to consider as it creates a public ROW permitting process for food trucks.

Due to the greater number of recommendations under this section, the following recommendations are arranged into four topic areas to assist with planning: logistics, communications, marketing, and evaluation.



Logistics

1. Identify and communicate with adjacent brick and mortar businesses in the immediate vicinity of proposed parking zones before launching the program.

Proposed strategies are to ensure there is no overlap in cuisine type, form agreements for bathroom accessibility, and collect concerns and feedback to keep businesses engaged and heard. This can be done within the City or in partnership with an appropriate organization.

A vital aspect of launching a new program that was identified in both literature and among stakeholder groups is the desire for engagement early on with residents, nearby businesses, and prospective customers.

2. To assist in identifying suitable parking locations, capture physical characteristics of potential parking zones through photos or virtual mapping.

Important physical elements identified by stakeholders include: width of curb and sidewalk, roadway slope and cross-slope, existing brick and mortar businesses, and planting strips that could block operational set-up or customer access.

Stakeholders highly expressed that when choosing curbside parking locations, food trucks take specific factors into consideration. Four characteristics were commonly noted among food truck operators: population density/foot traffic, physical attributes of the location, presence of brick and mortar restaurants, and the cost of the parking permit.

3. Allow food trucks the flexibility to rotate locations among permitted parking zones.

Desire for parking flexibility for food trucks and opportunities for newer operators to also have prime locations is also reflected in literature and among stakeholder interviews.

EXAMPLE OF A RESTROOM FACILITY AGREEMENT



Days/Time at Restroom:

(Restroom Owner/Agent – Printed Name & Title)

(Restroom Owner/Agent - Signature & Date)

Fmail:

Appendix E

200 feet.

Use of Restroom Agreement

All Food Establishments must provide restroom facilities for employees. This form shall be completed if you will be using restroom facilities that are owned by someone else.

Restroom facilities must be readily accessible within two hundred (200) feet of the food establishment during all times of operation. In addition, Mobile Food Units must also have access to restrooms if in any one location for more than one hour.

Indicate which of the following is available at the restroom location:

	Hot water at hand-wash sin	k(s) at or above 100°F		
	Hand soap Disposable hand towels or	other acceptable hand dr	ning davias	
_	Required sign or poster whi			ndo" oloorly vioiblo
	Key accessibility to restroor		es to wash their ha	ilus clearly visible
	Distance from food service	` ' ' ' '	faat ar laaa	
	If seating is provided, then	a piumbed restroom allow	ing customer acces	ss must be avallable withir
Contac	ss: ct Person: ess Hours of Operation:	Title:	Phor	Zip: ne:
Email:				
	etail/service activity takes pla	ce at this facility?		
	, ,	,		
	Unit/Food Vendor Informatio			
Owner	/Operator:		Pho	·····
Addres	86.		Citv:	Zip:

This agreement between the owner/agent of the restroom and the owner/vendor of the food establishment signifies that both parties agree to the allowed use of the restroom facilities as specified. Note that this agreement is not transferable. Should there be a change in ownership of either the restroom or food establishment, or should there be any modification or cancelation of this agreement between parties, then the Public Health – Seattle & King County Food Service Operators Permit may be suspended.

Notice to operators of Mobile Food Units

A copy of this completed Use of Restroom Agreement must be kept onboard the Mobile Food Unit.

Available in alternative format upon request pursuant to ADA

DISTRICT HEALTH CENTERS

DOWNTOWN 401 5th Ave, 11th Floor Seattle, WA 98104 206-263-9566 EASTGATE 14350 S.E. Eastgate Way Bellevue, WA 98007

(Mobile/Vendor - Printed Name & Title)

(Mobile/Vendor - Signature & Date)

Public Health Seattle and King County's Environmental Health Services Division developed a restroom facility agreement form for any food business using restroom facilities owned by someone else. AUSTIN/TRAVIS COUNTY HEALTH & HUMAN SERVICES DEPARTMENT

Communication

- 4. Develop a phone application or texting notifications among food truck operators, the City, and regulators for regulatory reminders, updates, and clarifications to create accountability across all parties.
- 5. Develop feedback channels to capture best practices and lessons learned from key stakeholders (i.e., food truck operators, customers, and brick and mortar restaurants).

This can be created as a rating-scale survey, in-person interview, or openended questions distributed electronically.

Overall, it was found that information and updates are not equally accessible for all food trucks. Developing clear and accessible communication systems and making them feasible for food truck operators is a suggestion.

Marketing

- 6. Create an up-to-date online portal for customers to actively check to see where food trucks will be operating. The ability for food truck operators to update as well is suggested.
- 7. Reach out to nearby office buildings and/or residents in the area to build awareness, excitement, and demand.

Research for food truck locations in Bellevue found inconsistencies in location updates and information that was available online. In addition, information was scattered across different online platforms, creating challenges to finding one central site that contains all existing food truck locations. Consequently, it would be valuable to also develop an updated centralized platform with food truck information and locations for the launch of the program.

Evaluation

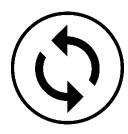
8. Collect feedback from the general public before, during, and after launching the food truck program to gauge perceptions and demand for food trucks. Collecting and storing this information for future reference is recommended.

This can be done through inserting an online survey in utility bill mailings; emailing surveys electronically through Listserv (an electric mailing list software application); or posting surveys online through the City of Bellevue's main web page, social media accounts, or apps such as MyBellevue mobile app.

EXAMPLE OF A CUSTOMER SURVEY

Tell us what you think about Food Trucks!						
have eaten at a mobil	le food vendor <i>outsi</i> Good	de of Nashville and Dav Average	idson County, and n	ny experience was: * Very Poor	I haven't visited a food vendor outisde of Nashville	
					I haven't visited a food vendor outisde	

Nashville's Metropolitan Government provides an 11-question survey that is available on its website to fill out electronically. Full survey in Appendix B METROPOLITAN GOVERNMEN OF NASHVILLE & DAVIDSON COUNTY



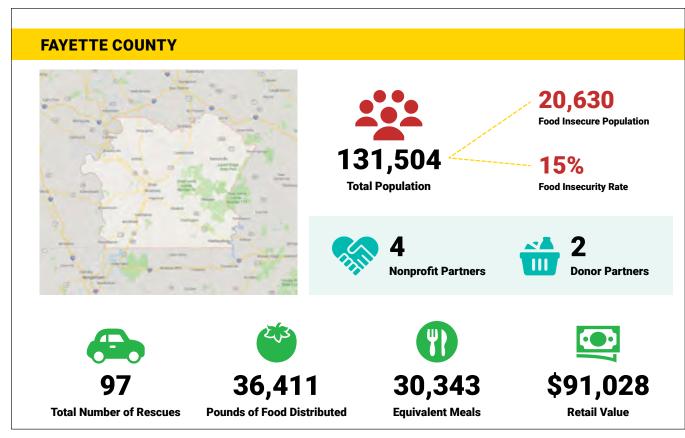
- 1. Explore adopting an existing food recovery model to pilot in the city.
- 2. Develop a food truck food recovery or have food trucks participate in a broader citywide program that provides transportation of leftover food between food suppliers and donation sites. This can be done in partnership with commissary kitchens, food donation sites, or the PHSKC Environmental Health Services Division.

Data collected from the literature and stakeholder interviews indicate that a formal food recovery program is both lacking and desired for the food truck industry. While the quantity of food waste is not believed to be substantial, food truck operators do express interest and willingness to participate in a donation process. Donation sites also expressed willingness and availability to receive donations from food trucks. However, neither party has the capacity to transport and deliver the leftover food. House Bill 1114 reflects a statewide effort to reduce food waste (Legislature of the State of Washington 2019), and Bellevue can lead the way by developing a food recovery program that includes the participation of food trucks.



- 1. Require all participating food trucks to have appropriate garbage, composting, and recycling waste receptacles available for staff and for customers, when seating is available. This can be especially helpful in areas that do not have publicly-owned waste receptacles. *
- *Existing publicly owned waste receptacles could be located first.
- 2. Require all participating food trucks to use compostable or recyclable packaging. It is rvecommended for food trucks to use one main packaging type instead of mixed packaging types, as this leads to more accurate waste sorting for disposal.

FOOD RESCUE: AN IMPACTFUL STATEWIDE FOOD RECOVERY PROGRAM



412 Food Rescue designed an online transport and distribution model which connects donors to nonprofit distribution partners. The impact made in Fayette County, Pennsylvania, which has a population similar to Bellevue, shows considerable potential for significantly reducing overall food waste in the city. 412 FOOD RESCUE

Partnerships can be developed between Cedar Grove Composting, Bellevue Solid Waste Division, and compostable packaging companies.

3.Incentivize the use of sustainable packaging and waste reduction practices by implementing a green/sustainability certification that food truck operators can display. For example, Don't Waste Durham's Sustainable Food Truck certification program, mentioned under Findings in this report, is a potential model to use.

In terms of food sustainability practices, Bellevue has already shown interest in accommodating organic recycling into the services provided to all multifamily and commercial establishments. The city's solid waste collection contract states that "the Contractor shall provide weekly Container-based Organics collection to all Multifamily Complex or Commercial Customers for no additional charge up to 96-gallons per week. The Contractor shall provide Container-based Organics collection services in excess of 96-gallons per week to requesting Multifamily Complex and Commercial Customers on a subscription fee basis, in accordance with the service levels selected by the Customer." The lack of recycling or composting requirements specific to food trucks reduces accountability and incentives for adopting waste reduction and waste prevention practices, such as using compostable packaging (City of Bellevue; Republic Services of Bellevue 2014).



At "Food Truck Lobby Day," sample packaging items were displayed from Transitions2Earth, a company that provides a broad range of eco-friendly products to businesses. LCY STUDENT TEAM

LIMITATIONS

This project has three main limitations. First, several limitations were beyond the students' capabilities and project scope and may create obstacles for the City in moving forward with some of the recommendations. Specifically, the lack of mandatory regulations regarding composting, as well as the limited number of publicly owned waste receptacles, is suggested to be addressed and explored in creating long-term sustainable change. In addition, ROW parking locations are limited, with several competing uses, leading the City to explore flexible uses of curbside spaces. Originally, Spring District was part of the case study assessment with Downtown Bellevue, but development plans ended up not aligning with the project timeline, and the student team could no longer pursue exploring this site as an option during the project time period. Second, processes in our project methods may have introduced biases into our analyses, and potential sources could have been overlooked. While students reviewed literature from peer-reviewed databases and gray literature found on government and organizational websites, it was not a systematic review. It is possible that literature from both category sources could have been overlooked. Our stakeholder selection process also used purposive sampling rather than random sampling, and the sample size for the interviewed stakeholders is relatively small and is not fully reflective of all the identified stakeholders who could affect or be affected by this program. Both of these processes may introduce bias. Third, the time constraint of this project period prevented the student team from conducting case studies in other Bellevue neighborhoods identified for food trucks, such as Bel-Red, Crossroads, and Factoria. Limited time also prevented the team from diving deeper into research and evaluation of the three overarching themes. This project in particular is also in the very early planning stages, where uncertainties are common, so more time is needed to define the scope and feasibility of the project.

NEXT STEPS

BRICK AND MORTAR ENGAGEMENT

Establishing communication channels with brick and mortar restaurants is a top concern for all stakeholder groups. Good communication not only improves the flow of information, but also dispels dis-information or myths. For example, the general belief is that food trucks have an unfair advantage over brick and mortar restaurants; however, on balance, their profit is comparatively small to the brick and mortar restaurants (National League of Cities 2013).

Additionally, research has shown that the presence of food trucks improves the long-term viability of permanent establishments. Economic Roundtable, a nonprofit research organization, mapped the locations of street vendors, brick and mortar retail stores, and restaurants in Los Angeles. They found that while only a quarter of retail stores and restaurants are located in proximity to street vendors, they were more likely to experience job growth. Retail stores and restaurants that were farther from vendors experienced greater employee turnover over the course of five years. On average, businesses observed a five percent decrease in jobs when they fall in census blocks with no or few street vendors, compared to census blocks with street vendors. On the other hand, businesses in close proximity to street vendors maintained employment levels from 2007 to 2011 and grew, on average, by five percent (Yvonne Yen Liu 2015).

PROGRAM MONITORING AND EVALUATION

This project was conducted during the planning stage of the ROW permitting program. As the City moves forward with implementing this program, program monitoring and evaluation are crucial to understanding successes, challenges, and lessons learned.

EXAMPLE OF BRICK AND MORTAR ENGAGEMENT IN PORTLAND, OREGON

In 2013, a group of postgraduate students, The Urban Vitality Group, worked in partnership with the City of Portland Bureau of Planning to conduct a study called "The Food Cartology," which reviewed the state of the mobile food vending industry in Portland, Oregon. They produced a survey which gauged attitudes and perceptions of mobile food vendors' effects on businesses in the neighborhood (Urban Vitality Group 2013).

NEIGHBORHOOD BUSINESS SURVEY

NOTE: Please ask the bu	siness owner or manager to o	complete this surv	ey.	Is there noticeable smell from the food caIs there noticeable noise from the food ca	
Date					
Name of Business				11. Is there noticeable litter from the food ca	art(s)? ₁ Yes ₂ No ₃ Don't know
Business Address					
Type of Business (restaura	ant, dry cleaner, etc.)			9a. How do you feel about the smell?	
How long has your busin	ess been in this location?			₁ Pleasant ₂ Neutral ₃ Unp	oleasant ₄ N/A
How many employees we	ork in your business?			10a. How do you feel about the noise?	
				,□ Pleasant 2□ Neutral 3□ Unp	oleasant ₄□ N/A
1. How often do you patr	onize the food cart(s) in this	neighborhood?			
₁☐ 5 or more times a we	ek			12. How do you think the food cart(s) can be	improved? (Please check all that apply.)
₂☐ 3 to 4 times a week				a☐ Better design of cart exterior/signage	h□ Operate more evening hours
₃□ 1 to 2 times a week				ы Appropriate handling of trash	¡☐ Operate fewer hours
4☐ Less than once a we	k			□ Appropriate waste water disposal	¡□ Pedestrian clearance on sidewalk
₅ Never					
n				d□ Safer food handling	k Provide bathroom
kegarding the 100d cart disagree with the followi	s in this neighborhood, plea	ase indicate to wh	at extent you agree or	。☐ Use recyclable food container	ı□ Provide seating/table
0	U			← Reduce odor f	_m ☐ Provide shelter from weather
	arts has increased foot traffi			g Reduce noise	n Nothing to improve
□ Strongly agree □ □ A	gree ₃□ Neutral	₄ □ Disagree	5 ☐ Strongly disagree	Others (please specify)	
				1 1 //	
	d because of the presence of			13. Of the above issues, which one are you m	nostly concerned about?
□ Strongly agree □□ A	gree ₃□ Neutral	₄ □ Disagree	₅☐ Strongly disagree		,
4. The presence of food o	arts makes the streets feel sa	afer.		14. Please rank your overall perception of fo	ood cart(s) in this neighborhood.
ı□ Strongly agree	gree ₃□ Neutral	₄□ Disagree	5 ☐ Strongly disagree	Very positive Very positive	out cut (()) in this neighborhooth
				∘□ Positive	
5. I have a friendly relati	onship with the food cart ope	erators.		3 Neutral	
□ Strongly agree □ A	gree ₃□ Neutral	₄□ Disagree	5 Strongly disagree	Negative Negative	
				5 Very negative	
6. I have a friendly relati	onship with other store-fron	nt business owners		5□ very negative	
□ Strongly agree □□ A	-	₄□ Disagree	s□ Strongly disagree	04	. 10
	35 210444	4 Providence	s and a supply the supple supp	15. Other comments or suggestions for our s	study?
Twent to see more fee	d carts in this neighborhood				
			□ c		
□ Strongly agree □ A	gree ₃□ Neutral	₄ □ Disagree	5 ☐ Strongly disagree		
8 Food carte are a better	use of the site than a parkin			Thank you for your time!	
1□ Strongly agree 2□ A	gree ₃□ Neutral	₄□ Disagree	5 Strongly disagree		

URBAN VITALITY GROUP

CONCLUSION

The purpose of this report is to offer best practices and recommendations to the City of Bellevue for developing a food truck program that can most effectively leverage the benefits of food trucks, while balancing the need to regulate growth and account for the concerns of primary stakeholders: food truck operators, regulatory agencies, food recovery organizations, and supportive business organizations.

It is important to recognize that a universal prescription for how to best incorporate food trucks into the fabric of a community does not exist. Many characteristics contribute to the complexity and vibrancy of a city, including political climate, state laws, demographics, and the existing restaurant industry. With this in mind, the recommendations included here for the City of Bellevue are intended to be flexible enough to accommodate different circumstances, but logical enough to provide useful guidance. We hope that this report can serve as a road map to help Bellevue establish a regulatory framework for food trucks that is best suited to its unique circumstances and incorporates principles of equitable permitting, food recovery, and waste reduction.



One of four private property food truck locations currently in Downtown Bellevue. JAMIE MERRIMAN-COHAN

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APPENDICES

APPENDIX A: STAKEHOLDER ENGAGEMENT SURVEYS

Outreach Goals:

- Identify opportunities and barriers for implementing (i.e., cost and inconvenience) a ROW food truck permitting program in Bellevue
- Identify stakeholder perceptions and barriers related to food truck operations
- Provide recommendations for an equitable and sustainable food truck permitting process in the City of Bellevue

Introductory Script:

• My name is ______, and I am currently a student at the University of Washington. My classmates and I are partnering with the City of Bellevue to learn about how food trucks currently function. The City is exploring options for food truck permitting that provide more flexibility for food trucks to operate, in addition to reducing their environmental impact by reducing food waste. The information we gather will be seen by our team as well as the Transportation Department in Bellevue. It will be used to produce a best practices report. We will not gather any identifying information or link your name to any comments cited in the final document. In order to make sure we remember what you tell us, is it okay if we take notes or record during the interview? At any time in the interview, you may choose to not answer a question or end the interview entirely. Completion of this interview is entirely voluntary.

Food Truck Operators

Location:	
Food Truck Name:	(internal use)
Background	
Why did you start a food truck business, and what c	loes this business
mean to you?	

Transportation Patterns

Where do you drive/park throughout the day? (check all that apply)

Location

Parking Lots

Curb Space Parking

Other:

Why?

Are there challenges to parking in these specific areas?

Hours of the Day

Morning (7 AM-11 AM)

Afternoon (11 AM-2 PM)

Evening (after 3 PM)

All Day

Other:

Which cities do you operate in? (Open ended)

If mainly Bellevue, which neighborhoods do you operate in?

Do you participate mainly in One Day Events or Daily Street Vending? (Circle all that apply)

Permit

What challenges have you experienced throughout the permitting process for your food truck regarding your priority locations for operation?

If a public Right of Way permitting process (curbside parking) were made available in the city of Bellevue, would you be interested in obtaining a permit for your food truck to operate in the city of Bellevue? (Y/N)

Why?

Communication

How do you currently obtain permitting information for your business?

Brochures

Fact sheets

Online information

Phone Apps

Personal Communication/contact persons

Bilingual Communication information

Other:

Waste Management/Food Recovery

Do you have bins (recycling, compost, or garbage) available on your truck? (Y/N)

Do you provide any bins to your customers? (Y/N)

At the end of each business day, what is your biggest source of waste?

Do you track how much uneaten food you have at the end of the day?

How do you dispose of this waste at the end of the day?

Compost

Garbage

Save for next business day

Other:

If you do not currently donate, would you be open to donating your uneaten food to a food recovery organization?

If NO, why not?

Time

Space

Staff

Liability

Would you be open to using compostable packaging for your customers?

Yes

No

What has prevented you from using these products in the past? (check all that apply)

Not easily accessible

Too expensive

Don't know how

Don't know where to start

Other: _____

Regulatory Agencies

Environmental Health Division

lame: _____ (for internal use)

What health-permitting barriers/challenges are unique to food trucks?

What communication methods work well with this type of mobile establishment?

Based on your experience, is solid waste disposal/recycling a particular problem for this type of establishment? How?

Based on your experience, is food recovery/donation a good solution for leftover food from these types of establishments? If not, why?

Our project is exploring "Right of Way" (ROW) curb spaces as an option to expand food truck access in Bellevue. Do you have any specific concerns or feedback regarding such a plan from an environmental health perspective?

If food trucks were interested in donating any excess foods to meal programs, are there any concerns?

Solid Waste Division

Name: (for internal use)

How are food trucks in the City of Bellevue currently disposing of garbage, recycling, and compost?

Does the City of Bellevue offer (or is thinking of offering) a centralized drop-off point for its garbage, recycling, and compost?

What waste disposal barriers/challenges are unique to food trucks in your jurisdiction?

Does the City of Bellevue offer any resources to food service establishments to donate their unsold consumable food to food recovery programs?

If so, how is that process/connection established and communicated?

Do you have any other concerns around waste generation or disposal related to food truck operations?

Food Recovery Organizations

Name:______(for internal use)

What days and times do you accept meal donations? (open ended)

How much food do they receive on a regular basis?

Daily

Weekly

Do they have a donation surplus or food deficit problem?

Do you have any restrictions on the food you accept? (open ended)

Are these restrictions the result of: (check all that apply)

Lack of refrigeration/freezer space

Lack of dry goods storage space

Lack of repackaging space

Has any food truck, food cart, or mobile food unit ever provided your program with meal donations? (Y/N)

If yes, what major difficulties have you encountered? (open ended)

If no, would you be open to accepting leftover food from food trucks?

If NO, why not? (Inconvenience or liability reasons?)

If YES, describe what logistical requirements food trucks will need to meet?

What is the health and safety standard of food that is required for acceptable donation? (open ended)

Do you use any technologies to coordinate food donation and retrieval times? (Y/N)

How often does your organization have to discard uneaten meal donations? (open ended)

What barriers or challenges influence the amount?

Do you compost food waste? (Y/N)

If not, what are the barriers to composting inedible food?

Do you provide tax receipts to meal donors? (Y/N)

Supportive Business Organizations

Name:______ (for internal use)
All open-ended.

APPENDIX B: FOOD VENDOR SURVEY ON WEBSITE

http://www.foodvendorsurvey.com/



Tell us what you think about Food Trucks!

Very Good	Good	Average	Poor	Very Poor	I haven't visited a food vendor outisde of Nashville
0	0	0			0
l have eaten at a mobile	food vendor within	Nashville and Davids	on County, and my	experience was: *	
Very Good	Good	Average	Poor	Very Poor	I haven't visited a food vendor in Nashville
0	0				
I am more likely to visit	an area where ther	e are mobile food vend	dor dining options: *		
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Opinion
0	0				0
ease answer the following the following the season to how the seas					
. It is likely that I would d	ine at a mobile foo	d vendor in the mornir	ng: *		
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Opinion

Strongly Agree Strongly Agree Strongly Agree Strongly Agree Strongly Agree It is likely that I would dine a strongly Agree Strongly Agree I live downtown I visit downtown	Agree at a mobile food v	Neutral	Disagree	Strongly Disagree Strongly Disagree Strongly Disagree	No Opinion No Opinion No Opinion
Strongly Agree It is likely that I would dine a Strongly Agree Strongly Agree Strongly Agree I live downtown I visit downtown	Agree at a mobile food v	vendor in the evening Neutral vendor in the late nig	g: * Disagree ght: * Disagree	Strongly Disagree Strongly Disagree	No Opinion No Opinion
Strongly Agree It is likely that I would dine a Strongly Agree What Best Describes you? * I live downtown I visit downtown	Agree at a mobile food v	Neutral vendor in the late nig	Disagree ght: *	Strongly Disagree	No Opinion
It is likely that I would dine a Strongly Agree What Best Describes you? * I live downtown I visit downtown	at a mobile food v	vendor in the late niç	ght: *	Strongly Disagree	No Opinion
. It is likely that I would dine a Strongly Agree . What Best Describes you? *	at a mobile food v Agree	vendor in the late nig	ght: *	Strongly Disagree	No Opinion
Strongly Agree . What Best Describes you? * I live downtown I visit downtown	Agree	Neutral	Disagree		
. What Best Describes you? *	0				
. What Best Describes you? *		•	0	0	0
I live downtown I visit downtown	•				
Yes, I am aware of the pro No, not aware	gram				
. What recommendations wo od Vending in general? *	ould you make to	the City of Nashville	regarding their curr	ent Mobile Food Vendor p	orogram pilot or Mob
Anonymous surveys may be bulated or relied upon for decorated					
		Sub	bmit		