

# LOGISTICS AND EFFICIENCY OF LOCAL FOOD DISTRIBUTION IN KITSAP COUNTY, WASHINGTON



*Prepared for the Kitsap Food Systems Roundtable*

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# INTRODUCTION

## Purpose & Scope

This project, titled *Logistics and Efficiency of Local Food Distribution in Kitsap County, Washington*, was funded through a USDA Local Food Promotion Program planning grant. Its purpose was to conduct a comprehensive assessment of the local food distribution system in Kitsap County, covering the period from October 2023 through September 2025.

The data collected through this assessment informed a set of recommendations developed for the Kitsap Food System Roundtable - a collaborative network of organizations, agencies, businesses, farmers, and cooperatives working to strengthen the local food system. These recommendations are intended to guide the network in advancing a more efficient, coordinated, and sustainable food distribution model, with a particular emphasis on supporting local farmers and food producers.

## Background Information

Between 1997 and 2017, Kitsap County experienced a 9% increase in the number of farms, despite a 61% loss in farmland, according to the U.S. Agriculture Census. This trend indicates a rise in smaller, family-owned farms that sell their products locally. This shift has been supported by the opening of accessible sales outlets such as the Kitsap Community Food Co-op and Kitsap Fresh, as well as an increase in consumer interest in local food.

At the time of the assessment, Kitsap farmers were independently transporting food to multiple locations across the county, often with overlapping routes and schedules. Similarly, local food organizations and food access partners - such as food banks - were also distributing food in a fragmented and uncoordinated manner. This model was found to be inefficient and not cost-effective for both farmers and food access organizations.

The assessment aimed to better understand the current distribution landscape and explore opportunities for improvement. Key questions addressed included:

- To what extent were farmers using similar distribution routes and schedules?
- Were there opportunities to coordinate food movement across the county?
- Could more efficient, cost-effective systems be developed for both farmers and food access organizations?

## METHODS AND PROCEDURES

Washington State University (WSU) Extension in Kitsap County partnered with the Social and Economic Sciences Research Center (SESRC) at WSU to collaboratively design, implement, and analyze a comprehensive data collection effort focused on food movement in Kitsap County. This mixed-methods research project included qualitative interviews with farmers, an online survey targeting farming businesses, and qualitative interviews with local food organizations.

The project was initiated in January 2024. Data collection activities were conducted throughout the spring and summer of 2024, during which in-person engagement with local farms and food access organizations was also prioritized. The online survey was administered in the fall of 2024. Final data analysis and reporting by SESRC were completed in August 2025.

Contact lists for both farmers and local food distribution organizations were provided by partners of the Kitsap Food System Roundtable, ensuring a representative and relevant sample for the study.

The primary objectives of the interviews and survey were to gather insights on the following:

1. **Current food distribution practices**, including schedules, transportation methods, and infrastructure in use.
2. **Identified needs** related to food movement within Kitsap County, with attention to areas of overlap and redundancy.
3. **Barriers to effective food distribution**, particularly those related to cost and infrastructure limitations; and
4. **Interest in and potential for enhanced collaboration** among stakeholders to improve food movement systems.

## Data Collection Activities

As part of the project's data collection activities, several methods were employed to gather comprehensive insights into Kitsap County's local food distribution system. These included conducting qualitative interviews with local farmers and food organizations to explore key themes and challenges. To supplement the interview findings, an online survey was implemented to reach a broader group of farmers. Additionally, participant observation was used to gain contextual understanding of the food systems in practice, although both this component and the interview timeline were impacted by a personnel change within SESRC during the project.

## Qualitative Interview Process with Kitsap County Farmers

To gather detailed insights into the local food system, qualitative interviews were conducted with farmers in Kitsap County as a central component of the project's data collection activities. The recruitment process began with a contact list provided by WSU Kitsap Extension and the Kitsap Food System Roundtable partners. Farmers were invited to participate in one-hour interviews conducted via Zoom, with scheduling coordinated to accommodate their availability. Participants were offered a \$20 gift card for their time.

All interviews were recorded with the informed consent of participants, and written transcripts were developed by SESRC from these recordings to support thematic analysis. In addition to virtual interviews, a subset of interviews was conducted in person during August 2025. This in-person engagement was made possible by a site visit from the SESRC project lead, which facilitated deeper local connections and a more nuanced understanding of the food system and current distribution efforts in the county.

The interviews aimed to develop a comprehensive profile of what farmers are producing, as well as how they are marketing and distributing their products. Analysis of the transcripts revealed eight key themes, which were aligned with the interview questions and recurring topics raised by participants:

1. Infrastructure
2. Food movement patterns
3. Capacity for increased production and/or distribution
4. Openness to collaboration for food distribution
5. Barriers or gaps in the ability to grow food locally
6. Supportive programs and resources
7. Food waste and management strategies
8. Improving food access across Kitsap County

These themes provide a foundation for understanding the current landscape of agricultural production and food distribution in Kitsap County, as well as identifying opportunities for strengthening the local food distribution system.

## Online Farmer Survey

To complement the qualitative interviews and broaden participation among Kitsap County farmers, an online survey was developed and administered using the SESRC's proprietary web platform, DCWorks. The survey was designed to cover many of the same topics addressed in the interviews, while also capturing additional information related to the geographic movement of farm products within the county.

Personalized email invitations and follow-up reminders were sent to farmers using the same contact list provided by WSU Kitsap Extension and the Kitsap Food System Roundtable partners. The online survey served as an alternative mode of participation for farmers who were unable to engage in interviews, particularly due to delays in the project's launch that limited the number of interviews conducted.

The implementation of the survey yielded two key benefits. First, it allowed interview participants to provide additional detail and clarification, enriching the data collected through the initial conversations. Second, it enabled participation from farmers who were not available for interviews, ensuring that their perspectives and experiences were still represented in the study. This dual function of the survey enhanced the overall comprehensiveness and inclusivity of the data collection process.

## Qualitative Interviews with Local Food Organizations

Local food organizations in Kitsap County were invited to participate in one-hour qualitative interviews conducted by SESRC via Zoom. The contact list was developed in collaboration with WSU Kitsap Extension, Kitsap Food System Roundtable partners, and local farmers. Invitations were sent by email, and organizations were given the opportunity to schedule interviews at their convenience.

Participating organizations represented a diverse range of food system roles, functioning in areas such as:

- Online farmers markets and direct-to-consumer food hubs
- Consumer cooperatives
- Food banks and emergency food assistance providers
- Community gardens
- Gleaning organizations
- Non-profit community resources focused on food access and assistance

A total of ten organizations participated in the interviews. With permission, interviews were recorded and transcribed for analysis. While most interviews were conducted online, a few were held in person during the SESRC program coordinator's site visit to Kitsap County in August 2024.

Interview questions closely mirrored those asked in the farmer survey, focusing on:

1. Infrastructure
2. Food movement patterns
3. Capacity for increased production or distribution
4. Willingness to collaborate with other organizations or farms
5. Barriers and gaps in food distribution
6. Existing programs that support food movement
7. Food waste management
8. Strategies to improve food access across the county

Local food organizations were included in the project because they play a critical role in the movement, storage, and distribution of local food throughout Kitsap County. Many of these organizations possess infrastructure - such as refrigerated trucks, vans, and storage facilities - that individual farmers sometimes lack. Additionally, they serve as key connectors within the local food system, interacting with farmers, consumers, and other stakeholders in a networked, collaborative fashion. Their insights were essential to understanding the broader distribution landscape, identifying systemic challenges, and exploring opportunities for more coordinated and equitable food movement across the region.

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## SUMMARY OF FINDINGS

### Findings from SESRC Interviews and Survey of Farmers in Kitsap County

A total of 34 farmers across Kitsap County participated in this project through either qualitative interview, an online survey, or both.

- Interviews
  - 23 farmers took part in qualitative interviews.
  - Of these, 12 also completed the online survey following their interviews to provide additional information.
- Survey Only
  - An additional 11 farmers, who were not interviewed, completed the online survey independently.
- Partial Survey Responses
  - The survey also received 5 partial responses.
  - These were excluded from the final data analysis due to their incomplete nature.



### Economic Pressures

- High operating costs, low profit margins, and limited access to affordable farmland and worker housing are major barriers.
- Farmers report difficulty accessing grants and navigating complex regulatory environments, which further limits their ability to invest in infrastructure or expand operations.

### Scheduling and Seasonal Inefficiencies

- Food movement is concentrated in spring through fall, with some limited activity in winter.
- Delivery schedules vary widely, with most farmers moving food one to three days per week, often dictated by market days or CSA schedules.

### Market Access and Demand Forecasting

- Farmers rely heavily on direct-to-consumer sales, including farm stands, CSAs, and farmers markets, which can be inefficient and unpredictable.
- Matching supply with demand is a challenge, especially for small-scale producers who lack buffer inventory.

### Food Waste and Donation Logistics

- While many farmers compost or donate excess produce, there is no streamlined system for food recovery and redistribution.
- Donations are often informal and depend on surplus availability after market days.
- Farm to Food Pantry program incentivizes donation and coordinates the pick-up/delivery of produce from farms for delivery to hunger relief organizations. This was necessitated by time and scheduling constraints of the producers.

## *Feasibility of Coordinated Food Distribution Efforts*

Despite the barriers, there is notable interest among farmers in exploring more coordinated food distribution models. However, feasibility depends on addressing logistical, economic, and relational factors.

### Capacity to Expand Distribution

- Interview and survey data shows that 34.8% of farmers believe they have the capacity to move more food, while 26.1% say they might, and 39.1% report no additional capacity.
- Interviews reveal that capacity is often conditional—dependent on labor availability, vehicle size, and convenience.

### Willingness to Collaborate

- About 26% of surveyed farmers are either already moving other farms' food or are willing to do so. With about 35% stating they would be somewhat willing to move another farms' food.
- Over half (52.4%) are willing or very willing to adjust delivery schedules to improve county-wide efficiency.

### Interest in Coordination

- 56.5% of farmers expressed interest in developing partnerships with other growers.
- 52.1% are interested in learning ways to optimize food distribution.
- 43.5% are open to sharing resources to facilitate coordinated distribution.
- 39.1% are interested in joining a network for food distribution in the county.

### Concerns and Conditions for Collaboration

- Farmers emphasize the importance of maintaining product quality and customer relationships, which can be compromised in shared delivery models.
- Cost and compensation are major concerns; many farmers cannot afford to pay for delivery services or absorb additional expenses.
- Logistical challenges include varying harvest schedules, remote farm locations, and lack of centralized infrastructure.

- Any fee-for-service model would need to be flexible and scalable to meet seasonal demands. However, because of the seasonal nature of most food movement it would need to be a secondary service for an organization or business rather than their primary business.

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## Findings from SESRC Interviews with Food Organizations in Kitsap County

The Social and Economic Sciences Research Center (SESRC) conducted interviews with food access organizations and direct to consumer local food businesses across Kitsap County to assess current challenges and opportunities for collaboration within the local food system, specifically a county-wide network for food distribution. The interviews confirmed several existing barriers while also highlighting emerging potential for a more integrated and efficient county-wide food distribution network. Key findings are summarized below.

### *Existing Conditions and Emerging Opportunities*

- **Informal Collaboration Networks:** Some degree of resource and infrastructure sharing is already occurring among food assistance organizations, indicating a foundation for broader collaboration.
- **Interest in County-Wide Coordination:** Organizations expressed a strong interest in developing a more cohesive and efficient food distribution system across the county.
- **Capacity Limitations:** Many organizations are currently operating at or near full capacity, constrained by limited resources, infrastructure, and staffing.

### *Organizational Needs for Enhanced Efficiency*

Several themes emerged regarding the organizational requirements necessary to participate effectively in a county-wide food distribution network:

- **Infrastructure Enhancements:** Organizations identified the need for improved facilities, equipment, and transportation capabilities.
- **Sustainable Funding:** There is a clear demand for consistent and reliable financial support to sustain and expand current operations.
- **Human Resource Support:** Additional paid staff and dependable volunteers are needed to meet operational demands.
- **Reliable Local Food Supply:** Organizations face challenges in sourcing a consistent supply of locally grown food.

### *Operational Constraints and Limitations*

Food organizations reported both internal and external barriers that hinder their ability to engage in broader network initiatives:

- **Inward-Focused Operations:** Many organizations are primarily focused on day-to-day survival, limiting their capacity to participate in collaborative efforts.
- **Barriers to External Collaboration:** Operational strains and resource limitations restrict the ability to invest in county-wide efficiency improvements.
- **Perceived Competition:** Within the community, food access organizations specifically, often operate in overlapping spheres, pursuing similar funding sources and resources. While not in direct conflict, this dynamic can create a form of territorial tension, as each organization navigates limited opportunities in an environment of shared scarcity.

### *Factors Influencing Network Feasibility*

Interview responses from food organizations revealed several factors that may impact the feasibility of establishing a county-wide food distribution network within this group:

- **Divergent Organizational Missions:**
  - Some organizations prioritize addressing unmet food needs (e.g., food banks).
  - Others focus on serving consumers who choose to purchase locally sourced food.
- **Relationships with Farmers:**

- Consumer-oriented organizations often maintain direct, mutually beneficial relationships with local farmers.
- Assistance-focused organizations typically rely on surplus donations or occasional purchases and often have a tangential relationship with farmers
- **Logistical Costs:**
  - While shared pickup and delivery routes could reduce the number of trips, they may also increase costs related to labor and vehicle maintenance.
- **Scheduling Constraints:**
  - Limited flexibility in adjusting pickup and delivery schedules due to operational dependencies presents a challenge to coordination.

## RECOMMENDATIONS

While interviews and surveys showed strong interest in a shared food distribution model across the system, and broad recognition of its benefits, several significant barriers emerged. Most notably scheduling constraints, logistics, divergent business models, maintaining product quality/food safety, and labor. Based on these findings, a few key recommendations stood out as ways that the larger group could both work together as farm and food businesses as well as ways in which only farm businesses may benefit from working together. Below are the two models that reflect those needs.

### Recommendation 1: Establish a County-Wide Coordinated Food Movement Network

This recommendation proposes the development of a county-wide food distribution system designed to support both **local farmers** and **local food businesses**, including food access organizations, retailers, and farmers. The goal under this recommendation is to create shared infrastructure that improves efficiency, reduces redundancy, and strengthens the local food economy.

#### *Key Components of the Model*

1. **Centralized Drop-Off and Pick-Up Hubs**
  - Develop strategically located, refrigerated cold storage hubs across Kitsap County to serve as shared access points for food movement. These could be newly introduced cold storage options, or come from existing partner sites.
  - These hubs would reduce travel distance for both food drop-off and pick-up, minimizing the need for multiple individual trips, saving time and transportation costs for farmers and food businesses alike.
  - A successful model to consider is the **Smart Food Locker system** developed by *GoodRoots Northwest* in Pierce County, WA. These lockers act as satellite hubs accessible to various stakeholders in the food system.
2. **Shared Delivery Route System**
  - To ensure food reaches its final destination after being dropped at a hub, a coordinated delivery route system would need to be established.
  - Routes would be designed based on geographic proximity and existing movement patterns (e.g., peak delivery days such as Tuesday, Wednesday, and Saturday).
  - This system would support both inbound and outbound logistics for farms and food businesses.
3. **County-Wide Food Distribution Calendar**
  - A centralized calendar would coordinate food movement across the county, aligning with existing truck routes and delivery schedules.
  - This tool would help stakeholders plan around shared logistics, reducing overlap and improving predictability.

#### *Operational Considerations*

- **Coordination & Management**
  - A dedicated entity would be required to manage the system, ensuring sustainability and equitable access.

- While farmers would be a key beneficiary, they often lack the capacity to manage such a system independently.
- Potential coordinating bodies could include Kitsap Fresh, a local food bank, or potentially a newly formed coalition of stakeholders.
- If existing cold storage in central locations is not usable and the locker system is chosen as the preferred solution, implementation will involve higher upfront costs. Any organization taking on this effort should consider seeking grant funding or community-based financial support to help cover those expenses.
- **Leveraging Existing Resources**
  - Kitsap Fresh, Kitsap Harvest, and potentially some food banks, currently have underutilized vehicles that could be deployed for shared routes.
  - These organizations could contract delivery services, generate modest revenue and support the broader food system.
  - Key partners have identified existing cold storage capabilities.
  - A shared staffing model could be explored, combining part-time roles across organizations to fund full-time logistics positions. This would improve wage stability and operational efficiency.

### *Benefits to Farmers and Food Businesses*

- Farmers gain access to reliable, cost-effective distribution without needing to manage logistics independently.
- Farmers and producers can reach more customers (retailers, institutions, food banks) without needing to expand their own delivery operations.
- Local food businesses benefit from streamlined access to fresh, local products and reduced transportation overhead.
- Both groups would save on fuel, labor and time through shared routes, storage and logistics.
- This type of model would provide greater resilience and sustainability for the entire local food system. Shared infrastructure supports quicker adaptation during disruptions and reduces impacts.
- Vehicle reliability and capacity are frequently cited in Washington State Department of Agriculture (WSDA) Infrastructure Grant applications as key barriers to the growth of farm and food businesses. This model offers a sustainable solution by enabling expansion without requiring significant financial investment in vehicles.

## **Recommendation 2: Farmer-Focused Pilot**

Of the 34 farmers who participated in the data collection, 21 identified Wednesday as a key day for food movement—likely aligning with existing distribution schedules such as those used by Kitsap Fresh. The interviews and online survey also provided insights into farms’ labor capacity and ability for distribution:

- **39.1%** of respondents reported having adequate help and saw no need for improvement.
- **34.8%** indicated they had help but could benefit from improvements.
- **26.1%** stated they lacked sufficient support for food distribution.

These findings highlight the need for collaborative models that improve distribution efficiency and reduce labor burdens on individual farms. The following pilot model is proposed to leverage existing infrastructure and farmer relationships.

### *Key Components of the Model*

#### **1. Coordinated Wednesday Pick-Up Service**

Establish a shared pick-up route for farms delivering to the Kitsap Fresh warehouse on Wednesdays. This would reduce redundant trips and improve efficiency for producers currently making individual deliveries.

Out of 19 farms that provided location data, identifying moving food on Wednesdays:

- **15 farms** are located in Central or North Kitsap (including 2 on Bainbridge Island)
- **4 farms** are located in South Kitsap

This high concentration of farms in Central and North Kitsap presents a promising opportunity to pilot a shared pick-up route. Farm locations were mapped by SESRC to highlight proximity and potential for collaboration. However, due to the

limited number of participating farms and the anonymous nature of the survey and interviews, including a potential route map in the final report would risk compromising confidentiality. Therefore, location specific data will not be disclosed.

## 2. Scalable Implementation

The pilot could start with easily accessible clusters of farms. If successful, expand the model to include additional areas across the county and producers.

## 3. Sustainability Through Fee-for-Service

Offer the pick-up service as a fee-based option available to all farms. Kitsap Fresh, with its existing infrastructure and producer relationships, would be the most likely candidate to successfully coordinate this service. Participating farms would benefit from reduced transportation and labor costs while maintaining scheduling flexibility.

### *Benefits to Farmers and Food Businesses*

- **Lower Labor Costs:** Farmers save time and money by reducing the need to personally deliver products on Wednesdays.
- **Reduced Transportation Expenses:** Shared pick-up services would help cut fuel and vehicle maintenance costs.
- **Expanded Market Access:** A coordinated route may attract new producers who currently don't participate in Kitsap Fresh due to scheduling conflicts, small order capability, or lack of transportation options.
- **Improved Infrastructure Support:** Vehicle reliability and capacity are frequently cited as barriers in WSDA Infrastructure Grant applications. This model offers a scalable solution that allows farms and food businesses to grow without needing to invest in new vehicles.

### *Operational Considerations and Next Steps*

If this recommendation is selected to move forward, a follow-up survey should be conducted to gather updated and detailed information necessary for planning and implementation. Key areas of focus include:

- **Updated Producer Information:** SESRC data may no longer reflect current conditions, and Kitsap Fresh's producer membership evolves over time. Accurate counts and current farm locations are essential.
- **Seasonal Participation:** Identify which producers are active during the typical delivery season (e.g., mid-May through mid-October).
- **Willingness to Participate:** Identify producers in the most geographically clustered area who are genuinely interested in joining a coordinated, shared pick-up route. The lead organization should engage these producers early in the process to pilot the route and gather valuable feedback that can inform future improvements and broader implementation.
- **Cost Modeling:** Due to fluctuating fuel prices and route variability, a reliable per-mile cost estimate is not currently feasible. A sample cost model should be developed if a pilot is to move forward to illustrate potential expenses and savings.

### *Other Considerations/Integration Opportunities*

- **Food Bank Schedules:** In lieu of Kitsap Fresh taking on the pilot, existing food bank pickup routes could be expanded to include farm pickups, increasing efficiency and potentially benefiting from the fee-for-service model.
- **Underutilized Vehicles:** In lieu of Kitsap Fresh taking on the pilot, vehicles owned by Kitsap Fresh and Kitsap Harvest, or food banks that are currently underused could be deployed on a contract basis for pilot delivery routes.
- **Shared Staffing Models:** Many food banks and farm organizations offer part-time positions. A collaborative staffing approach could pool resources to fund full-time delivery roles, improving wage stability and route consistency.

This recommended pilot presents a promising opportunity to strengthen the local food system by supporting farmers through shared infrastructure, coordinated logistics, and collaborative labor models. Continued stakeholder engagement and financial modeling will be essential for moving toward implementation.

## REPORT SUMMARY

This report provides a snapshot of the current local food distribution landscape in Kitsap County and offers two key recommendations to enhance its overall efficiency and sustainability. The first proposes the establishment of a county-wide coordinated food movement network, leveraging shared infrastructure, centralized hubs, and collaborative logistics to benefit both farmers and food organizations. The second recommends a farmer-focused pilot, targeting Wednesday deliveries to Kitsap Fresh, with the goal of reducing labor and transportation costs for farmers through a shared pick-up service.

Both models have the potential to strengthen the local food system, but their adoption depends on the interest, capacity, and priorities of the Kitsap Food Systems Roundtable and its partners. However, implementation does not need to be led by the Roundtable, any organization committed to improving local food distribution can pursue either model independently.

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## APPENDIX A. WSU SESRC REPORT

*Attached*