

# **NORTH COAST FOOD HUB FEASIBILITY REPORT**

**Scaling Food Production  
through Investments  
in Infrastructure**



***Tillamook Coast  
Visitors Association***

***Business Oregon  
Rural Opportunity Initiative***



***Tillamook Coast Visitors Association***

***USDA RBDG***

***North Coast Industries***

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## INTRODUCTION

The North Coast region comprises five percent of Oregon’s geography, spanning nearly 5,200 square miles across Clatsop, Columbia, and Tillamook counties. This rural region is home to approximately four percent of the state’s population with much of the population in unincorporated communities, farmland and forest areas. Most towns have less than 10,000 residents. Each small community has a unique character, often tied to its immediate geography. For years, a running quip that “Tillamook County has more cows than people” portrays a real agricultural statistic of our area. Despite the small-town character of the region, it is influenced and impacted by its proximity to Oregon’s largest metropolitan area; the city of Portland and its more than two million population reside just east of the Cascade Range, a mere 1.5 hour drive from the coast. At times, during peak times of travel, the North Coast’s population balloons to nearly double its resident population providing an even greater market for food produced in the North Coast region.

Since 2013, several of the region’s producers and partner organizations have collaborated to support the expansion of the region’s local food supply and markets. These efforts have given way to a coordinated multi-partner network or “Collaborative” of economic development organizations, small agriculture and seafood producers, food hubs, tourism stakeholders, small business development centers and local ports. For the purposes of this study, we are centering our research, analysis and recommendations on food hub development around Clatsop and Tillamook County, with the intent that the findings will be reproducible across the entire North Coast region. Tillamook and Clatsop County are both defined as rural communities, with populations less than 50,000 (25,840 and 38,021, respectively) and low population density.<sup>1</sup>

Throughout this report we outline the importance of food hub services to spur sales of local products, as well as the infrastructure investments identified by producers in Clatsop and Tillamook County that will bolster access to local products in the entire regional food system.

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<sup>1</sup> [https://mtgis-portal.geo.census.gov/arcgis/apps/MapSeries/index.html?appid=49cd4bc9c8eb444ab51218c1d5001ef6#:~:text=The percent20Census percent20Bureau percent20defines percent20rural,tied percent20to percent20the percent20urban percent20definition.](https://mtgis-portal.geo.census.gov/arcgis/apps/MapSeries/index.html?appid=49cd4bc9c8eb444ab51218c1d5001ef6#:~:text=The%20percent20Census%20Bureau%20defines%20rural,tied%20to%20the%20urban%20definition.)

## EXECUTIVE SUMMARY

The United States Department of Agriculture (USDA) defines food hubs as “centrally located facilities with a business management structure facilitating the aggregation, storage, processing, distribution, and/or marketing of locally/regionally produced food products.” This definition emphasizes how hubs actively coordinate activities to provide wider access to institutional and retail markets for small to mid-sized producers. Primary and secondary research have shown the possibility of allocating hub services (aggregation, distribution, processing, etc.) across a number of “feeder” hubs to form a network model that can be just as efficient, if not more, than a single centralized facility undertaking every aspect of what a food hub can offer. Our research and recommendations outline such networked possibilities based on the diverse landscape of stakeholders, an emerging privately-operated hub facility, and several identified prospective hub facilities.

Research conducted and analyzed during this study, confirms among North Coast producers to participate in local food hubs from a business development and regional networking perspective. The evidence extends beyond the anecdotal discussions and community surveys to include an analysis of farm production, farm sales and both household and visitor spending. This combined data and insight indicate that consumer markets for local products exist, and there are producers who have the supply or potential to scale up to meet this demand if the necessary logistical and other infrastructure exists.

Ultimately, to build up the local supply chain and capture more value from our locally grown and harvested foods, recommendations include:

- 1 Investment in multi-scaled cold storage
- 2 Value-added processing and co-packing, including shared-use commercial kitchens
- 3 Continued investment in a regional Value Chain Coordinator

- 4 Education and relationship building, including certification support, equipment financing guidance, and curated business services.

This report demonstrates that a robust food hub network could play a pivotal role in the North Coast food system, and with proper investment in network infrastructure, production of local food will flourish, producers will experience opportunities to grow and North Coast communities will be able to participate in a resilient and regenerative food system economy.

### Research Methods

Market research and analytics provided in this report are based off of a compilation of data sets, including producer surveys completed by non-profit partners, numerous community conversations, industry data, USDA Census and Consumer Expenditures Surveys along with other secondary sources cited in the report footnotes. Several limitations should be noted in our efforts to conduct the most accurate market analysis and scenarios. In both Tillamook and Clatsop county, there is a lack of producer data, ranging from scale of operations, economic performance, and local market share.

For instance, no comprehensive producer database existed at the onset of this study. To “ground-truth” USDA data on local farms and producers, we collected and synthesized producer business information from several local organizations and state agencies including North Coast Food Web (Clatsop County), Food Roots (Tillamook County), Oregon Department of Agriculture (ODA), Port Districts and Oregon Department of Fish and Wildlife (ODFW), as well as over eight online food business directories. ODA and ODFW are the primary agencies involved in the issuance and compliance of food production licensing, however, reporting requirements vary greatly depending on license type, so the data

tracked by these sources is incongruent and incompatible; making it difficult to compare or provide insights into producer scale.

These gaps in North Coast industry data limit the understanding of overall economic performance and impact of producers of all sizes in the regional food system. It also detracts from data-driven food system policy and large-scale investment opportunities. Despite these gaps, the producer database resulting from this research is a foundational database that reveals much about the current production landscape on the North Coast.

## **Report Overview**

Utilizing and building on prior studies and work done to date, this feasibility report includes a comprehensive market and financial assessment of producers on the North Coast and an assessment of consumer demand markets to inform development strategies associated with a food hub or hub network. The team's work has leveraged previous food system assessment work in Tillamook County, enabling the team to secure subsequent USDA Rural Business Development Grant funds to extend the same scenarios into Clatsop County in all assessment and research tasks. The project also includes the completion of a GIS mapping model to complement financial and market analysis.

# NORTH COAST MARKET ANALYSIS

## Discussion of Markets

Direct to consumer, wholesale and institutional are the three major markets available to local producers. Direct to consumer opportunities are supported among existing food hubs in the region, Food Roots in Tillamook County and North Coast Food Web in Clatsop County. Wholesale and institutional opportunities are less developed and are a priority aspiration. Food hub research indicates a fairly strong direct to consumer market, but less significant market and revenue opportunities. Our preliminary research and regional surveying corroborate national research findings that the possibilities for food system growth and increased producer income lies in wholesale and institutional contracts. The creation of food hub services scaled to offer logistical and infrastructure support for producers positioned to enter the wholesale market could aid in the expansion of North Coast product availability and more robust and consistent sales contracts for producers.

## North Coast Supply

In the North Coast Region 22.9 percent of farms participate in Direct to Consumer (DTC) markets, surpassing the statewide rate of participation of 18 percent. However, North Coast DTC sales amount to only 5.6 percent of total value of farm sales. The comparably higher rate of DTC market participation coupled with conversely lower sales is most likely due to the greater

proportion of small and medium farms in the region, with 46.1 percent operating on 49 acres or less and generating limited supply. In order to boost sales, more producers need to enter the more and larger markets or those currently participating must scale up production.

As we aim to provide analysis on the landscape of the regional market, we note the limitations of using USDA data to reveal the entire picture of local opportunities. The direct to consumer market is predominantly defined by “farmers markets, roadside stands, pick-your-own operations, community supported agriculture (CSA) arrangements,” and other individual consumer transactions. Direct to retail (institutions, restaurants, etc.) are included, but the Oregon DTC market is dominated by the smaller individual consumer transactions and any institutional/wholesale accounts won't be significantly reflected in the data, even more so in the North Coast region.

With the state-level and thus regional-level data restricted to these small-scale transactions, the 6.9 percent state DTC market share creates a low percentage benchmark in which to compare to the North Coast's 5.6 percent. This benchmark can provide a fine initial framework for the possible DTC market share producers can achieve on the North Coast, however it should not serve as a fixed goal as we explore the full capacity of our region's producers to ramp up supply and for regional buyers to leverage their spending power to see the substantial growth and success of the North Coast regional food system.

While the USDA data above doesn't capture commercial fishing activity, other sources of data exist which illustrate the economic impact of the North Coast region's seafood industry. The North Coast is home to a vast and celebrated community of independent wild seafood harvesters, and Oregon's

|                    | 2017                               |                 |                  |
|--------------------|------------------------------------|-----------------|------------------|
|                    | Direct to Consumer/Hub/Institution | All farms       | DTC share of All |
| <b>Oregon</b>      |                                    |                 |                  |
| Farms              | 6,760                              | 37,616          | 18.0%            |
| Value of sales     | \$344,951,000                      | \$5,006,822,000 | 6.9%             |
| Average/Farm       | \$51,028                           | \$133,104       |                  |
| <b>North Coast</b> |                                    |                 |                  |
| Farms              | 119                                | 519             | 22.9%            |
| Value of sales     | \$7,514,000                        | \$134,948,000   | 5.6%             |
| Average/Farm       | \$63,143                           | \$260,015       |                  |

\*Existing food hubs in the region recorded approximate 2020 sales of \$209,000 (2.8% of sales)

fisheries, like other Pacific coast states, are highly regulated. Data from a 2019 Economic Impact Report on Commercial Fisheries of Tillamook County shows that there were 127 active vessels for 2018, generating \$5,215,602 in landing revenue across all species in Tillamook County.<sup>2</sup> This equates to approximately \$41,068 per vessel. Comparatively, landing values for the Port of Astoria totaled \$39,691,304 in 2018.<sup>3</sup> The number of active vessels for this port area totaled 183 in 2019, and 186 in 2020. These landing revenues reflect the dockside or “ex-vessel” value, or the price of the fish when it leaves the boat; additional value is generated by the local processing of seafood. The values and vessel counts are indicative of the scale of these ports. Astoria, located in Clatsop County, boasts a much larger port offering a greater number of moorage and marine services than its Tillamook counterparts, and is also home to several high-volume seafood processors, making it more attractive for larger vessels to land their catch. On-the-ground knowledge of current fresh fish prices demonstrates a prominent opportunity to capture a significantly greater margin if more local product were to move through local DTC and wholesale markets, but as with other areas of food production, local processing capacity and infrastructure are barriers to this kind of growth within the sector.

Currently, the region supports two small non-profit food hubs, which almost entirely operate within the DTC market. Sales data provided by these hubs shows that collectively their market program sales comprise only \$209,000, or 2.8 percent of the region’s annual DTC sales to resident households, demonstrating the opportunity for growth.<sup>4</sup> While unlikely that these hubs will develop much of a wholesale sales channel, these non-profit retail centers play a role in facilitating producer business development and production, and can ultimately help increase sales in the North Coast DTC market, while



<sup>2</sup> <https://ecotrust.org/wp-content/uploads/Commercial-Fisheries-of-Tillamook-County2-final.pdf>

<sup>3</sup> 2018 Final Pounds and Values of Commercially Caught Fish and Shellfish Landed in Oregon - In Astoria; [https://www.dfw.state.or.us/fish/commercial/landing\\_stats/2018/ASTORIA\\_percent202018.pdf](https://www.dfw.state.or.us/fish/commercial/landing_stats/2018/ASTORIA_percent202018.pdf)

<sup>4</sup> In reference to the most recent 2017 USDA DTC market sales data.

providing a unique incubator space for new and emerging producers.

## Building the Local Landscape

To capture demand for food hub services and opportunities for new markets available through increased supply, we evaluated a “producer subset” sample population based on a community compiled database of producers. Due to limited availability of producer and sales data, the subset of producers was organized product category: seafood processors, poultry, meat, produce/vegetable, small or independent dairy, value added, and eggs. This subset is reflective of the geographic composition of producers in the region, covering an expanse of over 100 miles of coast from Long Beach, WA to Neskowin, OR. Select producers were then pulled from each product category to include five small, five medium, five large when available, totaling 95 (or approximately 5-10 percent of regional producers. To get a sense of what markets these producers operate in, and what barriers they may face in scaling up production, this population was further filtered to examine those who participated in a 2020 producer survey; 23 responded, or 24 percent of the original subset. This latter sample is composed entirely of producers already participating in the direct to consumer market.

By filtering for producers that completed the survey, the already small number of large producers identified were no longer included, leaving only the smaller scaled producers with a small handful of medium-sized producers. Overlaying the subset producer list with survey respondents enables our analysis to include quantitative business data and qualitative producer input. The downside of filtering the data to achieve this level of clarity provides the increasingly small sample size left to reflect scenarios of opportunity and demand for expanded food hub services and infrastructure.

The survey sample shows that 61 percent of producers, or 14 small businesses, would take advantage of the services a food hub could offer and were prepared to scale up immediately with the right tools, indicating that additional investments into food hub infrastructure could directly aid producers in scaling their production, expanding their business, and entering into new and more profitable markets. Given the small sample size, there isn't a clear dominant demand in one product sector, but meat producers responded “yes” to hub usage at slightly greater rates.<sup>5</sup> Applying anecdotal product-level analysis, staple regional products like ground beef and commodity seafood offer the most stable opportunity for wholesale purchasing contracts given current volumes and regional significance. Infrastructure and services required to support the seafood and meat market are detailed in the *Existing Assets and Producer Needs*.

When we incorporate the size of farms as a factor of our analysis, the reality is a bit different. Community knowledge tells us that large producers already have invested in the infrastructure and assets they need, and are only able to operate at such a large scale through aggregation of local products (via some of the region's biggest processors, Tillamook Coop, Pacific Seafoods, and Bornsteins). Consequently, all of the large producers in the region are either dairy or seafood that have such expansive infrastructure to support large scale operations. The data, or lack thereof, demonstrates that the North Coast region simply doesn't have many mid-scale producers outside of dairy and seafood. For the few medium producers that do exist, often dealing with meat or seafood, the costs required for these products to scale are almost insurmountable, with the need for cold storage, distribution, and processing (all of which have to be incorporated virtually at the same time).

Given these capital barriers and the qualitative and quantitative data we have available to us, the least expensive, near-term opportunity is to support small

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<sup>5</sup> Also of note, two small farms that said “yes” to food hub services replied “no” to the question of whether they had a desire to scale up.

producers who want to scale. For small fishers to scale - the costs are unique to the sector and enormous - bigger boat, bigger permit, bigger operational costs. Small farmers struggle to cover the cost of available land, labor, and season extension equipment. Even once these big capital costs are covered and enable producers to scale their supply, they have to immediately think about the cold storage, distribution, processing, and ensuring they have a roster of good working relationships with buyers or a trusted representative to make those connections for them. These realities illustrate the need for infrastructure to enable broader scaling from small into medium (and even to stay at mid-scale). The pressures to remain small or grow extremely large are ingrained in the current food system state and nation-wide.

## North Coast Demand

The population size and lack of dense population centers in Clatsop and Tillamook Counties, in addition to the current minimal *structural* connectivity to larger urban centers like Portland, are prominent factors that define the consumer demand landscape. This also dictates the food hub model most suitable for producers spread across the North Coast regions looking to serve consumer, wholesale, and institutional markets.

Based on data extracted from the Bureau of Labor Statistics' Consumer Expenditure Survey (CES), consumers on the North Coast spent about 6.5 percent of their income on food at home in 2019 and likely much more since then as demand for food at home has shifted upwards due to the COVID-19 pandemic. Those producers who had robust direct-to-consumer databases and/or online sales, cold storage and delivery were able to pivot quickly and grow during COVID-19. Of household spending on food at home, households spend 3.1 percent

on meats, eggs, dairy, fruits, and vegetables. This percentage translates to \$45 million spent annually on fresh foods in the region. The USDA estimates that households spent on average 0.7 percent of their annual food expenditures in farmer's markets, amounting to a projected revenue of \$301,970 annually, or \$2,538 per farmer. This average does not reflect the recent upward trends of home and local purchases spurred by the COVID-19 pandemic that prompted a shift towards at home meal preparation, increased demand for shorter and more transparent food supply chains<sup>6</sup>, and larger supply chain disruptions experiences on the wholesale level.<sup>7</sup> Projections of demand for direct to consumer E-commerce over the next five to ten years estimates a 10-15 percent growth, equating to the potential of an additional \$4.5 million in DTC sales annually.

The above data provides a profile of the household demand for a larger local, fresh-food direct-to-consumer market, but further research is needed to fully understand the wholesale and institutional buyer opportunities. The Oregon Farm to School (F2S) program is popular among farmers given ample USDA grant funding.<sup>8</sup> While margins from the program are low, it offers farmers consistent revenue while directing healthy, local products to kids.<sup>9</sup>

In the realm of tourism, visitors spend upwards of \$320,000,000 annually on food service (\$247.7M) and retail (\$71.5M) in the North Coast region.<sup>10</sup> The development of strong regional food supply channels could facilitate more wholesale and DTC opportunities to divert a larger portion of visitor cash flow into the local market. Utilizing the USDA's "Economics of Local Food System Toolkit" and a 2017 study conducted by Oregon State University Extension Service in partnership with Central Oregon Intergovernmental Council and the High Desert Food and Farm Alliance, we assume a economic

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<sup>6</sup> <https://www.canr.msu.edu/news/how-might-covid-19-change-food-purchases-this-summer>

<sup>7</sup> <http://www.oecd.org/coronavirus/policy-responses/food-supply-chains-and-covid-19-impacts-and-policy-lessons-71b57aea/>

<sup>8</sup> Food Supply Chains and Trends. Oregon Department of Agriculture, 15, Dec. 2020. Webinar.

<sup>9</sup> Food Roots already has strong program-based relationships with several school districts in Tillamook county, posing the opportunity to build more wholesale/institutional sales relationships. If we look to the total amount of dollars spent on food by schools in our region, rather than strictly on F2S funds available, the impact of schools choosing to source a few local staple products could be much greater.

<sup>10</sup> Oregon Travel Impacts, 1992-2018p. Dean Runyan Associates, Mar. 2019, [visittheoregoncoast.com/wp-content/uploads/2019/04/Oregon-Travel-Impacts-Dean-Runyan-Associates-.pdf](http://visittheoregoncoast.com/wp-content/uploads/2019/04/Oregon-Travel-Impacts-Dean-Runyan-Associates-.pdf)

multiplier effect of 1.74 from the sale of local products in the regional food system.<sup>11</sup> With this multiplier, capturing even 1 percent of the visitor food sales in the local food market through increased processing for DTC sales and restaurant partnerships, would result in an additional \$2,664,000 in regional economic activity.

| Household Expenditures Extrapolated for North Coast by Household Income Ranges (2019) |        |               |  |                       |                     |                       |                         |                         |                     |
|---|--------|---------------|--|-----------------------|---------------------|-----------------------|-------------------------|-------------------------|---------------------|
|   | %      | Median Income | <\$10,000-<br>\$24,999   | \$25,000-<br>\$49,000 | \$50,000-<br>74,999 | \$75,000-<br>\$99,999 | \$100,000-<br>\$149,999 | \$150,000-<br>\$199,999 | \$200,000+          |
| Income  |        | \$52,861      | \$17,500   | \$37,000              | \$62,500            | \$87,500              | \$125,000               | \$175,000               | \$200,000           |
| Total Expenditures as % of Income   | 80.21% | \$42,398      | \$14,036   | \$29,676              | \$50,128            | \$70,180              | \$100,257               | \$140,361               | \$160,412           |
| Food at Home  | 6.51%  | \$2,759       | \$913  | \$1,931               | \$3,262             | \$4,567               | \$6,524                 | \$9,134                 | \$10,439            |
| Meats, Poultry, Fish, Eggs  | 1.48%  | \$628         | \$208  | \$439                 | \$742               | \$1,039               | \$1,484                 | \$2,078                 | \$2,375             |
| Dairy   | 0.63%  | \$266         | \$88   | \$186                 | \$314               | \$440                 | \$628                   | \$880                   | \$1,005             |
| Fruits & Vegetables   | 1.08%  | \$456         | \$151  | \$319                 | \$539               | \$755                 | \$1,079                 | \$1,510                 | \$1,726             |
| Housing   | 23.46% | \$9,948       | \$3,293  | \$6,963               | \$11,762            | \$16,466              | \$23,523                | \$32,932                | \$37,637            |
| Utilities   | 5.65%  | \$2,395       | \$793  | \$1,677               | \$2,832             | \$3,965               | \$5,664                 | \$7,930                 | \$9,063             |
| Healthcare  | 7.62%  | \$3,230       | \$1,069  | \$2,261               | \$3,819             | \$5,347               | \$7,639                 | \$10,694                | \$12,222            |
| Other   | 36.97% | \$15,673      | \$5,189  | \$10,970              | \$18,531            | \$25,943              | \$37,062                | \$51,887                | \$59,299            |
| Total Fresh Food Expenditures per Household   |        |               | \$447  | \$945                 | \$1,596             | \$2,234               | \$3,191                 | \$4,468                 | \$5,106             |
| Total Households  |        |               | 5,237  | 7,292                 | 5,148               | 3,556                 | 3,673                   | 1,035                   | 659                 |
| Total Expenditure on Fresh Food   |        |               | \$2,339,401  | \$6,887,871           | \$8,213,924         | \$7,944,401           | \$11,722,116            | \$4,621,787             | \$3,363,868         |
|   |        |               | Annual Fresh Food Expenditure Total for All Households   |                       |                     |                       |                         |                         | <b>\$45,093,370</b> |
|   |        |               | Average Percentage of Expenditures (0.7%) Purchased from Direct Selling by Farmers to Consumers* |                       |                     |                       |                         |                         | <b>\$301,970</b>    |
|   |        |               | Next five to ten year demand for Direct to Consumer Ecommerce (10%-15%)                          |                       |                     |                       |                         |                         | <b>\$4,509,337</b>  |

\*According to a U.S. Farm Bureau analysis of USDA data, direct sales to consumer, wholesaler or manufacturer averages 0.7% of total food at home expenditures. Before 2020, DTC food sales have been declining as a share of Food at Home Expenditures.

<sup>11</sup> <https://extension.oregonstate.edu/sites/default/files/documents/10896/economicimpactlocalfoodscenariororegon.pdf>

## EXISTING ASSETS AND PRODUCER NEEDS

In late 2020 and early 2021, the Tillamook County Visitors Association commissioned an in-depth producer survey in Clatsop and Tillamook counties. Roughly 61 producers participated in the survey and all of these were small to mid-scale. With a majority of these survey respondents confirming their potential to scale up and use the services of a food hub, direct investments in a food hub network may position these “ready” producers to take advantage of streamlined logistical and infrastructure to support. The following section outlines the various components required to assist ready-to-scale producers in achieving greater capacity, as well as highlighting the current assets along the North Coast region that can be leveraged.

To date, several key assets and services offered by private businesses, non-profit organizations, and public agencies have been identified as the foundation of the North Coast regional food system. Further review reveals a robust collection of existing or prospective assets and services that can be scaled to serve the needs of producers, including: established and emerging hubs, distribution services, processing and supply, storage and warehousing, as well as marketing, relationship, and ‘benevolent’ brokerage.

**Existing and emerging food hubs** on the North Coast include two small, existing consignment programs run by non-profit organizations, and at least one emerging for-profit hub model. North Coast Food Web and Food Roots are established 501c3 non-profit organizations that serve Clatsop and Tillamook County respectively. North Coast Food Web’s “Small Farms Market Day” offers a weekly online farmers’ market in the city of Astoria, while 65 miles south, in the City of Tillamook, Food Roots offers online and brick-and-mortar local food sales through their “FarmTable” program. Combined, in 2020 these non-profit programs served 95 of the region’s small and beginning farmers and food producers (or roughly 80 percent of USDA’s estimated North Coast farms currently participating in the DTC market) resulting in \$209,000 in

sales. The organizations also offer a wide array of services catered to producer business support and community food systems engagement. Among these offerings, there is opportunity to expand and refine program services in response to recent surveys, and to directly aid farmers in business development and technical assistance. In response to producer needs, a for-profit hub is also under development in Astoria that will co-locate cold storage, commercial kitchen, fish processing and retail space.

**Distribution and direct to consumer deliveries** are available through a patchwork of solutions with various adaptations spanning all food system sectors, and are largely operated independently by private companies. Capacity within these systems is low and only a few exhibit a collaborative approach to transporting local foods either around the region or into the adjacent Portland metro area. In the 2020 Tillamook County Food Producer Assessment, “distribution of products” was ranked as the second highest priority after “assistance making sales or reaching new buyers”. Fifty percent of survey respondents indicated the willingness to increase production to meet wholesale market demand if cost-effective distribution infrastructure and additional labor was in place. Delivery is considered a “last mile” logistical concern -- a final, often cumbersome step in the supply chain that small/medium producers primarily undertake independently, undercutting other valuable business operations like customer base building.<sup>12</sup> Efficient and cost-effective distribution is hindered by producers’ limited capacity (in time, labor, delivery) and the lack of regional coordination that could reduce the redundancy in routes traveled.

At the beginning of March 2020, a pilot delivery program operated by Nehalem Provisions launched in partnership with Astoria’s North Coast Food Web and Tillamook’s Food Roots. In addition to fulfilling wholesale orders for Nehalem Provisions, the delivery van distributes online orders for customers purchasing from Food Root’s Table

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<sup>12</sup> Oregon Food Infrastructure Gap Analysis. Edited by Buck Matthew, Ecotrust, Apr. 2015, [ecotrust.org/media/Food-Infrastructure-Gap-Report1.pdf](http://ecotrust.org/media/Food-Infrastructure-Gap-Report1.pdf)

and North Coast Food Web's Marketplace. Positive sales margins on direct-to-home deliveries are projected far into the future and may not provide adequate margins for producers. To achieve a true expansion of product availability across the North Coast region and an increase in the scale of regional sales, producers need access to a regional delivery fleet serving bigger buyers.

**Processing and supply** challenges point to a promising yet frustrating reality where many producers are motivated to scale up production, but are hindered by the lack of accessible processing facilities and logistical capacity to deliver potentially increased supply. Supplementing local processing opportunities is somewhat limited due to high costs and existing processing is mostly privately owned by large corporations. These facilities cater largely to industrial-scale dairies and seafood producers who aggregate product from many individual operations. Seafood processing refers to a wide range of handling including filleting, cooking, freezing, canning and other specialized processing for species such as shellfish and hake, the latter of which is used to make imitation crab. Large scale processing is very necessary for these high volume sectors, but the purchasing environment is generally set by the buyers, who also export a high percentage of Oregon's catch for consumption or processing overseas. Making smaller-scale processing opportunities and infrastructure available for smaller seafood operations has the potential to empower them to become price takers as opposed to commodity price takers. Expanding appropriately scaled processing opportunities allows seafood operators to take on more stages (economic activities) of the supply chain, an impact which is reflected in the previously discussed economic multiplier of 1.74, whose cascading economic effects immediately strengthen local seafood supply chains and direct more dollars in the value chain to local businesses. In addition to processing facilities, access to infrastructure such as ice machines, cold storage

(particularly blast freezers for both bait and value-added products), boat moorage, forklifts and hoists are essential for any fishing operation. These items are costly to purchase and maintain and in some cases, subject to waterfront access or availability. Investments in these types of assets are one option for increasing access for small and independent operators.

In meat processing, the Oregon Department of Agriculture plans to build out the State Meat Inspection Program which will potentially aid in the efficient processing and supply of meat in local and regional markets. As of now, ranchers feel the negative effects of missing USDA slaughter, cut and wrap, and post cut and wrap value added production in their supply chains. Time intensive and costly trips to approved slaughter facilities, not including the additional processing costs, are especially burdensome for small and niche producers. All meat producers surveyed indicated the need for USDA slaughter either to support the sustainability of their business or in order to scale up. Additionally, no produce (vegetable and fruit) or value-added product co-packers exist on the coast at this time.

**Storage and warehousing** assets have been identified through ongoing conversations and personal connections with North Coast businesses, with several opportunities for direct capital investments to increase storage space leasing/purchase options; locations include properties at the Port of Tillamook Bay, Port of Astoria, and Port of Garibaldi, and would involve development of partnerships with larger scale private companies or organizations such as Fort George Brewery, Tillamook Creamery, and/or Oregon State University extension. Small producers ready to ramp up supply, forge wholesale contracts, and take advantage of regional food hubs indicated that additional labor was the primary investment required to scale up their operations, followed closely by acquisition of

specialized equipment such as boats, permits, land, season-extension farm equipment, processing facilities, and cold storage.

**Marketing, relationship building, and ‘benevolent’ brokerage** is a prominent missing link for a strong North Coast food system. On the ground, there is limited direct relationship building/sales support for the producers looking to build their business and reach new markets. Both the “2020 North Coast Producer Infrastructure Needs” survey prepared by Ecotrust and the “2020 Food Hub Assessment” published by Food Roots detail the need for marketing as well as brokerage expertise to forge critical relationships between producers and large-scale (wholesale/institutional) regional buyers. Marketing and buyer relationship building ranks as the greatest priority above access to technical assistance, indicating that there are producers who are positioned to scale but need help establishing market presence and securing a reliable customer base. Currently, large buyers dominate the buyer market. However, there are opportunities to diversify the market by tracking down demand and ensuring producers concrete wholesale accounts.

Previously, both North Coast Food Web and Food Roots have facilitated wholesale relationships through annual "Buyer/Seller Meet-up" events. While deemed successful on a qualitative level, any resulting sales from such events did not necessarily run through the non-profits' platforms, making it hard to track the direct economic impact of this work. Additionally, relationships forged at these events required follow-through by buyers or sellers on an individual basis occurring outside of the hubs. Coordinated brokerage of such relationships is a service currently in development that could provide an immediate and streamlined benefit to the system, as described later in this report.

## RESEARCH: FOOD HUBS AND NETWORKS

To supplement our North Coast market analysis, we explored several key areas of food hub research to understand the network opportunities, operational challenges, and food hub logistics required for robust regional food system engagement and multi-food hub network development. In this section we explore food hub models around the country and provide a comparison of the current North Coast landscape to help frame investment opportunities across the region.

### Food Hub Network Logistics

Research into multi-hub collaboration reveals two predominant network building approaches: transactional and support.<sup>13</sup>

**Business-to-Business Transaction networks** facilitate transactions between food hubs and their final customers through shared online sales software and coordinated docking and distributing. Key takeaways from this model include:

- Hub-to-hub sales allows for real-time response to product market conditions, moving products easily across the region to an area of higher demand.
- Coordinating and cross-tracking products regionally can streamline multi-hub aggregation for institutional buyers.
- Integrated distribution strategies, like dispersed storage “nodes”,<sup>14</sup> can address last-mile delivery challenges that small to medium producers face in accessing new markets.

Building a transaction-based network requires significant investment in digital, and operational assets and infrastructure including the exchange of farm/hub information, product tracking and availability database, product pricing models, strategic cross-docking and transportation solutions, shared cold storage, and integrated invoicing solutions. Several of these strategies and investments have already been identified as

advantageous services for business growth by several North Coast producers. Numerous producers surveyed also noted the importance of coordinating transportation efforts to create efficient multi-producer delivery routes and reduce the number of staff hours and operational costs of a delivery fleet, including acquisition costs.

Alternatively, a **Support Network** provides emerging and existing food hubs with support services, educational materials, professional networking forums, resources for funding tools, best-practices training, marketing materials, and other forms of technical assistance. These types of networks focus on fostering cross-sector collaboration.

To build a trusted institutional buyer profile, a strong connection between regional/statewide distributors and producers is critical, especially for nascent regional food hubs and supply chains. For rural producers that struggle to bridge greater distances and support the time and labor required for networking, the role of a food hub as a “benevolent broker” to forge regional connections and reach new buyers is even more valuable. Research also shows the importance of establishing and ensuring a common “value chain” (aligned mission, priorities, risk appetite, etc.), across all partners prior to constructing logistical pathways.<sup>15</sup> This upfront work can assist in balancing the value proposition of the network and its essential business functions. Coordinating a regional multi-hub network makes it easier for larger, institutional buyers that need higher levels of coordination for larger volumes but it also facilitates small grocers and restaurants where rural logistics would otherwise make it hard to distribute to them without the volumes for larger buyers.

A 2017 report titled “New England Food Hub Network: Exploring Options to Enhance Food Hub Collaboration & Increase New England Farm to Institution Sales” revealed several advantages of establishing a food hub network:

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<sup>13</sup> <https://www.farmtoinstitution.org/sites/default/files/imce/uploads/FINE%20Food%20Hub%20Network%20Report.pdf>

<sup>14</sup> <https://mendolakefoodhub.org/about-us/>

<sup>15</sup> <https://wallacecenter6.squarespace.com/ngfn> and [https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1008&context=leopold\\_pubspapers](https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1008&context=leopold_pubspapers)

Logistics coordination: increase the number of full trucks on the road; access regional supply; increase cross-docking; and increase ability to serve bigger customers more consistently

Merchandising and sales support: source or origin and value chain stories relayed to end consumer; Brokering on behalf of multiple producers across a network

Peer-to-peer learning community: funding collaboration; shared price reports and “market intelligence”

The report ultimately recommends the creation of a regional food hub network with the following initiatives:

- ① Develop a business-to-business trade platform for food hubs to facilitate demand driven hub to hub movement of regional products
- ② Establish foundational alliances and relationships with larger and institutional buyers
- ③ Hire collaborative value chain coordinators to serve multiple food hubs marketing to the same target region
- ④ Form a regional food hub support network
- ⑤ Collaborative delivery and cold chain logistics solutions

## Local Models: Discussion of Financials

Food hubs, whether centralized or formed as a network, perform operational services that alleviate operational, logistical or regulatory barriers. Many food hubs, including the North Coast’s two non-profit hubs, also perform a broad range of community services like increasing low income access to local foods, food bank donations and educational programming. A hub’s financial profile will depend on the ratio of services that

can be operated as competitive market solutions and the community services, if any, that rely on external funding. Operational and logistical solutions such as on-farm pick up, cold and dry storage, sales, and distribution require significant infrastructure investment and labor, however, they can reasonably be expected to self-sustain through appropriate fees for service.

For many food hubs, dependency on external financing is one of the biggest hurdles preventing food hubs from generating substantial sales and operating as a traditional sustainable and profitable enterprise. For instance, the North Coast’s two non-profit hubs depend on grant funds to support the majority of their operating costs.

Foundation and government grants account for 84 percent of Food Roots’ 2019 revenue while North Coast Food Web reports a third of 2019 income came from government grants matched by individual and business contributions.<sup>16</sup> Recent research into food hub financial viability by the Federal Reserve Bank of St. Louis outlines ten nation-wide lessons at the core of food bank profitability. Number one states the importance of delivering on the economic bottom line first as a means to support additional social objectives -- not to be tackled simultaneously.<sup>17</sup>

Research on the impacts of higher mark-up rates on small/medium producers and a regional, especially rural, customer base is limited.<sup>18</sup> Different fee structures have different implications on product handling, producer onboarding policy, staff capacity, and food hub cash flow. Research published in the Journal of Agriculture devised that \$300,000 is required to sustain direct-to-consumer models and \$1.2 million to sustain wholesale and hybrid hub models. Operating primarily as direct to consumer hubs with few wholesale customers, gross revenues for both North Coast hubs are significantly below established industry benchmarks. Diversifying buyers from DTC to institutions provides some cushion from any shocks that might occur in a certain buyer base, as well as providing a diversity of price points for producers.

<sup>16</sup> [5ead0126-3cc7-4e1e-8ec9-4a1c821277c6.filesusr.com/ugd/26ffd2\\_21759d5312ad48e2870f48de886bb15c.pdf](https://www.filesusr.com/ugd/26ffd2_21759d5312ad48e2870f48de886bb15c.pdf) and [3d033937-473d-4e94-ae3d-445019b59472.filesusr.com/ugd/56306d\\_3659245038f342bcbfcf1cda14cdf449.pdf](https://www.filesusr.com/ugd/56306d_3659245038f342bcbfcf1cda14cdf449.pdf)

<sup>17</sup> Barham, James, and James Matson. “Food Hubs: 10 Lessons on Viability.” St. Louis Fed, Federal Reserve Bank of St. Louis, 20 Sept. 2019, [www.stlouisfed.org/publications/bridges/summer-2019/food-hubs](http://www.stlouisfed.org/publications/bridges/summer-2019/food-hubs).

<sup>18</sup> Rysin, O., and R. Dunning. “Economic Viability of a Food Hub Business: Assessment of Annual Operational Expenses and Revenues”. Journal of Agriculture, Food Systems, and Community Development, Vol. 6, no. 4, Aug. 2016, pp. 7-20, doi:10.5304/jafscd.2016.064.002.

For networked hub models, a delivery fleet is also a significant cost consideration for successful, scaled food hub operations. In a 2020 Tillamook County Food Producer Assessment prepared by Food Roots, the estimated cost of a delivery vehicle is \$35,000 - \$45,000 used and \$60,000 - \$75,000 new. After the initial purchase of a van, preliminary calculations for establishing delivery routes along the 100 mile stretch of the north coast region shows that exclusively fulfilling direct to consumer/home delivery orders is not sufficient to cover delivery costs unless an additional, and likely unattractive, delivery fee is applied. Cost per delivery throughout the North Coast is estimated at \$14 per stop. Dedicated institutional and wholesale contracts and product backfill strategies must supplement the hub to home delivery service, as recommended previously. Lessons from food hub closures include a failed venture working with multiple small farms to deliver low volume orders across long distances which led to disproportionately high transportation costs that higher volumes could not solve.

While evidence suggests external public funds cannot be wholly eliminated from food hub operations, there is entrepreneurial-aligned financing that position a food hub for economic success.<sup>19</sup> When we consider the financing needs of building out a food hub network, rather than focusing on the funds required to build a new food hub facility, financial strategies tend to be more flexible and require a shorter funding timeline. To deliver on the processing, delivery, and storage demands of our North Coast producers and expand the capacity of our regional food system, shorter term financial tools are more appropriate for funding small capital investments like cold storage, co-packing assistance, and expanded delivery fleets. Access to such capital can be achieved through revolving loan funds, loan guarantees, linked deposit programs, microlending, early stage capital investing, and other forms of alternative emerging funding tools like

crowdfunding. Funding entities include regional economic development districts, traditional lenders such as banks and credit unions, and private investors; mapping the local and lesser-known paths to capital might be a worthwhile investment to make on behalf of local producers.

To provide a local example, the Astoria Food Hub is a for-profit venture emerging from the practical experience and expansion of a local grass-fed beef operation, Nehalem River Ranch, into a product aggregation and delivery service for producers and food enterprises. The cash flow projections for this business are built largely on local demand for cold storage, but added hub services, including commercial kitchen rental and retail space, will generate additional revenue. After eighteen months of project development including private site analysis, engineering, and relationship-building, the hub management team launched an online capital campaign for a new Astoria Food Hub in March of 2021 to secure and rehab a historic downtown building capable of providing services for local producers. Funds from the crowd-funded real estate secured loan participation campaign will be used to secure the building and start permitting. Shortly thereafter, a planned second phase, also funded from this public market-rate loan participation model, will include a series of tenant improvements, such as onsite cold and dry storage, processing and distribution facilities, commercial kitchen, retail storefront, office space, food education, and marketing and technical assistance. The goal is to be operational by fall 2021. Using a commercial lender that allows local participation in the financing to cover the upfront capital costs of building acquisition and large-scale equipment installation is a prime example of leveraging local, flexible investment to build out substantial food hub infrastructure. The Astoria Food Hub was able to raise it's target of \$700,000 in a period of just 14 days.

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<sup>19</sup> Farm Credit East, Wallace Center at Winrock International, Morse Marketing Connections & Farm Credit Council. (2015). *Counting Values: Food hub financial benchmarking study*

## Engaging Large Producers and Local Businesses

Leveraging the industry network and financial resources of a region's largest producers, can be an important step in building the resilience and robustness of small and medium producer entrepreneurship and market access. For example, Organically Grown Co., in Eugene, OR, provides a strong example of the possibilities of partnering with larger businesses. The company provides logistical support, resource networking, sales and marketing, organic trade advocacy, packaging supplies, packing, and crop planning to smaller distributors and producers with whom they work. One replicable model that can be introduced on the North Coast is Organically Grown Co.'s "Mission Fund" program launched in 2020, providing producers with "zero-and low-percent loan and grant program. [The program] was developed in partnership with existing allies, targeting mission-aligned supply chain partners and underserved and/or marginalized communities that lack ready access to capital".<sup>20</sup> The synergies already present along the North Coast lay a basis for recruiting further regional support and multi-stakeholder financial planning to support a food hub network and the necessary flexible funds for producers. This work has been largely driven by small and mid-scale producers eager to expand in a way that brings benefit to others.

An important consideration in generating business support and collaborative financing is long term relationship building that ensures regional food system development remains a consistent and motivating conversation. Many North Coast producers and stakeholders have detailed the "dead ends" and "cooling" of conversations with large producers and companies as a result of staff turnover and a lack of structured communications and outreach to support comprehensive regional goals. National examples show that a dedicated coordinator can be critical in making sure these

conversations remain relevant and action-oriented. The opportunity to partner with larger stakeholders and leverage large infrastructure and networking assets requires sustained community engagement and follow through that a regional coordinator could provide.

On the North Coast, coordination currently occurs through the two non profit hubs, as well as through grant-funded contractors. The hubs have built collaborative relationships and offer an avenue to expand direct to consumer sales, however, currently they do not have the staffing or logistical capacity to support a sustained outward focused regional coordination effort. Existing regional examples such as the USDA Rural Business Development Grant shared by Central Oregon Intergovernmental Council (COIC) and High Desert Food and Farms demonstrate possible solutions.<sup>21</sup> The Central Oregon Rural Business Development Grant funds a part-time independent coordinator contracted through COIC. The California-based Growers Collaborative also benefited from the inclusion of a food 'facilitator' that served as a connector and educator, increasing supply and demand of local food through product promotion, training on local food purchasing and marketing, and connecting prospective buyers with local producers prepared to meet their needs.

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<sup>20</sup> <https://www.organicgrown.com/impact-partnerships>

<sup>21</sup> <https://www.coic.org/community-development/food-hub/>

# NORTH COAST FOOD SYSTEM: OPPORTUNITIES AND GAPS

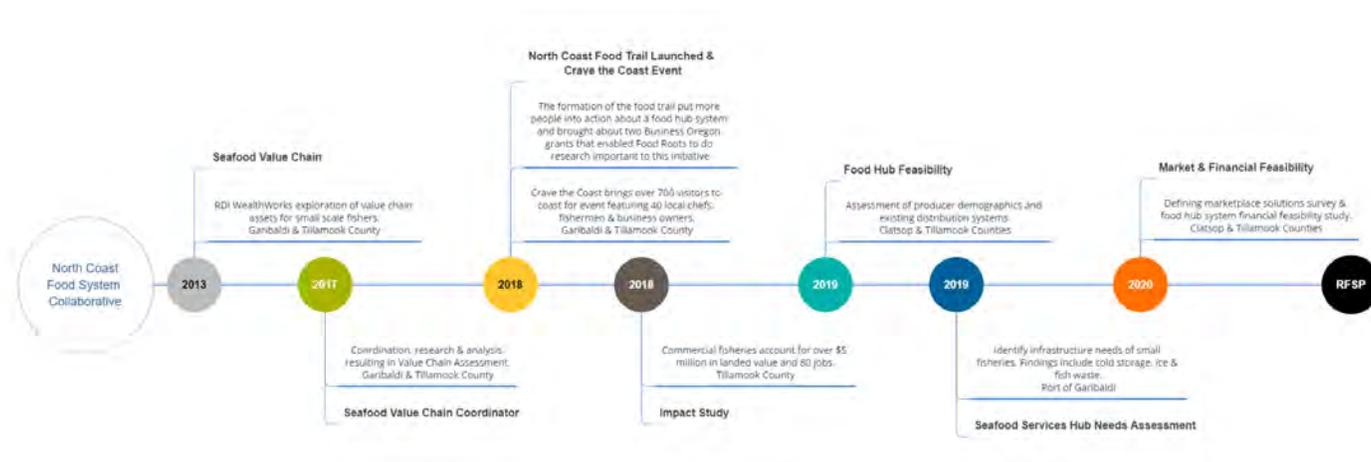
The following sections illustrate the current state of food system infrastructure supporting a regional food system network, short term capital needs, long term food system initiatives, and identified opportunities and gaps to propel a cohesive and thriving North Coast food hub network.

Large producers in the region, primarily dairy and seafood producers, have already invested in the infrastructure and assets they need for aggregation and distribution. Mid-size producers in the region, which primarily consist of meat or seafood producers face difficulties in achieving scale expressly because the infrastructure needs and costs are so great. As both meat and seafood producers attempt to scale they face an immediate need for equipment, cold storage, processing and distribution.

Directing demand, whether wholesale, direct to consumer, or institutional, to local food supply has a profound economic impact not only on producers' livelihoods, but the entire region. On a national level, U.S. farmers and ranchers earn 14.6 cents on every dollar spent on food in the U.S. The remaining 85.4 cents cover off-farm costs, including processing, wholesaling, distribution, marketing, and retailing. The increasing burden of those costs resulted in a drop of net farm income by 50 percent between 2013-2016, which has remained depressed ever since. Regional food systems have one of the highest Local Multiplier Effect of any economic sector.<sup>22</sup>

Every dollar spent by farmers, fishers, and ranchers circulates in the local economy 9 times or more. The proposed investment in food hub network infrastructure detailed in this report will bolster all facets of the regional food system and have incredible cascading impacts on the North Coast economy overall.<sup>23</sup> Leveraging the success of a stronger regional supply chain and generating producer opportunities would allow the North Coast region to position local food system development at the heart of economic resiliency and a vibrant North Coast community.

## North Coast Initiatives



*The Development of the North Coast Food System Collaborative*

<sup>22</sup> The Local Multiplier Effect is defined as how many times dollars are recirculated within a local economy and what is the regional impact from each new dollar spent

<sup>23</sup> "Phase I Building Purchase - Astoria Food Hub." Steward, Mar. 2020, [gosteward.com/projects/astoria-food-hub/phase-i-building-purchase](http://gosteward.com/projects/astoria-food-hub/phase-i-building-purchase).

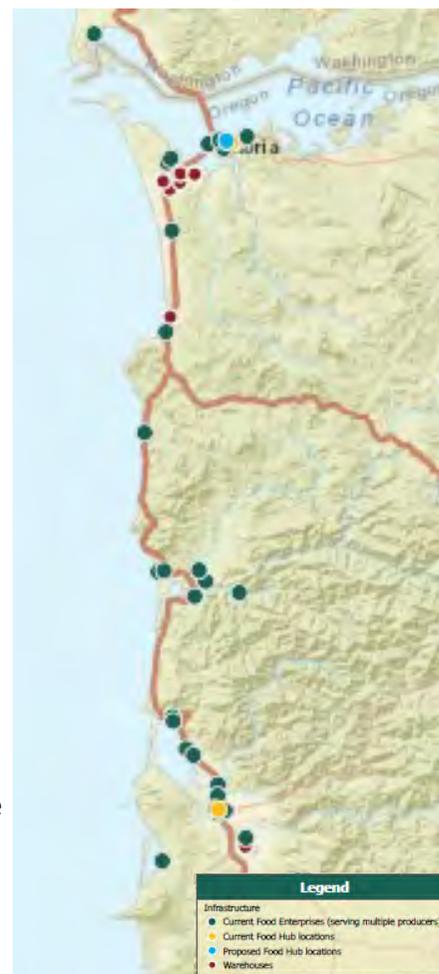
Lessons learned by national food hub models have resonated with producers on the North Coast and are helping shape work in this region. The 2020 Food Roots Tillamook County Producer Report, based on an extensive recent survey and 1:1 interviews with over 35 small producers, echo the recommendation of investment in a network model, supporting regional, decentralized growth through securement of specialized property assets, equipment, and technical assistance for the local food community, as well as investment in local capacity to support food production and distribution.

As illustrated in the timeline above, years worth of community outreach, research, and organizing has *culminated* in the creation of a North Coast Food System Collaborative and the award of a 2020 USDA Regional Food System Partnership (RFSP) multi-year grant. Direct grant income and matching community funds of just under \$350,000 has resulted in an infusion of nearly \$800,000 in developing the infrastructure, outreach, impact and efficacy of the North Coast food system. For three years, \$90,000 of those dollars are allocated annually for procurement activities along the coast, although this may trend toward supporting more general coordination in years to come. The Collaborative has already begun setting the groundwork for more regionally-focus food system initiatives, including cross-hub procurement, marketing, and collaborative pilot delivery programs.

Currently, a series of grants are supporting the food system development work that the North Coast community is spearheading. However, direct entrepreneurial-driven investment in capital needs and operational infrastructure is ultimately the most secure, and likely necessary way to ensure these initiatives are economically viable and can be a sustainable source of economic growth and community resilience.

In addition to the Astoria Food Hub, several facilities and properties across the North Coast have been identified as prospective hub spaces with the potential to deliver a variety of the capital needs outlined by producers and thus serve greater regional markets.

Potential Hub Network Locations



## RECOMMENDATIONS

In researching the feasibility and possibilities for building out food hub infrastructure, stakeholders across the North Coast are propelled by a shared vision for the future of the North Coast food system. A robust and regenerative food system is one that provides infrastructure, cooperative marketing and distribution so that small and mid-sized producers can access markets with less risk and capture greater market share than they could on their own. The vision incorporates a network of food hubs, both existing and yet to be realized, dedicated to cost efficient cold storage, distribution and processing as well as education and marketing to ensure producers are capturing the highest value of food dollars, while improving access to high quality, nutritious food along North Coast communities. Supporting an expanded food hub network lays the foundation for achieving sustainable and regenerative food production that supports a resilient socio-economic landscape driven by land and sea based operations.

Based on community conversations, regional surveys, and market analysis there are four dominant infrastructure and resource gaps in which the expansion of the North Coast food hub network could provide:

- 1 Investment in multi-scaled cold storage
- 2 Value-added processing and co-packing, including shared-use commercial kitchens
- 3 Continued investment in a regional Coordinator
- 4 Education and relationship building to grow production and sales, including technical certification, equipment financing support, and curated business services.

In order to address these gaps and build the necessary food hub infrastructure, North Coast producers need greater access to capital, the support of a coordinator and logistical services that an integrated hub network could provide. Most of the region's small producers, including those recently surveyed, indicate entering or becoming competitive in wholesale markets remains a challenge due to the serious costs of infrastructure and logistics. An efficient and economically viable food hub network could help address this by aggregating supply to help secure more wholesale contracts.

Given the demographic, geographic and economic realities along the North Coast, the build out of a networked food hub model offers the appropriately smaller scaled and dispersed solution for producers and buyers spread across the North Coast, as well as leveraging the synergies already present and increasingly developing among producers, non-profits, and community partners. Current food system infrastructure on the North Coast, including two food hubs and extensive community buy-in, sets up a strong landscape for new infrastructure and services to

### Building the North Coast Food Hub Network

