Carroll County Food Access Network Community Food Needs Report & Planning Resource

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About the Project

This report is intended to inform the Carroll County Food Access Network's (CCFAN) efforts to develop a vision and action plan for the region. In 2022, the University of New Hampshire (UNH) Cooperative Extension team, in partnership with the UNH Carsey School of Public Policy, began a data collection and collation effort, seeking to understand Carroll County's food needs and resources. This report is a result of that effort.

Drawing on data from the U.S. Census Bureau, the U.S. Department of Agriculture, Feeding America, and other national resources, plus original data collection in Carroll County led by Cooperative Extension, this report paints a portrait of the challenges facing Carroll County residents, outlines opportunities for strengthening the system, and draws the voices of Carroll residents into that process.

Part I of the report focuses on food access in Carroll County, including a snapshot of residents' income, the region's food retail landscape, and the unique contribution of the region's demographics to its food needs. Part II focuses on the nutrition social safety net, including residents' use of, and experience with, federal programs like the Supplemental Nutrition Assistance Program (SNAP, or food stamps) and community-based resources like food pantries. Part III explores the food production landscape, outlining the structure and capacity of the local food system, and describing some of those food producers' perspectives.

In addition to the report, we crafted a companion document that includes every table and figure derived from the data efforts of this project, including some that do not appear in this report. A complete list of, and link to, that material is available at the end of this report. These additional data may be useful for those who are seeking more details in specific areas as they continue to plan, fund, and build Carroll's food system. Together, this work will guide the CCFAN's vision and work developing food access in the Carroll County region.

Acknowledgements

This project was made possible with the partnership of our tireless colleagues working to establish food security and good health across New Hampshire. Special thanks to: Jo Anne M Rainville, RN, Executive Director, Tamworth Community Nurse Association for inspiring the formation of CCFAN; Tiffany Brewster, NH Hunger Solutions; Catalina Kirsch, Carroll County Coalition for Public Health; Sue Ruka, Memorial Hospital; Riona Corr, WIC, Goodwin Community Health (former); Maureen Diamond, Carroll County Food Access Network; Nadine San Antonio, Wolfeboro Farmers Market; and Mikayla Cerney; UNH Cooperative Extension

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Key Findings

Food Access in Carroll County

- **More than 7 percent of Carroll County residents are food insecure**. Food security is complex, but household incomes that are lower than statewide, relatively low participation in the Supplemental Nutrition Assistance Program, and long distances to grocery stores may factor into Carroll's food security outcomes.

- **Although convenience stores dominate Carroll County's food landscape**, 91 percent of respondents to the Carroll County Food Access Network's community survey reported shopping most often at grocery stores. Focusing efforts to support food access via grocery stores is especially important.

- **Carroll County's unique demographics create unique food access challenges.** Carroll County is older than other parts of the state in the state, driven in part by the extent to which it attracts retirees. Addressing transportation and finding ways to communicate food access resources to a steady stream of newcomers are key.

Food and Nutrition Safety Nets in Carroll County

- **Although Carroll County residents are more often low-income than residents statewide, they less often participate in SNAP**. However, SNAP is under-utilization is a statewide issue, and Carroll County residents report common reasons for non-participation, including claiming not to need assistance, struggling with enrollment, and finding available benefits too low to be worthwhile.

- **About 40 percent of Carroll County food retailers accept** SNAP, with grocery stores especially likely to accept. SNAP-accepting retailers are concentrated in Conway.

- **Two-in-five Carroll residents who are food insecure are ineligible for SNAP**. To support food access for these residents, formal programs must be supplemented with a robust local food safety net.

Perspectives of Carroll County Food Producers

- **Most Carroll farms are small.** Data from both the Census of Agriculture and the Network's food producer survey suggest small-acreage operations prevail.

- **Carroll farmers reported challenges selling to restaurants, grocery stores, and wholesale markets**. Producers were enthusiastic about selling directly to consumers, both for ease and as part of their farming values; however, reaching customers and achieving proper scale remain challenges.

Data & Methods

Focus Groups

Focus group protocols were developed with the help of Dr. Noereem Mena from the UNH Agriculture, Nutrition and Food Systems department. Questions were designed to identify strengths and weaknesses of the food access ecosystem in Carroll County. Seven focus groups were conducted between March and June of 2023. Two focus groups engaged local agencies and organizations, one was oriented towards farmers and producers, and four included community members at large. Agency and farmer/producer groups were conducted via Zoom and the remainder were in person.

Key Informant Interviews

To complement the focus groups, UNH Cooperative Extension staff also interviewed four key informants. Interviewees were drawn from a list of stakeholders, selected for their important insights into the issues or because they filled a gap identified after the focus groups were completed (e.g., youth voice). Agency focus group questions were used for the key informant interviews.

Community & Food Producer Survey

About the Survey

The survey for this project was designed by UNH Cooperative Extension, with insights from NH Hunger Solutions, Carroll County Coalition for Public Health, Memorial Hospital, and Carroll County WIC, and included portions for farmers and food producers as well as the community broadly. Some survey questions were replicated from existing surveys and assessments, including the Monadnock Region Food Access Analysis, the USDA Community Food Security Assessment Toolkit, the Gretchen Swansen Center for Nutrition Food Insecurity Measures, and the Manchester Food Collaborative. The survey was intended to fill gaps in existing data by providing timelier insights than most national data sources, and to touch upon questions often not included in such sources.

To ensure the survey had wide community circulation, UNH Cooperative Extension disseminated the survey link through the Carroll County Extension web page and shared it with community partners via email and social media. Printed copies of the survey were also delivered to libraries, town offices, and other community gathering spaces. Extension staff also visited food pantries and attended community events with paper versions of the survey and self-addressed envelopes.

Survey data were collected between February and June 2023 via Qualtrics, an online data collection platform. Most of the data collection occurred online, although some respondents utilized paper copies, which were later hand-entered into the Qualtrics platform by UNH Cooperative Extension staff. All data collection protocols for this project were approved by the

UNH Institutional Review Board for the Protection of Human Subjects in Research (IRB-FY2023-112).

About the Sample

In total, 659 people responded to the CCFAN survey. Respondents were eligible to participate if they were 18 years of age or older and confirmed that they lived or worked in Carroll County. Of the initial 659 responses, 158 responses were removed because they did not meet one of the inclusion criteria for the survey, as summarized in Table 1.

Table 1. Carroll County Food Access Community Survey: Respondent Eligibility for Inclusion in Sample

	Number	Running Total
Total responses recorded	659	659
Survey owners "previewing" the survey	19	640
Did not consent	3	637
Did not complete consent question	106	531
Did not complete anything past consent question	10	521
Ineligible – age under 18	3	518
Ineligible – did not live or work in Carroll	4	514
Ineligible – did not indicate whether live or work in Carroll	13	501
Final Sample		**501**

Note: This sample also includes 34 respondents who identified themselves first as food producers, then went on to also participate in the community survey. Note that while 501 is the maximum number of respondents to any given question, not all respondents answered each question. Actual sample sizes are included throughout the report for clarity.

Table 2 describes the community survey sample and compares respondents' characteristics to characteristics of Carroll County's population in general.

Table 2. Carroll County Food Access Community Survey: Characteristics of Survey Respondents and the County Overall

	Sample Percent	Carroll County Percent
Gender		
Woman	83.0	50.8
Man	14.0	49.2
Non-binary, non-conforming, or transgender	1.2	n/a
Missing	1.8	n/a
Age		
18-20	0.6	3.0
21-40	27.4	19.1
41-59	27.5	30.0
60 or older	43.7	48.0
Missing	0.8	n/a
Race & Ethnicity		
American Indian / Alaska Native alone, non-Hispanic	0.4	0.2
Asian alone, non-Hispanic	0.2	0.7
Black alone, non-Hispanic	0.4	0.2
Native Hawaiian / Pacific Islander alone, non-Hispanic	0.0	0.01
White alone, non-Hispanic	93.4	94.6
Other alone, non-Hispanic	0.4	0.4
Two or more races, non-Hispanic	1.6	2.7
Hispanic, any race	2.4	1.3
Missing	1.2	n/a
Children in the household		
No children	65.1	83.0
Only children under age 5	8.4	2.6
Children under age 5 and children 5 to 17	12.2	3.4
Only children 5 to 17	13.8	11.0
Missing	0.6	n/a

Note: Carroll County comparisons are from the U.S. Census Bureau's 2020 Decennial Census (gender, age, race, and ethnicity) and the American Community Survey 2021 5-year estimates (children in the household). Percentages for Carroll County are calculated among those age 18 and over to improve comparability, as respondents are only eligible for the survey if they are age 18 or older.
Source: U.S. Census Bureau's 2020 Decennial Census; American Community Survey 2021 5-year estimates.

Part I. Food Access in Carroll County

Food Insecurity and Household Resources

Food Insecurity in Carroll County

Food insecurity remains stubbornly high, both in Carroll County and statewide. The hunger relief organization Feeding America[i] found that food insecurity in Carroll County was slightly higher than the state average for both children and all residents in 2021 (see Table 3).[ii] Rates of food insufficiency, or not having enough to eat in the past seven days, allow for reflection on more immediate conditions, compared with the official food insecurity rate, which reflects whether food insecure conditions happened in the prior 12 months. In 2021, food insufficiency affected about one-in-fifteen people in New Hampshire.

Table 3. Food Insecurity & Insufficiency, Carroll County & New Hampshire, 2021

	Carroll County	New Hampshire
Percent food insecure (all residents)	7.6	6.8
Percent food insecure (children only)	11.4	8.5
Percent of food insecure residents eligible for SNAP	65.0	38.0
Percent of households that sometimes or "often" did not have enough food in the past seven days	n/a	6.5

Source: Food insecurity data via Feeding America (2021). Food insufficiency rate calculated by the Carsey School using U.S. Census Bureau's Household Pulse Survey (HPS) data collected January 6, 2021 to December 13, 2021.[iii] Data are not available at the county level from this source. Although newer data exist from the HPS, we elected to pool data across the earliest full year available (2021) to promote comparability with other sources in this document.

Respondents to the CCFAN survey reported higher food insecurity rates than the population-wide rate estimated by Feeding America. Of 501 survey respondents, 468 reported their food security status, and 32.5 percent of those—152 respondents—met the criteria for food insecurity.[iv]

152

respondents to the CCFAN community survey met the criteria for food insecurity.

Criteria for food insecurity include at least sometimes worrying that food would run out before having money to buy more, or at least sometimes finding that food didn't last before having money to buy more. Figure 1 shows that food insecure respondents most often reported both statements were true. Although these rates of reported food insecurity are higher than those in Table 3, it is important to note that results from the community survey do not necessarily represent the county overall, and it is not possible to determine whether the higher rate from the survey (compared to the representative data in Table 3) is a result of the survey disproportionately reaching food insecure people, because rates have increased since 2021, or both.

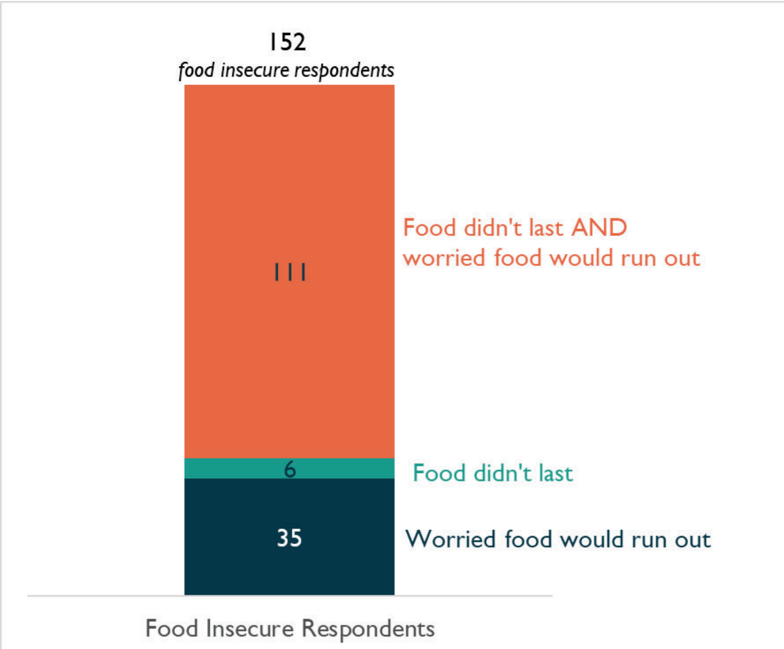


Figure 1. Responses to Food Insecurity Criteria among Food Insecure Respondents

Source: Carsey School analysis of CCFAN 2023 survey
Note: Respondents are counted as food insecure if they report that either condition is "sometimes" or "often" true. Of the 501 survey respondents, 468 completed the food insecurity screener.

Household Resources

An important driver of food insecurity in any place is income. Carroll County has a lower median income than statewide, at $70,873 as compared to the statewide household income of $83,449 (Table 4). Carroll County also has a higher percentage of residents who fall below 200 percent of the federal poverty line. This is often considered a threshold for "low income," although historically above income eligibility for federal benefits, including the Supplemental Nutrition Assistance Program (SNAP). Recent changes in New Hampshire now mean that those up to 200 percent of poverty are considered SNAP-eligible.[v]

Table 4. Income and Poverty in Carroll County and New Hampshire, 2021

	Carroll County		New Hampshire	
	Estimate	±	Estimate	±
Median household income	$70,873	$3,677	$83,449	$921
Percent of people below 100% FPL*	7.8	1.5	7.4	0.4
Percent of people below 200% FPL	22.9	2.4	18.8	0.5
Percent of households reporting SNAP receipt	4.8	1.4	6.1	0.4
Percent of residents housing-cost burdened**	31.1	3.2	30.7	0.6

Source: U.S. Census Bureau, American Community Survey, 2021 5-year estimates
Notes: "±" indicates margin of error at the 95 percent confidence level.

*"FPL" is federal poverty line, or the official threshold below which a person's income must fall to be counted as "in poverty." In 2022, the poverty threshold for a single, non-elderly adult was $15,225, per the U.S. Census Bureau.
** Housing-cost burdened" refers to residents who spend more than 30 percent of their income on housing costs. Those paying more than this threshold, identified in prior research and practice, likely have inadequate resources for the remaining household expenses.

In addition to income flowing in, it is important to also consider the non-food expenses that drain household coffers. For instance, nearly one-third of Carroll residents are housing-cost burdened, spending more than 30 percent of their income on housing (more on the role of housing below). As consumer costs have continued to rise, these data (collected 2016-2021) don't fully reflect modern levels of burden. Recent estimates from the 2023 New Hampshire Residential Rental Cost Survey Report indicate that essentially none (estimate rounded to 0 percent) of Carroll's two-bedroom rental units fall at or below the level to be deemed "affordable rent," set at 30 percent of renters' median household income.[vi]

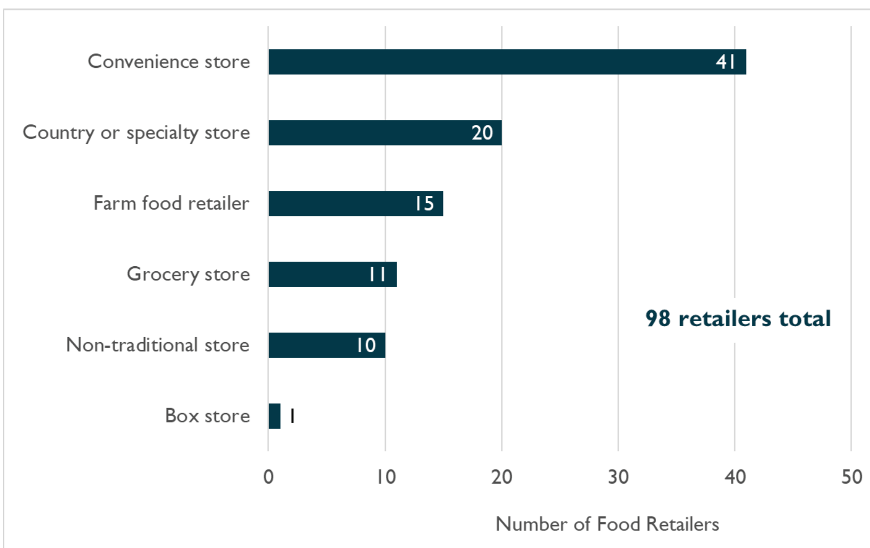
Food Landscape in Carroll County

Available Retailers & Shopping Experiences

Prior data aggregation by the Carsey School finds that Carroll County's food landscape is marked by a mixture of food retailers. As is true statewide, convenience stores are the most prevalent type of food retailer in Carroll County (see Figure 2).[vii]

Figure 2. Carroll County Food Retailers by Type, 2022

Source: Carsey School of Public Policy, via State of New Hampshire Department of Health and Human Services Food Protection Unit and the USDA Food and Nutrition Service's SNAP Retailer Locator



Despite the prevalence of these smaller stores, these kinds of shops are not the main site for people's food purchasing, either nationally speaking,[viii] or among respondents to the CCFAN community survey. Among respondents who reported their food shopping habits, 90.6 percent reported often shopping for food at a grocery store, while only 30.3 percent reported often shopping at a minimart or convenience store.

Grocery stores were the most popular shopping site among CCFAN survey respondents.

In general, food access decisions represent a complex layering of availability plus affordability, transportation, household preferences, convenience, and other factors.[ix] Respondents to the CCFAN survey were asked to identify reasons for shopping at their most-frequently used shopping site, selecting from the list of factors shown in Table 5. Respondents most often identified variety of food offered and convenience as important, followed by location and value. Availability of online shopping, Double Up Food Bucks, and delivery were least-often selected as driving factors. Although relatively small shares of respondents prioritized whether a store accepted SNAP or WIC (about one-in-five respondents), this share was twice as high among respondents who were food insecure, at 42.1 percent.

Table 5. Share of Respondents Selecting Each Factor as a Reason for Shopping at Their Most Used Food Store

Share of Respondents	Factor
50 percent or more	• Variety of foods offered • Convenience
40 – 50 percent	• Location • Value
30 – 40 percent	n/a
20 – 30 percent	• Cleanliness • Offers coupons or sales • Accepts SNAP, EBT, or WIC
10 – 20 percent	• Offers curbside pick-up • Safety • Availability of local foods
Less than 10 percent	• Offers online shopping • Offers Double Up Food Bucks • Offers delivery • Other

Source: Carsey School analysis of CCFAN 2023 Survey

The Role of Distance in Food Shopping

Along with consistency in where respondents shop, participants reported common ways of traveling to the store, with nine-in-ten (446) respondents driving their own car to the store. The next most popular commuting option was borrowing or sharing a car, reported by just 4 percent of respondents.

Participants were asked about challenges in accessing food based on their reported method of travel to the store; given the heavy reliance on driving their own vehicles, most of survey participants described driving-related challenges. The most reported challenge was distance, reported by 216 respondents, or about half of those who drive to the store. Another 40 percent of drivers reported no challenges in food access, and 17 percent struggled with the cost of gas.

That distance is an issue is perhaps unsurprising, given the size of Carroll County and the uneven distribution of the county's grocery stores, as shown in Figure 3.

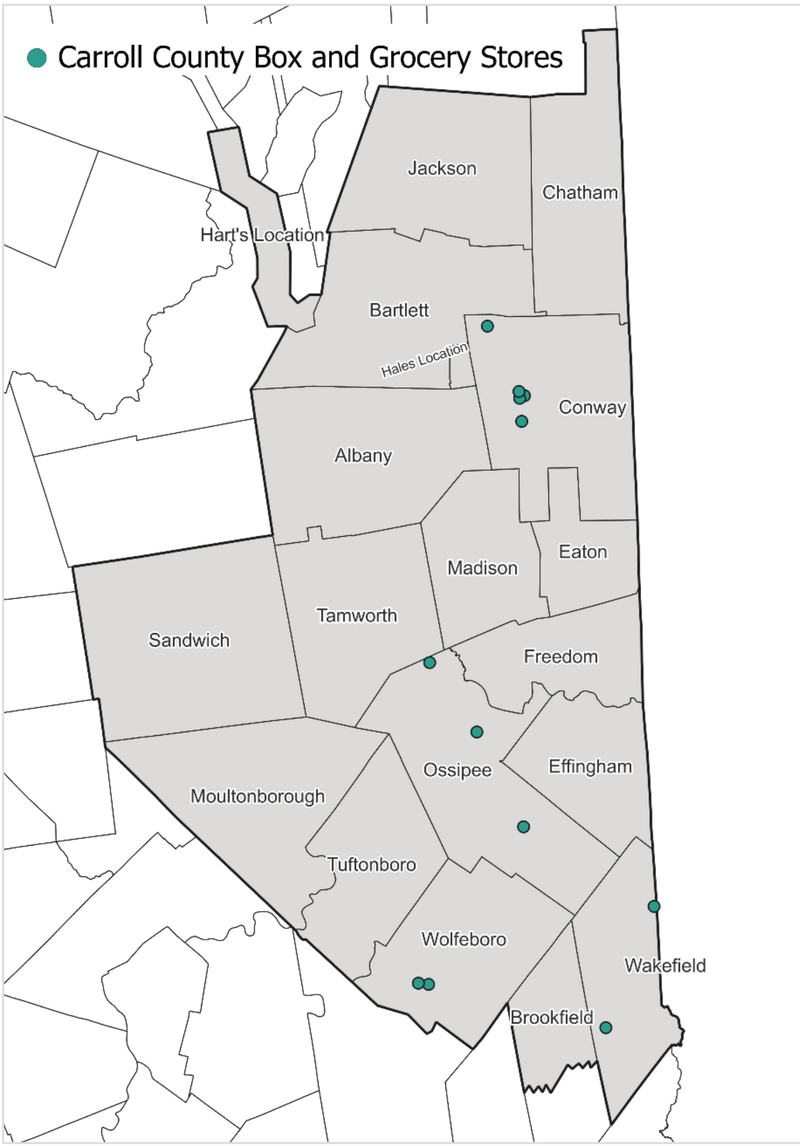
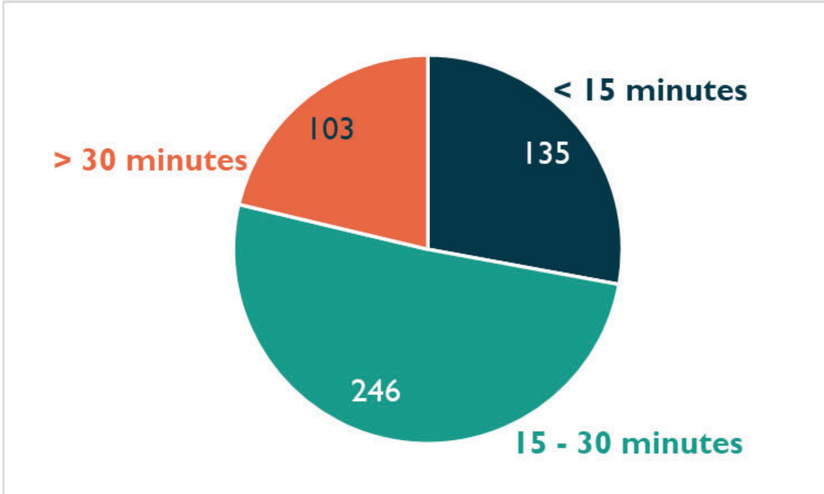


Figure 3. Grocery and Box Stores in Carroll County

Source: Carsey School of Public Policy, via State of New Hampshire Department of Health and Human Services Food Protection Unit and the USDA Food and Nutrition Service's SNAP Retailer Locator

Distances between main food sites are also reflected in CCFAN participants' travel time: as shown in Figure 4, most survey participants reported traveling between 15 and 30 minutes one way to get groceries, while 103 (more than 20 percent) faced commutes over 30 minutes.

Figure 4. How long does it take you to travel (one way) to get food or groceries?



Source: Carsey School analysis of CCFAN 2023 Survey
Note: n = 484

With distance as a pressing issue, participants in CCFAN focus groups shone light on some of the ways that residents meet the challenge. One service provider explained, "There's no public transportation to get to food…people are going to…gas stations for food…Not only is that expensive, they're [also] not getting healthy stuff." Although most survey respondents reported shopping at grocery stores, a substantial minority—30 percent—do report often shopping at convenience stores and mini marts, and although sample sizes are small, there is some evidence that this is more common among respondents who walk, bike, or take a cab than among respondents who drive their own car to get food.[x] Another community member reported that people handle the challenges of distance by planning shopping trips around required outings for appointments, ensuring more efficient use of drive time. Another noted that people consider tradeoffs, willing to visit a more expensive store if it is closer than the alternative.

Public Transportation Considerations for Food Access

It is worth noting that very few survey respondents reported utilizing public transportation (0.2 percent). Whether this is because few respondents needed this type of support or because existing transit infrastructure isn't feasible is not clear. However, there is a relationship between mode of travel to the store and food insecurity in the CCFAN survey sample, with food insecure participants being much less likely to drive their own car (80.9 percent) to get groceries than respondents who are not food insecure (96.8 percent). The link between food access and having one's own vehicle has been well established elsewhere, to the extent than a 2016 literature review concluded "Of all the factors that seemingly limit access to food, the most important is no money, but second in importance is no car."[xi]

Beyond transportation challenges for low-income residents, Carroll County has additional reasons to consider building a public transportation infrastructure. Specifically, Carroll's population is aging, and increasing shares of the population there may have trouble driving themselves. Further, as nearly one-third of Carroll County households are comprised of a single adult living alone,[xii] options to with a household member may be especially limited.

The CCFAN community survey included a question gauging respondents' interest in public transportation, asking "if there was a reliable form of public transportation [in Carroll County], would you use it? More than half of respondents said no, while one-quarter said they would use it at least once a week. Perhaps surprisingly, younger respondents were more likely to express an interest, while the share who would use at least weekly was lowest among respondents age 60 and older.

Insights from CCFAN focus group participants suggest that public transit is part of an ongoing conversation in Carroll County. Yet, like the survey participants, focus group participants were mixed on its potential utility. One participant noted that a bus would need to be available on the weekends to be helpful, while another flagged that it would need to be specially structured to accommodate grocery bags. It is possible that respondents struggle to envision a transit system that would be reliable and robust enough to become practical. One participant noted that if a bus were more regularly available, it would be "easier to plan around," suggesting that a sporadic system is unlikely helpful. These observations align with national research: although having a car tends to be linked to better food security outcomes, as described above, conclusions are mixed on the link between public transportation and food access.[xiii] In short, the research generally concurs that a transit system alone is not sufficient for food security. Instead, inadequate routes can mean long waits, while abbreviated schedules limit offerings for those working non-standard shifts, and crowded conditions limit capacity for shopping in cost-effective bulk.[xiv]

Local Foods as Part of the Carroll Landscape

As residents identify challenges with travel and distance, it is important to consider the potential for a food system that leans more heavily on local foods. Respondents to the CCFAN community survey indicate at least some regular engagement with local foods already. For instance, when asked where they shopped for their food, about a quarter of respondents indicated that they often shop at a farm stand or farmers' market. When asked specifically how often they purchased local foods when in season, 81 percent of respondents (406 of 501) indicated at least one purchase in the past year, and more than half (273 of 501) indicated that they purchased local food at least a few times a month. These findings align with earlier (representative) data from the 2021 Granite State Poll, which had a limited sample of Carroll County residents (n=51).[xv] That survey found that most Carroll County residents—more than nine in ten—report having purchased local farm foods in the past year.

Importantly, however, occasional visits to the farmers' market during the summer are not necessarily sufficient to solidify local foods as part of residents' regular food mix, nor to keep Carroll farmers in business. One farmer participating in a CCFAN focus group noted the tension between wanting to supply their neighbors with local foods, while also knowing that local foods platforms can be inconvenient. "It's hard when you can't do all your shopping in one spot," the farmer explained. "It's hard to convince people that it's worthwhile to still buy local produce." For residents already struggling with distance to food stores and strategizing on how to minimize trips, making an additional stop for local foods may not be feasible.

Respondents to the CCFAN survey were also asked to identify whether local foods were easily available to them in a variety of settings, replicating a series of questions from the Granite State Poll. Table 6 shows response from both surveys side by side.

Table 6. Estimated Range or Share of Carroll County Residents to Whom Local Farm Foods are "Easily Available" Through Each Platform

	Granite State Poll		CCFAN Community Survey
	Low Percent	High Percent	Percent
Farm store or farm stand	77.6	97.2	70.5
Farmers' market	79.5	96.1	63.3
Community Supported Agriculture	21.9	65.6	23.2
Online market platform	7.0	36.1	3.2
Brick and mortar retail store	70.8	93.3	38.5
Other	1.3	30.6	1.8

Sources: Carsey School analysis of UNH Granite State Poll (GSP), May 2021; Carsey School analysis of CCFAN 2023 community survey

Note: Estimates for the Granite State Poll are presented as a range to avoid offering misleadingly precise point estimates. Sample sizes specific to Carroll County are small (n = 51), and any specific percentage is likely to be inexact. Instead, presenting estimates as a range, with "low" and "high" denoting a 95 percent logit confidence interval, offers a more reliable and realistic takeaway. Estimates are calculated using survey weights. Question wording differs slightly across surveys.[xvi]

Results from both surveys demonstrate some consistent patterns. The Granite State Poll finds that Carroll residents report that farm stores, stands, and markets are the easiest sites to access local foods. The CCFAN survey shows that respondents agree. Less easily accessible are Community Supported Agriculture and online platforms. The biggest discrepancy in results across the two surveys is around the availability of local foods in brick-and-mortar sites, which Granite State Poll respondents found accessible compared to the CCFAN respondents. Whether the Carroll County residents in general (via the representative Granite State Poll) shop in different places than the CCFAN survey participants, or whether local food availability has changed in the years between surveys is unknown.

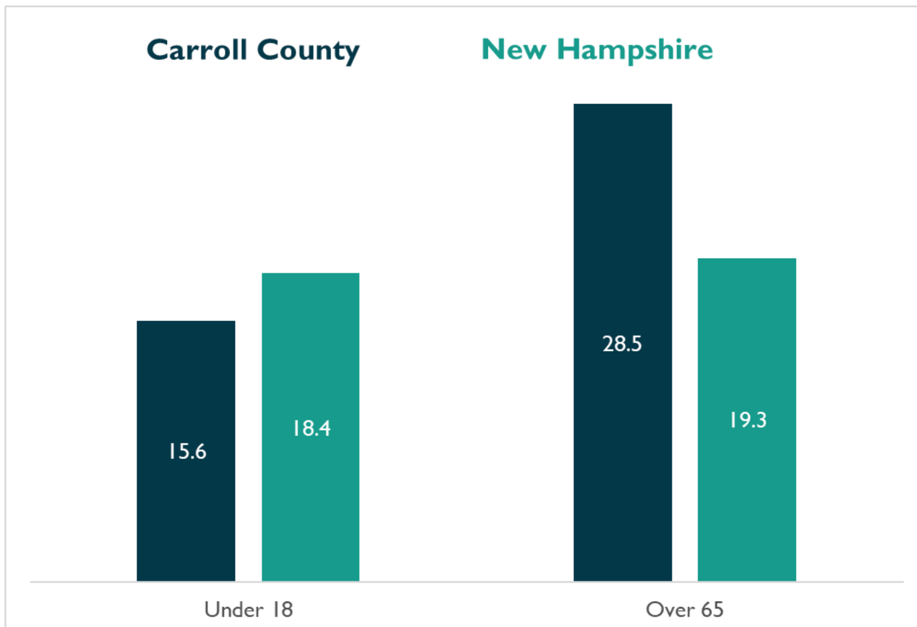
Aside from purchasing locally grown foods in retail settings, CCFAN survey participants were also asked about their knowledge of and interest in community gardens. One-third of survey respondents were aware of a community garden near them, indicating at least some knowledge of the idea among respondents. When asked about their interest in a community garden, the most frequent response (195 out of 501 respondents) was "I wouldn't participate," although the second-most-common was "I would not pay, but would like to volunteer," (117 of the 501 respondents). Most respondents who contributed a write-in response indicated that they already have a home garden (26 respondents), implying that a community garden was unnecessary.

Implications of Carroll's Demographics on Residents' Food Access

An Aging Population

As the CCFAN works to develop Carroll's food access ecosystem, consideration of the residents to be served by that system is key. Perhaps one of Carroll's most unique demographic features is the age distribution of its residents. More than one-in-four Carroll County residents are over the age of 65, compared to less than one-fifth in New Hampshire (Figure 5). Partly driving this structure is the fact that Carroll is home to disproportionate shares of people over age 65 who were not born in New Hampshire, which reflects Carroll's history as an attractive location for retirees.[xvii] The county's age structure is also visible in the makeup of households there, where the most common household type is couples without children in the home.[xviii]

Figure 5. Percent of Population Under 18 or Over 65, Carroll County & New Hampshire, 2021



Source: U.S. Census Bureau, American Community Survey, 2021 5-year estimates

That Carroll County has a higher proportion of older adults compared to the rest of New Hampshire means Carroll faces a different set of challenges for food access than in other areas of the state. Transportation, hesitancy to use social safety net resources, and availability of specific diet-relevant foods are concerns that may disproportionately affect older adults, and may warrant special consideration here.

For instance, challenges with transportation are often amplified for older adults. This can attenuate the effectiveness of programs like SNAP, which only relieve food insecurity for those who have access to food retailers at which they can utilize those benefits. By comparison, programs like Meals on Wheels that have experience serving older populations and offer delivery services may be disproportionately important in Carroll. In addition, nutrition supports that pair opportunities for socialization and connection can be important services for communities with this demographic makeup.

Carroll County's Unique "Destination" Status: Migration, Housing, and Work

Developing a strong regional food network in Carroll County is key. However, some of Carroll's characteristics—particularly in its housing landscape and employment features—mean that the county's food landscape is not insular. Further, as visible in its age structure, Carroll County is a destination for retirees, but it is also a recreation destination that attracts tourists, visitors, and second homeowners. The magnetism of Carroll County was amplified during the COVID-19 pandemic, when the county saw more in-migrants than any other county in the Northern Forest region of New Hampshire, New York, Maine, or Vermont.[xix] A steady flow of in-migrants shapes how long and how well Carroll residents are connected to the community. And as a result, Carroll is bound to face a continued, active inflow of "newcomers" who will need to be continuously (re-)educated on Carroll's resources.

A second implication of Carroll's destination status is that the region's housing stock is heavily comprised of vacant units, and in particular, vacant units designated for seasonal or recreational use (see Table 7). As a result, Carroll County food efforts not only need to reach new residents, but also must grapple with ongoing flows of new *temporary* residents (vacationers, migrant workers, second homeowners), which can lead to fluctuating levels of demand across seasons. One CCFAN survey taker went even further to connect Carroll's seasonal economy directly to food, noting "Seasonal price hikes may be 'normal' but are brutal on the working poor."

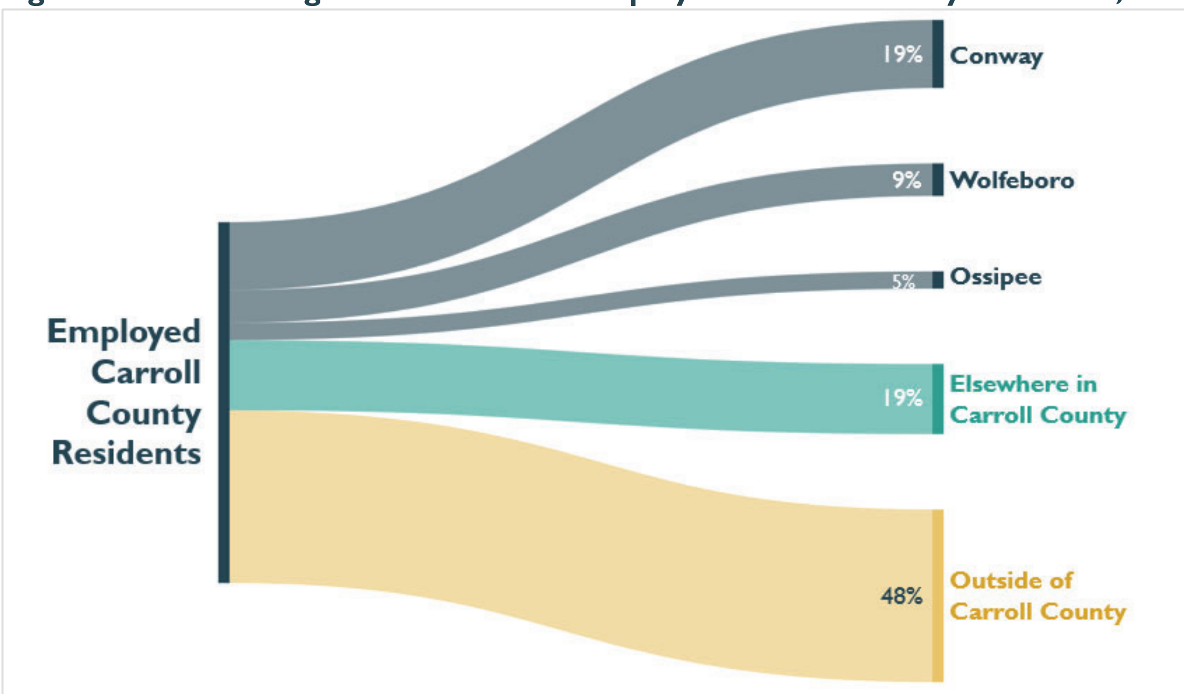
Table 7. Housing Vacancies in Carroll County & New Hampshire, 2021 & 2023

	Carroll County		New Hampshire	
	Percent	±	Percent	±
Percent of housing units vacant (2021)	45.8	1.9	15.1	0.4
Percent of homeowner inventory vacant for sale (2021)	1.8	1.1	0.7	0.1
Percent of rental inventory vacant for rent (2021)	4.2	3.1	3.9	0.6
Percent of rental inventory vacant for rent (2023)	0.0	n/a	0.8	n/a
Percent of vacant housing units for seasonal, recreational, or occasional use (2021)	90.2	1.9	70.5	0.4

Sources: U.S. Census Bureau, American Community Survey, 2021 5-year estimates (2021 homeowner/rental inventory vacant for sale/rent); New Hampshire Housing Finance Authority 2023 (2023 rental inventory vacant for rent).
Note: "±" indicates margin of error at the 95 percent confidence level.

Finally, the economy in Carroll is structured such that a substantial share of Carroll County residents travel to other parts of the state for work. For instance, data from the U.S. Census Bureau show that nearly half of employed Carroll County residents commute to work outside of Carroll County (Figure 6). This means that efforts to craft a local food landscape will need to acknowledge that a substantial volume of Carroll residents are leaving the county daily. These commuters may not represent a potential client base for the region's food retailers in the same way that residents who work in the region do. With out-of-town commutes, they may not be as aware of in-county resources, supports, or offerings as people who are more often staying local. In addition, commuters may interact with food landscapes outside Carroll more regularly. Thinking carefully about whether the CCFAN focuses on Carroll as a region or Carroll residents as a population can be a helpful exercise in the network's planning.

Figure 6. Commuting Destinations for Employed Carroll County Residents, 2019



Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics, 2019

Taken together, Carroll's unique features mean that a robust and stable food system there needs some specific elements. First, Carroll's aging population is likely to require new and specific support around food access, for which demand is likely not yet fully elucidated. In addition, eighty percent of Carroll adults aged 55 and older were not born in New Hampshire, reflecting the region's long history as a retirement destination.[xx] Those who are newer to the region may not have the social connections that established residents do, and may need to rely on more formal social safety nets than older adults in places with dense family ties. In particular, transportation may become a pressing part of that equation.

Beyond the age structure of those migrating to Carroll County are questions about the kinds of resources that in-migrants bring with them. Analysis of tax returns filed in 2020 and 2021 shows that beyond Carroll's exceptionally high in-migration rate, its in-migrants had substantially higher incomes than people who already lived there, with a larger gap than any other county in the region. Specifically, those who moved to Carroll County between 2020 and 2021 reported $95,000 in average adjusted gross income, compared with incomes of $52,000 for those who already lived there.[xxi] This income disparity between newcomers and longerterm residents can muddy aggregate statistics about the region, making regional income look high and poverty look low, which in turn, can de-prioritize it in scenarios of limited funds or resources. Further, the perennial tension between newcomer and old-timer priorities may be especially sharp when groups differ both in their tenure and their income. Ensuring community-embedded supports like food pantries remain well-supported despite a growing higher-income population is essential.

Finally, the region's migration signature means that special care will need to be taken to address Carroll County's needs, incorporating flexibility to accommodate changing demand. Supports available to low-income residents or older adults will need to be communicated regularly through ongoing outreach that is steadily refreshed so that newcomers know what is available.

Part 2. Food and Nutrition Safety Nets in Carroll County

The Primacy of SNAP

Use and Experiences

The Supplemental Nutrition Assistance Program (SNAP) is underutilized in Carroll County as compared to the state average. Data from both the State of New Hampshire and the U.S. Census Bureau show that 4.8 percent of residents in Carroll County reported SNAP receipt, as compared to 6.1 percent of residents statewide.[xxii] This runs counter to the fact that a higher percentage of people are low income (below 200 percent of the federal poverty line) in Carroll County than statewide. Whether these gaps are due to eligibility differences—perhaps connected to availability of assets over allowable thresholds—or differences in willingness to seek support from a federal social safety net benefit is unclear. Understanding the discrepancy between SNAP eligibility and receipt is essential not only in Carroll County, but also statewide.[xxiii]

To shed light on residents' experiences with the social safety net, the Carroll County Food Access Network (CCFAN) community survey asked people about their experience with food assistance (Table 8).

Table 8. CCFAN Survey Participants' Responses to "If you have ever applied or considered applying for food assistance, what has been your experience?" (select all that apply)

	Percent of all respondents who selected	Percent of food insecure respondents who selected
None	25.1	21.8
I've never considered it	21.9	4.9
I don't think I'm eligible	17.4	23.9
I don't need or want it	16.8	2.8
I applied but did not qualify	14.3	26.1
Enrolling was hard, confusing, or took too long	7.6	12.7
The amount I would get is too low to be worth applying for	6.3	14.1
I am worried about being judged when using my benefits	6.3	9.2
I had a bad experience signing up	4.5	6.3
Other	4.5	9.9

My income changes too frequently for enrollment to be worthwhile	2.7	2.8
I missed my recertification	2.0	5.6
I don't know how to apply	1.3	3.5
I didn’t want to share personal information	1.3	2.1
I had a bad experience using my benefits in the store	0.7	0.7

Source: Carsey School analysis of CCFAN 2023 Survey
Note: Number of survey participants who supplied at least one answer to this question is 447 (of 501 total); number of respondents who met criteria for food insecurity and supplied at least one answer is 142 (of 152 food insecure).

One-quarter of respondents had no experience with food assistance programs, a share that was only slightly higher than among the subset of respondents who met the criteria for food insecurity. Higher shares of the food insecure group selected responses having to do with eligibility or program enrollment struggles. Finally, less than 4 percent of food insecure respondents said they didn’t know how to apply for assistance. This high level of knowledge around accessing supports is commendable, however, it is also important to recall that the CCFAN sample is affected by self-selection. That is, only those who were connected to Cooperative Extension, its partners, or key community gathering sites would have received the survey. It is unclear to what extent folks who were not reached also know how to apply for assistance.

There was a substantial minority of respondents who elevated the long-standing challenge of administrative and regulatory burden placed on applicants to social safety net programs.[xxiv] These challenges include long waits, inaccurate and redundant paperwork handling, and strict eligibility cutoffs that trigger rapid changes in eligibility. One CCFAN focus group participant observed that programs require “too much paperwork. It’s degrading.” CCFAN survey respondents also shared personal stories of frustration and hardship related to administrative and regulatory challenges, some of which are presented in Table 9, below.

Table 9. Selected CCFAN Survey Write-In Responses to “If you have ever applied or considered applying for food assistance, what has been your experience?”
“I was denied SNAP benefits for one year as DHHS had me in their system as paying $0 rent. I sent [my] lease 4 times…When approved after 1 year I got $23!”
“It’s just another thing to do in my overwhelmed life.”
“My income is always too much to really get much money in food stamps. But yet I don’t see all the money that they use to calculate whether you qualify or not. So they are saying I don’t qualify but yet I don’t actually make as much as they see when they add it all up.”

"WIC made me wait about a month more, then I had…to get a[n] appointment because they were booked out. I ended up in serious debt over the formula for just that one month - formula is over 25 dollars a can. They should make sure people with babies don't have to wait that long to get a[n] appointment."

"When separated from husband, my [child] and I had no income…[DHHS still considered my husband's income in our eligibility calculations] even though he did not contribute to household bills so my [child] and I did not qualify even though my husband was not living with us anymore."

Source: Responses to CCFAN 2023 survey; brackets indicate where quotes are lightly edited for punctuation or to protect respondents' privacy.

In later, open-ended portions of the survey, some CCFAN survey respondents offered additional responses on food assistance, particularly on the adequacy of benefits and eligibility levels. One respondent noted, "[The state] always say[s] I make too much or only offer[s] me like 50 dollars a month, which just doesn't seem worth it to jump through so many hoops." Another respondent concurred, particularly in light of costs: "Food prices are too high, even if you get SNAP benefits it never goes through the month, maybe 2.5 weeks." Finally, one participant's deeply personal and reflective comment highlights the complex ways that they navigate income, expenses, debt, and social safety net ineligibility to feed their children:

> **"There are a lot of times [that] I purchase my foods with credit cards. My kids don't run out of food but I don't have the cash and my debt is increasing. I pay more in the long run, [but]…it is the only way I can feed my kids knowing they are getting fresh fruits and veggies and [make sure they do] not know how food insecure we 'really' are.**
>
> **I do not qualify for food stamps…I have now attempted to apply 4 times with denial of food stamps…My expenses are high [with child care] but my income is medium. So [my] net worth is negative but [by] gross [income] I do not qualify."**
>
> - Carroll County resident

Despite its drawbacks, the CCFAN community survey found that SNAP was the most popular food assistance program from the selection shown to respondents, with 22 percent of survey respondents reporting having participated in or applied for the program since 2019 (Table 10). Among respondents who met the criteria for food insecurity, 56.8 percent reported that they or a member of their household applied for or participated in SNAP.

Table 10. Percent of CCFAN survey respondents who report that they or a member of their household applied for or participated in food assistance

	Percent, among all respondents	Percent, among respondents meeting criteria for food insecurity
SNAP (EBT/Food Stamps)	24.6	56.8
Nutrition program for the elderly (Meals on Wheels, Commodity Food Program)	3.3	2.0
WIC	15.3	32.4
Granite State Market Match	3.5	7.4
Double up Food Bucks	3.1	4.7
Summer food service program	2.2	6.8
School Lunch and / or Breakfast Program, including P-EBT programs	10.0	24.3
Food For All	1.3	1.4
Congregate meals at the senior center	5.7	4.7
Dinner Bell	3.5	4.7
Bearcamp Community Center	5.2	5.4
Food Pantry	19.2	41.9
None of the above	54.2	21.0

Source: Carsey School analysis of CCFAN 2023 Survey

Availability of SNAP-Accepting Retailers

For those seeking to use SNAP benefits, retailer participation is greatest among grocery stores, as nine of the county's 11 stores accept SNAP, shown in Table 11.[xxv] Only 14 of the region's 41 convenience stores accept SNAP benefits, which poses a substantial barrier for those who shop there. This is particularly meaningful because, as described above, survey respondents who shop at a convenience store or mini mart are also less likely to have their own car, and more often meet the criteria for food insecurity. Participation among farm food retailers is also low, with only 20 percent accepting SNAP. Administrative burden may play a role here too: according to a farmer participating in a CCFAN focus group, "Everything's just like a little clunky and constantly changing, which feels a little overwhelming like from the farmer perspective." Offering supports to increase the prevalence of farm food retailers and convenience stores that accept SNAP benefits will help to make the food safety net available to eligible residents that live in more remote areas of the county.

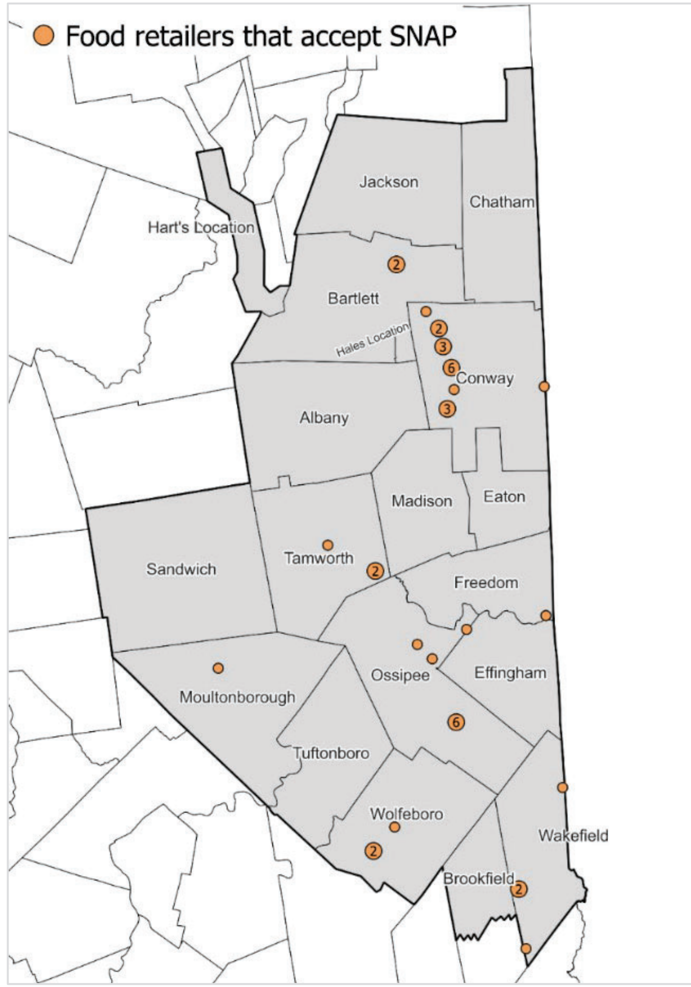
Table 11. Number, Type & SNAP Participation of Food Retailers in Carroll County, 2022

	Number	Number accepting SNAP
Box store	1	1
Grocery store	11	9
Convenience store	41	14
Non-traditional food outlet	10	10
Specialty food outlet	8	1
Country store	12	1
Farm food retailer	15	3
Total	98	39

Sources: Food retailers identified by Carsey School in 2022 via State of New Hampshire Department of Health and Human Services Food Protection Unit and the USDA Food and Nutrition Service's SNAP Retailer Locator (https://fns.usda.gov/snap/retailer-locator). Definitions of retail sites build upon the Carsey School's earlier work funded first by the New Hampshire Children's Health Foundation in 2018, extended and updated in 2021 through collaboration with UNH's Dao Research Lab, supported by a UNH CoRE grant. Grateful acknowledgments go to those prior project sponsors and collaborators.

Figure 7 shows that SNAP-accepting retailers are concentrated in Conway; however, so is Carroll County's population of SNAP recipients.[xxvi] For those who live outside of Conway, the commute to a SNAP retailer might outweigh the benefit.

Figure 7. Map of SNAP-Participating Food Retailers in Carroll County, 2022



Source: Food retailers identified by Carsey School in 2022 via State of New Hampshire Department of Health and Human Services Food Protection Unit and the USDA Food and Nutrition Service's SNAP Retailer Locator

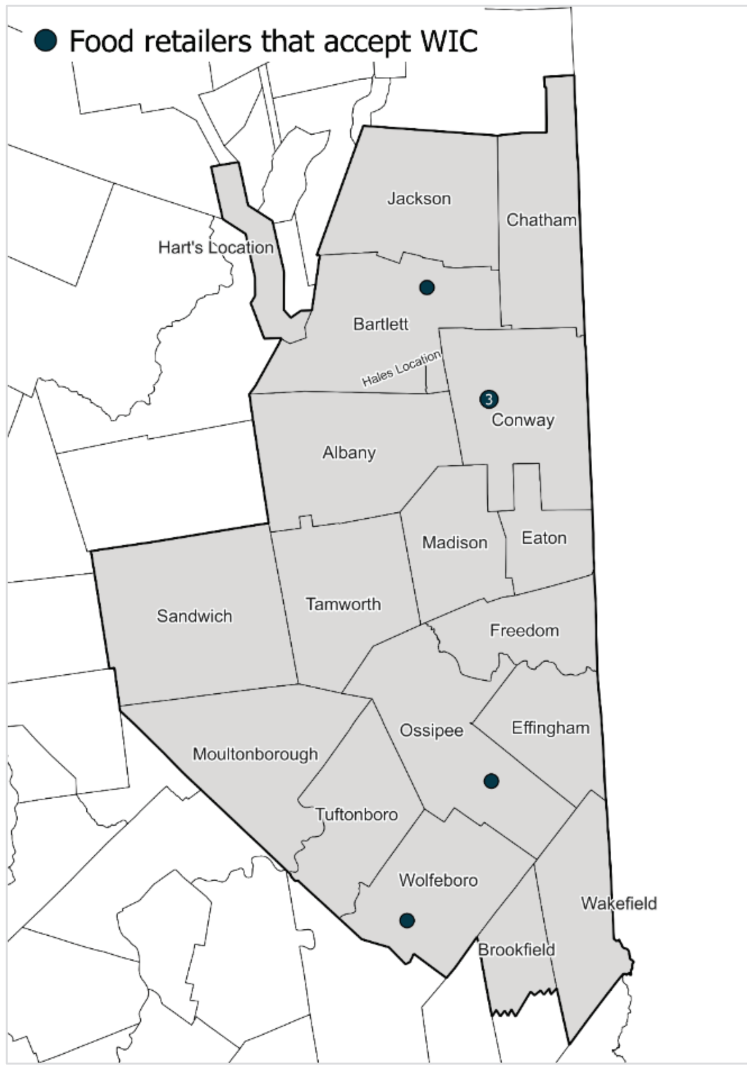
Data from Feeding America suggest that three-fifths of food insecure residents are eligible for SNAP.[xxvii] Ensuring that eligible households are aware of their eligibility via strong, locally rooted outreach is key to engaging participants and bolstering household buying power. At the state-level, this long-awaited outreach is just beginning.[xxviii] In mid-2023, it was announced that the New Hampshire Food Bank was awarded the state contract for implementing the statewide SNAP outreach plan. As the plan takes shape, the Food Bank will continue to seek community partners to locally support and implement that plan too.[xxix]

Awareness & Extent of Food Assistance Beyond SNAP

Despite the promise of enhancing SNAP participation, it is important to recall that food insecurity also extends beyond those eligible for SNAP benefits. Two-in-five of food insecure Carroll residents are not eligible for SNAP.[xxx] Often just above the income-based threshold for eligibility, people in this category face particular precarity without a formal nutrition safety net, and often must rely on charitable organizations to meet their needs. One participant in the CCFAN survey summed up the issue perfectly, noting "Folks like myself who do not qualify for help are the ones left in the margins, not enough money to get what we need. It's problematic for us all." For this population, it is essential to ensure an array of non-SNAP resources are available *and* to ensure that people are aware of lesser-known food assistance options.

One non-SNAP option is the Special Supplemental Nutrition program for Women, Infants, and Children (WIC). Retailers accepting WIC are only available in four towns in the county, at grocery and box stores only. For families that could benefit from WIC, a significant commute to redeem benefits could render the resource largely useless.

Figure 8. Map of WIC-Participating Food Retailers in Carroll County, 2022



Source: Food retailers identified via State of New Hampshire Department of Health and Human Services Women, Infants, & Children Nutrition Program and their WIC Authorized Stores List. Data accessed in May 2023, but last updated by DHHS in December 2022.

According to state administrative data, the food assistance program that has the highest levels of eligibility both in Carroll County and statewide is Free or Reduced-Priced Lunch. More than one-quarter (27 percent) of students are eligible for Free or Reduced-Price Lunch (FRPL) in Carroll County.[xxxi] FRPL has the benefit of being delivered directly to children in places where they already frequent (schools), but, of course, cannot reach the broader populations of other safety net programs like SNAP. The National School Lunch Program underwent significant shifts in its policies and implementation during the COVID-19 pandemic, including some lessons learned on how to reach children through other programs to which their families are already connected. The CCFAN survey found that 30.7 percent of participants with children reported applying for or participating in school lunch/breakfast programs.

Beyond state and federally funded nutrition programs, locally designed and delivered programs often fill important gaps in a community food landscape, with food pantries acting as one of the most familiar models. In Carroll County, pantries are significantly more dispersed than retailers that accept SNAP or WIC, reflecting their community-embedded nature (see Figure 9). A substantial minority of CCFAN survey respondents reported using food pantries, although food pantries too have some challenges. For instance, a CCFAN focus group participant described how pantries are often unable to tailor the type and amount of food shared with families, which results in food waste, and sometimes pantries have limited hours of availability. However, practices emerging from or accelerated by the pandemic may help here, including mobile pantries and the elevation of "grocery shopping" type pantry models in some places.[xxxii]

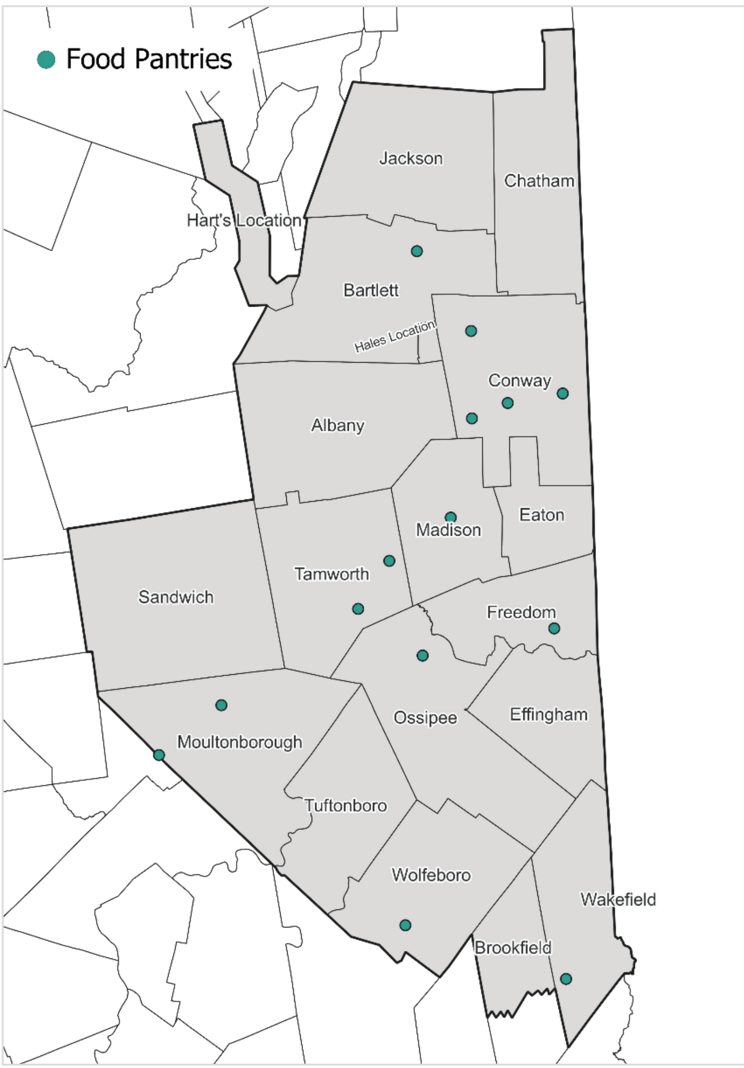


Figure 9. Map of Food Pantries in Carroll County, 2023

Source: Carsey School map using data from the New Hampshire Food Bank and foodpantries.org.

In summary, the food assistance landscape in Carroll County is a layered landscape of federal, state, and local offerings, including SNAP, WIC, FRPL, and food pantries. Although SNAP and WIC can be woven into people's usual grocery shopping practices, the unevenness of retailer participation in these programs may stunt their utility. As a result, residents may be forced to decide whether receiving benefits is worth the time and gas to commute to a participating location. By contrast, local food pantries are physically better positioned, but are sometimes unable to tailor offerings or hours to meet family needs.

A second set of challenges arises around the administrative and regulatory barriers to food assistance. Addressing the root of these issues is a difficult task at the county level; many of the identified challenges result from state and federal policies, both administrative and legislative. However, knowing that these challenges remain an issue for at least some Carroll residents identifies a potential role for supportive efforts. For instance, in one CCFAN focus group, a service provider described the ways that unfamiliar technology—including the state's online application for food stamps—can present a barrier for older adults. The provider explained, "A lot of the stuff is online now. I notice the older folks are having difficulties with apps and whatever connections are there. Or signing up online, anything like that…those are big problems." For those populations, benefit navigation services may be especially helpful. For those who struggle with improper processing of paperwork after applying for assistance, connecting people to New Hampshire Legal Assistance, who have a stated mission to support people who have been wrongly denied access to public benefits.[xxxiii]

A third challenge is serving individuals who have incomes just above 200 percent of the federal poverty line, making them ineligible for many of the programs that comprise the formal food safety net. Carroll County has several programs and charitable organizations that meet the needs of these individuals, however the CCFAN survey found that participation was low for these programs. Future work is needed to understand the sources of low participation to understand if efforts would be best spent increasing awareness, overcoming stigma, or assisting with applications to food assistance programs.

Part 3. Farms and Food Production in Carroll County

The Small Footprint of Carroll County Farms

Critical to the Carroll County food landscape are not just the access issues facing its residents, but also a firmer understanding of the opportunities, challenges, and resources relevant to its food producers. Data from the National Census of Agriculture—the newest data for which are from 2017—show that Carroll County is home to 285 farms, spread across just 5 percent of the county's land area (Table 12). While not all these farms are strictly food-producing, these data suggest that farms in Carroll County are small: one-third are under 10 acres, compared to one-quarter statewide.

Table 12. Farm Overview, Carroll County & New Hampshire, 2017

	Carroll County	New Hampshire
Number of farms	285	4,123
Total farmland (acres)	32,464	425,393
Percent of land acres used for farm land	5.4	7.4
Percent of farms that are under 10 acres	32.3	26.2
Percent of farms that are 10-49 acres	19.3	30.9
Percent of farms that are 50-179 acres	31.2	27.7
Percent of farms that are 180-499 acres	12.6	27.7
Percent of farms that are 500+ acres	4.6	3.6

Source: 2017 USDA National Agricultural Statistics Service (NASS), Census of Agriculture. Land acres via NH Office of Strategic Initiatives.

Along with surveying community members, the Carroll County Food Access Network (CCFAN) survey also included Carroll County food producers, reaching 34 such respondents. Producers connected to small farms were especially prevalent in this sample, with 20 of 32 producers who answered the question reporting working on a farm that is between one and three acres in size.

Perhaps connected to the size of Carroll County's farms are its revenues. According to the Census of Agriculture (2017), Carroll County farms average less than half the sales value of farms statewide, and per farm, average net cash income runs at more than $2,000 in losses (see Figure 10).

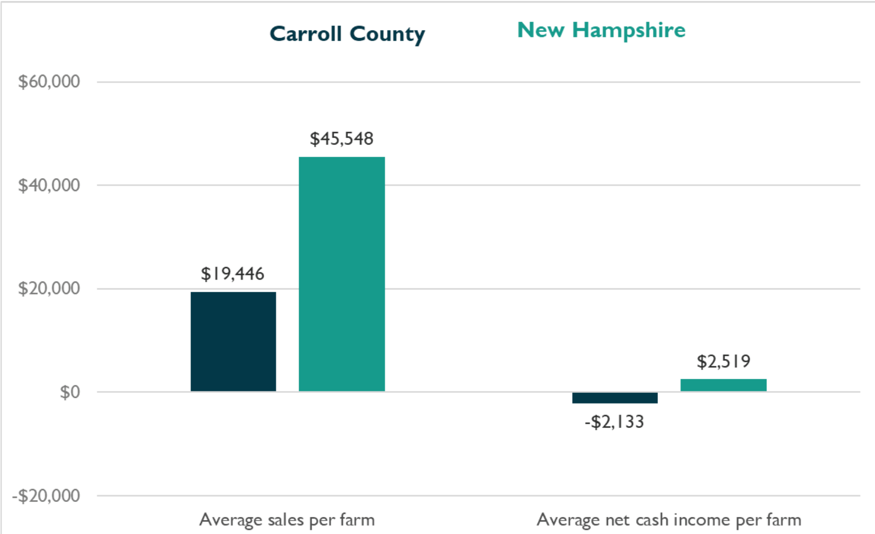


Figure 10. Average Sales and Net Cash Income Per Farm, Carroll County and New Hampshire, 2017

Source: 2017 USDA National Agricultural Statistics Service (NASS), Census of Agriculture.

Relatedly, most farms in Carroll County do not have sufficient sales to support large operating expenses like full-time salaries. Data from the 2017 Census of Agriculture show that only 6.7 percent of Carroll County farms reported total sales over $50,000 in 2017, compared with 10.4 percent statewide (see Table 13).

Table 13. Farms by Value, Carroll County and New Hampshire, 2017

	Carroll County		New Hampshire	
	Number	Percent	Number	Percent
Sales under $2,500	130	45.6	1,856	45.0
Sales $2,500 - $4,999	30	10.5	524	12.7
Sales $5,000 - $9,999	40	14.0	528	12.8
Sales $10,000 - $24,999	42	14.7	502	12.2
Sales $25,000 - $49,999	24	8.4	287	7.0
Sales $50,000 - $99,999	9	3.2	160	3.9
Sales at or above $100,000	10	3.5	266	6.5
Total	285	100	4,123	100

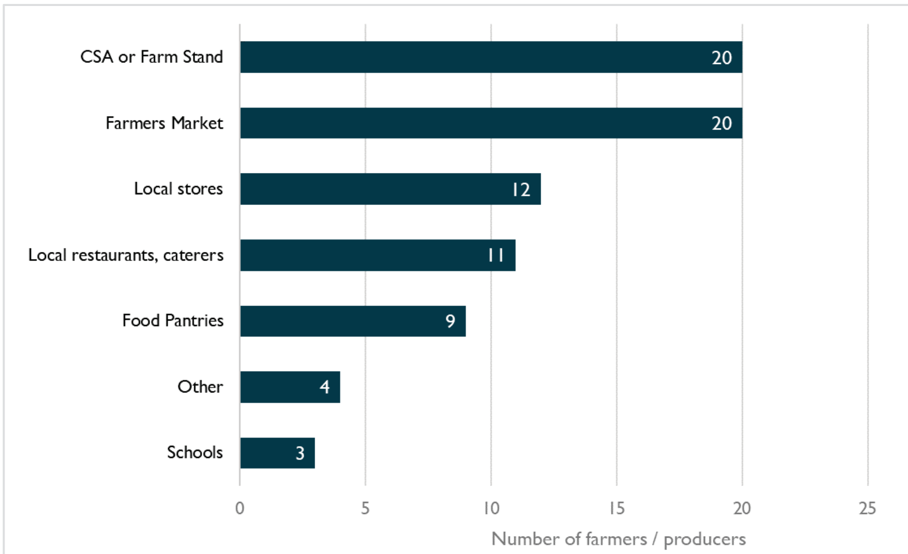
Source: 2017 USDA National Agricultural Statistics Service (NASS), Census of Agriculture

The 34 self-identified farmers and producers who responded to the CCFAN food producer survey were not asked about the scale of their farm operation in dollars. However, when asked about labor, only 18 percent of respondents indicated that they used employees other than themselves. The group was especially likely to report selling vegetables (24 of 34), followed by meat, poultry, or eggs (18 of 34).

Experiences Selling Across Farm Food Platforms

The CCFAN survey found that producers most often reported selling their products directly to consumers via farm stands or CSAs) and farmers' markets (shown in Figure 11), and less often through indirect channels like restaurants and schools. The Census of Agriculture suggests that only 34 percent of the 285 farms in Carroll County sell their goods directly to consumers, substantially lower than the share among respondents to the CCFAN producer survey. This may be a function of the type of farms included in the Census (at least some do not focus on food production), because direct-to-consumer sales have grown post-2017, or because the farmers surveyed are just especially likely to sell in this way.

Figure 11. Percent of CCFAN Farmer-Producer Survey Participants Distributing Goods via Each Platform



Source: Carsey School analysis of CCFAN 2023 Survey
Note: n = 34

Participants in the CCFAN focus group of food producers shed light on reasons to prioritize selling directly to consumers. One farmer explained, "the wholesale markets just take a lot of work like pretty consistent[ly], weekly, and [they] are slightly unpredictable [for sales]." Another farmer noted their challenge with selling to "the local grocery stores," saying, "they'll only take so much, and a lot of the bigger ones are only allotted to spend so much money because they're owned by their distributors…That makes it a little bit harder." A third producer chimed in with additional nuance related to the ways that choosing a sales platform goes beyond logistics. They explained, "You make more money selling directly to customers. And then also…I am guessing most of us don't farm to become wealthy. We do it because it's like the lifestyle we want, and [it] is connected to our ideology and belief system. And so for me, the people that I want to be supporting are my neighbors and the community…It's way, less rewarding to bring boxes of lettuce to a kitchen where it's gonna get fed to rich tourists."

> **"I am guessing most of us don't farm to become wealthy…The people that I want to be supporting are my neighbors and the community."**
>
> \- Carroll County farmer

Local Food Systems Capacity

Respondents to the CCFAN community survey reported moderate engagement with local food purveyors, with more than half of respondents buying local farm foods at least a few times a month (see "Food Landscape in Carroll County" section, above). However, that purchases weren't more frequent suggests that this engagement may be treated as an occasional stop, rather than as an embedded, regular site for food acquisition. Prior literature suggests that logistics play a role and CCFAN survey data show that survey respondents prioritize variety and convenience. As noted earlier, there was some recognition of this challenge among CCFAN focus group participants, with one farmer noting "It's hard when you can't do all your shopping in one spot." In short, there is some demand for local foods in Carroll County, but as is often true for local food systems, it can be difficult for farmers to efficiently engage enough customers to ensure farming is a feasible livelihood.

If local demand were to increase, farmers participating in the CCFAN survey were split as to whether they could accommodate. One-third reported that they are able and willing to expand their business. Just under one-quarter (23 percent) of producers reported not wanting to expand, and another 29 percent reported wanting to expand but not being able to. Labor shortages were the largest barrier to expansion, with three quarters of producers citing this as a challenge. Participants in CCFAN focus groups concurred: "Our biggest problem is labor. If we had more hands, and we could really, really put it out there," one farmer commented.

Other challenges for farmers included marketing and distribution. "Our farm has just struggled a bit to reach customers and to figure out the best ways to connect with people," one farmer in the CCFAN focus group admitted. "Getting the name out for the farmer would be a huge asset," explained another. One farmer envisioned a dedicated hub or mediated market model for the region as addressing many of the shared challenges: "I think a distribution hub, like a local food cooperative of some sort, or a farmers' cooperative, that was just a hub where everybody's food came into a permanent farmer's market, essentially, would be huge. And we need to find a philanthropist that wants to just give us that [so] we can all share the fruits." This model is a growing area of consideration for local food producers, and connecting farmers with resources and training on the subject is the topic of an open USDA-funded project housed at the University of New Hampshire through 2025.[xxxiv]

"A distribution hub…that was just a hub where everybody's food came into a permanent farmer's market, essentially, would be huge."

- Carroll County farmer

Conclusion

This report compiles data from the Carroll County Food Access Network survey, focus groups key informant interviews, and secondary data to understand the strengths, weaknesses, and opportunities in Carroll County's food access ecosystem. The region faces challenges of a dispersed geography and weak public transportation system, alongside a bifurcated and churning population of higher-income migrants and retirees alongside lower-income long-term residents. There is some evidence that uptake of existing social safety net supports is relatively low, perhaps in part because of the county's older adult demographic, for whom self-reliance and avoiding assistance may be a point of pride or technological barriers may be a challenge. Finding ways to connect Carroll residents, whether newcomers or old-timers, to needed resources will remain an area for focus.

Despite these challenges, Carroll residents also have so much to draw upon. An active food action network is seeking data, identifying gaps, and formulating solutions. The region is a magnet for higher-income residents who might represent fresh sources of energy, ideas, and funding for regional initiatives if properly engaged and leveraged. Even in the face of food insecurity, residents meet the challenge with creativity and community, interested in healthful, local foods, and in finding ways to get them. Finally, local food producers demonstrate commitment to the notion of farming as both a livelihood and a way of life, willing to consider needs and gaps to find creative ways to get fresh foods into their communities.

For the CCFAN, this report yields an array of possible starting points. The network will need to identify areas of priority, investment, and scope. Does CCFAN serve the region or its residents, and how do newcomers fit into the scope of the work? Is the network's vision driven by the desire to reach all, or to support those with the greatest need? Does the network invest effort in encouraging uptake and availability of federal safety net programs like SNAP, or focus on filling gaps with expanded local-level efforts? Which have faster or bigger payoffs for the community the network serves? As the network grapples with the next stages in its planning, continued connections to residents' needs, farmers' perspectives, and the contributions of partners will bolster bandwidth and ensure a vision built by and for Carroll County.

Appendix. List of Tables and Figures Available in Companion Data Supplement

The following list is a series of tables and figures contained in a supplemental spreadsheet that serves as a companion document to this report. The CCFAN survey was long, and to allow narrative preservation in this report, not every question asked on the survey was analyzed and presented in this document. In addition, an interim report using only secondary data was commissioned by UNH Cooperative Extension from the UNH Carsey School of Public Policy team, only some of the data from which is woven into this report.

The companion data supplement includes all tables and figures resulting from the survey, the interim report using secondary data, and all tables and figures used in this report collated into a single data resource. The spreadsheet, accessible here, will allow the CCFAN team to consult, use, and draw upon the full array of data collected even if not embedded in this report.

Tables and Figures from the CCFAN Farmer / Producer Survey

- Are you a farmer or producer of foods for sale in Carroll County?
- What region of Carroll County? Choose the region you identify with. Check any that apply.
- How long have you been growing or producing food for Carroll County?
- What goods do you sell? (Check all that apply)
- What is the total size of the land you cultivate? Include land owned or leased (choose the closest acreage).
- Who provides the labor to run your business? Check all that apply.
- Where do you source, sell or distribute your goods? Check all that apply.
- Do you collaborate with others (individuals, other farmers, or agencies)?
- If local demand increased, would you want to or be able to expand your business?
- What currently prevents you from increasing production or expanding your business?
- Complete this sentence: I am/we are able to harvest all the food produced in a year…
- Are you able to sell all the food you produce?
- Incentive programs: Circle the numbers to rate how well you know of or use these options in your business.
- What changes do you think could be made to help people in Carroll County have better access to local foods?
- Carroll County Food Access Network is a resource to optimize access to affordable, nutritious, food for all people with efforts focused on supporting the local food system in Carroll County. How can we support YOU and your business?

Tables and Figures from the CCFAN Community Survey

CCFAN Community Survey - Sample Demographics

- Do you live or work in Carroll County, NH?

- What region of Carroll County do you live or work in? Choose the region you moth identify with. Choose any that apply.
- What is your gender identity?
- Age range
- Choose each racial group you identify with. Check all that apply.
- Choose an Ethnicity
- In your household, are there…[children under 5 years old, children 5 through 11 years old, children 12 through 17 years old, no children living with me]

CCFAN Community Survey - Food Shopping

- What type of food stores do you typically shop at most often?
- Since 2019, from which of the following sources has your household gotten food? (Select all that apply)
- For the food store you shop at the most, why do you use it most often? (Check all that apply)
- How long does it take you to travel (one way) to get food or groceries?
- How do you typically travel to the food store you regularly use?
- Additional answer: How do you typically get food from the food store you regularly use?
- When driving, what makes it difficult to shop for the foods you want to eat or go to stores you prefer? (select all that apply)
- When walking or biking, what makes it difficult to shop for or buy the foods you want to eat? (select all that apply)
- If there was a reliable form of public transportation, would you use it?

CCFAN Community Survey – Local Foods

- Which of the following options best describes your interest in community gardens?
- Are you aware of a community garden near you?
- Over the past year, when available, about how often did you buy local farm foods?
- Which options (if any) for buying local farm foods are easily available to you, if you were to choose to buy local foods? Choose all that apply.
- Are you aware that at participating farms you can use EBT/SNAP/Food Stamp benefits to purchase a CSA?

CCFAN Community Survey – Fresh Foods

- In a typical week how many days do you eat fresh fruits and vegetables? (may be cooked)
- In a typical week how many days do children living with you eat fresh fruits and vegetables? (may be cooked)
- What prevents you or the children living with you from eating fresh fruits and vegetables every day? (Vegetables may be cooked.) Check all that apply.

CCFAN Community Survey – Food Insecurity

- Please select the reason(s) that best describe why you or your household might not always have the kinds of food you want to eat. Select all that apply.
- "I worried whether our food would run out before we got money to buy more." Was that often true, sometimes true, or never true for your household in the past 12 months?
- "The food that we bought just didn't last, and we didn't have money to get more." Was that often true, sometimes true, or never true for your household in the past 12 months?
- Additional question (combination of Q58 and Q59) Food insecurity screener

CCFAN Community Survey – Food Assistance

- Do you or a member of your household participate in or have you applied for any of the following food assistance programs since 2019. Check all that apply.
- If you have ever applied or considered applying for food assistance, what has been your experience? (Check all that apply)
- If your children participate in any of these programs, would they eat more fruits and vegetables if they (or more) were added? (Summer meals, Food Pantry vouchers for youth, End 68 hours of hunger, WIC, other)
- Which of the following options have you heard of? Select all that apply.

CCFAN Community Survey – Open Ended Responses

- Is there anything else you would like to tell us or add?

Indicators from Secondary Data Sources

Secondary Data - Farmers and Producers

- Percent of Farms in Carroll County and New Hampshire by Size in Acres, 2017
- Farm Overview, Carroll County & New Hampshire, 2017
- Farms by Value, Carroll County and New Hampshire, 2017
- Top Crops and Livestock Sales ($), Carroll County and New Hampshire, 2017

Secondary Data - Carroll County Demographics

- Percent of Population Under 18 or Over 65, Carroll County & New Hampshire, 2021
- Race & Ethnicity (Percent), Carroll County & New Hampshire, 2020
- Race & Ethnicity (Percent) Distribution of Carroll County & New Hampshire Public School Enrollment
- Household Composition in Carroll County & New Hampshire, 2021
- Percent of Residents Born in New Hampshire by Age, Carroll County & New Hampshire, 2021

- Educational Attainment and Full Time Work Status, Carroll County & New Hampshire, 2021
- Income and Poverty in Carroll County and New Hampshire

Secondary Data – Food Landscape

- Types of food retailers in Carroll County
- Estimated Range of Residents to Whom Local Farm Foods are "Easily Available" Through Each Option, Carroll County & New Hampshire, May 2021
- Estimated Range of Residents Who Have Purchased Local Farm Foods in Past Year, Carroll County and New Hampshire, May 2021

Secondary Data – Food Security & Food Assistance

- Food Insecurity & Insufficiency, Carroll County & New Hampshire, 2020-2021
- Section. Food Assistance
- Poverty, and SNAP in Carroll County and New Hampshire, 2021
- Number, Type, SNAP & WIC Participation of Food Retailers in Carroll County, 2022
- Free and Reduced-Price Lunch Eligibility and SNAP Enrollment in Carroll County and New Hampshire, 2021

Secondary Data – Work and Housing

- Work Location of Carroll Residents & Home Location of Carroll Workers, 2019
- Commuting Destinations for Employed Carroll County Residents, 2019
- Number of Jobs Filled by Carroll County Residents, by Direction of Commute from Home
- Housing Vacancies in Carroll County & New Hampshire, 2021 & 2023

[i] Feeding America's measure of food insecurity is estimated by using characteristics of people and places known to be associated with food insecurity at the national level. No food insecurity data are collected at a large enough scale directly from Carroll County residents to estimate this without modeling. A margin of error applies to this estimate, but Feeding America does not make this available alongside its estimates. For more on Feeding America, see here.

[ii] The gap between food insecurity in Carroll County and New Hampshire may be rooted in sampling error and should be interpreted with caution. Rather, focusing on the overall rate in Carroll is more important.

[iii] Estimates from the Household Pulse Survey describe households, rather than people. We employed survey weights in the calculation of this estimate, and the margin of error was +/- 0.6 percentage points (that is, the true rate is likely between 5.9 and 7.1 percent). For more on the Household Pulse Survey, see here.

[iv] The survey used the Hunger Vital Sign™ two-question food insecurity screening tool. Households are considered food insecurity if they report either of two statements as "sometimes true" or "often true." Statements include "Within the past 12 months we worried whether our food would run out before we got money to buy more" and "Within the past 12 months the food we bought just didn't last and we didn't have money to get more." See more at https://childrenshealthwatch.org/public-policy/hunger-vital-sign.

[v] Effective as of January 1, 2023. See https://www.dhhs.nh.gov/programs-services/food-meals-assistance/supplemental-nutrition-assistance-program-snap.

[vi] New Hampshire Housing Finance Authority. 2023. https://www.nhhfa.org/wp-content/uploads/2023/07/NHH-2023-Res-Rental-Survey-Report.pdf

[vii] Food retailers were identified by Carsey School in 2022 via State of New Hampshire Department of Health and Human Services Food Protection Unit and the USDA Food and Nutrition Service's SNAP Retailer Locator (https://fns.usda.gov/snap/retailer-locator). Definitions of retail sites build upon the Carsey School's earlier work funded first by the New Hampshire Children's Health Foundation in 2018, extended and updated in 2021 through collaboration with UNH's Dao Research Lab, supported by a UNH CoRE grant. Grateful acknowledgments go to those prior project sponsors and collaborators. Definitions are as follows: a "box store" is a retail store with multiple departments, where one or more department sells a wide enough variety of pre-packaged food products, raw ingredients, and other household necessities such that it can serve as a single point of contact for grocery shopping needs. A "grocery store" is a retail site that primarily sells food, both perishable and nonperishable. Includes supermarkets and smaller grocery stores. Smaller footprint "corner market" and "bodega" type stores are included if they sell nonperishable goods plus meat, produce, and dairy. A "convenience store" is a retail site that sells a limited range of household goods and groceries, with few, if any, perishable goods available. Includes stores attached to gas stations. A "non-traditional food outlet" is a retail store that sells food, but not as its primary purpose. Includes pharmacies and dollar stores. A "specialty food outlet" is a retail store that primarily sells a specific type of (usually fresh) food product. Includes, for example, bakeries, seafood markets, gourmet shops, and butchers. Excludes retailers that specialize in sweets (e.g., cupcakes, maple syrup), condiments or seasonings (e.g., spice shop), and alcohol. A "country store" is a retail site that sells a wide variety of goods, usually including nonperishable foods, often locally sourced. Often also sells local crafts and souvenirs and contains a delicatessen. Specialty and country stores are graphed together here. Three types of farm food retailers are captured here. A "farm stand" is a retail site at which farm-fresh goods are sold directly to consumers, often onsite at a farm and available seasonally. "Community Supported Agriculture" is a retail model that offers consumers the chance to pledge support to a farm in advance of the growing season in exchange for regular distributions of farm goods (e.g., a weekly box of produce). Usually offered seasonally. A "farmers' market" is a market site at which farmers sell produce, meat, and value-added goods (e.g., cheese, pies, jam) directly to consumers. Usually open for limited hours weekly; usually seasonal.

[viii] See Ma, Xiaonan, Angela D. Liese, James Hibbert, Bethany A. Bell, Sara Wilcox, and Patricia A. Sharpe. 2017. "The Association between Food Security and Store-Specific and Overall Food Shopping Behaviors." *Journal of the Academy of Nutrition and Dietetics* 117(12):1931–40.

[ix] For instance, the Carsey School's December 2022 paper interviewed 16 low-income New Hampshire parents about their food acquisition decisions, finding that food choices are complicated, multifaceted, and dynamic, shifting with changes in and out of the household. Paper available from Carson & Boege upon request.

[x] Only two respondents reported using a cab or ride share, and only eight reported walking or biking to get groceries. Of those ten respondents, nine report often shopping at a convenience store or mini mart (compared

with just 28 percent of people who drive). Those who shop convenience stores or mini marts are disproportionately likely to be younger adults.

[xi] Wright, James D., Amy M. Donley, Marie C. Gualtieri, and Sara M. Strickhouser. 2016. "Food Deserts: What Is the Problem? What Is the Solution?" *Society* 53(2):171–81.

[xii] U.S. Census Bureau, American Community Survey, 2021 5-year estimates.

[xiii] Baek, Deokrye. 2016. "The Effect of Public Transportation Accessibility on Food Insecurity." *Eastern Economic Journal* 42(1):104–34; Gottlieb, Robert, Andy Fisher, and Nancy Jakowitsch. 2002. *Transportation and Food: The Importance of Access. Policy Brief.* Center for Food and Justice & Community Food Security Coalition.

[xiv] Harrison, Eona, Brandi Gilbert, Susan J. Popkin, and Elaine Waxman. 2019. *Tackling Food Insecurity by Bringing Data to Communities*. Urban Institute.

[xv] While the UNH Survey Center's Granite State Poll is a recurring survey, these specific questions were associated with a pilot test effort from the UNH Food Systems Lab and the Carsey School of Public Policy. They represent the most recent available, although related data collection completed in summer 2023. See https://www.unh.edu/unhtoday/2022/06/serving-new-england-farmers for details on that project.

[xvi] In the Granite State Poll, the question appeared as "Which options (if any) for buying local farm foods are easily available to you, whether you've used them or not?" with respondents being asked to select degree of ease across multiple sites. Percentages here include those who answered that a given site was "somewhat" or "very" easy. In the CCFAN survey, the question appeared as "Which options (if any) for buying local farm foods are easily available to you, if you were to choose to buy local foods?" Respondents selected sites from a list, without indicating degree of ease in access.

[xvii] Carsey School analysis of U.S. Census Bureau, American Community Survey, 2021 5-year estimates.

[xviii] Ibid.

[xix] Carson, Boege, and Schwaner. 2023. "A Descriptive Study of Covid-Era Movers to the Northern Forest Region." Durham, NH: Carsey School of Public Policy, University of New Hampshire. https://carsey.unh.edu/publication/descriptive-study-of-covid-era-movers-to-northern-forest-region.

[xx] Economic Research Service. 2015. "County Typology Codes." Washington, DC: U.S. Department of Agriculture. https://www.ers.usda.gov/data-products/county-typology-codes/.

[xxi] Ibid.

[xxii] U.S. Census Bureau, American Community Survey, 2021 5-year estimates and New Hampshire Department of Health and Human Services SNAP enrollment data. Special thanks to Phil Sletten of the New Hampshire Fiscal Policy Institute for sharing state data and geographic crosswalk materials.

[xxiii] New Hampshire's new SNAP outreach plan, in part, aims to address this discrepancy. https://newhampshirebulletin.com/briefs/snap-outreach-money-coming-to-new-hampshire/.

[xxiv] For instance, see Herd, Pamela and Donald P. Moynihan. 2018. Administrative Burden: Policymaking by Other Means. New York: Russell Sage Foundation. https://www.russellsage.org/publications/administrative-burden; and Barnes, Carolyn, Sarah Halpern-Meekin, and Jill Hoiting. 2023. "'I used to get WIC but then I stopped: How WIC Participants Perceive the Value and Burdens of Maintaining Benefits." *The Russell Sage Journal of the Social Sciences* 9(5): 32-55. https://doi.org/10.7758/RSF.2023.9.5.02.

[xxv] For definitions of each type of retailer see endnote vii above.

[xxvi] Carsey School analysis of New Hampshire Department of Health and Human Services. Special thanks to Phil Sletten of the New Hampshire Fiscal Policy Institute for sharing data and geographic crosswalk materials.

[xxvii] Feeding America. 2021. "Map the Meal Gap."

[xxviii] See https://newhampshirebulletin.com/briefs/snap-outreach-money-coming-to-new-hampshire/.

[xxix] See, for example, https://www.nhfoodalliance.org/blog/2023/06/call-partners-new-hampshires-snap-outreach-program.

[xxx] Feeding America. 2021. "Map the Meal Gap."

[xxxi] Department of Education data show that just over one-quarter of Carroll County students were eligible for free and reduced-price lunch (FRPL) in 2021-2022. This overall rate masks substantial in-county variation: rates range from one-in-twenty students in Jackson to one-in-two in Ossipee and Tamworth. Although this variability may offer some insight into within-county inequities, these data should be interpreted with caution, given pandemic-era flexibilities in school lunch programs that affected schools' ability to consistently capture true eligibility data.

[xxxii] See, for instance, https://www.wmur.com/article/food-pantry-manchester-grocery-store-new-hampshire/41849510.

[xxxiii] See https://nhla.org/services.

[xxxiv] The Carsey School of Public Policy has a subfund on this project, for Jess Carson to support the development of a consumer survey. The overall project is led by Dr. Analena Bruce and is entitled "Developing Mediated Market Models to Increase Consumer Engagement and Market Access for New England Farmers." See https://projects.sare.org/sare_project/lne22-436/ for more.