



Wyoming Food Systems Assessment

Prepared by NourishedRx on behalf of the
Wyoming Department of Family Services

November 2023-April 2024

Dedicated to the people working to build a future Wyoming without hunger.

We are grateful to the enormous help of individuals and organizations around the state of Wyoming, without whom this work could not have been accomplished.

Cent\$ible Nutrition
Central Wyoming College
Cheyenne Veterans Administration
Eat Wyoming
Edible Prairie Project
Feeding Laramie Valley
Food Bank of Wyoming
Hughes Foundation
Northwest and Rocky Mountain
USDA Regional Food Business Center
Papa Joes Produce
Poverty Resistance
Rooted in Wyoming
Salvation Army Cheyenne
True Foundation
University of Wyoming GIS
Vertical Harvest
Wind River Food Sovereignty Project

Wyoming Business Council
Wyoming Community Foundation
Wyoming Department of Agriculture
Wyoming Department of Education
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Wyoming Department of Health
Wyoming Food Bank
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Wyoming Heritage Grains
Wyoming Honor Farm
Wyoming Hospital Association
Wyoming Hunger Initiative
Wyoming Public Radio
Wyoming School Boards Association
Wyoming Stock Growers Association
Wyoming Veterans' Commission

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Executive Summary

Wyoming has a history of proud self-sufficiency. It feels like a state of neighbors, with the understanding that people and regions are interconnected. And its regions are unique, with different needs, due to geography, weather, and an intentional mindset of taking care of themselves. Wyoming-based solutions that align with these qualities, such as the Food Freedom Act, have had an immediate and positive impact throughout the food ecosystem, benefiting both producers and consumers alike.

And at the same time, these characteristics have led to a fragile food system: Food pantries across the state are primarily run by (aging) volunteers, while facing an increasing number of clients in need. Whole regions of Wyoming are cut off from food supply chains when winter weather—or global pandemics—hit. And those most vulnerable—children, tribal members, veterans, farm laborers, the elderly, and the poor—are most at risk for being hungry, food insecure (not enough food), or nutrition insecure (not enough nutritious food). Subsequently, many suffer from diet-related chronic conditions.

During COVID-19, the Wyoming Department of Family Services (DFS) recognized the increasing risk of food insecurity in Wyoming, both to the individuals it serves as well as to the system as a whole. DFS applied for funding through the American Rescue Plan Act (ARPA) to specifically address food security, beginning with a systems analysis. DFS contracted with NourishedRx in Fall 2023 to conduct this analysis, assessing the current capacity of the food production and distribution system in Wyoming through a lens of food security. **With the triple aim of increasing food security for Wyomingites in need, decreasing food waste, and supporting local production, this assessment provides a framework to utilize the \$3 million awarded to the state of Wyoming through ARPA for utilization by the end of 2026.**

NourishedRx visited with individuals, teams, and organizations throughout Wyoming to address key questions related to the civil sector's ability to assist food-insecure individuals in the state. This included exploring logistical requirements to enhance food acquisition and distribution, strategies to boost local production, to understand the impact of food waste, and to meet the underlying needs of individuals and communities in terms of food security.

Wyoming is uniquely positioned to make a material impact on its food system—and could be a leading model for rural food systems:

Our recommendations follow Governor Gordon's *Survive, Drive, and Thrive* strategy of both meeting urgent needs while also laying the groundwork to solve more systemic issues. Based on the thoughtful ideas, solutions, feedback, and time provided from dedicated producers, food systems experts, organizational leaders, and volunteers across the state, NourishedRx offers the following recommendations to provide resources that enable short term food security wins and long term food system resiliency for Wyomingites:

Invest ARPA funds as follows as a catalyst for improving all levels of the food system:

- **\$1.4M** for forward-contracts between Wyoming producers and food pantries or other food security service organizations
- **\$695,000** for aggregation and distribution logistics
- **\$275,000** for statewide food systems coordination and collaboration
- **\$260,000** for connecting food insecure Wyomingites to resources to thrive

Inspire Wyoming to lead on food system security:

- Utilize federal funding mechanisms for large-scale infrastructure
- Establish local purchasing preferences with increasing volume targets
- Establish statewide food waste protocols and targets
- Establish a state matching fund for producer grants
- Establish pilot programs to integrate local producers with targeted health, nutrition, and education programs
- Build infrastructure for the production of Wyoming food products

We hope that this assessment will both inform the utilization of the one-time ARPA funds, as well as provide a framework for funders, policy makers, and food system leaders to strengthen the food system. Wyoming is positioned for resiliency and growth centering on food for those who need it and for those who grow it.



Why is this important?

Wyoming's culture has a clear core value of self-sufficiency; however, it finds itself at the end of a very long food supply chain, dependent upon primarily external sources. This is no news to anyone who has seen empty grocery shelves during a blizzard. The fragility of the larger food system that Wyoming is dependent on became readily apparent during COVID-19. Today, 61,200 Wyomingites are hungry, and 16,100 of them are children.¹

Wyoming's household food insecurity rate is 11.4%; its very low food security rate is 4.6%—meaning the food intake of household members is reduced and their normal eating patterns are disrupted because the household lacks money and other resources for food. Wyoming ranks 36th in food security in the US.² Out of Wyoming's 23 counties, five counties (Albany, Fremont, Hot Springs, Johnson, and Niobrara counties) have food insecurity rates over 12%.³ Summary information on Wyoming's food insecurity can be found in the [2023 Wyoming Foodscape through a Lens of Food Insecurity](#).

Food insecurity is associated with poor dietary quality, and those experiencing food insecurity are more likely to suffer from chronic diseases—which impact healthcare costs, which in turn can lead to increased poverty. This is often referred to as the cycle of hunger.⁴ At the same time, the chronic disease burden is growing across the state: 65% of adults are overweight or obese, and 30% have high blood pressure, and one in three adults in Wyoming are at high risk of developing type 2 diabetes.⁵ With food insecurity and hunger on the rise, the timing of this assessment is critical.

Over the course of this assessment, we often heard interesting—and competing—ideas about the food system in Wyoming. We heard the remark “we have enough here”—while food pantry leaders expressed fear that they cannot keep up with the need. We heard that it's impossible to grow much in Wyoming—while meeting farmers who are building season-extending infrastructure and producing lettuces, heritage grains, strawberries, and so much in between. Part of the work to be done is myth-busting around food system limitations: it can be done.

So many individuals, organizations, and networks are already working to improve food access for their communities: Wyomingites take care of their neighbors. The food system of Wyoming should, too. It just needs to be resourced to do so. Without a systems-wide approach, work will continue to happen in silos. We hope that this assessment will challenge the State of Wyoming to set a targeted goal and agenda to drive forward food systems change. Improving the food system could unlock big Wyoming wins—positive economic growth,⁶ better health for Wyoming, and longer-term sustainability with fewer people in need.



1 Feeding America, 2024. Data available [here](#).

2 Rabbitt MP, Hales LJ, Burke MP, Coleman-Jensen A. Household food security in the United States in 2022. 2023.

3 Feeding America Map the Meal Gap. Vol 2023/2022.

4 Webb P, Stordalen GA, Singh S, Wijesinha-Bettoni R, Shetty P, Lartey A. Hunger and malnutrition in the 21st century. *Bmj*. 2018;361.

5 The Wyoming Department of Health Chronic Disease Prevention Program reports Wyoming-wide statistics, [here](#).

6 The Center for Good Food Purchasing released a report showing how greater localization of food system activity yields economic gains and increased job opportunities. It is available [here](#).

Assessment: November 2023-April 2024

To respond to the question of how to utilize ARPA funding to increase food security, while decreasing food waste, and increasing local production, NourishedRx conducted this mixed-methods assessment in four phases (see Figure 1). The full methodology and results can be found in the [Appendix](#).

We first produced a literature review of published data and gray literature about the Wyoming food system and related topics, titled [2023 Wyoming Foodscape through a Lens of Food Insecurity](#) to identify publicly known data, knowledge gaps, and areas to explore in subsequent parts of the assessment. NourishedRx then conducted two surveys in parallel, one of the general public and one of all WY food pantries. The third phase consisted of stakeholder interviews, expert interviews, and three focus groups, each to further explore data, themes, and ideas identified within previous data or conversations. These focus groups focused on Logistics, Production, and Food Pantries, based on insights gathered during phase two and three. An overview of data collected can be seen in Table 1.

The NourishedRx team gained additional insights by visiting various food security organizations across Wyoming between December 2023 and April 2024. The fourth phase centered on the analysis of all of the collected data, the creation of an interactive food security map (including geographical displays of need and pantries), and the development of specific, actionable recommendations for the state of Wyoming.

Figure 1: Process of the Assessment

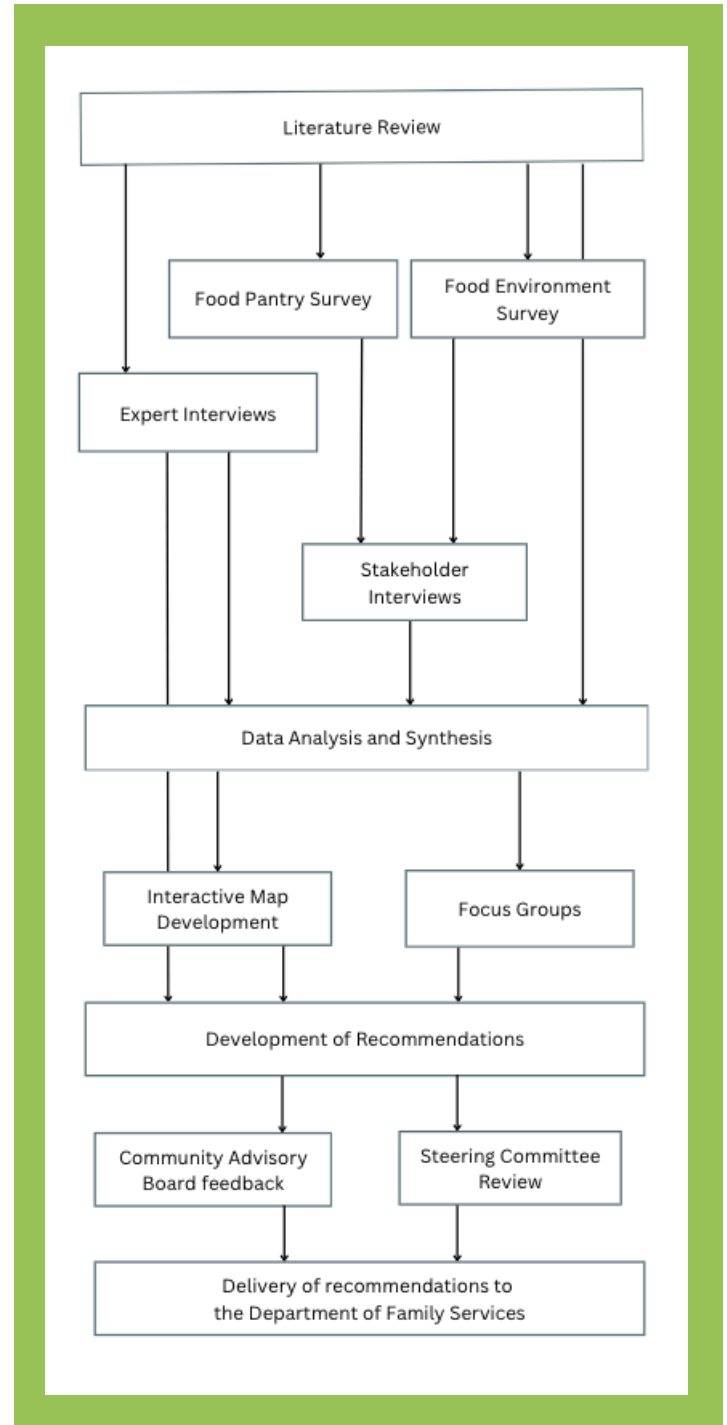


Table 1 : Summary of data collected

Assessment Segment	Count	Participants	Note
Literature Review	1		The literature review can be accessed here
Surveys	2		
Food Pantry Capacity Survey		136	49% response rate; responses from 100% of WY counties
Food Environment Survey		1995	responses from 100% of WY counties
Stakeholder Interviews	14		
Expert Interviews	34		
Focus Groups	3	28	58% response rate (Logistics, Producers, Pantries)
Observational visits	8		In-person at food security organizations

(Note: Data analysis may reflect different number of participants for both surveys due to missing or incomplete responses)

Literature Review

The [2023 Wyoming Foodscape through a Lens of Food Insecurity](#) contains a review of food insecurity, collecting relevant data on the Wyoming population and the most at-risk populations across the state. It explores the current (through December 2023) efforts to ameliorate food insecurity, including the work of food pantries, federal aid programs, and local charitable organizations across the state. The literature review then shares a food systems landscape review of Wyoming and comparable regions, focusing on Wyoming-based production, food waste and recovery efforts, transportation, and the role of food system conveners and policy councils. **The literature review sets much of the context for this Wyoming Food System Assessment, and is intended to be read in conjunction with it.**

The review ends with best practices from and for Wyoming, many of which are enumerated in this report. It also revealed several priority themes for further fact-finding for this assessment, which informed survey and interview questions:

- Overall capacity of the civil sector organizations serving food insecure Wyomingites
- Opportunities to address food and nutrition insecurity through targeted healthcare-driven nutrition interventions
- The importance of regional flexibility for the implementation of programs and solutions
- The food systems coordination role of a statewide food coalition or food policy council
- Highest-risk regions and communities, especially the Wind River Indian Reservation
- Low enrollment in federally funded food support programs
- Opportunities for supply chain and food distribution network changes or improvements

External Data Sets

During this assessment, NourishedRx encountered numerous food security organizations operating within the state of Wyoming. Notably, related research, assessments, or implementation projects had either recently concluded, or were simultaneously underway. These projects are key to understanding the current state of Wyoming's food system:

Insights from the Wind River Indian Reservation

One key insight developed during this assessment is that **US Census data inaccurately depict the realities of the Northern Arapaho and Eastern Shoshone communities** within the Wind River Indian Reservation, as census data include the city of Riverton, WY, within its boundaries. While US Census data reports that the median household income is \$58,266 and poverty level is 16%. **Data from the Wind River Foundation find that the actual median household income is \$25,000 for Eastern Shoshone and \$16,000 for Northern Arapaho, with poverty levels between 47% and 62%, respectively.**⁷

The present-day realities of Indigenous communities are thus subject to further erasure, as their food security levels, employment rates, income levels, and other data points key for state and federal decision-making (and funding) do not accurately reflect present-day needs. The Wind River Indian Reservation is planning to undertake a full census to share accurate and representative data.

Even with the highest unemployment and food insecurity rates in the state, the Wind River Reservation currently has no food banks within its borders. In August 2020, the Food Bank of Wyoming launched the pilot phase of the Culturally Responsive Food Initiative (CRFI), which provided resources to re-establish distributions on the Wind River Reservation; the Food Bank of Wyoming began two monthly mobile distribution sites, which continue today. Members of the Wind River community generated two important reports that should lead the design of food-based interventions in Wind River. In January 2022, CRFI funded the Wind River Foodography, a community photovoice project, for Wind River community members to define what they would like improved food access to look like.

Insights shared from community members led to the expansion of mobile food distributions, an elderhome delivery pilot, a pilot expansion for additional game meat tags for hunting and distribution back to the Wind River community, and recommended steps for the future establishment of food pantries.

In August 2022, the Numad Group, through the Boundless Collaboration project (grant funded by Feeding America, between the Great Plains Food Bank, Feeding South Dakota, Montana Food Bank Network, the Food Bank of Wyoming to assess how the region's food banks can best support American Indian reservation communities in a culturally responsive and equitable manner) shared the outcomes of a 2022 project to share the existing relationships and models that support food access,

⁷ The Wind River Native Advocacy Center and the Wyoming Office of Multicultural Health of the Wyoming Department of Health published the report *In the Heart of Wyoming is Indian Country*, available [here](#).

and what opportunities exist to bolster these relationships, systems, and specific food options within the Wind River Reservation. They included:

- ▶ Coordinate with other food-access and food-adjacent organizations to create awareness of resources across the Wind River Reservation
- ▶ Identify options and partnerships to address transportation barriers
- ▶ Support the development of food pantries
- ▶ Partner with organizations focused on food sovereignty

Federal tax code currently requires all organizations receiving Food Bank donations to be a registered 501c3 organization or a faith-based institution. The Food Bank of Wyoming is supporting Feeding America's current pursuit of a policy change to also include sovereign indigenous nations to this rule. In the meantime, the communities of Wind River need a massive investment in economic development, health systems, and the ability to produce and procure nutritious foods.

Simultaneously, several native-led organizations, including the Wind River Food Sovereignty Project, Restoring Ancestral Shoshone Food, and the Wind River Tribal Buffalo Initiative are leading food sovereignty work within Wind River, and are in the early phases of bolstering local food production. Agencies, funders, or philanthropists interested in supporting food sovereignty in the Wind River Reservation should prioritize native-led efforts and organizations delivering on the requests directly from the Wind River community.

A group of Wind River leaders is currently (Spring 2024) meeting to establish a native-led 501c3 nonprofit organization that will serve as the umbrella for two brick-and-mortar food banks to be built and operationalized.

Insights from the Cent\$ible Nutrition Program

The Cent\$ible Nutrition Program (CNP), Wyoming's SNAP-Ed program through the University of Wyoming Extension, performed a food pantry user survey during the same time as this assessment.⁸ Upon learning this, NourishedRx altered its original research plan, removing the food pantry user focus group, to not duplicate the effort asked of food insecure Wyomingites, and instead utilized their data, below, and shared back (aggregated, de-identified) NourishedRx data with the CNP team.

The Cent\$ible Nutrition Food Pantry Experience Usage Survey, focused on food pantry user needs, behaviors, and preferences across Laramie, Uinta, Natrona, Albany, and Fremont counties.⁹ Respondents completed the survey during a pantry visit. Importantly:

- ▶ 39% responded that they visit that pantry **once a week or more**
- ▶ 36% responded that **more than half of their food comes from that food pantry**
- ▶ 3% responded that **all of their food** came from a food pantry
- ▶ 9% responded that it was their first time visiting the pantry
- ▶ 11% responded that they had been using this food pantry for about a month
- ▶ 52% responded that they had been **utilizing the food pantry for more than a year**
- ▶ 92% responded that they had to **make a choice between food and other expenses** in the past

⁸ The Supplemental Nutrition Assistance Program - Education (SNAP-Ed) focuses on nutrition education for people participating in SNAP, including healthy eating, safe food, staying active, stretching food dollars, and more.

⁹ The initial analysis of the study data was shared in the Wyoming Food Coalition's Healthy People Working Group Committee April 8, 2024. The full data analysis from the Cent\$ible Nutrition report will be key to further understanding the needs of food insecure Wyoming residents.

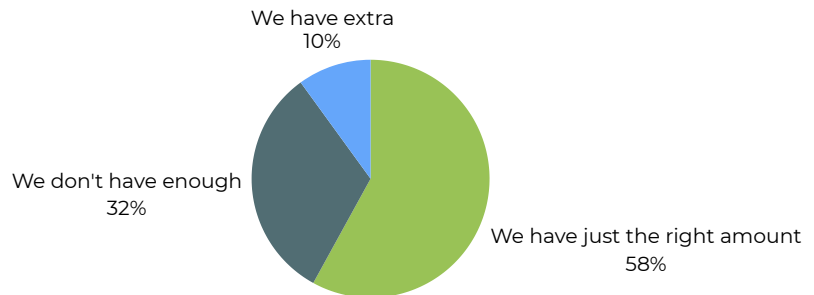
NourishedRx Survey Data

The NourishedRx Food Pantry survey shared several key insights:

Detailed results of the survey data are available in the [Appendix](#).

- 46 of the 136 responding pantries (**34%**) responded that they do not have enough physical space. No significant relationships existed between the location and lack of space, nor between their institutional affiliation and lack of space—the **issue of lack of space is occurring across Wyoming**.

Figure 2: Food Pantry Physical Space
Pantry Ratings of Amount of Overall Physical Space



- About **60% of surveyed pantries purchase over 50% of all of their food**, highlighting the potential for local and regional sourcing.
- The top three reported reasons for non-participation in the USDA food distributions included: lack of capacity or resources, philosophical reasons, lack of awareness—**24 pantries mentioned that they were unaware of USDA programs**, highlighting the ongoing need for statewide coordination, communication, and operational support.
- **56% of survey respondents answered that they had no forms of transportation for their pantry**—and are thus dependent on volunteers and regional stores dropping off goods, and unable to connect to local food hubs.
- **53% of all responding pantries had no paid staff working in their facilities**—highlighting the incredible fragility of getting food to people in need. Many pantries expressed a desire to hire more full time staff and to increase their wages. In addition, many pantries noted that their volunteer force would benefit from a younger and more diverse population.
- **78% of pantries reported their food waste reduction efforts as “excellent” or “good”**.



The NourishedRx Food Environment survey also shared public feedback:

- Food assistance was statistically significantly associated with food security. Neighborhood type—between rural, suburban, and urban—was not.
- Time to travel to the nearest grocery store was not statistically significantly associated with food security—highlighting yet again that **the experience of food insecurity is not limited to certain geographic locations.**
- **38% of participants reported being willing to spend more for locally produced foods.**

The Food Environment survey concluded with an open-ended question, “if you can change one thing about the Wyoming food system, what would it be?”. The key themes of those responses were:

- Increasing food access and availability
- Improving quality, healthfulness, and diversity of food
- Increasing community support and assistance programs
- Appreciation of local efforts and the wish to replicate successful ones
- Fixing transportation and distribution issues
- Changing the economic factors driving food insecurity

Food pantries are facing shared challenges: space, operating capacity, procurement, and funding—against an increasing demand for their services in recent years. The Wyoming public seems hyper-aware of these challenges, mirrored across the food system, comprehending the transportation and distribution issues and the underlying need for increasing economic security as a core solution to food insecurity. The full methodology and results can be found in the [Appendix](#).



Synthesis of Key Themes

NourishedRx met with individuals, organizations, and agencies across the state of Wyoming throughout this project, and spent time at gatherings of key stakeholders including the Wyoming Stock Grower's Association December 2023 meeting and the Wyoming Food Coalition February 2024 conference. We invited stakeholders from various organizations within the food system to formal interviews to share information about the operations of their organizations, their views on the Wyoming food landscape and current efforts, challenges in the Wyoming food provision system, capacity, and their vision for the future.

The NourishedRx team consistently heard alignment across issues from stakeholders even from seemingly disparate industries including:

- 1 Organizational capacity limitations across sectors
- 2 Parallel programming and the need for a coordinating body and vision
- 3 Food pantry procurement and general food transportation challenges
- 4 Low enrollment in federally financed programs as a key challenge to food security
- 5 The link between food insecurity and diet-related chronic conditions
- 6 Producer / market connection challenges
- 7 Wyoming state policy challenges and missing out on funding opportunities

Theme 1: Organizational capacity limitations across sectors

Organizational capacity repeatedly surfaced as a key theme across conversations, interviews, and focus groups, and centered on three major issues: staffing, the ability to acquire funding, and ability to coordinate and connect with others within the food system due to both time and distance. Given the vast number of organizations working in support of food production, food security, hunger alleviation, and distribution, [as noted](#) in the Literature Review, it is clear that the food system is full of hardworking, thoughtful, and innovative leaders—and the provision of coordinated organizational support is needed.

Individual organizations often execute the same work in parallel—each applying for grants, each coordinating food rescue efforts, each thinking about the logistics of acquiring food. Food pantries, in particular, are in need of combined infrastructure to utilize when needed—without duplicating efforts and each facing increasing costs.

“No producer who [even] has any time is going to be able to do a 60-page grant...there's a lot of bookkeeping that goes with it after you get a grant and so sometimes that's kind of hard.”
—a local distributor

Farmers, producers, food pantry staff or volunteers, and the civil service organizations running food security work repeatedly reported that they often do not have time to apply for grants and then manage funding and reporting. This is especially true for larger and more complex grants from the state or the federal government, even as those grants are often of the size required for large-scale infrastructure improvements. Thus, Wyomingites lose out on much-needed infrastructure and technology upgrades as well as funding streams that would sustain their work.

Theme 2: Parallel programming and the need for a coordinating body and vision

The feedback that individual organizations are lacking the capacity to coordinate and collaborate with other organizations, given the overall lean infrastructure of most groups, highlights the need for a coordinating function across the state. Regional flexibility will continue to be important for various parts of the food system, but NourishedRx heard the clear call for improved coordination and ownership of strategic regional or statewide initiatives.

Critically, Wyoming food systems leaders need a mechanism to develop a shared vision for the Food system of Wyoming, to establish a set of priorities for short and long term changes, and coordinate the activities of the disparate organizations to improve efficiency, transparency, and reporting.

NourishedRx also heard the feedback about duplicative work happening in parallel across the state. Some of the most interesting, and valuable, sets of learnings from this assessment was the regular feedback that NourishedRx was bringing together groups that do not typically connect on their own. One example centered around mapping the food security system of Wyoming: while scoping the development of an interactive food security [map](#). NourishedRx discovered six other mapping initiatives happening in parallel. Each focused on slightly different core areas (e.g. mapping producers in the state for direct-to-consumer markets, mapping social service requests via 211 and mapping for distribution route planning); connecting data and coordinating outputs would eliminate duplication and strengthen the power of these types of tools.

Theme 3: Food pantry procurement and general food transportation challenges

The food pantry network is vast, with 280 within the state. Food pantry leaders repeatedly [reported](#) key challenges to the procurement of food. From total budgets limited by donations against an increasing need, to the risk of food waste recovery programs relying on individual volunteers at a grocery store (who may, for example, be on vacation for a week or two and thus stop providing food to the local pantry at that time) to repeated reporting about lack of reliable pantry [transportation](#), NourishedRx heard the clear need for final-mile delivery capabilities to the organizations serving people most in need.

**"Need is high, there is only so much we can do with free food.
Large, systemic change is needed."
—a food pantry leader**



Participants in the Logistics Focus Group discussed the hub and spoke models of infrastructure at length, supporting the stakeholder interview data that suggested that the overall food system of Wyoming needs regional aggregation, distribution, and production hubs to distribute foods across the state. The USDA Agricultural Marketing Service (AMS) found that the development and enhancement of local supply chains by supporting local contractors to serve as the intermediary between farmers and recipients, while addressing food insecurity, [also had the added benefit of strengthening regional economies.](#)

“There is so much need in the state. I do really think that the distribution network might be the bigger problem even beyond increasing production or processing capacity”.

–a Wyoming producer

“Another thing that we found out was that Wyoming is not set up for one hub spoke out. What we have to do is have one central hub that coordinates six other regional hubs around the state because of the vastness of the geographic area.”

–a Wyoming distributor

The whole of Wyoming's food system is challenged by transportation. Stakeholders pointed to a lack of reliable distribution routes, which, for large state purchasers, only allows for national suppliers. Regional hubs, interspersed at key aggregation and distribution points, enable growth for smaller players within the food system. There seems to be a growing understanding that Wyoming has the producers and the buyers for an increasing number of local goods, but struggles with the infrastructure and policies to support it further.

“The biggest cost of all of this is transporting because it's ten-hour drives...paying a decent wage to a driver. Basically a ten-hour drive is \$150 right there, you know, with nothing else.”

–a Wyoming distributor

“There's not a lot of hauling that's just within the state, where people can back-haul back and forth. And so then the routes just become inefficient and not meaningful to larger distributors that are, you know, running from Salt Lake or Denver or whatever it might be.”

–a Wyoming state agency



Theme 4: Low enrollment in federally financed programs as a key challenge

Despite high numbers of Wyomingites facing food insecurity, Wyoming has consistently low engagement with federal assistance programs. For example, only 54% of the population eligible for SNAP are currently enrolled – meaning 23,000 people who are eligible are not getting food assistance.¹⁰ Little safety exists for those who are reliant on Wyoming’s food pantries, and when the aforementioned statewide transportation, procurement, or funding issues (or weather) hit the pantries, those who are most at risk bear the consequences.

“I think we're based a lot on the total Wyoming population [so federal funders think] *they're small, so they don't need a lot.* But if they would base it more on need, I think that would be helpful. Just because we're small doesn't mean we need less.”

–a Wyoming stage agency

Stakeholder interviews added context around the low enrollment numbers for SNAP and free school lunch programs. Stakeholders pointed to restrictive policies, gaps in Wyoming counties providing free lunch, and lack of funding for and capacity for local organizations to implement other solutions in place of free lunch programs or EBT.¹¹

Theme 5: Link between food insecurity and diet-related chronic conditions

Stakeholders acknowledged the interplay between food access challenges and diet-related chronic conditions. Some work is already underway in this realm, like the ten Diabetes Prevention Programs (DPPs) that are active across the state. In particular, stakeholders observed that Wyoming ranchers and growers could play a key role in providing sources of fresh and healthy food to residents experiencing diet-related diseases, thereby positively impacting economic opportunities for the growers and health outcomes for the residents.

“We are really interested in Wyoming grown food... being strategic with local food producers is a good avenue.”

– a Wyoming Department of Health leader

¹⁰ USDA. <https://www.fns.usda.gov/pd/supplemental-nutrition-assistance-program-snap>

¹¹ Electronic Benefits Transfer (EBT) is the electronic system that allows SNAP participants to pay for food using SNAP benefits. In regions where there are no summer lunch programs nor summer EBT, children eligible for National School Lunch do not have access to summertime food support.

Theme 6: Producer / market connection challenges

Local production was a point of Wyoming pride identified across stakeholders, with a deep understanding of the challenging market incentive issues for producers and buyers, like the significant price differences between local production and commoditized goods. There is a lack of infrastructure for producers in storage, processing, packaging, and selling of both crops and also value-added products—forcing some of this processing and packaging out of state.

“So I have to go to Rapid City and pay for storage. And their storage is, like, super reasonable. But it's in Rapid City. It's 140 miles away from me. So that's frustrating.”

—a Wyoming producer

“There's no one reliably kind of connecting those things or local producers to access the broader state market in a way that would and would, you know, incentivize greater production.”

—a Wyoming producer

“So we produce all of these raw agricultural products, and then we export them out of the state somewhere else for the most value, adding pieces of the whole production process, and then we buy them back into our state. So most of the beef that we produce is born here, raised here, and then the last 3 to 6 months they're finished in a feedlot, and then we buy them back through Walmart, or whatever, and that pretty much sums up our food system and its current state.”

—a Wyoming food systems leader



“We don't have one co-packing plant.”

–a Wyoming state agency

A focus group on production within Wyoming also brought in the previously unidentified **theme of labor and education challenges, highlighting the aging producer population as a key risk to local production writ large.** Participants recognized that there is a shift in preference for local, healthier foods—but belief in the myth that nothing grows in Wyoming. Local producers want to continue busting that myth, but need some structural support to do so—highlighting the barriers (often in the matching requirements) for larger grants.

Theme 7: Wyoming state policy challenges and missing out on funding opportunities

The combined forces of a lean state infrastructure and a lack of a central body for coordinating food systems efforts have contributed to work happening in silo, duplication at organizations, and the lack of a coordinated vision to drive food systems improvements. Wyoming is the last state to launch a food policy council—with the establishment of the Wyoming Food Coalition in 2019—and a growing body of evidence suggests that the presence of active Food Policy Councils results in increased healthy food policies and ensuring local access to healthy foods. The [Literature Review](#) shares practices of food councils in similarly rural and frontier states that Wyoming could follow: Alaska, Idaho, and Montana.

One example of a lack of programming due to lean infrastructure is the Farmers Market Nutrition Incentive programs: these programs, which could supply at-risk moms and babies on Women Infant and Children support (WIC) as well as at-risk seniors access additional fruits and vegetables straight from Wyoming producers, currently do not exist due to a lack of funding of state administrative positions to coordinate them statewide. State programs and policies relating to food sit between various state agencies, including the Department of Agriculture, the Department of Family Services, and the Department of Health, and could also benefit from a singular coordinating vision.

An example of lack of clear ownership, and potentially capacity, occurred when multiple organizations wanted to apply for the Resilient Food Systems Infrastructure (RFSI) grants from the USDA—while food systems teams wanted to apply, neither the Department of Agriculture nor the Department of Family Services, were initially able to sponsor the application. Wyoming was ultimately granted an extension for application—which the Department of Agriculture estimates will be opened in Spring 2024—but without other key food systems leaders aware that the state will in fact receive RFSI funding.

“There just needs to be a little more state infrastructure...because we [often] miss out.”

–a Wyoming food systems leader

What does this tell us about Wyoming food system?

By combining the publicly shared data, the new Cent\$ible Nutrition and NourishedRx data, and insights from Wyomingites across industries and organizations within the state, it is clear that the Wyoming food system is fragile—and the most at-risk Wyomingites are the first to feel fractures in the system. However, Wyoming has unique strengths, and ones that could reshape the food system, and set a leading example for building food resiliency in rural communities.

Strengths

- **Hunger myth-busting by the Wyoming Hunger Initiative led by First Lady Jennie Gordon**, changing the narrative around hunger to one focused on helping neighbors in need
- **Food-forward policy development for smaller producers** in the 2015 establishment of Food Freedom Act, allowing small-scale producers to bring home-grown and made goods to market, as well as the enablement of state meat processing facilities for in-state purchase and consumption
- **Express route development by the Food Bank of Wyoming for delivering fresh produce** to pantries and people in need of nutritious foods both rescued and purchased from distributors in the Wyoming
- **Success of the Local Food Assistance Cooperative Agreement Program (LFPA) of the Food Bank of Wyoming**, demonstrating the viability for large-scale purchasing of foods from Wyoming producers
- **Regional food pantry coordination** also through the Wyoming Hunger Initiative, increasing cross-pantry support and collaboration on food waste and recovery efforts
- **A state of neighbors** with a high degree of community connectivity, support, and interest in increasing Wyoming-based solutions
- **Regional geographic realities driving regional resilience** with innovative partnerships already occurring between food pantries and local grocery stores for food rescue, innovators building small food hubs, and community colleges serving as a nexus for agriculture and food system innovation
- **Active engagement in building a local protein supply chain** including state processing facilities, active 4H programs, an abundance of game meat, the backpack jerky programs, along with the growing awareness of the importance of local protein sourcing

Weaknesses

- **An increasing number of Wyomingites relying on food pantries**, as shared by food pantry leaders across the state and mirrored by the Food Bank of Wyoming's witnessing of at 15% increase at its mobile food banks between 2022 and 2023
- **Lack of coordination between organizations** across the food system, with multiple initiatives carrying out similar work without any centralized support or coordination
- **Lack of integration between the food and health systems** of the state, leaving high-risk patients at risk of not getting the nutritional support required for their care
- **Overburdened state agencies** that support state food security programming and hunger relief across the state, but are too lean to implement additional food security programming
- **Deeply at-risk populations** with the least accessibility to Wyoming's food system, including the Wind River Indian Reservation, poor children, veterans, and the elderly

- **An underfunded civil sector, including nonprofit, faith-based, and philanthropic entities that deliver social services** across the state that have been tasked with providing for hungry children, especially in schools that do not participate in school lunch or summertime feeding programs
- **Lowest SNAP and WIC enrollment rates in the country** with 46% of eligible Wyomingites—roughly 23,000—not getting the proven food security support from SNAP. 18% of Wyoming women who had children in 2021 did not obtain prenatal care during their first trimester¹³ and only 43% of eligible WIC participants received benefits in 2023; funding and programming to help ensure families can make ends meet and babies have a solid foundation at the start of life are deeply underutilized

Opportunities



- **Following on the Wyoming Hunger Initiative's momentum to change the stigma around hunger** and facilitate neighborliness as the driving force behind social support programs, designed to keep families thriving and more resilient in the face of financial shocks
- **The potential for a centralized food systems coordinating body** to support organizational collaboration, grant writing, and tackle discoordination and duplication among organizations
- **Mobilization of coordinated philanthropic institutions to fund food systems improvement**, including private donors, family foundations, and county-focused funding at the Wyoming Community Foundation
- **Utilizing regional resiliency to build out regional infrastructure** for aggregation, storage, and distribution, increasing weather resilience as well as increasing market potential for local producers and buyers
- **Create ownership for streamlining funding for food systems improvement** by designating clear ownership between the Department of Agriculture, Department of Family Services, Nutrition Programs of the Department of Education, health systems, and civil organizations
- **Investments in the infrastructure** that enables the growth of economically driven programs, such as the Farmers Market Nutrition Programs for women and children and at-risk senior Wyomingites, or food purchasing for healthcare program delivery
- **An opportunity to increase food waste reduction** by expanding on the strong examples of food rescue [across the state](#) to challenge all grocery retailers and restaurants to rescue or compost foods for producers

Threats



- **Food pantries continue to rely on an aging volunteer population** without a coordinated response to train a next generation of volunteers
- **Continued loss of major funding streams without clear ownership pathways** at the state level, with massive missed opportunities for structural food system funding
- **Economic loss from lack of value-added capabilities** and all Wyoming-made products created for national distribution requiring packaging in CA, UT, and other states
- **Ongoing weather or national supply chain shocks** that will continue to interrupt food services until regional resiliency is increased through internal production
- **Excessive grocery retailer consolidation and increase in profits** that rose during the COVID-19 pandemic continues to reduce the financial capability of grocery buyers¹⁴

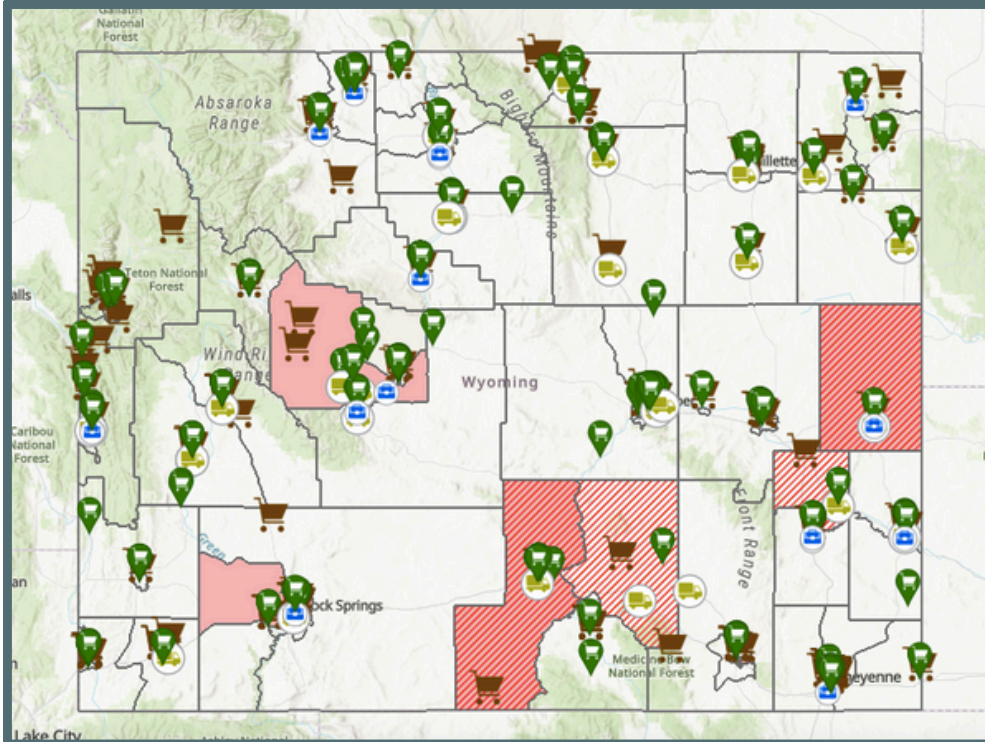
¹³ 2023 Healthcare Scorecard on State Healthcare System Performance.

¹⁴ The Federal Trade Commission released the report "Feeding America in a Time of Crisis: The United State Grocery Supply Chain and the COVID-19 Pandemic" in March 2024. It revealed that large market participants accelerated and distorted the negative effects associated with supply chain disruptions during the pandemic, and that some in the grocery retail industry continue to elevate prices for profit, not due to supply chain costs. The report is available [here](#).

What Remains to be Learned?

Food Security Mapping

The NourishedRx team partnered with the University of Wyoming GIS department, and with the input of national food system mapping leaders to build a map of all food security service organizations in Wyoming. The map highlights the relationship between population density, poverty levels, geographic distances, and distances to food pantries as well as grocery and convenience stores. Together, these data will help food system leaders comprehend needs—and where they are not being met—across the state.



The map is accessible at <https://foodsecurity.wygisc.org/>. This map will be combined with other food system mapping projects that are currently (Spring 2024) underway within the state of Wyoming, and will continue to grow as a resource for food systems leaders under the coordination of the Wyoming Food Coalition.

Limitations of this Assessment

We are grateful for the generous welcome from people and organizations across sectors during the course of this assessment. NourishedRx recognizes that we were unable to capture every perspective within the state and were limited in terms of time and capacity to follow every possible idea. We offer two specific areas for further exploration and analysis here, share limitations we recognize within our own data and methods within the [Appendix](#), and welcome this assessment to open conversation about additional food security needs in the state.

Food Waste

When examining waste at the food pantry level, three main points became clear.

- The Food Bank of Wyoming is leading the pantry-grocery retailer coordination effort for systemic food recovery across the state, and should remain so, given its vast transportation and cold-chain capacity required.
- Participants repeatedly shared that grocery retailers are becoming more efficient, meaning less food is becoming available from this mechanism.
- The most nutritious foods (produce, particularly) often are at the very end of (or beyond) their viability by the time they are donated from a retailer, meaning people aren't getting nutritious food and end-user waste can be high.

As feedback directed our focus to considering how to best get high-quality foods to those who need it most, NourishedRx did not examine food waste from other parts of the food system, including restaurants or fast food locations. We recommend that the [organizations already focusing on food waste recovery in Wyoming](#), and nationally, be brought together to further examine and quantify the need for state-wide food waste and recovery efforts.

Unreported unmet needs

We recognize that additional groups of people in Wyoming may face similar underreporting similar to that within the Wind River Indian Reservation. The Spanish-speaking population of farm laborers and their families face food insecurity rates of 20-68%,¹⁵ while at the same time playing a critical role in the Wyoming food system. We recommend that further resources be directed to examining and correcting the food systems imbalance for some of its most critical workers. We also recognize that the 16,100 hungry children in Wyoming are also unable to advocate for themselves, and multiple non profit organizations shared anecdotal evidence of an increasing trend of grandparents raising their grandchildren—and potentially not qualifying for needed support. If we wanted to ensure that no child in Wyoming is hungry, a similar deep dive analysis would be required to answer where current gaps are in meeting that need.

How Could Wyoming Lead?

While the primary purpose of this assessment is to determine how to best utilize the one-time ARPA funding for food security, the state of Wyoming is at an inflection point—and could choose to lead in building a resilient food system that supports its producers, improves the wellbeing of its residents, and grows the Wyoming economy. We offer the following recommendations as a backdrop for larger food systems investments for the state, public, and private funders that would enable a new era for food-based innovation, based on the input of producers, suppliers, purchasers, and residents across the state:

- 1 Utilize federal funding mechanisms for large-scale infrastructure**, including the USDA's Resilient Food Systems Infrastructure (RFSI) [grants](#) and FEMA's Building Resilient Infrastructure and Communities (BRIC) [grants](#), each intended for large-scale infrastructure, the latter specifically geared towards building resilience against future disaster-created risks (like food supply chain outages due to blizzards).
- 2 Establish local purchasing preferences and increasing volume targets** for state industries, including education and healthcare. New local purchasing targets should be set at lower levels and increased gradually over time, and with price percentage preference targets against standard goods.¹⁶
- 3 Establish food waste targets** to ensure all grocery and other food retail companies partner with local organizations for food recovery, resourcing and working with the Food Bank of Wyoming for planning and logistics support.
- 4 Establish a state matching fund pool** that smaller and medium-sized producers can utilize against matching funds requirements for large-scale USDA grants for farm, ranch, or production infrastructure needs, eliminating the financial barrier requiring up-front matching from producers for large grants.
- 5 Establish pilot programs to integrate local producers with targeted health, nutrition, and education programs**, for vulnerable populations (e.g. members of the Northern Arapaho and Eastern Shoshone communities, veterans, or those with uncontrolled diabetes or high risk for poor maternal and fetal health outcomes), and by permanently funding the Farm to School program of the Department of Education.¹⁷
- 6 Build Infrastructure for Wyoming products**, like a contract packaging (co-packing) plant, within the state of Wyoming. Value-added products are currently shipped out of state for processing and packaging, and returned to Wyoming before final points of sale. Further quantification of the economic potential should be conducted, but as local production increases, it seems logical to provide an outlet for WY-based product development.

¹⁶ The State of Maine offers a policy example for local food purchasing standards that increase over time. An overview can be found [here](#). The Colorado Food Systems Council collated a 50-state policy scan on the role of state procurement policy for buying local CO foods, which can be found [here](#).

¹⁷ Funding for Food Is Medicine is increasing nationally, but Wyoming is [missing out](#) on ProduceRx funding. Further connectivity between the producer and healthcare communities could further Wyoming-based solutions.

Immediate Solutions for Increasing Food Security

NourishedRx recommends the following initiatives to tackle the most immediate food security challenges within the state of Wyoming, using the one-time ARPA funding as a catalyst for systemic changes that will strengthen food system resilience and lay the foundation for future economic growth.

1 Invest \$1.4M in forward-contracts between WY producers and food pantries or other food security service organizations

The immediate problem is that 61,200 people are hungry, and we recommend anchoring a significant portion of the ARPA funds to increase the local, nutritious foods available at local food security service organizations. Following the successes of the Food Bank of Wyoming's Local Food Purchasing Agreement, the Wyoming Hunger Initiative's Grow a Little Extra, and the Wind River Food Sovereignty Project's small producer granting program, we recommend catalyzing the producer community and enabling local market growth for produce, grain, and protein purchasing. By utilizing these additional funds for fresh foods for local food procurement, not donation, it also strengthens the medium-term capacity of the Wyoming food system and prepares producers for potential growth to follow these one-time funds.

Details

- Need-prioritized grants to enable forward-contracting between a pantry, or similar food distribution organization (e.g. a senior center), and a local producer (produce, protein, or grain) for two years (2025-2026 seasons)
- Grants should be flexible in amount, depending on pantry need and producer capacity
- Producers should have flexibility in how to utilize funds to meet requested production, whether it be for purchasing inputs, infrastructure improvements, or other necessary expenditures to increase production
- A native-led organization to be responsible for the distribution of the portion of these grants intended for participants within the Wind River Indian Reservation

2 Invest \$695,000 in Aggregation and Distribution Logistics

Wyoming needs improved food aggregation and distribution capacity, to both shore up the resiliency of the current supply chain and serve smaller frontier communities, but to also build capacity for the growth in local food production and purchasing across the state. NourishedRx recommends financing the development of food hubs in regions that are currently underserved and require long-distance hauling—either with new equipment, or supporting the expansion of smaller, pre-existing, local food hubs. By supporting pre-existing regional food stores, Wyoming would build net new capacity and offer economic stability and reversal of the [trend of the dying rural grocery store](#). The Logistics Focus Group, which included stakeholders from large state purchasers, market aggregators, large-scale food distributors, agreed on a number of regions to prioritize for food hub development.

Details

- Finance the development and maintenance of multiple hubs throughout the state, at a rate that matches the ability to utilize these new spaces
- Utilize funds for either the expansion of cold chain or storage capacity in existing brick and mortar locations, or for purchasing of refrigerated trailers, trucks, and/or vans to serve as hubs and first and final mile pickup and distribution capacity, and their associated operating and maintenance costs
- Focus, first, on regions identified as areas most in need of shared infrastructure for aggregation and distribution of Wyoming goods: Green River/Rock Springs, Cody/the Big Horn Basin, and Sheridan/Gillette
- Coordinate efforts between The Food Bank of Wyoming with the Nutrition Programs of the Department of Education—two of the largest purchasers of food for those in need in Wyoming—with the food system logistics experts of the state, including the USDA Northwest and Rocky Mountain Regional Food Business Center, Central Wyoming College, the Wind River Food Sovereignty Project, and other key participants for further location development and optimal utilization of spaces

3 Invest \$275,000 in efforts to increase statewide food systems coordination and collaboration

The primary feedback that NourishedRx heard throughout this assessment was that the state is in need of a single hub for the coordination of food systems, providing groups and individuals the opportunity to collaborate on key issues. Part of this assessment underlined this point: during fact-finding calls, in meetings, or in focus groups, we witnessed and enabled conversations between entities that do not normally interact—one food pantry offering to run supplies for another, the Food Bank of Wyoming advertising their backhauling capabilities to other organizations contemplating how to move products around the state, and food systems professionals meeting one another for the first time.

The Wyoming Food Coalition (WFC), founded in 2019, is the natural organization to lead and convene food systems improvement across sectors. Wyoming was the last state to establish a food coalition, but has galvanized a growing and interconnected network across the state. NourishedRx recommends enabling the growth of the Wyoming Food Coalition to become the organization with the primary responsibility to drive collaboration—and accountability for—improving the Wyoming food system, and to lead the assessment of what is working, and not working, in growing a resilient food system.

As a first step, we recommend that the Wyoming Food Coalition gather the necessary stakeholders for decision-making for implementation of these recommendations.

Details

- Provide catalytic salary support for priority staffing and hiring, potentially including but not limited to the Executive Director, Director of Communications, or other roles
- Kickstart the ability for WFC to own, streamline, and direct statewide tools and directories for food system mapping
- Host convening meetings with food system stakeholders, specifically including those required to immediately implement the recommendations of this assessment

4

Invest \$260,000 to connect food insecure Wyomingites to resources to thrive

A food pantry leader remarked to us that while the disbursement of one-time funds would be nice, it would not change the fact their pantry has been steadily overwhelmed since 2020—what their pantry needed was massive capital improvement projects and structural investments to expand their services. Which, in the short term, is true—and yet also does not start to tackle **why they're seeing an ever-increasing number of Wyomingites unable to afford food.**

Many residents are falling through the cracks, when it comes to getting them the right services at the right time—and more families have suffered the consequences of global supply chain events completely out of their control in recent years. With an increasing cost of living, more and more families have reported that they're concerned about having enough resources. SNAP is the single most effective nutrition program in the US for reducing food insecurity and lifting families out of poverty—and is meant to be a stop-gap preventing Wyoming families from falling into further crisis, and preventing their needing future Department of Family Services (DFS) support. 46% of Wyomingites eligible for SNAP—roughly 23,000—aren't enrolled in this critical support program.

Simultaneously, if Wyoming achieved the national average rate of SNAP participation it would bring an additional \$38.6 million a year in grocery purchasing power and revenue to Wyoming producers and grocers. Each dollar in federally funded SNAP benefits generates \$1.79 in economic activity; **increasing Wyoming's SNAP participation rates to the national average would stimulate an additional \$69 million in economic activity in the state.** We recommend further economic analysis be done to understand how utilization of stop-gap programs like SNAP prevent downstream hardship, and costs, to both individuals as well as to DFS and the civil sector that provides social support.

One critical growth area for Wyoming is ensuring that applications for emergency and other stop-gap assistance programs are easy to access, and timely for a family where someone has just lost a job or faced some other emergency—services that come many weeks later might be too late. **Both SNAP and WIC applications are moving online in 2024, and NourishedRx recommends that this transition be handled as speedily as possible.**

Details

- Enable eligible Wyomingites to access critical food support by deploying a project coordinator at a statewide food security organization to convene existing outreach teams, including Cent\$ible Nutrition and food pantry staff and volunteers
- Train and deploy resources at current access points (e.g. food pantries, senior centers, daycares) to ensure at-risk Wyomingites obtain the resources they are eligible for

Recognizing the logistical support required to implement these solutions, especially solutions #1 and #2, we propose that the 15% overhead funding withheld for administration be utilized by local organization(s) to oversee, subgrant, and implement these recommendations.

18 SNAP Participation Rates by State, All Eligible People | USDA-FNS. Retrieved from www.fns.usda.gov/usamap. The financial gain calculation is based on 2023 SNAP individual enrollment and the actual average individual monthly benefit of \$178.62 in 2023, and on raising the state's current 54% participation rate to the national average of 82%. Thank you to Dr. Christine Porter at the University of Wyoming for the analysis.

19 Lacko, A., Bylander, A., Adams, S. (2017). The positive effect of SNAP benefits on participants and Communities. Food Research & Action Center. Retrieved from <https://frac.org/programs/supplemental-nutrition-assistance-program-snap/positive-effect-snap-benefits-participants-communities>

Why these ideas, and why now?

These recommendations are grounded in the regional model that serves Wyoming well—letting local innovations continue to flourish—while growing the connective capacity to increase food system resilience throughout and across the state. The goal is to utilize the ARPA funds to increase food security at the individual level, the service organization level, the producer level, the logistics level, and to enable coordination and communication at the state level.

By investing in the local food system through 2026, we hope that simultaneous gains in local production, local purchasing, local consumption, and local distribution leads to reduced food insecurity and better health of Wyoming residents, and better economic opportunities for Wyoming growers.

We view these funds as a catalytic opportunity, and recommend that other funders who are interested in expanding the capacity of the food system will both consider these priorities, and also follow the outcomes of the utilization of these funds. We presume by the end of 2026, when the ARPA funds are required to be spent by, the next set of aggregation and distribution hubs will be identified for resourcing and development. Producers who participate in supplying local food pantries may be interested in expanding their operations to respond to larger contracts with other state entities—and may be seeking additional grant support for expansion. And with the Wyoming Food Coalition centered as the coordinating food system organization, we foresee the potential for an endowment to provide ongoing resources to new projects identified from its systems-level viewpoint. Importantly, we see the Wyoming Food Coalition as a central resource to evaluate the outcomes of the efforts proposed in this assessment to know quickly what works well, and what does not, so that future funding can be used effectively and efficiently.

Wyoming can choose to lead in the development of food policies that support the growth of its local food system—timing the growth of purchasing power of currently food insecure Wyomingites to the growth of capacity of its producers, or timing state local purchasing minimums to production targets enabled by an infusion of funding. Better yet, Wyoming could choose to lead the Plains Rockies region in supporting its growers, young farmers and ranchers, and its at-risk consumers, by investing in the resiliency of its food system end-to-end, and enabling more communities of neighbors to continue to build more Wyoming-based food solutions for themselves.



Appendix

The Literature Review, 2023 Wyoming Foodscape through a Lens of Food Insecurity, can be found [here](#). Here are the methods for the primary data collection for this assessment:

Methodology

NourishedRx conducted two surveys in parallel: the Food Pantry Capacity survey, which surveyed the staff/volunteers of Wyoming food pantries, and the Wyoming Food Environment survey of the general public. Each survey was adapted from a previously validated tool: the 2015 Caster Family Center's Food Pantry Capacity survey and the Perceived Nutrition Environment Survey (NEMS-P)⁹, respectively. The Food Pantry Capacity Survey centered on the community needs and ability to respond—including physical capacity, transportation and logistics, staffing, and food pantry client participation. The Food Environment Survey focused on what Wyomingites are eating, where they get it, and how they feel about their food purchasing options, results of which highlighted differing community needs across Wyoming and areas for further exploration. Survey submissions were collected between December 2023 and February 2024.

The NourishedRx team conducted expert and stakeholder interviews between December 2023 and March 2024. We held 14 hour-long individual stakeholder interviews with producers, distributors, state and federal program staff, and other key leaders in Wyoming's food system. We asked Wyoming stakeholders to describe Wyoming wins and challenges in terms of food, to identify what it would take to support current success in some areas and pivot in others. Expert interviews were also conducted on more granular topics and were not uniform across interviewees; many of these interviews connected the NourishedRx to additional experts in the Wyoming food system, provided detail about particular topics, or disproved/validated ideas and themes.

The NourishedRx team also conducted three focus groups in early April 2024, each focusing on a different topic and with a different set of stakeholders: food pantry staff, food system participants focused on logistics and supply chain, and producers. The focus groups were conducted to uncover an additional level of detail from either the Food Pantry Capacity survey, stakeholder interviews, or information learned throughout the assessment.

Limitations

NourishedRx is aware of several limitations of this assessment, and also offers what we would change in approaching a similar assessment again. The Food Pantry Capacity survey results were limited by selection bias. While all pantries (280) were surveyed, only 136 responded. With the ability to opt-in to this survey, we are mindful that that data set is incomplete, and may be missing some specific data regarding the food pantry experience—and if the pantries that did not respond share any similar characteristics.

The demographics of the participants in the Food Environment Survey do not fully align with the [demographics of Wyoming](#). Of note, the survey respondents were more urban/suburban, male, Black, wealthier, and younger than is representative of the state of Wyoming. We assume that recruitment channels originating in larger cities or towns may have reached this audience more quickly or effectively than older, rural populations.

Both of these might have been ameliorated with a longer survey collection period; this assessment was limited in terms of time. We would also recommend that questions centered around food waste first ask for participants to define their current actions, prior to rating their efficacy.

Results

Food Pantry Capacity Survey

The Food Pantry Capacity Survey was sent to all food pantries in the state of Wyoming to understand the current overall capacity of the food pantry system to serve food insecure Wyoming residents, and to see if any relationships existed between various demographics, physical characteristics of the pantries, food acquisition strategies, USDA program participation, volunteer and staff capacity, pantry transportation capabilities, and local partnerships, on its capacity to serve. 136 (of 280) WY pantries responded, yielding statistically insignificant responses to many analyses, but nonetheless provided enlightening information regarding the current state of organizations responding to food insecurity.

Table 2: Pantry Capacity Survey sample characteristics (N = 136 pantries)

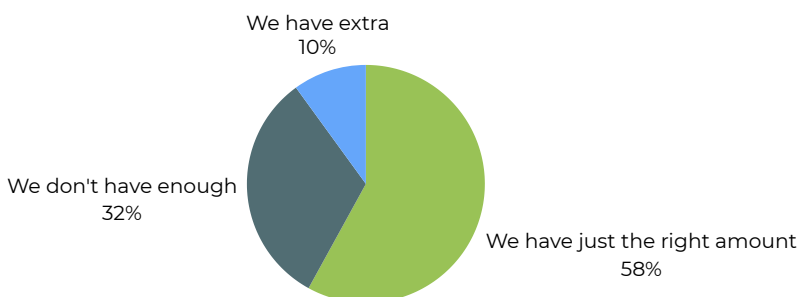
Types of Pantry Facility (multi-select)		Food Donation Source (multi-select)	
Designated Program Office	57%	Wyoming Food Bank	88%
Church	26%	WHI	56%
School	16%	Retail	38%
Mobile Food Trucks	10%	Local Food Rescue	33%
Community Centers	7%	Local Food Drive	47%
Other	11%	Other Sources	20%

Wyoming Food Bank / Wyoming Hunger Initiative Partners (multi-select)		Utilization of USDA Programs (multi-select)	
Mentioned only Food Bank Partnership	45%	TEFAP	24%
Mentioned only WHI Partnership	13%	CSFP	1%
Mentioned both partnerships	49%	Both	6%
		None	74%

A significant portion of responding pantries (46) indicated that they do not have enough physical space. Of these, 34 indicated that they wanted more food storage space—refrigerator, freezer, and dry food storage capacity, and in the open-ended responses, many pantry leaders indicated that lack of space decreased their ability to serve clients.

Figure 2: Food Pantry Physical Space

Pantry Ratings of Amount of Overall Physical Space



Issues of space were consistently noted among pantries: “Always more space”, “Bigger building”, “Bigger facility”, “More shelving” and “More freezer and refrigerator room” were common themes among open-ended responses.

No significant relationships existed between the county of the food pantry and lack of space, nor between their institutional affiliation and lack of space—**meaning the issue of lack of space is occurring across Wyoming.**

Survey responses indicated that a large portion of Wyoming's food pantries acquire most of their distributed food through purchasing as opposed to donation. **About 60% of surveyed pantries purchase over 50% of all of their food.** Below, two charts are depicting the breakdown of pantry food acquisition via purchasing vs. donation.

Figure 3: Percentage of donated food

Of all of the food distributed at the pantry, how much is donated?

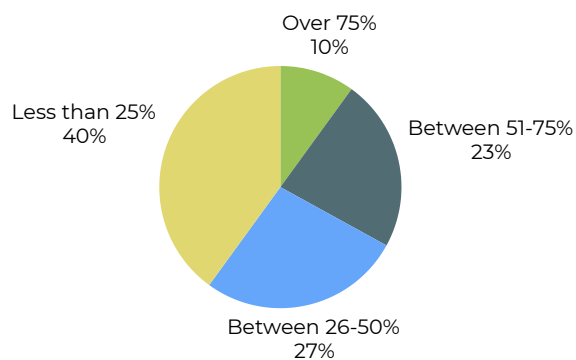
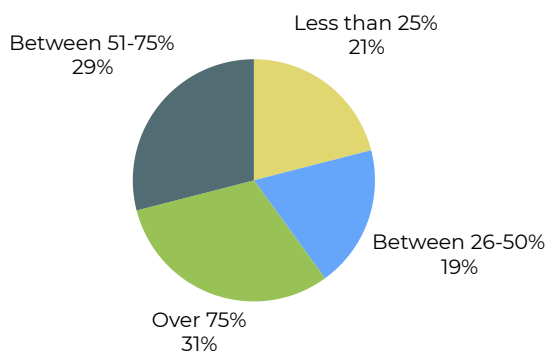


Figure 4: Percentage of purchased food

Of all of the food distributed at the pantry, how much is purchased?



The Food Bank of Wyoming currently has two main programs for distributing federally-financed foods: TEFAP and CSFP. While participation in these programs increases the guarantee of donated food, many pantries in Wyoming do not participate in them.

The top three reported reasons for non-participation in the USDA food distributions included:

- (1) lack of capacity or resources**
- (2) philosophical reasons**
- (3) lack of awareness**

Pantries that did not have enough resources to enroll in a USDA program reported in their surveys that "[we] only have a few volunteers, they do not have the time"; that "reporting was too much and not an efficient use of our time", or that the pantries did not have enough money to accommodate the USDA programs. Among the pantries that were philosophically against the USDA involvement were ones that voiced concerns over the government dictating the pantries' decisions. Understanding the desire for autonomy, these pantries may face increased risk in food supply without the free foods delivered via assistance programs. Pantries mentioned wanting to be able to serve anyone, and communicated worry over whether all of their current clients would qualify for the programs. **Importantly, many pantries (24) mentioned that they were unaware of USDA programs.**

Survey responses also shared critical information regarding the resilience of the food pantries. **56% of survey respondents answered that they had no forms of transportation for their pantry. 53% of all responding pantries had no paid staff working in their facilities.** Many of the pantries praised their hardworking volunteers in write-in, short answer comments. Both of these sets of responses indicate a dependence on volunteers and external networks to continue to serve.

Food Environment Survey

Food environment survey participants were recruited via convenience sampling; Nourished Rx distributed flyers and postcards with a direct link to the survey. Study advertisements were posted on social media sites, circulated through members of the steering committee's networks, and distributed at conferences; press briefs were published by local news channels across the state. Key demographics and characteristics are listed in Table 3. Of note, the survey respondents were more urban/suburban, male, Black, wealthier, and younger than is representative of the state of Wyoming; we assume that recruitment channels originating in larger cities or towns may have reached this audience more quickly or effectively than older, rural populations.

Table 3: Food Environment Survey sample demographics and characteristics (N=1,960)

	Mean (Standard Deviation)
Age	37 (± 10)
Number of people in the home	
Adults	2 (± 1)
Own children	2 (± 1)
Other children	1 (± 1)
	Count (%)
Gender	
Female	901 (46)
Male	1,056 (54)
Non-binary	3 (0)
Race	
White/ Caucasian	1,247 (64)
Black/ African American	498 (25)
Latino/ Hispanic	76 (4)
Asian/ South Asian/ Pacific Islander	36 (2)
American Indian or Alaskan Native	103 (5)
Food Assistance	
1 or more	996 (51)
None	964 (49)
Food Security	
Food secure	1,214 (62)
Food insecure	746 (38)
Health Status	
Poor	16 (1)
Fair	183 (9)
Good	716 (37)
Very Good	616 (31)
Excellent	428 (22)
Income	
<\$20,000	295 (15)
\$20,000 - \$34,999	334 (17)
\$35,000 - \$49,999	398 (20)
\$50,000 - \$100,000	488 (25)
> \$100,000	345 (18)
Not willing to share	94 (5)
Neighborhood	
Rural	238 (12)
Suburban	622 (32)
Urban/ city or town	1,083 (55)

While recognizing the limitations of the ability to extrapolate this data across the state of Wyoming, the analysis resulted in several items of interest. In an analysis of food security and variables relating to food security, **food assistance is statistically significantly associated with food security. Neighborhood type, between rural, suburban, and urban, was not.**

Table 4. Socio Demographics by food security status

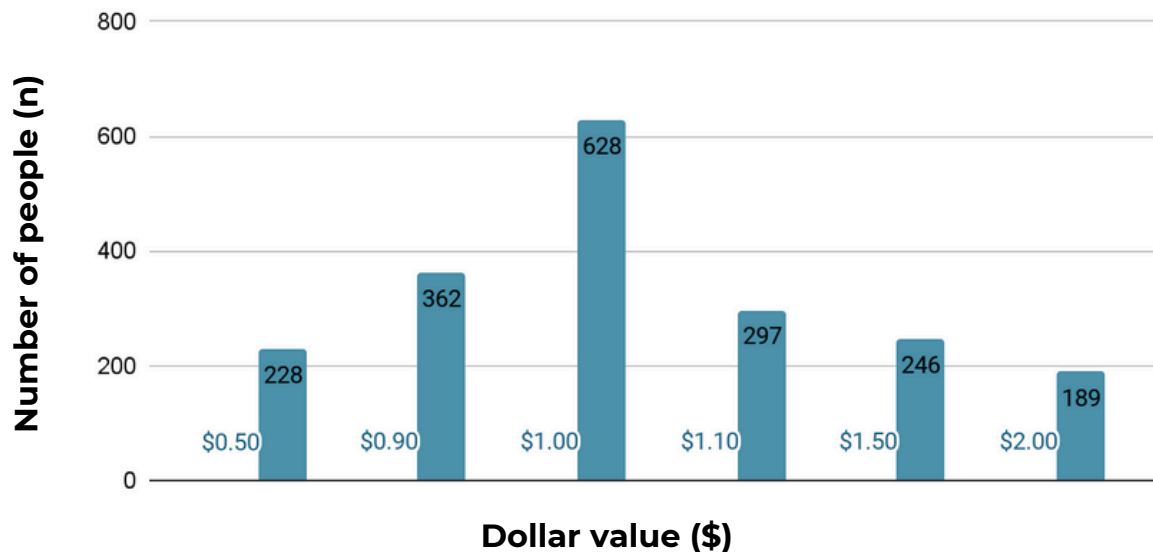
	Food Secure (n=1,214) N (%)	Food Insecure (n=746) N (%)	p-value
Food assistance >1 program 0 programs	590 (49) 624 (51)	406 (54) 340 (46)	0.012
Health status Poor/ Fair Good Very good Excellent	124 (10) 419 (34) 397 (33) 273 (23)	75 (10) 297 (40) 219 (29) 155 (21)	0.169
Neighborhood type Rural Suburban Urban/city or town Missing	144 (12) 394 (33) 666 (55) 10 (1)	94 (13) 228 (31) 417 (56) 7 (1)	0.828

In an analysis of food security status and variables relating to shopping habits and decisions, the type of store that participants most frequently shop at, percentage of local food, and perception of the price of fruits and vegetables are significantly associated with food security. **Time to travel to the store is not—highlighting yet again that the experience of food insecurity is not limited purely by location.**

Table 5. Grocery shopping habits and decisions by food security status

	Food Secure (n=1,214) n (%)	Food Insecure (n=746) n (%)	p-value
Type of store most frequently shopped at Corner store or convenience store E-commerce Farmer's market Food pantry Major grocery store Small grocery store Other	143 (12) 25 (2) 149 (12) 87 (7) 450 (37) 355 (29) 5 (0)	61 (8) 30 (4) 86 (12) 95 (13) 272 (37) 202 (27) 0 (0)	<0.001
Percentage of food from local producers None (0%) Less than 25% 25%-50% 50%-75% Other	726 (60) 238 (20) 212 (18) 33 (3) 5 (0)	517 (69) 97 (13) 105 (14) 20 (3) 7 (1)	<0.001
Travel time to store Less than 10 minutes 10 - 20 minutes 20 - 30 minutes More than 30 minutes Other	329 (27) 557 (46) 240 (20) 84 (7) 4 (0)	180 (24) 340 (46) 160 (21) 65 (9) 1 (0)	0.3
Perception of fruit and vegetable prices Very inexpensive Not expensive Somewhat expensive Very expensive Other	107 (9) 476 (39) 562 (46) 71 (6) 1 (0)	46 (6) 192 (26) 410 (55) 92 (12) 6 (1)	<0.001

Figure 6. Willingness to spend on locally produced items



63% of participants report that none of their food is locally produced, but 38% of participants reported being willing to spend more for locally produced foods—\$1.10 or more on a local food item given the same item is available for \$1.00 at a major grocery retailer.

The Food Environment survey concluded with an open-ended question, “if you can change one thing about the Wyoming food system, what would it be?”. The key themes of those responses are detailed below in order of most to least discussed:

Food Access and Availability (discussed by 597 participants)

- "More farmers markets or fresh produce areas other than the store."
- "Availability of more food stores to ease getting food items."
- "Improving food access and availability, especially in rural areas."

Distribution and Distribution Methods (discussed by 393 participants)

- "Enhance and optimize distribution networks."
- "Create regional food hubs to streamline distribution."
- "Uniform distribution of food."

Price and Affordability (discussed by 264 participants)

- "Lower prices."
- "Making healthy food more accessible."
- "The cost of food should be minimized."

Support for Local Agriculture and Sustainable Practices (discussed by 169 participants):

- "Offering targeted support for small-scale farmers and producers."
- "Promoting local farmers."
- "Supporting more farming resources."

Quality of Food (discussed by 156 participants):

- "Better quality fruits and vegetables throughout the year."
- "Ensuring freshness of foodstuffs."
- "Increasing access, including affordability, to nutritious and healthy ingredients."

Community Engagement and Education (discussed by 132 participants):

- "Encouraging community involvement in shaping the food system."
- "Implementing educational programs to raise awareness."
- "Training more people in business skills, food management."