

# NORTHEAST KINGDOM, VERMONT RESILIENT FOOD SYSTEMS RESEARCH BRIEF

Impacts from 2022-2024 flooding and severe weather



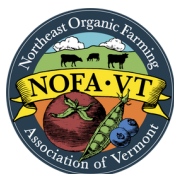
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# INTRODUCTION

This snapshot is formatted to give an in-depth analysis of findings related to the impacts of the flooding and severe weather between 2022-2024 on the Northeast Kingdom's (Caledonia, Essex, and Orleans Counties) food system. The study included three focus groups (40 participants total); nine interviews with IRBOF<sup>1</sup> approval and informed consent across the Northeast Kingdom. Participants included community advocates, city and county government, farmers and food businesses, non-profits, schools, and state organizations. The Northeast Organic Farming Association of Vermont (NOFA-VT) supported the project through outreach for participation in interviews and focus groups.

Overall, community members shared a strong desire to ensure that efforts and funds directly benefit farmers in the most accessible and low-barrier way possible. They emphasized the need for a resilience fund that is easy to access, sustainable over time, and supports both immediate disaster recovery and long-term stability while also fostering social connection and coordination across the food system.

## Suggested Priorities from Action Planning

Based on the snapshot, interviews, and focus groups, below are priority projects suggested for the food system in the Northeast Kingdom of Vermont, including Caledonia, Essex, and Orleans Counties. These are broad categories that relate to the ability to prepare and sustain during disaster and build back stronger. The report shares findings from the research conducted in December 2024 as well as updated priorities based on the action planning sessions in February 2025.

The priority that will be acted on through funding from the Agricultural Marketing Resource Center will include three farmer convenings, each with more than 30 participants, combining financial education, emergency preparedness, and co-designing a farmer resilience fund. Farmers attending all three sessions will receive stipends for attending, one, two, or all three meetings. This process was the top priority from action planning and integrates other community priorities by fostering social connection through farmer gatherings, improving coordination between service agencies by collaborating with similar initiatives, and ensuring the fund is designed as a replenishable resource rather than a one-time payment mechanism. Additionally, it prioritizes farming and financial equity, with the goal to make the funds accessible and beneficial to a diverse range of farmers. NOFA-VT and UVM's Institute for Agroecology will conduct participatory research on the best practices for fund management which will inform the funding allocation process and long-term sustainability plan.

### 01. BUSINESS

Develop a shared storage and aggregation system, coordinate local food awareness, and assess utilizing closed dairies.

### 02. COMMUNICATIONS & EMERGENCY MANAGEMENT

Provide emergency management and risk reduction/mitigation, identify points of contact, and improve communication between service agencies.

### 03. FUNDING

Identify and apply for relevant funding opportunities, develop resource and grant toolkit, and establish a community fund for resilience.

### 04. PREPAREDNESS

Host sessions for preparedness for businesses and organizations, create subcommittees for specific areas of focus, ensure participatory governance structures, coordinate flooding mitigation plans and connect farmers to land trusts.

<sup>1</sup> Institutional Review Boards and Protection of Human Subjects - Study Exempt



## COMMUNITY OVERVIEW

The Northeast Kingdom is in the most northeastern corner of Vermont, and represents over 2,000 square miles across Caledonia, Essex, and Orleans counties. Caledonia County encompasses 649.2 square miles, Essex County encompasses 662.54 miles, and Orleans County encompasses 694.51 square miles. All three counties have an estimated growth in their population since 2020 of 1.3%, 1.5%, and 0.4%, respectively (United States Census Bureau, 2024). Estimated populations for each county in 2024 were:

- Caledonia County: estimated population of 30,535 (United States Census Bureau, 2024).
- Essex County: estimated population of 6,037 (United States Census Bureau, 2024).
- Orleans County: estimated population of 27,726 (United States Census Bureau, 2024).

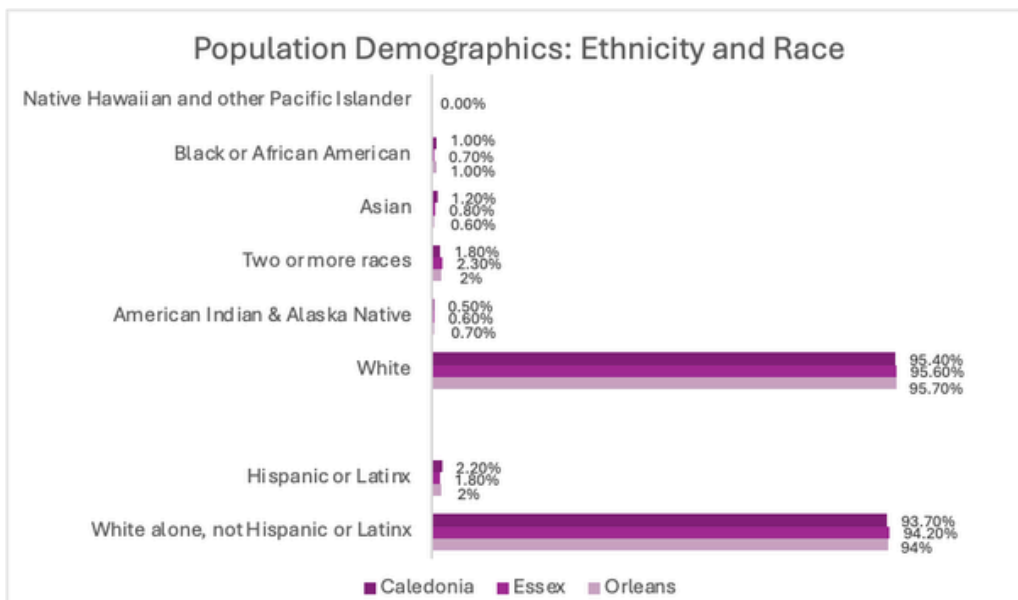


Figure 1: Population Demographics by Race and Ethnicity (United States Census Bureau, 2024).

It is estimated that County has a poverty rate of 12.6%, Essex County has a poverty rate of 14.3%, and Orleans County has a poverty rate of 10.8% - all three counties have higher poverty rates than the state poverty rate of 10.3% (United States Census Bureau, 2023).

# NATURAL DISASTERS IMPACT

Caledonia, Essex and Orleans Counties have been involved in twenty-six designated disaster areas since 2011 according to FEMA (2024). Interview and focus group participants were asked to reflect on their experiences of natural disasters, and the impacts on families, farms, and businesses varied significantly.

## Impacts from Extreme Weather

The catastrophic July floods of 2023 and 2024 were focused on in these spaces and were described as devastating to some and inconvenient to others, and caused severe soil erosion, crop loss, and widespread infrastructure damage on farms and throughout the Northeast Kingdom. For many, recovery has been slow and incomplete; some farmers reported, in winter of 2025, that they still hadn't regained stability after the losses suffered in July of 2023. This reality is due in part to the severity of the disasters, and to the fact that these floods are not isolated events but part of a relentless cycle of extreme weather occurring in the region.

*“Pieces of infrastructure are having critical damage and one storm ends up being the straw that breaks the camel's back after disaster after disaster.”*

Economic challenges further complicate efforts to recover from these shocks. Many interviewees expressed frustration with traditional relief programs - namely FEMA and BEGAP, which were described as slow, unreliable, and difficult to navigate. As a result, community support from individuals and organizations was reported as an essential lifeline. While some farmers brought up the prospect of moving out of the floodplain, relocating was not thought of as a viable solution as desirable farmland is scarce and prices are high. The ongoing housing crisis further limits options and leaves many farmers with no choice but to rebuild in the same vulnerable areas, despite the risks. Without reliable avenues to rebuilding, though, the escalating pressures of extreme weather events and economic instability, coupled with public health concerns and political uncertainty have left many feeling drained and exhausted, and make long-term planning a challenge.

## Additional Findings: COVID-19 Impact

Mentions of COVID in the focus groups and interviews highlighted both its lasting impacts in the region and the ways it shaped disaster response efforts. Farmers and service providers reflected on how the pandemic exposed vulnerabilities in the food system while also strengthening local networks and mutual aid efforts, which proved critical during the floods. Additionally, economic challenges stemming from the pandemic, including rising credit costs and shifting market demands, compounded the financial strain of flood recovery. In the NEK, the pandemic served as a warning and as training ground for the floods that came in 2023 and 2024 by revealing gaps and equipping farmers and service providers with networks and strategies that proved invaluable when responding to floods.

## Recovery

When asked about their perceived recovery, many struggled to answer because disaster impacts were so uneven across the Kingdom; some were relatively unscathed but reported that their neighbors lost everything and have yet to recover. When asked about organizational usefulness, local and regional organizations were the most effective in disaster response, specifically those with deep connections to the Northeast Kingdom and to Vermont's agricultural community. This list included NOFA-VT, local food hubs, the Center for an Agricultural Economy (CAE), and Northeast Kingdom Organizing (NEKO), who were all frequently praised for their direct support to farmers and the broader community post-flood. These organizations played crucial roles in providing immediate assistance: financial, logistical, technical, and manual labor-based. County NRCD's were also viewed positively with the understanding that “Conservation districts in Vermont are historically underfunded and understaffed.” In contrast, larger entities such as FEMA, the Small Business Association, crop insurers, and state emergency agencies/funding sources like BEGAP were seen as slow to respond, disconnected from rural realities, or focused on statewide recovery efforts that did not correspond to the unique needs of farmers in the NEK.

The focus groups and action planning session were valuable in helping farmers realize the full scope of services available to them, while also giving service providers a clearer understanding of farmers' needs. For example, NRCD clarified that they could assist with grant writing, a challenge often mentioned by farmers, while farmers emphasized that post-disaster, they needed help with food distribution rather than frequent safety checks and emails about resources. These conversations helped begin to bridge the gaps between farmers and service providers and set the stage for a priority project that addresses immediate financial needs of farmers while also creating further opportunities for in-person meetings to enable more regular communication and deeper understanding of ongoing needs.

## **Future**

Moving forward, Iowa State University Extension and Outreach, NOFA-VT, and UVM's Institute for Agroecology, together with participating Northeast Kingdom farmers and food system stakeholders, will launch a series of three educational convenings designed to support farmers in financial planning and emergency preparedness while co-developing a community-driven Farmer Resilience Fund. As climate disruptions grow more frequent and financial pressures mount, the strength of the Northeast Kingdom's food system will depend on its ability to invest in farmer-led solutions, build trust across sectors, and prioritize equity in both process and outcome. The momentum from this work offers a foundation for long-term, place-based resilience that reflects the values and determination of the region's agricultural community.

# **PRIORITY AREAS**

## **01. BUSINESS**

- 1.1 - Develop shared storage and aggregation system
- 1.2 - Coordinate local food outreach and awareness campaigns
- 1.3 - Assess opportunities for utilizing closed dairies

## **02. COMMUNICATIONS & EMERGENCY MANAGEMENT**

- 2.1 - Provide emergency planning and risk reduction/mitigation
- 2.2 - Identify organization/emergency response point of contact (POC)
- 2.3 - Improve coordination and communication between service agencies
- 2.4 - Hold political discussions on policy needs related to stewardship of land

## **03. FUNDING**

- 3.1 - Contract with a grant writer to identify and apply for relevant funding opportunities for farmers, food businesses, and community organizations
- 3.2 - Develop resource and grant toolkit
- 3.3 - Establish community fund for resilience-building

## **04. PREPAREDNESS**

- 4.1 - Host sessions for preparedness for different types of businesses and organizations
- 4.2 - Create subcommittees focused on specific areas of resilience
- 4.3 - Ensure participatory governance structures
- 4.4 - Coordinate and collaboratively plan flooding mitigation and food systems through regional watershed districts
- 4.5 Connect and collaborate for farming and financial equity through land trusts

# ACKNOWLEDGEMENTS

**Special thanks to all the farmers, businesses, organizations, staff, and individuals that met and shared their stories with us throughout the past year. Thank you for your work and dedication to resilient food systems. We are humbled and grateful for your time.**



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