Climate Resilience in Vermont: Farm-Level Action to Policy Context

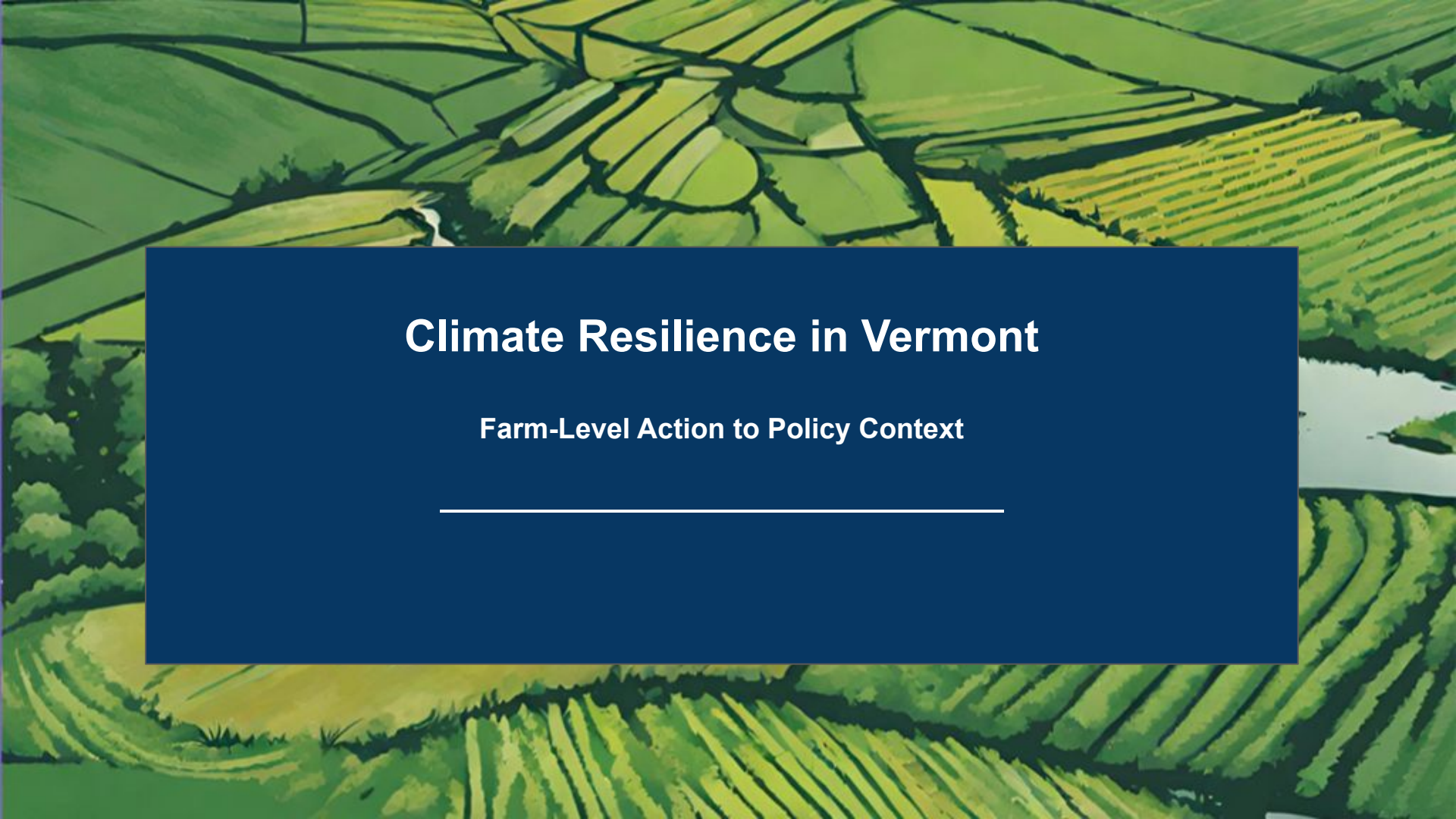
Thursday

- **Session Summary:**
- In this session, farm-level climate resilience planning is connected to state policy and funding levers. We'll start by grounding our discussion with examples of what climate adaptation planning on farms looks like and what resources are needed to support climate resilient agriculture in Vermont. Then we'll zoom out to get an understanding of Vermont's climate policy landscape, the role agriculture plays in these plans, various agency roles, financing needs and opportunities, and finally what effective advocacy looks like and requires in practice. Participants will engage in small group discussion, and leave with identified actions to engage in after the Gathering.

Climate Resilience in Vermont: Farm-Level Action to Policy Context

Session Plan:

- Welcome & orientation (Alissa)
- Farm Adaptation Plan case studies
  - Cheryl Cesario - Severy & Woodnotch farms (35 min)
  - Nancy LaRowe & Sam Rossier - Sunday Bell farm (20 min)
- Questions & discussion
- State Policy Context
  - Evan Horne (15 min)
  - Maddie Kempner (15 min)
- Questions
- Group activity
- Final discussion



Climate Resilience in Vermont

Farm-Level Action to Policy Context

Planning for Adaptation & Resilience to Agriculture

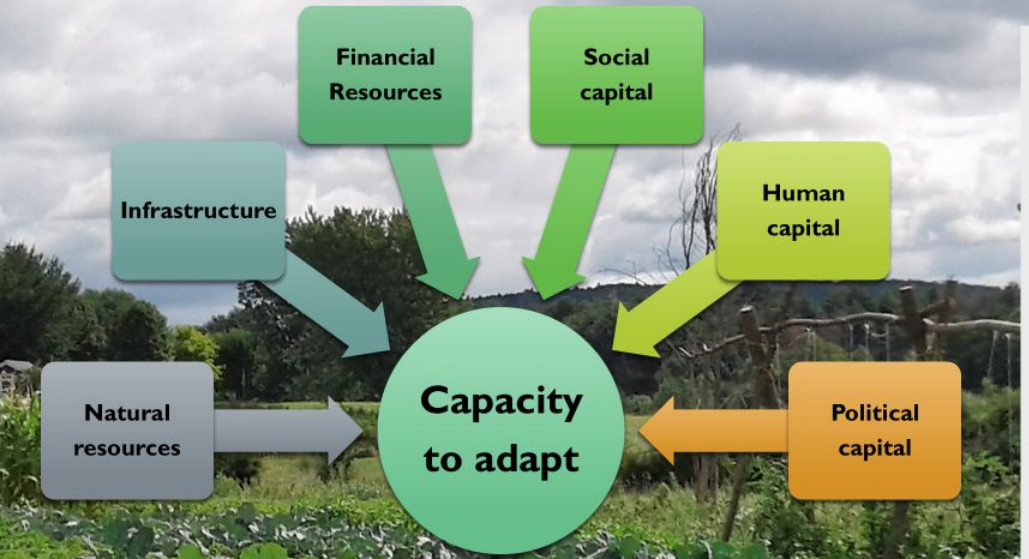
American Farmland Trust

Northeast Organic Farming Association of Vermont
NOFA·VT

University of Vermont
Extension

College of Agriculture and Life Sciences

Adaptive capacity & resilience



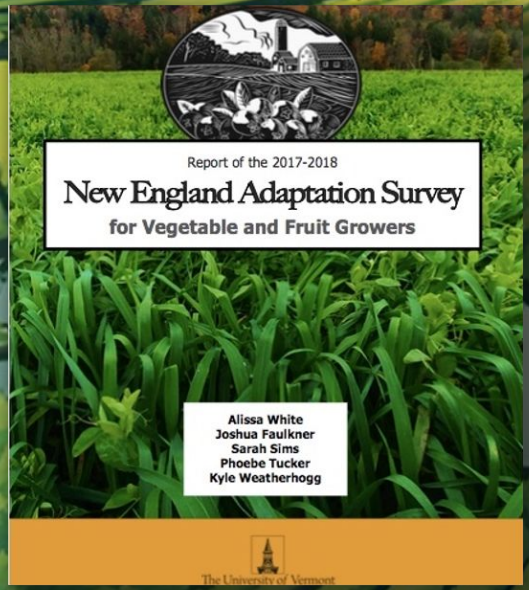
- **Major stressors & pressures**
  - Market stability & profitability
  - Generational transfer
  - Land access & tenure
  - Labor
  - Pest & disease
  - Regulatory pressures
  - **Climate change**

- **72%** of farmers **had already made changes** on their farm because of an experience with, or concern about, heavy precipitation or flooding

- **66%** of participants **had already made changes** on their farm because of an experience with, or concern about, drought.

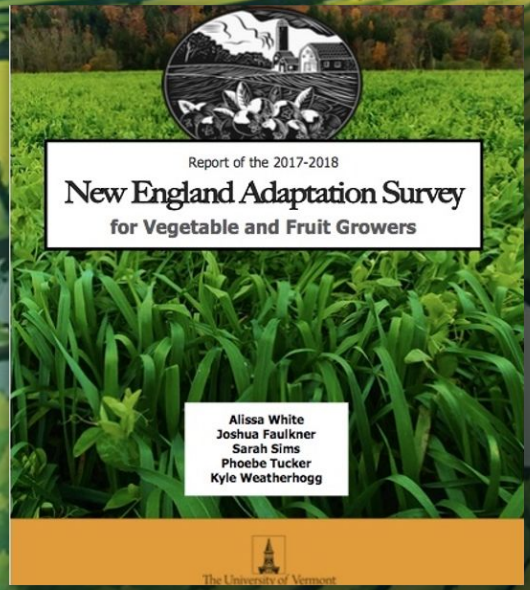
- Many adaptation practices reported by farmers were conservation practices.

- **74% of farmers already used soil health and cover crops strategies** to address risks of heavy precipitation events



White, A, et al. 2023. DOI: https://doi.org/10.1525/elementa.2022.00039

- **74%** of farmers **understand the vulnerability of their land** to extreme weather
- **Only 33%** believe they have the **knowledge and technical skil**l to deal with weather-related threats to the viability of their farm
- **53% do not** believe that they **have the financial capacity** to deal with weather-related threats to the viability of their farm operation



White, A, et al. 2023. DOI: https://doi.org/10.1525/elementa.2022.00039

Planning for Adaptation & Resilience to Climate Change (PARCC)

Objectives

- Adaptation planning with 8 farmers
- Collaboration across organizations
- Shared resources & planning tools
- Farmer-to-farmer learning & field walks
- Provide direct technical assistance
- Farmer grants

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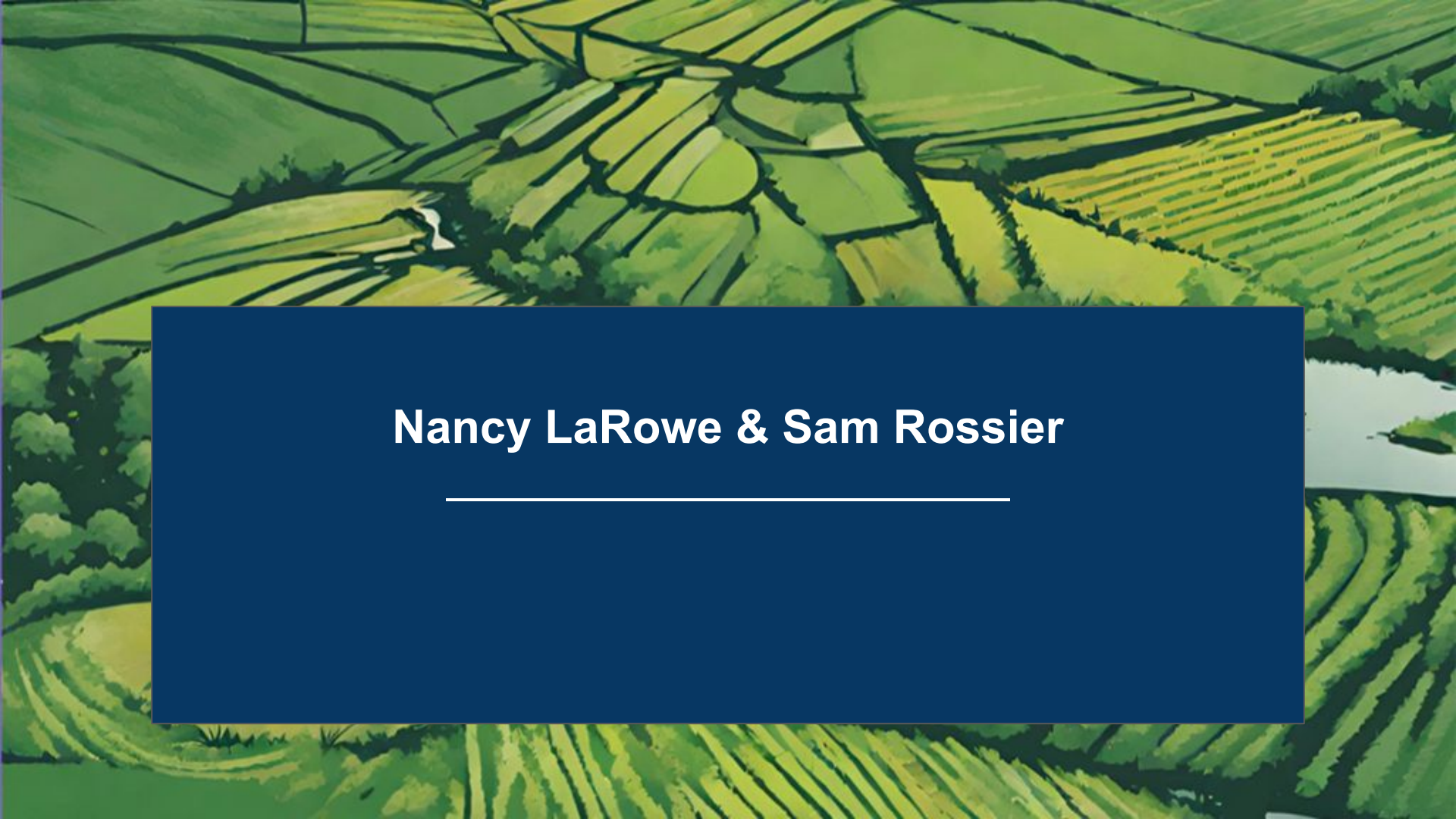


Nancy LaRowe & Sam Rossier


Sunday Bell Farm
Sam & Kylie Rossier

Climate Adaptation Planning for Farms

American Farmland Trust
SAVING THE LAND THAT SUSTAINS US

Start planning for climate adaptation and farm resilience based on the unique variables of your land and operation.

Five steps for farmland climate adaptation planning:

1. Define your farm goals and priorities
2. Identify specific, observed climate impacts
3. Conduct a risk & vulnerabilities assessment based on your climate impacts and farm goals
4. Develop a set of adaptation practices
5. Evaluate the effectiveness of those adaptations practices and update your plan accordingly

1. Goals

What are the overall or immediate goals of your farm operation?

Articulate one to three goals that inform your choices and priorities. *Consider foundational values, financial requirements, organizational strengths, farm resources, aspirations, challenges, etc.*

Version 4. This approach was adapted by Julie Fine from Adaptation Resources for Agriculture: Responding to Climate Variability and Change in the Midwest and Northeast. USDA Midwest, Northeast, and Northern Forests Climate Hubs, 2016. Updated versions and fillable pdf available at https://farmland.org/climate-adaptation-worksheet/

NOFA-VT CLIMATE RISK ANALYSIS WORKBOOK

PREWORK:

Farm Name

Business Health Assessment:

Check all that apply. Select level of concern for each line.

Business Health Assessment	Applies to your farm?	Level of Conc
Cash flow positive last season	☐	
Profitable last season	☐	
Cash reserves/rainy day funds on hand	☐	
Capacity to take on additional debt	☐	
Confident in your ability to access conservation programs	☐	
Confident in your ability to access grants and loans	☐	
Vulnerable to supply chain disruptions	☐	
Vulnerable to sales/distribution disruptions	☐	
Vulnerable to personnel issues	☐	
Strong community support/social resilience	☐	
Create annual projections (budgets)	☐	
Have an up-to-date business plan	☐	

PREWORK:

Farm Name

Climate Impacts Assessment:

What impacts of climate change have you observed and experienced on your farm?

Whole Farm	Applies to your farm?	Level of Concern
Wetter Spring/Fall	☐	
Increased seasonal temperatures	☐	
More frequent extreme precipitation	☐	
Infrastructure damage due to wind, snow, rain, or temperatures	☐	
Increased Erosion	☐	
Seasonal drought	☐	
Flooding and/or ponding	☐	
Wildfire frequency or size increase (smoke concerns)		
Other (explain):		
Crops		
Nutrient leaching		
Crop damage due to high winds		
Increased need for irrigation & crop heat stress		
Saturated soils affecting planting, weeding and/or harvest		
Unpredictable frosts, fruit loss		
Pollination mismatches		
Changes to timing of planting/harvest		
Changing pest or disease patterns		
Increased weed vigor		
Other (explain):		
Livestock		
Heat stress		
Animal health/growth decline		
Decreased pasture/forage/hay yield		
Breeds not well adapted to seasonal shifts		
Adequate water source & system available		
Adequate shade & shelter available		
Other (explain):		

Climate Resiliance SWOT Analysis:

STRENGTHS (internal to business)

WEAKNESSES (internal to business)

OPPORTUNITIES (external to business)

THREATS (external to business)

Goals

- Reduce heat stress on livestock
- Increase labor efficiency > time for family & business growth
- Water resilience
  - Water availability & delivery
  - mitigate impacts of high precip events (run off)

Changing precipitation patterns

- ☒ Wetter springs or falls
- ☒ More frequent extreme precipitation
- ☐ Saturated soils affecting planting, weeding, and/or harvest
- ☒ Seasonal drought
- ☐ Increased need for irrigation
- ☒ Decreased pasture/forage yield

Increased temperatures

- ☒ Increased seasonal temperatures
- ☒ More extreme temperatures
- ☐ Changing pest or disease patterns
- ☐ Increased weed vigor
- ☒ Increased cooling needs
- ☒ Heat stress
- ☐ Animal health declines

Extreme weather

- ☐ Flooding and/or ponding
- ☒ Increased erosion
- ☐ Nutrient leaching
- ☐ High wind effects
- ☒ Infrastructure damage due to wind, snow, rain, or temperatures
- ☐ Wildfire & smoke impacts

Seasonal shifts

- ☒ Wetter spring/fall
- ☐ Unpredictable frosts, fruit loss
- ☒ Warmer winter/summer
- ☐ Changes in timing of planting/harvest
- ☐ Crop or variety not adapted
- ☐ Pollination mismatches

3. Risks Assessment

Based on your observations of climate impacts, and taking into account projected changes in climate, **what are the major vulnerabilities of your farm operation?** *What areas of land, important crops, animals, or essential infrastructure are a priority to protect? What is at most risk? Where do the identified climate impacts directly impact your top farm goals?*

- Inefficient systems limit ability to manage the land, livestock & business
- Heat stressed cows spend more time near water, not grazing. Need to be in barn during extreme heat or rain
- Road ditches erode, depositing sediment in pasture.
- Single water source (house well)

Risk	Enterprise(s)	Strategy	Description	Timeline	Priority Level	Next Steps
WATER AVAILABILITY	Whole Farm Concern	Implement water usage monitoring system	Install a water metering system to more accurately track & understand water usage. Would also aid in leak detection, with potential to include an automatic shutoff system in the event of big leaks (tipped waterers, etc.)	ASAP	High	figure out how to get details for water usage for livestock (instead of daily recording) & also measure water usage for milk house (for waste water storage design)
INCREASED TEMPERATURES	Dairy, Beef, Hay/Forages	Establish silvopasture system	Started planting trees (hickories) in larger pastures in 2024. More trees will be interplanted in 2025 (mulberry, etc.)	in process, 2024 - 2025	High	HIGH PRIORITY - in process, complete irrigation system for trees.
LABOR	Whole Farm Concern	Develop habit of consistent bookkeeping throughout the year	Prioritize this. Doing so will significantly improve comfort level to make business decisions throughout the year and proactively respond when needed.	long term evolving process	High	refine POS system & self-check out system
CHANGING PRECIP PATTERNS	Whole Farm Concern	Add and armor culverts	Improve sediment catchment pools to withstand heaiver rain events. Load of rip rap to add on culvert ends (downhill especially)	2025	High	

Severy Farm
Addison County, VT
Cornwall

Ownership: Nate and Kerrianne Severy

Farm History:

- Home farm – purchased by Nate's father Joe in the early-80's
- Joe transitioned the farm to organic in 2006 – Organic Valley
- In 2019 transitioned to grass-fed – Organic Valley Grassmilk
- 2021 -Nate purchased cattle/real estate from Joe

TODAY: 50 milking cows, 400 acres owned and rented plus 5 acres of strawberries and a dealer for King's Agriseed

GOALS

- Update infrastructure – for regulatory compliance, cow comfort and human working enjoyment. Meet state regs.
- Increase stocking rate from 50-75 milkers with field and infrastructure efficiencies.
- Develop a profit goal and appropriate enterprise mix.
- Be able to delegate some daily tasks, more time for working on the business/strategizing. Economic model that supports employee and own salary.
- Use irrigation more, manage grazing for 40-day recoveries mid-summer

Climate Impacts
Addison County – clay soil and a rain shadow

Wetter springs and falls

More frequent extreme precipitation

Severe drought this year

Increased need for irrigation

Saturated soils can affect forage growth and quality

Decreased forage yield

Annual seasonal drought (Adirondack rain shadow)

More extreme temperatures

Heat stress

Fruit loss (strawberries)

Vulnerabilities

1. High labor requirement, little off-farm labor. Nate is the responsible party for all aspects of the business

2. There is one organic grass-fed milk market in VT

3. Without grain, he MUST put up the highest quality forages possible

4. Per organic/grass-fed regulations, he MUST meet 60% DMI from pasture during the grazing season (150 days) to stay in compliance unless USDA grants a variance

5. A bad year has cascading long-term ramifications in this system. An issue in fall 2022 with breeding did not fully recover until spring 2025, but then drought

6. Enterprise diversification has him spread very thin without profit realization on the new crop enterprise

Climate adaptation strategies include:

* Investments in infrastructure
* More reliance on wrapped baleage
* Annual small grain and warm-season forages for grazing and stored feed
* Pasture irrigation

2016 – survey of grazing infrastructure with Joe

Severy Farm had never taken government money

Water system was thrifty Yankee farmer ingenuity

2017 – NRCS contract for improved pipeline sytem

2019/2020 covered feed alley structure built for feeding efficiency with vision of a new cow barn being built

2025 new cow barn – being built currently to accommodate herd expansion

October 2025

2024 new heifer barn constructed to eliminate outwintering and boarding out

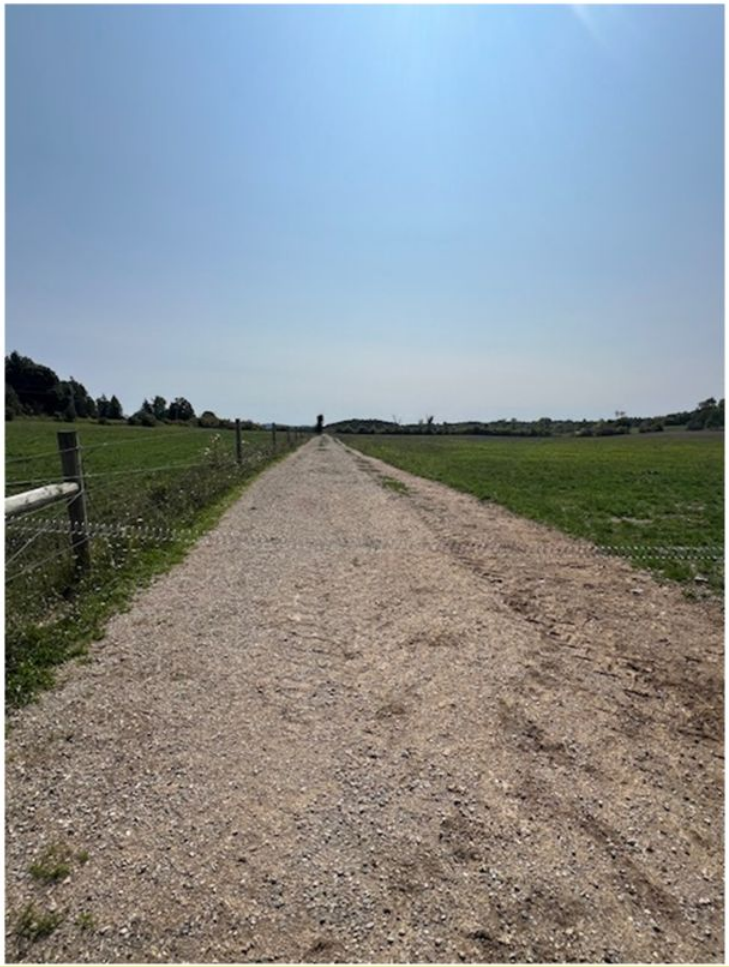
Outwintering led to issues with mud, slips/falls, pneumonia and slower growth

Bedded pack management in heifer barn

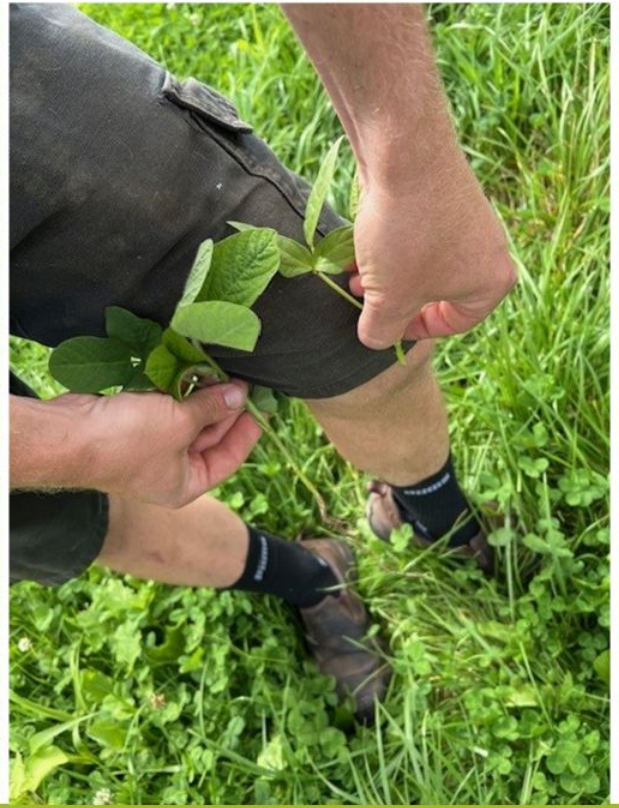
Improved laneways installed in 2021

Unimproved lanes on clay soil cause a host of issues in wet weather

Hoof health
Milk quality



Diverse annual mixes planted in 2024 included sorghum-sudan, soybeans/cowpeas, turnips, forage chicory, narrow leaf plantain



Wrapped baleage as an adaptation strategy

Dry hay kept under a roof

2022 – leachate pond installed along with a new barnyard and manure stacking site

Containment of nutrients to prevent runoff to sensitive areas

2022/2023 – irrigation system design and installation to utilize leachate effluent on the land

Traveling gun irrigation reel can cover 40 acres

Plan to expand, with additional rolls of hose, est. cost is $12,000

Summary of infrastructure investments made 2017 - 2025

Year	Investment	Program	Cost ($)
2017	Water pipeline	EQIP	~30,000
2019/2020	Covered feed alley/barnyard	VHCB WQ VHCB Biz enhancement	85,000
2021	Cow laneways	EQIP	~50,000
2022	Leachate pond	BMP/ARPA	200,000
2023	Traveling gun/irrigation	CEAP	65,000
2024	Heifer barn	EQIP/BMP	350,000
2025	Cow barn	WLEB/ARPA	285,000
Total investments			$1,065,000

Diversification strategy – strawberries
Viable enterprise or distraction from the core business?

Pros:

High dollar/acre specialty crop

Market demand

Cons:

High labor requirement

Specialized equipment

Cooling/storage

Small window for harvest

Very susceptible to weather challenges

Busy season overlaps with haying and start of grazing season

WOODNOTCH FARMS, INC
ADDISON COUNTY, VT
Shoreham - Orwell - Addison

Ownership: Loren and Gail Wood plus 4 sons – Lee, Lance, LJ, Les

Farm History:

- Home farm in Shoreham– founded by Loren's father in 1950's
- 2012 - milking 400 cows. As the sons came into the business they expanded.
- 2019 – Add Orwell farm
- 2023 – Add Addison farm

TODAY: 2,700 milking cows, 4,500 total head, 6,000 acres, 3 farmsteads, 73,000,000 pounds of milk annually

Loren was a founding member of the Champlain Valley Farmer Coalition and has been a board member since its inception in 2012

Members of the Champlain Valley Farmer Coalition gather at Woodnotch Farm in Shoreham to learn about environmentally friendly practices to protect water quality including planting corn that doesn't require the soil to be tilled. The adoption of less intensive tillage practices on farms helps to prevent soil erosion.

GOALS

- They have 5 owner-operators (2 generations). Would like in time to see more family involved (next generation).
- Profitability - to support all owners and their families, keep looking for expansion opportunities.
- To be innovative/adaptive, not afraid to try new things.
- To be seen as a leader and good managers. Have the farm be aesthetically appealing to the public and exhibit a positive appearance for the dairy industry

Climate Impacts
Addison County – clay soil and a rain shadow

Wetter springs and falls

More frequent extreme precipitation

Saturated soils can affect planting, sidedress, harvest

Seasonal drought (Adirondack rain shadow)

More extreme temperatures

Increased cooling needs, heat stress

Flooding/ponding

Nutrient leaching

Erosion risks

2023 – Excessive precipitation

- Getting multiple cuts of haylage off of 3,500 acres and corn silage out of fields on 2,500 acres was difficult. When the opportunity opened, worked very long days, extra trucks, tractors, day labor.
- Digestibility on feed was an issue, lower quality overall due to washed out nutrients in feed
- Very localized storms – ex. 7" in Addison, 3.5" in Shoreham – significant rainfall variability in a small radius
- Lost 30-40 acres in Rutland county due to flooding
- No tile drainage on any of their land. Loren feels that for the cost, he could just purchase more land for a better return.

2022 and 2025 – Drought

- Farm keeps enough feed inventory to make it thru one year of drought, can carry over enough feed to the next year. It would be hard if 2 years of drought
- Have expanded their bunks for more inventory
- Due to reduced yields in a dry year, the cost per ton harvested dramatically increases
- In a dry year a cow will be culled if she is producing less than 70#/day, feed gets precious
- Feed digestibility was lower, end up buying more grain
- Mentally challenging – always looking out the window for rain clouds

Risks and Vulnerabilities

1. High debt, highly leveraged, interest rates are up. But they are paying off loans and the business cash flows.

2. Reliance on migrant labor – 28 Hispanic laborers, up to 48 total employees during cropping

3. Milk markets – Until the purchase of the Dubois Farm, their market on the 2 other farms was AgriMark/Cabot. Gained DFA contract, so less vulnerable with 2 markets (competitive advantage).

4. Bird flu and other biosecurity concerns, changing climate will bring migration of diseases

5. TARIFFS – will cause significant increases in cost of production

6. State of Vermont farm regulations

What about being so spread out? Is it a disadvantage?

They see the opposite - multiple locations is an advantage

TRUCKING AND WEATHER-WISE

- The distance from the Orwell Farm to the Addison Farm is 21 miles.
- With the 3 milking facilities they see 3 pockets which cuts down on overall trucking.
- If they had all 2500 cows in one place, they'd have longer distances trucking crops and feed.
- The 3000 acres in Addison serves the Addison Farm. The other 3000 acres in Shoreham and Orwell serve those 2 farms.
- How do they cover all the ground in a timely way? Larger machinery for efficiency. In the process of upgrading one their forage harvesters to an 800-horsepower model. Custom cropping business reduces cost of running machinery (more hours of use)

Climate Adaptation Strategies include:

*New cropping strategies
*Improved nutrient management
*Cow comfort upgrades

CROPS

Adaptations/management changes

- Utilize no-till planting on corn silage (2,000 of 2,500 acres)
- Side dress corn in July for more efficient nutrient utilization
- Cover crops on 1,400+ acres – primarily winter rye – burned down in spring. Cover crop provides nitrogen in later stage corn
- Using slightly shortened days to maturity on some corn to stagger harvest and allow for getting cover crops in

MANURE
Adaptation/management changes

- Dragline hose application by custom operator – less tankers on field and road, less compaction. Also much higher efficiency moving manure via dragline – can move up to 1 million gallons per day
- Manure injection – prevents runoff, less off-farm fertilizer inputs. Some years have not put on any supplemental fertilizer on hay crops. Monetary benefits from injection.
- Have installed 2 silage leachate systems in the last 2 years – leachate can seep from bunk storage especially if feed goes in too wet. Typically very high in nutrients that can harm surface water and groundwater, silage leachate is a worse potential pollutant than manure

ANIMALS
Adaptation/management changes

Cow management:

- Holstein cows, registered
- Cow size 1500-1600# cows – larger cows over time, selecting for milk production
- Hotter summers, more focus on heat stress and preventing negative effects on milk production
- More fans, climate-controlled environment - curtains
- Cow comfort improvements, animal welfare requirements via FARM program

ANIMALS

Adaptaton/management changes over time

Heifer management:

- Some heifers had been outwintered in the past – up to 200 heifers outdoors year-round
- Took longer to get to the growth level they needed to get them bred on time
- Mud issues, freeze/thaw hard on animals, cold and rain
- Too many swings in winter weather
- To adapt- moved to full confinement of all heifers – foot rot eliminated, no heat stress (fans/ventilation), no pink eye, no injuries.
- Now fed a TMR for growth consistency, more control in raising

How do they evaluate effectiveness?

- They know the **cost of production** on everything
- Calculate **return on investment** on every decision
- Know industry **benchmarks**
- All partners on the same page and meet once a month. They make decisions collectively on big financial investments
- Everyone knows where the business is at financially
- Financials are evaluated quarterly
- Work with Farm Credit on benchmarking/analysis, bookkeeper, payroll, accountant

How do they evaluate effectiveness? - EXAMPLE

- Rented corn ground in Rutland County is 30 miles away from the Orwell/Shoreham farms
- Acreage there is ~150 acres
- Tonnage off that land is 25T/acre
- On clay soil in Addison Co, yields are typically 13T/acre
- Even with trucking, due to the yield difference, the Rutland Co land only costs $1 more per ton to produce

Perspectives on climate/weather and risk management overall

There can be a misperception that farms of this scale aren't thinking about these things, but Loren contends that he is probably thinking about it more than most since the amount of dollars on the line is in the tens of millions. They are always adapting.

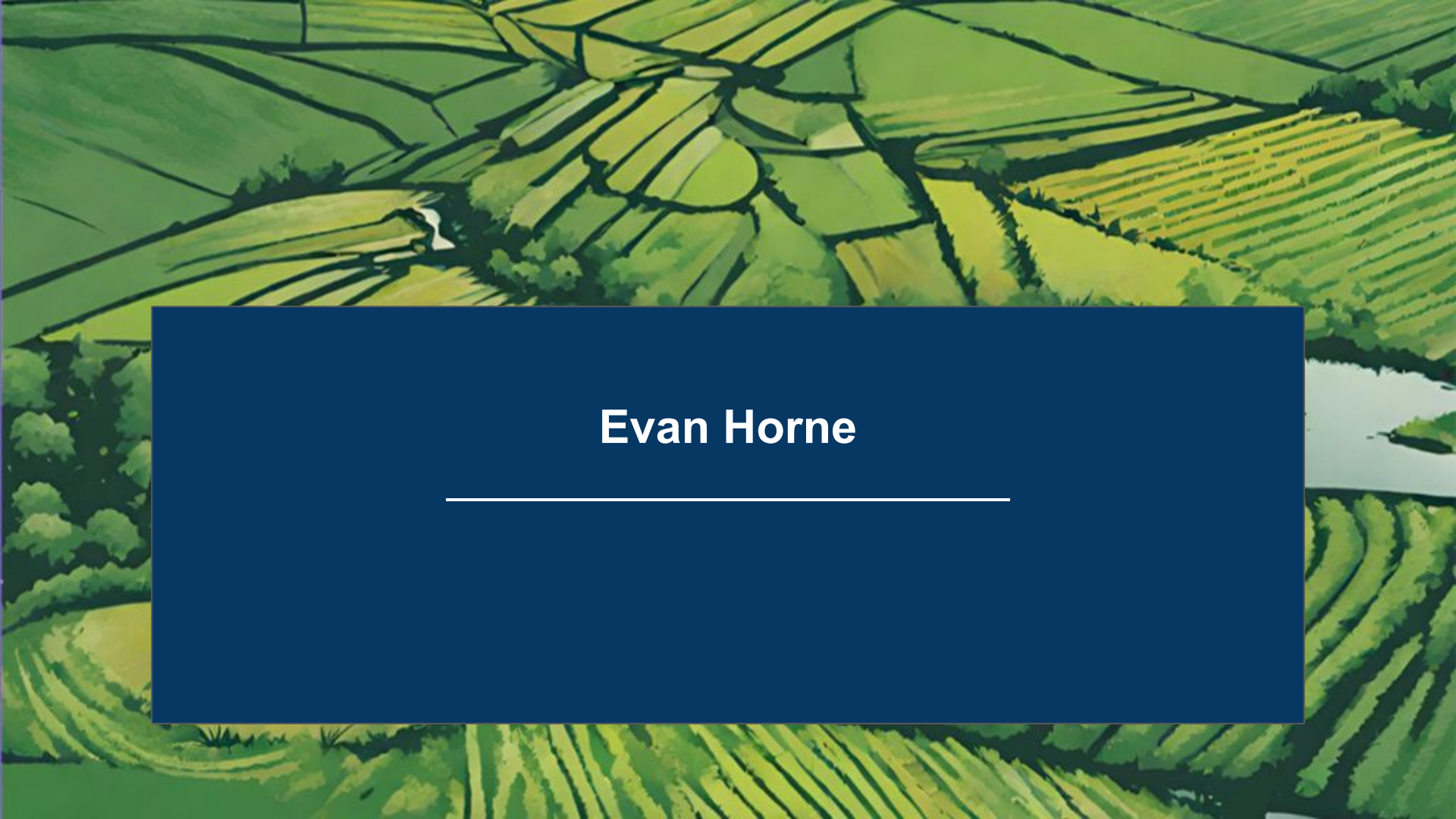
<u>What is his response to being called an "industrial" farm?</u>

"These farms are all family managed. With 5 owners, we have eyes on it all the time. The care level is high; it still bothers me to lose a cow. We have grown to make room financially for the next generation.

Scale is necessary (540 cows per family) so that everyone can make a living here."

Discussion

- **Questions** about climate adaptation plans?
- **Table discussions with note-taking**
  - What programs & resources exist that support elements of climate adaptation on farms?
  - What new programs & resources are needed, or evolutions of existing programs, that support elements of climate adaptation on farms?
- **Whole room shareback**



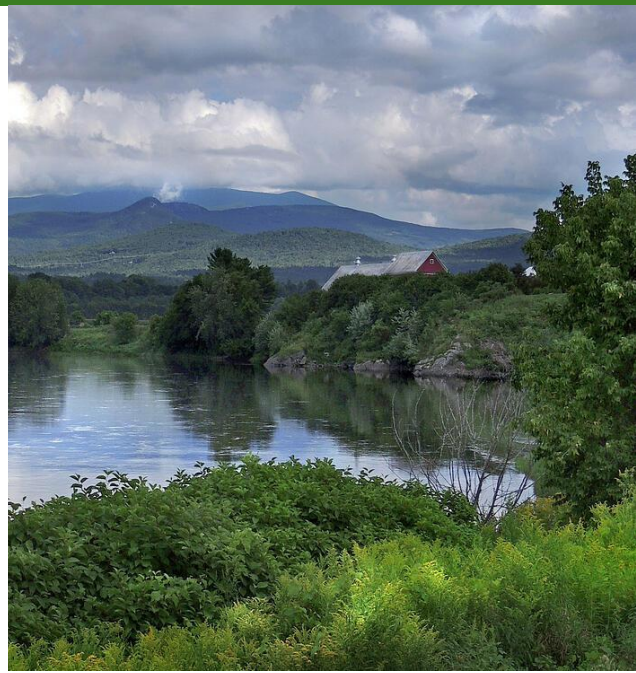
Evan Horne

Climate Action Plan and Resilience Implementation Strategy

Evan Horne
Climate Action Office
Agency of Natural Resources

Overview of the Climate Action Office

- Coordinates statewide mitigation & resilience
- Implements the Global Warming Solutions Act
- Aligns efforts across state government
- Centers frontline communities & equity



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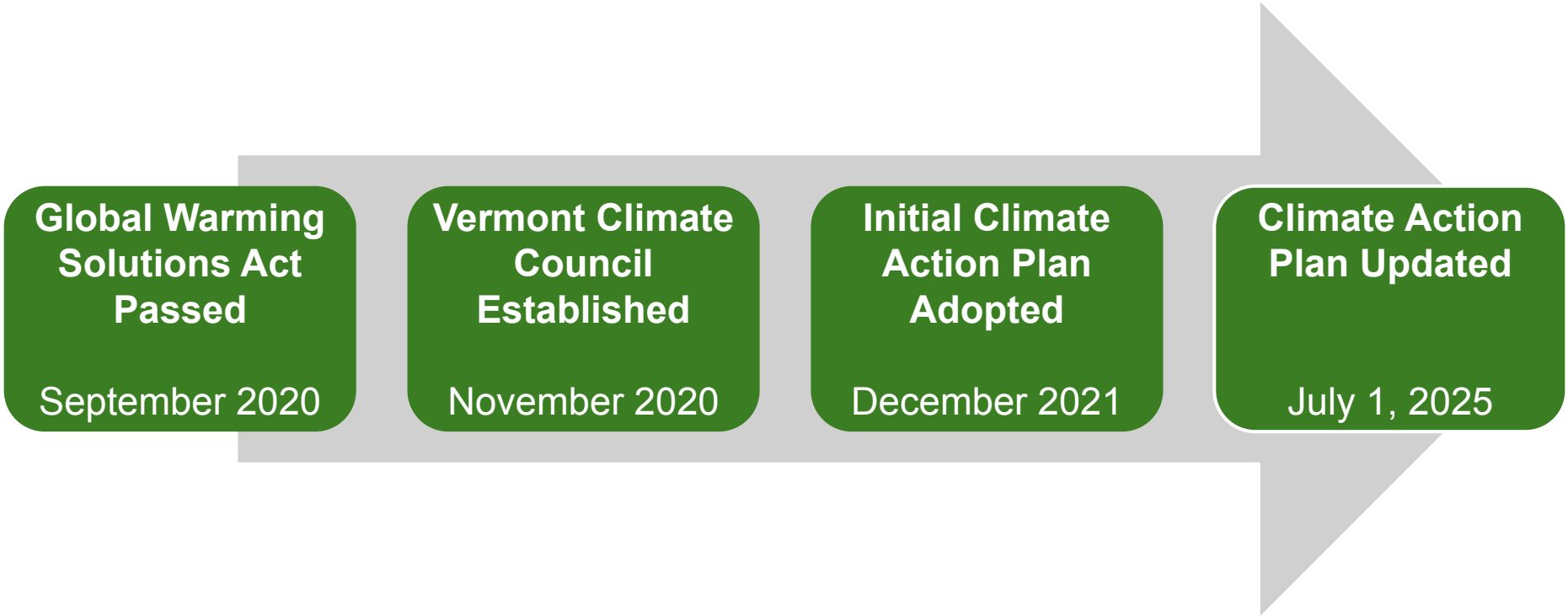
Climate Action Plan



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Climate Action Plan

1. Reduce GHG emissions
2. Encourage smart growth
3. Sequester Carbon
4. Achieve net zero emissions by 20250
5. Reduce energy burdens
6. Limit other pollutants
7. Build Resilience

2025 GWSA Target
26% below 2005 levels

2030 GWSA Target
40% below 1990 levels

2050 GWSA Target
80% below 1990 levels

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2025 Plan: Focus Areas

The plan serves as a roadmap for achieving the objectives set by GWSA.

The Update focuses on:

- Cutting Climate Pollution (aka emissions reductions)
- Adaptation & Resilience in Built and Natural Environment
- Natural and Working Lands Solutions
- Public Health and Housing

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2025 Plan: Process

Spring and Summer 2024

Update begins

Fall 2024

Subcommittees draft recommended actions

Winter 2025

Council drafts an updated plan

Spring & Summer 2025

Council revises and finalizes plan based on public input.

Community engagement throughout!

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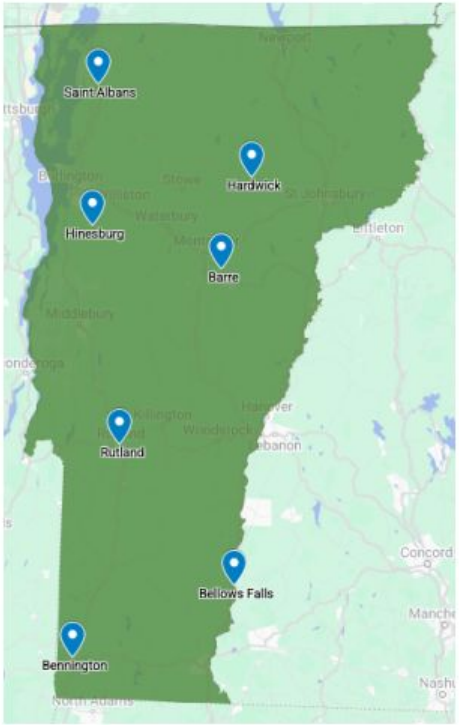
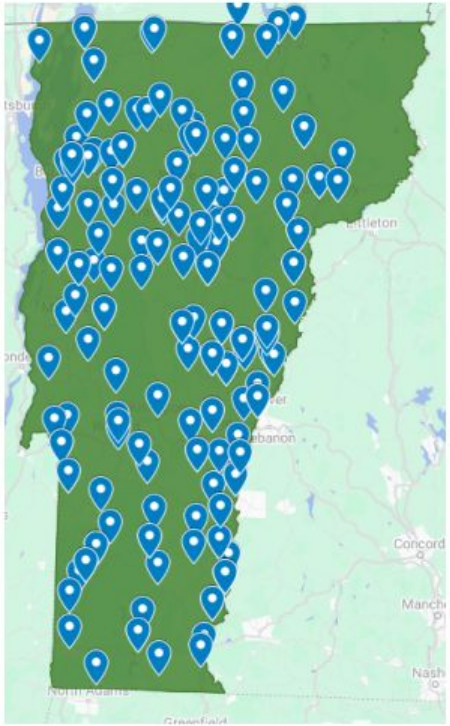
Nearly 400 people participated in the input sessions, from all corners of the state.

In-person meeting locations



Virtual Meeting Registrations



Meetings details:

- April 10th via Zoom (112 attendees)
- April 10, Barton (18 attendees)
- April 14th, Hardwick (28 attendees)
- April 15th, Hinesburg (60 attendees)
- April 16th, St. Albans (24 attendees)
- April 17th, Bennington (16 attendees)
- April 21st, Burlington (15 attendees)
- April 23rd, Bellows Falls (25 attendees)
- April 28th, Barre (40 attendees)
- April 30th, Rutland (19 attendees)
- May 1st via Zoom (73 attendees)

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Top Ten Priorities *Not ranked in order*

Make Vermont more resilient

- Expand and maintain a permanent Flood Resilience Communities Fund
- Invest in municipal infrastructure to support compact development

Support Climate-Informed Land Use

- Increase funding and adapt existing Vermont programs that achieve climate goals on farms and in forests
- Promote equitable landscape connectivity and conservation for 30x30 and 50x50 goals

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Top Ten Priorities *Not ranked in order*

Reduce Climate Pollution

- Weatherize homes, focusing on low- and moderate-income households
- Take preparatory steps now and join a cap-and-invest program as soon as a viable option is available
- Support utility programs that ensure the electric grid supports customer electrification and resilience
- Reduce greenhouse gas emissions from vehicles and buildings through electrification

Identify funding and support the needed workforce

- Identify revenue sources to immediately support these priority actions
- Implement the Climate-Ready Workforce Initiative and related actions

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Next Steps

July 1, 2025 | Climate Action Plan complete!

Fall 2025 | Climate Action Plan Design and Copy Edit Process

Winter 2026 | Events to share updated Climate Action Plan with Vermonters

https://climatechange.vermont.gov/cap-2025

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Resilience Implementation Strategy

- Built on work already done across the State Government to identify and prioritize climate resilience needs.
- Complements existing State plans and the Climate Action Plan.
- Identifies costs associated with resilience needs and considers approaches for funding of implementation.

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Timeline

Phase 1
April 2024 – November 2024

- Inventory existing initiatives, plans, programs, policies, and funding.
- Identify opportunities to build climate resilience.
- Establish statewide climate resilience vision informed by Vermonters.

Phase 2
September 2024 – May 2025

- Categorize and prioritize opportunities.
- Work with stakeholders to identify actions to meet opportunities.

Phase 3
May 2025 – September 2025

- Understand the costs associated with actions.
- Recommend final actions to meet identified opportunities.

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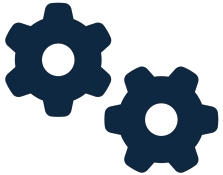
Vision for a Climate Resilient Vermont

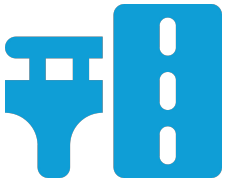


Government Systems

Community-Centric Approach

Early Warning Systems & Emergency Response

Economic & Environmental Sustainability



Infrastructure Design & Reinforcement

Nature-Based Solutions

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Opportunity Assessment and Workshop

Inventory: 330 Initiatives across 30 State Organizations

Workshop: 113 people from 50 Partner and State Organizations

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Final Recommended Actions

Prioritized by: **practicability, impact, and timing.**

126 total actions

66 Tier 1: high urgency and high readiness

60 Tier 2: – important, but less urgent and/or needs additional planning and coordination

Actions reflect **specific, measurable steps** that State Government can take.

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Priority Action Costing

- Actions that clearly **call for a funding or financing source.**
- Actions related to **immediate disaster response and recovery.**
- Actions relating to the **evaluation of risk and high-value mitigation** plans.
- 48 actions have associated estimated one-time or recurring costs.

Estimated one-time funds  $270 million

Estimated ongoing annual needs  $95 million (in 2025 dollars)

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Next Steps

Climate Action Office:

- Final report released on September 17th
- Built an interactive website

Implementation:

- Limited funding to support some early actions
- Support Agencies and Departments in implementing actions
- Policy proposals are being developed to support key recommended actions
- Develop project selection criteria (MVI)

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Next Steps

9C: Identify long-term sustainable funding for the Farm and Forestry Operations Security Special Fund to provide grants to farms and forestry operations to cover losses resulting from climate disasters.

10A: Support and expand self-evaluation tools for farm-level climate resilience and recovery, with aggregate results used to inform state planning, funding, and technical assistance efforts.

Municipal Climate Planning Framework

- **The Framework:** Establishes consistent, scalable principles based on best practices and Vermont's existing planning structure.
- **The Guide:** A "How-To" for integrating climate action into existing plans (Capital, Energy) or creating standalone Climate Action Plans.
- **The Pilot:** Testing with diverse municipalities to ensure scalability.
- **The Toolkit:** Provides resources to audit local capacity and identify "shovel-ready" projects.
- **Audience:** Municipal staff, committees, and Regional Planning Commissions.

Public Meeting: December 10 at 12 p.m.

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Thank You!

Evan Horne

Evan.Horne@vermont.gov
(802) 636-7925

Sign up for our monthly e-newsletter!

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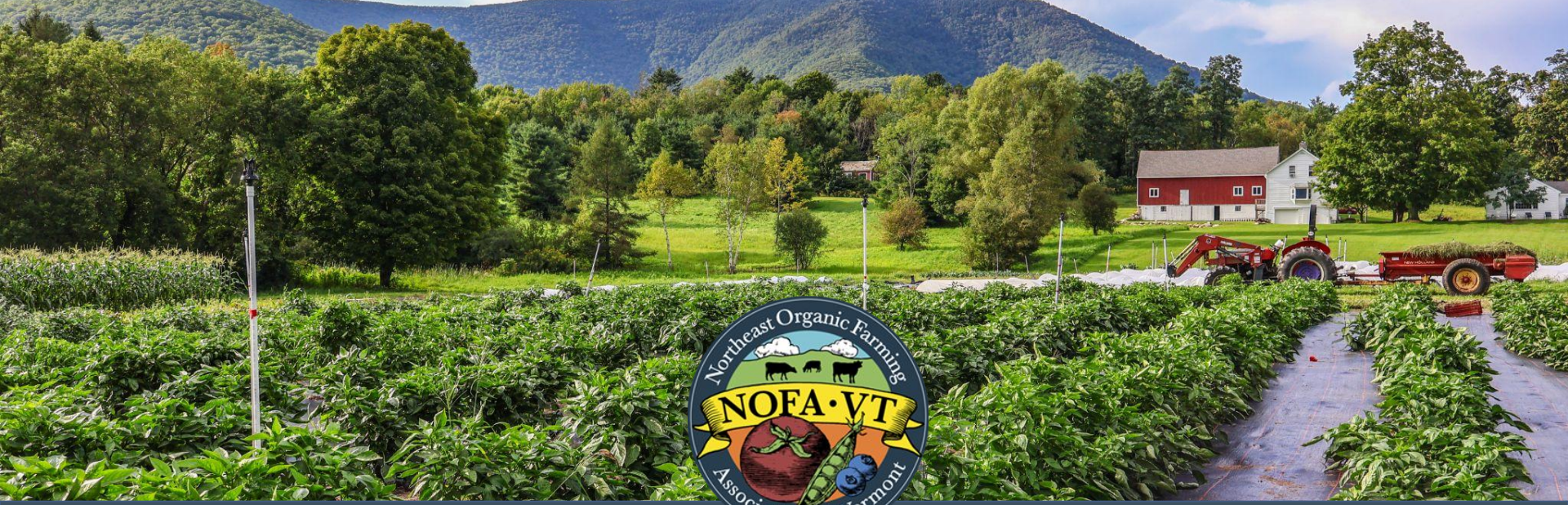
Maddie Kempner



State Policy for Climate Resilient Farms

climate resilience, farm viability, & food security flourish together

Maddie Kempner, Policy & Organizing Director
Northeast Organic Farming Association of Vermont

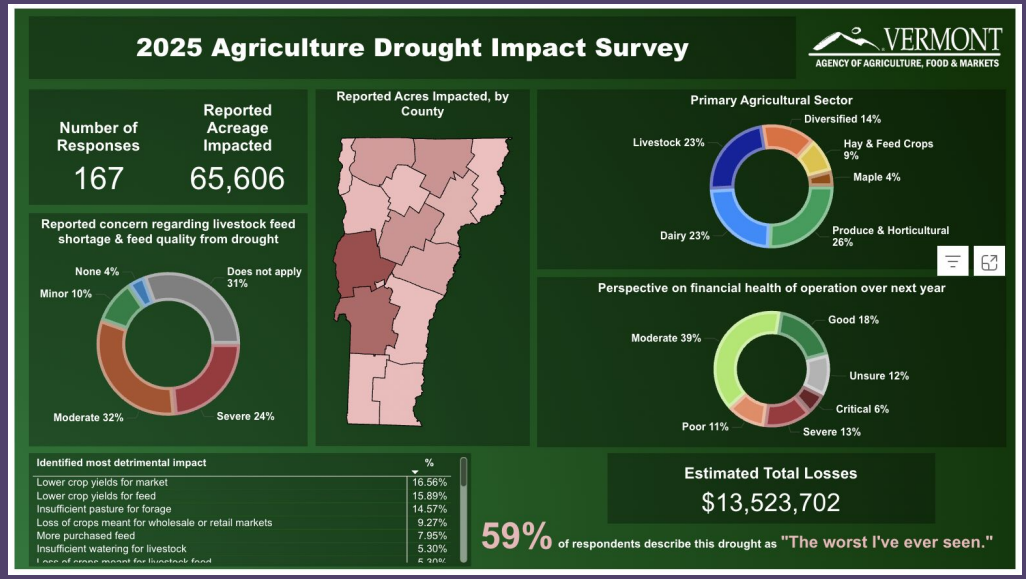
Farmers are facing multiple crises while trying to keep their communities fed and the land tended.

- Increasing land costs
- Corporate consolidation
- Climate impacts
- Labor challenges
- Federal political reality
  - Tariffs
  - Healthcare premiums increasing
  - USDA staff cuts
  - Divestment from:
    - Climate adaptive practices
    - BIPOC communities
    - SNAP
  - Increased targeting of immigrant farmworkers

Climate Crisis and Extreme Weather Impacts

$82.7 Million

Total estimated damage and losses reported by Vermont farms 2023 through November 2025 from extreme weather including a late spring freeze, multiple flooding events, and this year's drought.




Northeast Organic Farming
NOFA·VT
Association of Vermont

S.60: The Farm Security Fund

Funding for Farms in the Wake of Extreme Weather

Farmer organizations representing all types and scales of farms across the state have come together to ask the legislature to establish a Farm Security Fund to ensure farmers have financial assistance they need to recover from the impacts of extreme weather. Grants from the fund will r**eimburse a farm for up to 50% of uninsured or otherwise uncovered losses**. We're asking the legislature to pass the Farm Security Fund and appropriate $20 million for farm emergency relief in FY26. Future appropriations to the fund will be based on the average losses from eligible weather conditions over the past three years. The fund would be administered by the Vermont Agency of Agriculture, Food & Markets in collaboration with a review board.

Why This, Why Now

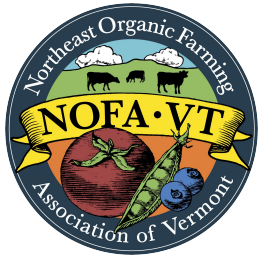
A storm, frost, or drought at the wrong time can devastate a farm. We all rely on farms, and we are all responsible for supporting farmers as they face increased climate instability, particularly as Vermont's small, diversified farms are left out of federal programs designed to stabilize agriculture in times of crisis.

It's time to start adapting to the climate crisis and ensuring our farms can continue producing the food we need. Supporting Vermont's farms means boosting rural economies, protecting the health of our land, preserving the heart of our communities, and ensuring a strong local food supply—critical as agriculture faces the same extreme weather challenges around the globe.

Supported by:

The Farm Security Fund is supported by:

Center for an Agricultural Economy



VERMONT FARM BUREAU INC.

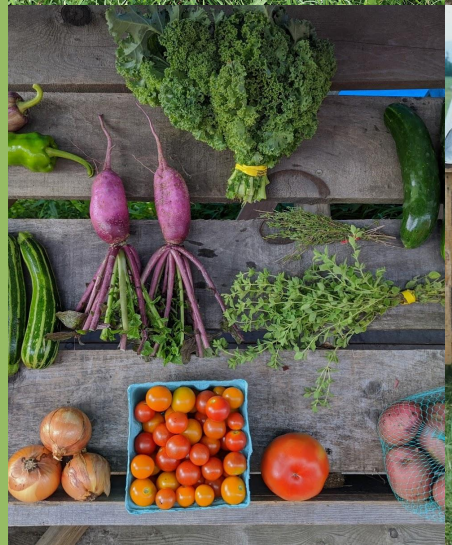
Vermont Association of Conservation Districts

SALVATION FARMS

The Farm Security Special Fund will provide farmers with immediate financial assistance to recover from the impacts of extreme weather.

How it would work:

- simple to apply for
- immediate payment
- flexible and proportional
- permanently and predictably funded over time
- farmers will be reimbursed for up to 50% of uninsured or otherwise uncovered losses (up to $150k)
- administered by VAAFM in collaboration with a review board



FOOD SECURITY IN VERMONT:

ROADMAP TO 2035

farm to plate

Vermont farms have the resources to be resilient

A1: Provide direct, easy-to-access financial support to farmers who provide essential services to Vermont

A2: Accelerate the permanent conservation of Vermont's agricultural lands as working farms

A3: Provide essential and urgently needed investments in agricultural supply-chain infrastructure

A4: Establish easier and equitable access to farmland and on-farm infrastructure

From the the Updated Climate Action Plan:

5) **Create a dedicated climate impact emergency recovery fund for farms and forestry operations or related infrastructure (or ensure the agriculture and forestry sectors are given specific considerations in existing recovery funds), support leverage of federal funds and expansion of programs to support the adaptive capacity and restoration of farms and forests, and promote insurance for farm and forest landowners and businesses, to ensure that they can equitably and viably recover from climate induced disasters.**

   - The fund should be simple to access, deploy sufficient funds quickly following a disaster, be flexible, equitable, and proportional to meet the diverse needs of the farming and forestry community, and be sustained over time with predictable and consistent funding.

From the Resilience Implementation Strategy:

9C

Tier: 1

Identify long-term sustainable funding for the Farm and Forestry Operations Security Special Fund to provide grants to farms and forestry operations to cover losses resulting from climate disasters.

Lead: Agency Agriculture, Food & Markets (AAFM)

Estimated Cost: $7,500,000

Duration: One-Time

Where is the Farm Security Fund Now?

- ➔ S.60 introduced in January 2025
- ➔ Passed the Senate Agriculture Committee
- ➔ Passed the full Senate (unanimously!)
- ➔ Passed the House Agriculture, Food Resiliency & Forestry Committee (w/ some amendments)
- ➔ Now in House Appropriations Committee
- ➔ Funding request for $20M, moving separately

What's next?

- ❏ Enact S.60, the Farm & Forestry Operations Security Special Fund bill by the end of the 2026 legislative session
- ❏ Secure $20 million in one-time money for the fund in FY27 state budget
- ❏ Track and engage in the fund's implementation
- ❏ Make sure farmers know about it and apply once it's available

How you can help:

- ➔ Sign on to support as an organization
- ➔ Sign our petition to support as an individual & share widely
- ➔ Comment on the Governor's Budget
- ➔ Contact your House Rep directly (especially if they're a member of the House Appropriations Committee)
- ➔ Write a letter to the editor for your local paper about the impacts of the drought and the need for more support for farmers

Sign On to Support S.60 (You can do this right now!)

As an organization:

Link to org sign-on letter.

As an individual:

bit.ly/3K8hKta

Link to petition.

Submit a comment to Governor Scott in support of S.60. (You can do this right now!)

"Please appropriate $20 million for the Farm & Forest Operations Security Special Fund envisioned in S.60 for FY2027."

In 1-2 sentences, say why YOU PERSONALLY support this request.

Rep. Robin Scheu, Addison-1 (Chair)

Rep. Jim Harrison Rutland-11, Vice Chair

Rep. Tiff Bluemle, Chittenden-13

Rep. Lynn Dickinson, Franklin-2

Rep. John Kascenska, Essex-Caledonia

Rep. Wayne Laroche, Franklin-5

Rep. Mike Mrowicki, Windham-4

Rep. Mike Nigro Bennington-5

Rep. Trevor Squirrel, Chittenden-3

Rep. Tom Stevens, Washington-Chittenden

House Appropriations Committee. Is your rep pictured here?

Rep. David Yacovone, Lamoille-Washington

We all rely on farms to eat, and we are all responsible for supporting farms as they face new climate realities.

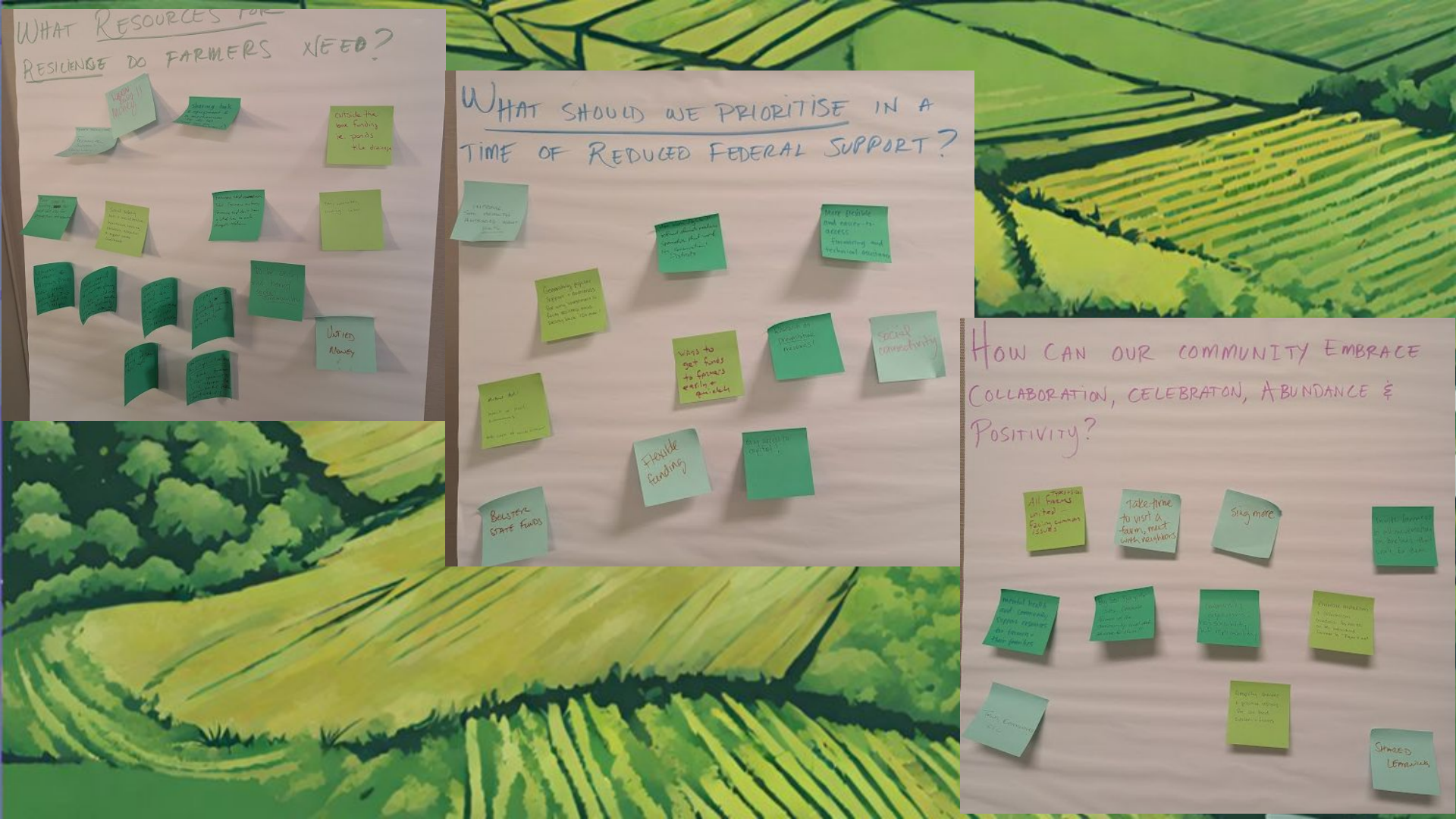

LOCAL FOOD SECURITY
HEALTHY COMMUNITIES
PROTECTED NATURAL RESOURCES
BIODIVERSITY
CIVIC ENGAGEMENT
SOIL HEALTH + LONG-TERM PRODUCTIVITY
MUTUAL AID
CLIMATE CHANGE RESILIENCY
STRONG LOCAL ECONOMIES
SHORTER SUPPLY CHAINS
THRIVING RURAL COMMUNITIES
ACTIVE WORKING LANDS
Northeast Organic Farming
NOFA·VT
Association of Vermont

Group Activity

Please use sticky notes to write down:

- What climate resilience resources do farmers need?
- Are there certain ones we should prioritize in this environment of reduced federal support?
- What can we do as a community to embrace collaboration, celebration, abundance, and positivity?

Add your answers to the papers on the wall.


WHAT RESOURCES FOR RESILIENCE DO FARMERS NEED?
Outside the box funding re: ponds tile drainage
Untied Money
WHAT SHOULD WE PRIORITISE IN A TIME OF REDUCED FEDERAL SUPPORT?
Ways to get funds to farmers early + quickly
Flexible funding
Bolster state funds
Social connectivity
HOW CAN OUR COMMUNITY EMBRACE COLLABORATION, CELEBRATION, ABUNDANCE & POSITIVITY?
All Farms united facing common issues
Take time to visit a farm, meet with neighbors
Sing more
Mental health and community support resources for farmers + their families
Shared Learning