FY 2025 Locally Led Conservation Local Fund Pool Proposal - Tri-District

2025_VT_Tri-District_Local Fund Pool_

Attachment B

2025 EQIP Locally Led Conservation Ranking Pool Request Form - Completed by the DC

Land Uses

Check off those land use/uses that will be applicable to the proposed ranking pool

1	Crop
2	Forest
	Range
3	Pasture
4	Farmstead
	Associated Ag Land

Resource Concerns

In EQIP there are 17 nationally recognized resource concern categories for the program. Zone DCs will select the top 5 resource concern priorities from the list below based on the LWG action plan, where highest priority is 1. Only 5 resource concerns are to be selected, prioritized as 1 through 5, with 1 being the highest priority.

	Air Quality Emissions
	Aquatic Habitat
	Concentrated Erosion
4	Degraded Plant Condition
	Field Pesticide Loss
3	Field Sediment, Nutrient and Pathogen Loss
	Fire Management
	Inefficient Energy Use
5	Livestock Production Limitation
	Pest Pressure
	Salt Losses to Water
1	Soil Quality Limitations
	Source Water Depletion
	Storage and Handling of Pollutants
	Terrestrial Habitat
2	Weather Resilience
	Wind and Water Erosion

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Core Conservation Practices

Check the conservation practices recommended to include in the proposed ranking pool. These practices must address at least one of the five resource concerns selected and ranked above.

	101	CNMP Design and Implementation Activity
	102	Comprehensive Nutrient Management Plan
✓	106	Forest Management Plan
✓	110	Grazing Management Plan
✓	116	Soil Health Management Plan
	120	Agricultural Energy Design
	138	Conservation Plan Supporting Organic Transition
	140	Transition to Organic Design
	144	Fish and Wildlife Habitat Design
✓	148	Pollinator Habitat Design
	157	Nutrient Management Design and Implementation Activity
	158	Feed Management Design
	159	Grazing Management Design
	160	Prescribed Burning Design
	161	Pest Management Conservation System Design
✓	162	Soil Health Management System Design
✓	163	Irrigation Water Management Design
✓	164	Improved Management of Drainage Water Design
	165	Forest Management Practice Design
	199	Conservation Plan
	201	Edge-of-Field Water Quality Monitoring - Data Collection and Evaluation
	202	Edge-of-Field Water Quality Monitoring - System Installation
	207	Site Assessment and Soil Testing for Contaminants Activity
	209	PFAS Testing in Water or Soil
✓	216	Soil Health Testing
✓	217	Soil and Source Testing for Nutrient Management
	218	Carbon Sequestration and Greenhouse Gas Mitigation Assessment
	221	Soil Organic Carbon Stock Measurement
	222	Indigenous Stewardship Methods Evaluation
✓	223	Forest Management Assessment
	224	Aquifer Flow Test
	228	Agricultural Energy Assessment
	309	Agrichemical Handling Facility
✓	311	Alley Cropping
	313	Waste Storage Facility
	314	Brush Management
	315	Herbaceous Weed Treatment
	316	Animal Mortality Facility
✓	317	Composting Facility
	319	On-Farm Secondary Containment Facility
✓	325	High Tunnel System
	326	Clearing and Snagging
	327	Conservation Cover
✓	328	Conservation Crop Rotation
	329	Residue and Tillage Management, No Till
✓	330	Contour Farming
✓	332	Contour Buffer Strips
	333	Amending Soil Properties with Gypsum Products
	334	Controlled Traffic Farming

Attachment B
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	338	Prescribed Burning
	340	Cover Crop
	342	Critical Area Planting
	345	Residue and Tillage Management, Reduced Till
✓	350	Sediment Basin
	351	Well Decommissioning
	353	Monitoring Well
	355	Groundwater Testing
	360	Waste Facility Closure
✓	362	Diversion
	366	Anaerobic Digester
	367	Roofs and Covers
	368	Emergency Animal Mortality Management
	372	Combustion System Improvement
	374	Energy Efficient Agricultural Operation
	378	Pond
✓	379	Forest Farming
	380	Windbreak/Shelterbelt Establishment and Renovation
✓	381	Silvopasture
✓	382	Fence
	384	Woody Residue Treatment
	386	Field Border
	390	Riparian Herbaceous Cover
	391	Riparian Forest Buffer
	393	Filter Strip
	395	Stream Habitat Improvement and Management
	396	Aquatic Organism Passage
	410	Grade Stabilization Structure
	412	Grassed Waterway
	420	Wildlife Habitat Planting
	422	Hedgerow Planting
✓	430	Irrigation Water Conveyance
✓	436	Irrigation Reservoir
✓	441	Irrigation System, Microirrigation
✓	442	Sprinkler System
✓	443	Irrigation System, Surface and Subsurface
✓	449	Irrigation Water Management
✓	464	Irrigation Land Leveling
✓	468	Lined Waterway or Outlet
	472	Access Control
✓	484	Mulching
✓	490	Tree/Shrub Site Preparation
	500	Obstruction Removal
	511	Forage Harvest Management
✓	512	Pasture and Hay Planting
✓	516	Livestock Pipeline
	520	Pond Sealing or Lining, Compacted Soil Treatment
	521	Pond Sealing or Lining, Geomembrane or Geosynthetic Clay Liner

Attachment B
2025 EQIP Locally Led Conservation Ranking Pool Request Form - Completed by the DC

	522	Pond Sealing or Lining – Concrete
✓?	528	Prescribed Grazing
	533	Pumping Plant
	554	Drainage Water Management
✓	557	Row Arrangement
✓?	558	Roof Runoff Structure
	560	Access Road
	561	Heavy Use Area Protection
	570	Stormwater Runoff Control
	574	Spring Development
	575	Trails and Walkways
	576	Livestock Shelter Structure
	578	Stream Crossing
	580	Streambank and Shoreline Protection
	582	Open Channel
	585	Stripcropping
	587	Structure for Water Control
	590	Nutrient Management
	592	Feed Management
	595	Pest Management Conservation System
	601	Vegetative Barrier
	603	Herbaceous Wind Barriers
	604	Saturated Buffer
	606	Subsurface Drain
✓	612	Tree/Shrub Establishment
	614	Watering Facility
	620	Underground Outlet
	627	Wastewater Treatment – Milk House
	629	Waste Treatment
	632	Waste Separation Facility
	633	Waste Recycling
	634	Waste Transfer
	635	Vegetated Treatment Area
✓	636	Water Harvesting Catchment
✓	638	Water and Sediment Control Basin
	642	Water Well
	643	Restoration of Rare or Declining Natural Communities
	644	Wetland Wildlife Habitat Management
	645	Upland Wildlife Habitat Management
	647	Early Successional Habitat Development-Management
	649	Structures for Wildlife
	654	Road/Trail/Landing Closure and Treatment
	655	Forest Trails and Landings
	656	Constructed Wetland
	657	Wetland Restoration
	659	Wetland Enhancement
✓	660	Tree/Shrub Pruning
✓	666	Forest Stand Improvement
	670	Energy Efficient Lighting System
	672	Energy Efficient Building Envelope
	782	Storage Facility – Nursery Substrate
	805	Amending Soil Properties with Lime

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☑	808	Soil Carbon Amendment
☑	810	Annual Forages for Grazing Systems
☑	812	Raised Bed
☑	821	Low Tunnel Systems

Attachment B
2025 EQIP Locally Led Conservation Ranking Pool Request Form - completed by the DC

Applicability and Category Question (if submitting a geospatial layer request, specify this in the space below and include a detailed explanation of what the boundaries are):

_____
_____
_____
_____

Program Questions

Question Number	Question	Points
1	Does this application support a historically under-served producer?	60
2	Does this application support improved economic efficiency and climate resilience?	50
3	Does this application support the production of local food in the tri-district area?	50
4	Does this application support a SFO or CSFO?	40
5		
	Total Points	200

Resource Questions

Question Number	Question	Points
1	Does this application include the design or implementation of resilient CSAF practices?	50
2	Does this application include at least one practice that addresses soil quality limitations and weather resilience?	40
3	Does this application include at least one practice that addresses Field Sediment, Nutrient and Pathogen Loss?	35
4	Does this application include at least one practice that addresses Degraded Plant Condition or Livestock Production Limitation?	30
5	Does this application include three or more practices?	45
	Total Points	200

Ranking Component Weights

Total ranking component weight must equal 100%. Zone DCs will select vulnerability, program priorities and resource priorities percentages. Percentages for each must be between the minimum and maximum percentage located in the EQIP national ranking template, as outlined below. The planned practice points and efficiency percent are set nationally.

	Min %	Max %	Suggested Weight
Vulnerabilities	10	40	10
Planned Practice Points	15	15	15
Program Priorities	5	15	15
Resource Priorities	20	60	50
Efficiency	10	10	10
TOTAL			100%

Attachment B
2025 EQIP Locally Led Conservation Ranking Pool Request Form - completed by the DC

Funds Being Requested ($)

$750,000

Ranking Pool Deadlines

Check here if the preferred funding cycle for the Locally Led Conservation Ranking Pool proposal is to follow the State funding cycle for 2025.

For a separate funding cycle, specific to this proposal, provide the following:

	Suggested Date
Application Sign Up Deadline	
Application Ranking Deadline	
Application Obligation Deadline	

Tri-District Local Work Group

March 28, 2024

Bennington County
Poultney Mettowee NRCD
Rutland NRCD

Conservation Needs Assessment

Includes data from NRCD Surveys, Shires Direct Producer Surveys & focus groups, the Community Resilience Forum, and NRCD-DEC Environmental Justice Stakeholder Engagement.

Conservation District Surveys: 55

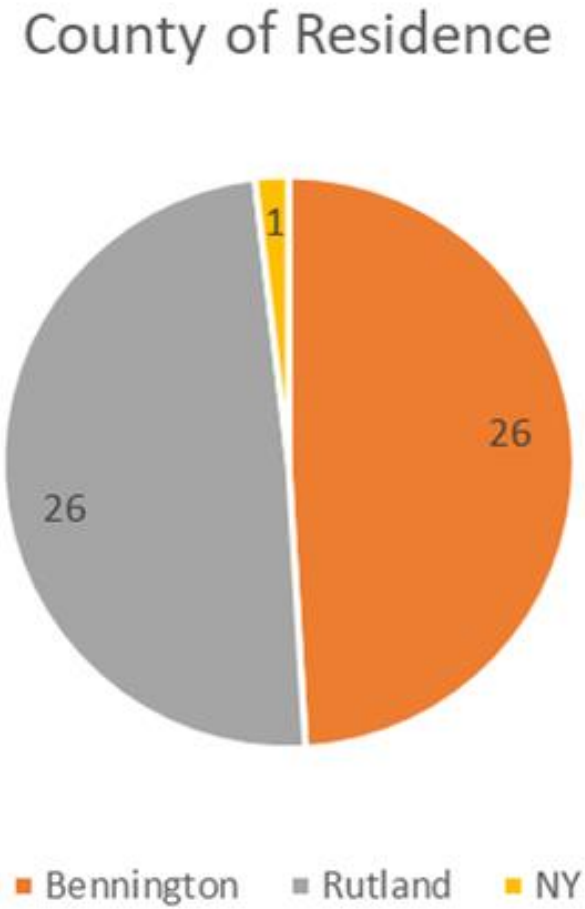
Community Resilience Forum: 21

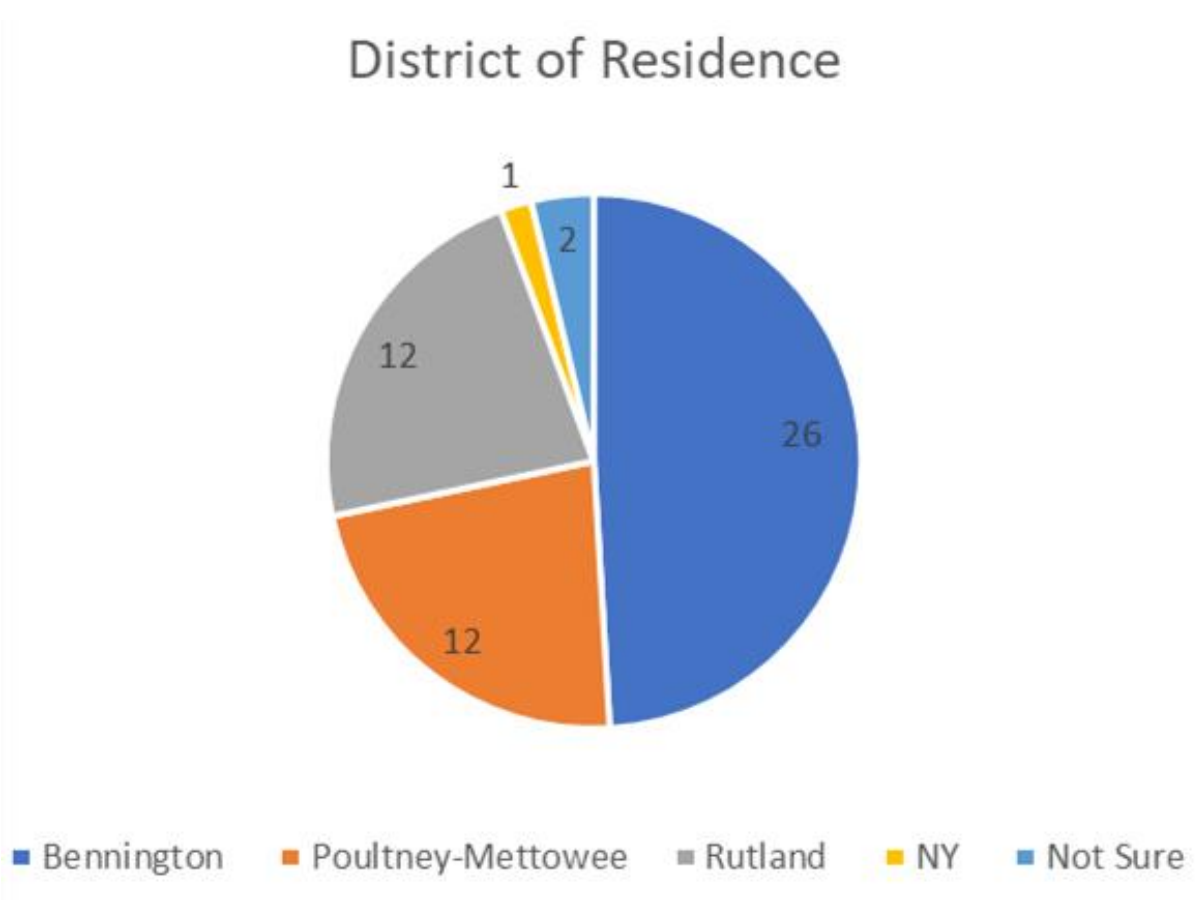
DEC EJ Engagement: 53

Shires & Lookout Foundation Surveys & Focus Groups: 165

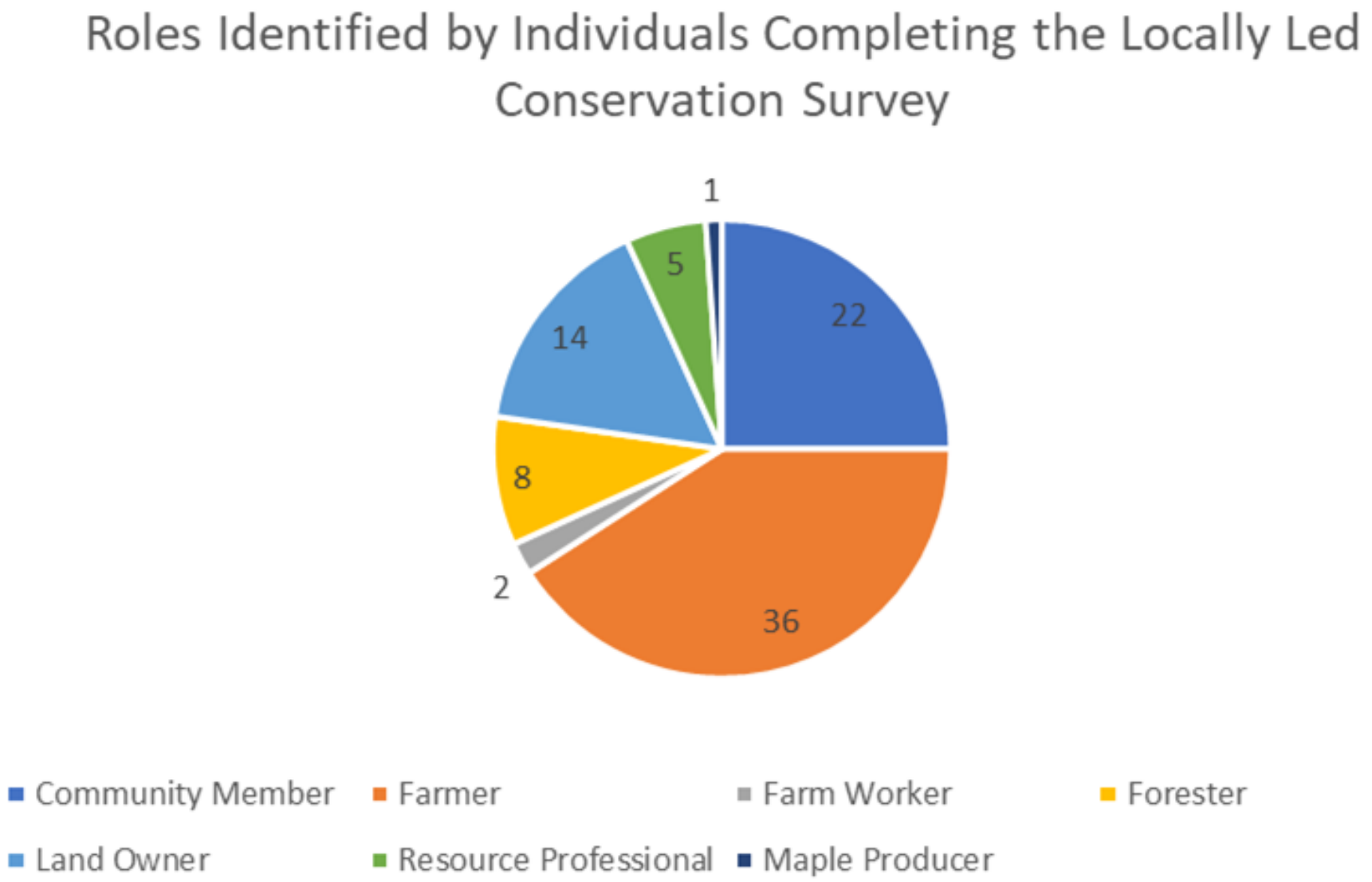
Total Stakeholders Engaged: 294

County and District of Survey Participants:

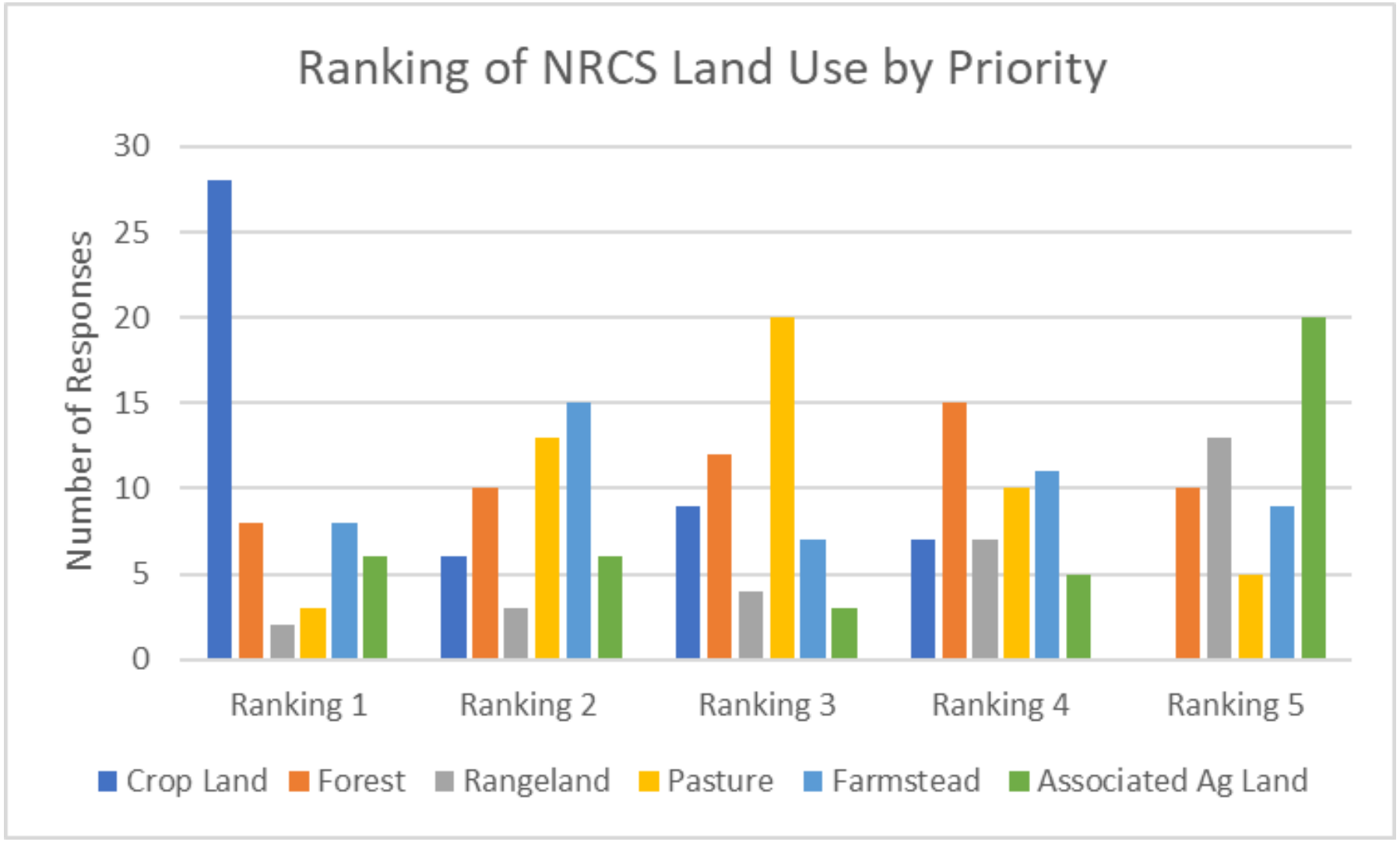




Who Completed the Survey?

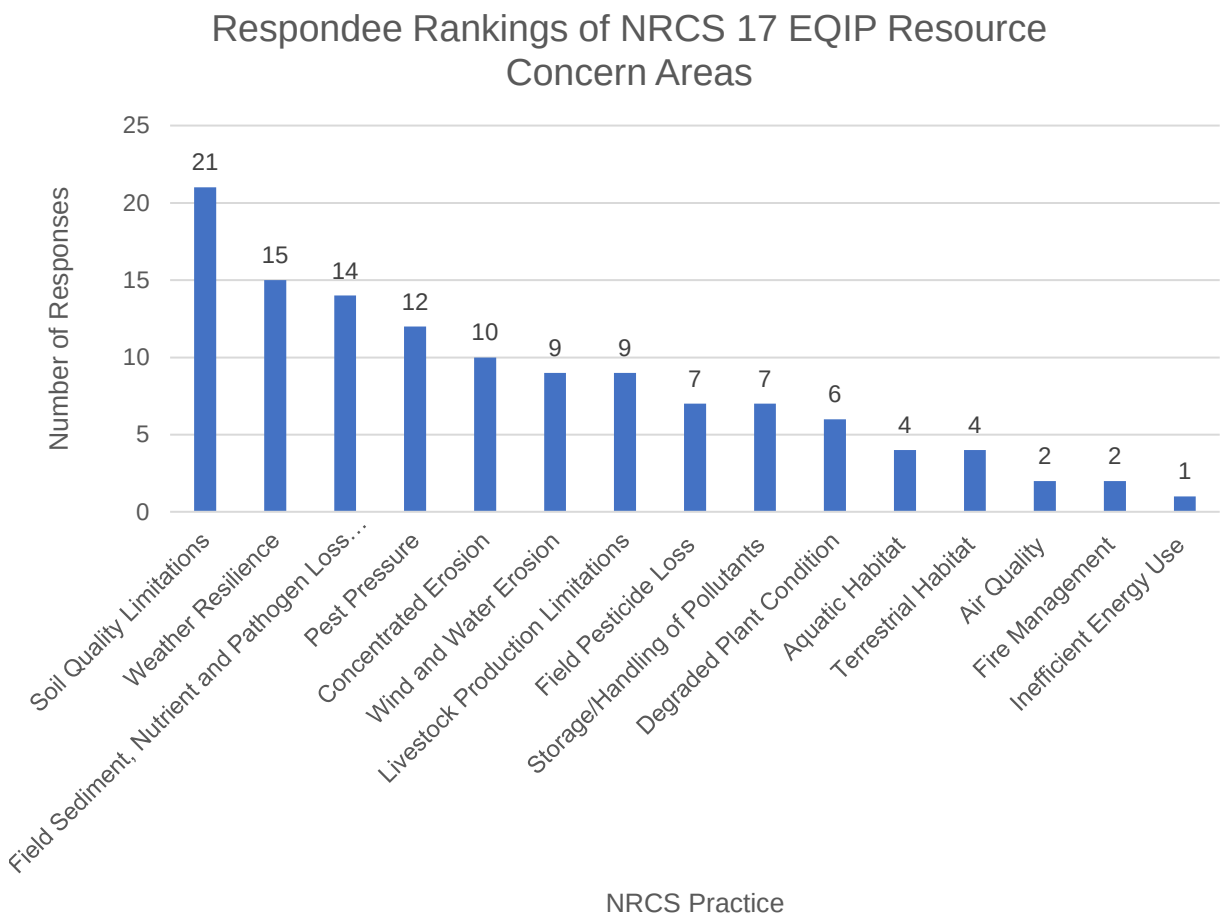


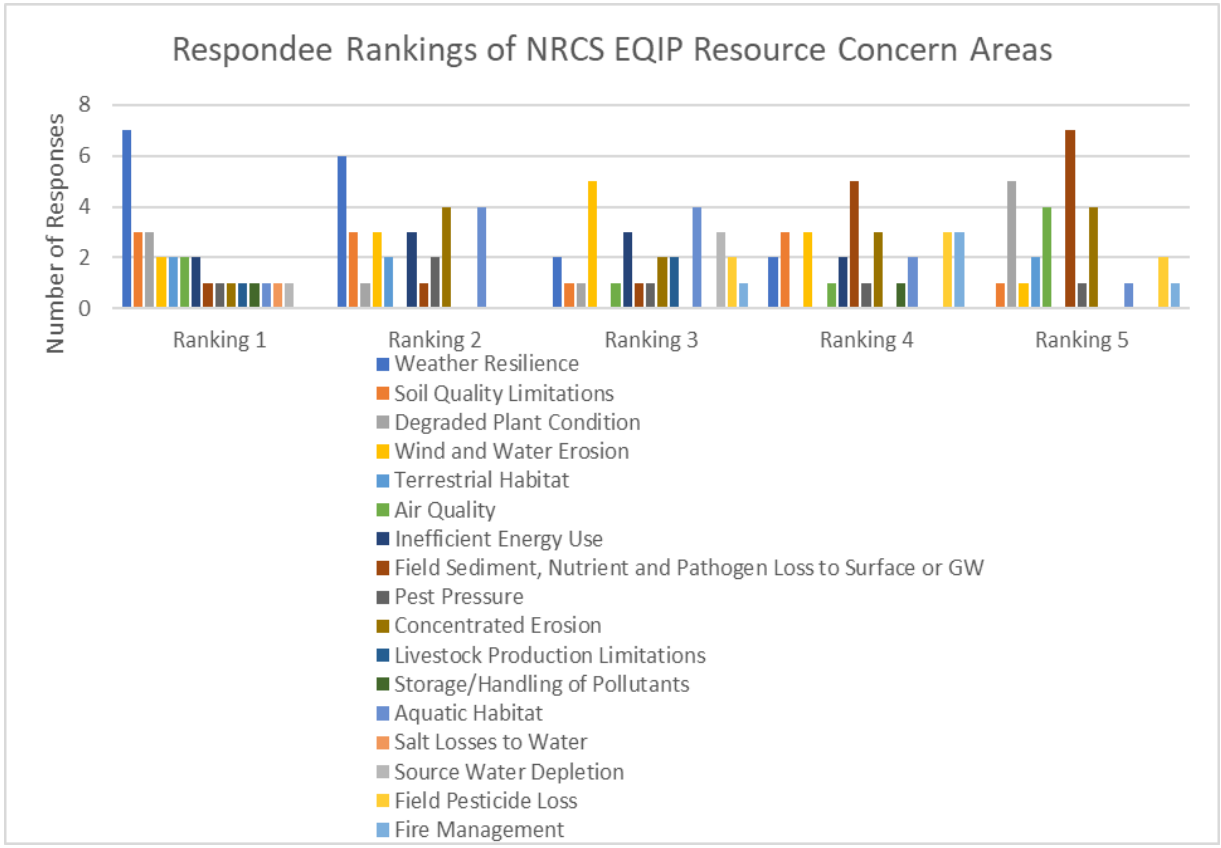
Ranking of Land Use by Conservation Priority:



Resource Concern Areas by County:

Rutland County (Left), Bennington County (Right)





Combined Resource Concern Rankings

- Weather Resilience
- Soil Quality Limitations
- Field Sediment, Nutrient, and Pathogen Losses
- Wind and Water Erosion/Concentrated Erosion

- Benn: Degraded Plant Condition
- PM/Rutland: Pest Pressure and Livestock Production Limitations
- Qualitative Review of Comments: High interest in Pasture and Grazing (might indicate resource concern around pasture and desire for local meat production and diversification/regenerative ag/agroforestry.

Other Resource/ General Concerns Identified:

- Water quality, flooding, and floodplain reconnection
- Lack of young farmers
- Habitat loss
- Produce Storage
- Forest Management, Stand Improvement
- Lack of Public Awareness of Farming
- Soil Carbon, Soil Health and Soil Biology

Qualitative Data Analysis: Themes

Theme	Count	Percentage
community food systems	33	61.1
land protection	21	38.9
farm viability	20	37.0
watershed health	14	25.9
climate change	12	22.2
access	9	16.7
climate smart/agroforestry	9	16.7
resilience	7	13.0
education	6	11.1
energy	6	11.1
soil and water contamination	4	7.4
pollinators	4	7.4
pesticide use	4	7.4
forests	3	5.6
biodiversity	3	5.6
maple related issues	3	5.6
housing	1	1.9

Key Takeaways from Qualitative Data

- Consistent focus on working lands economy, farm viability, and supporting increases in local food production driven by concerns about food security and economic viability.

- High levels of interest in climate smart practices, perennial agriculture, and water capture as a grassroots solution to climate related concerns.

- Recurring mentions of diversified operations and livestock could flag Livestock Production Limitations as a resource concern not captured in quantitative data.

- Decreases in maple production mentioned in multiple surveys could indicate early arrival of climate change, necessitates further analysis and outreach to discover the scope of the decline and whether it is a trend.

Quotes from the surveys

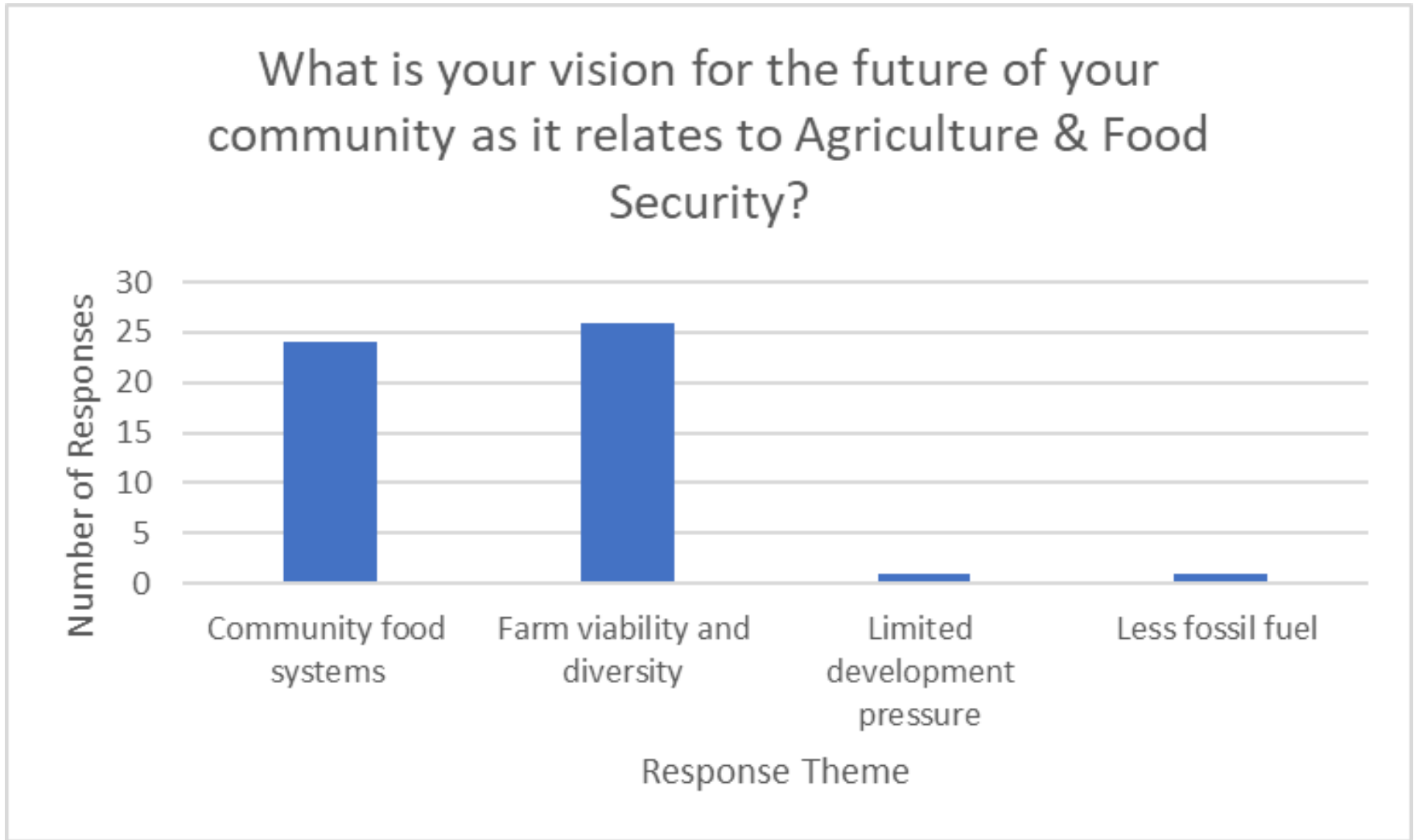
What do you love about your community?

- My town? While my town has no zoning currently, we try to preserve ag lands through our town plan. The larger district region has worked hard in many ways to protect water quality and soil health.
- Forests, wildlife, rivers, access to trails, and local farms.
- I love the abundance of local food options. I love how involved and attentive the local farmers and farm workers are to their land.

Quotes from the Survey

What is your vision for the future of your community as it relates to Agriculture & Food Security?

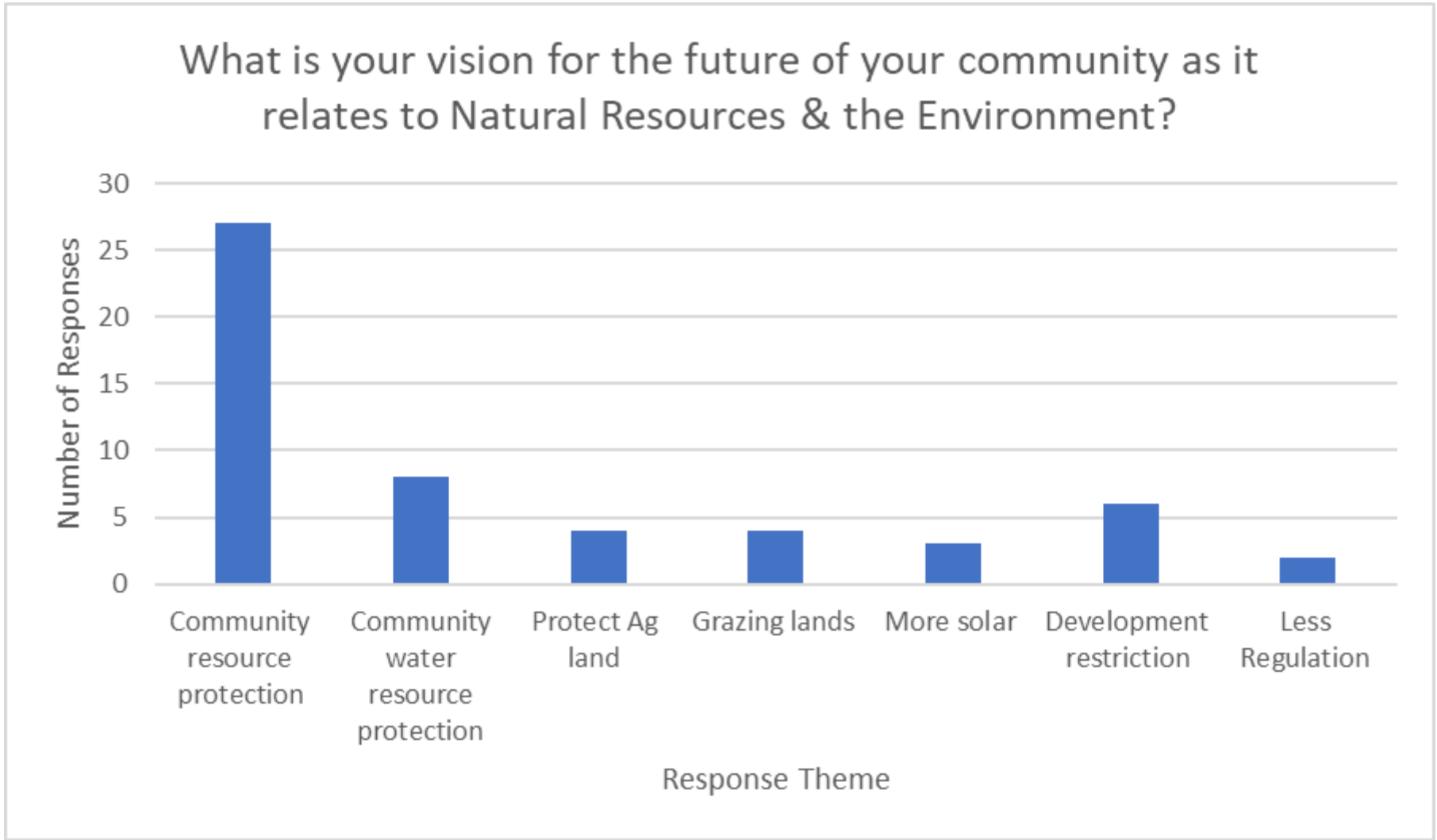
- Food as medicine, food as ecological health, agriculture as foundation of economy.
- Small, diversified farms, selling direct to the public.
- Building a sustainable, resilient and equitable local food system in the region. Focus on seed, soil, and access. Make changes here and serve as a model for communities across the country.
- My vision is one of resilience through sustainable decisions regarding our water catchment system, and wholistic planning that focuses on the wellbeing of future generations and a truly robust response to climate change.
- I envision a locally sustainable permaculture food system that is not reliant on imports for its security.


What is your vision for the future of your community as it relates to Agriculture & Food Security?
Number of Responses
30
25
20
15
10
5
0
Community food systems
Farm viability and diversity
Limited development pressure
Less fossil fuel
Response Theme

Quotes from the surveys

What is your vision for the future of your community as it relates to Natural Resources & the Environment

- We need to use our natural resources wisely and in a manner to promote growth that will sustain future generations.
- Lots of conflicting answers from fewer regulations and managed streams to less development, forest fragmentation, and parcelization.
- Increasing local citizens' ecological understanding of the local landscape while building the economic viability of stewarding farms, forests, and waterways.
- My vision is one of resilience through sustainable decisions regarding our water catchment system, and wholistic planning that focuses on the wellbeing of future generations and a truly robust response to climate change.


What is your vision for the future of your community as it relates to Natural Resources & the Environment?
Number of Responses
30
25
20
15
10
5
0
Community resource protection
Community water resource protection
Protect Ag land
Grazing lands
More solar
Development restriction
Less Regulation
Response Theme

Quotes from the surveys

Can you identify specific or emerging issues in your community related to Agriculture & Food Security?

- Flooding and unpredictable weather have impacted the local community and producers, where many lost their nursery stock, apple harvests, flooded property, etc. Additionally, much of the available produce in this area (grocery stores, markets) comes from Canada/Mexico which is fragile in the face of supply chain disruptions etc. Local producers often don't have the funds needed to make improvements to land, and can be unaware of the resources (like conservation districts) that are available to support them.

- loss of productive farm land in our country, state regs the little farms can't handle, practices that don't work for small farm, over building, climate change, calpacs of maple syrup production

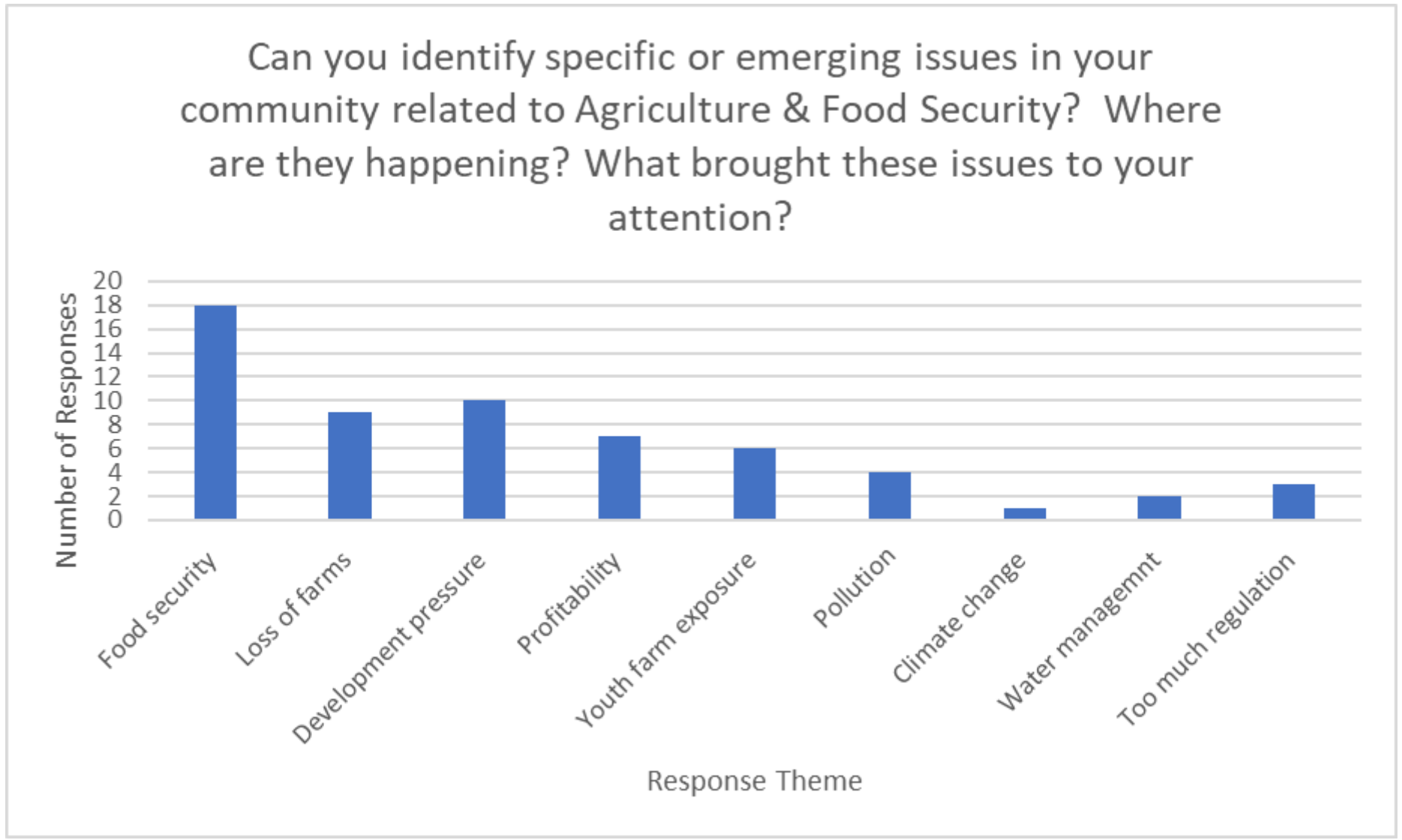
Quotes from the surveys

Can you identify specific or emerging issues in your community related to Natural Resources & the Environment?

- Water management. As area development continues to occur and land uses change in combination with changes in rainfall/snow-melt amounts and patterns, runoff and water volumes in flood plains are changing with no mitigation or management practices being implemented or insufficient practices that are community implemented

- There is a push in this community to bring industry back to Pownal in order to meet the economic needs of residents. Sustainable industry would be welcome, but the push for jobs is currently putting economics over sustainability and that is a false dichotomy. We must have options that can put food on the table, give people a means to pay bills, and not pay for that on the backs of future generations. We can no longer tolerate a way of life that is killing us. Residents brought these issues to my attention.

- Every town should be thinking about and planning for solar installations. Many landowners cannot perform TSI indicated in their forest management plans due to lack of available (and affordable) services. Farmland conservation needs to not be conflated with housing crisis; vast tracts of marginal land could be developed if it comes to that without ruining best ag soils

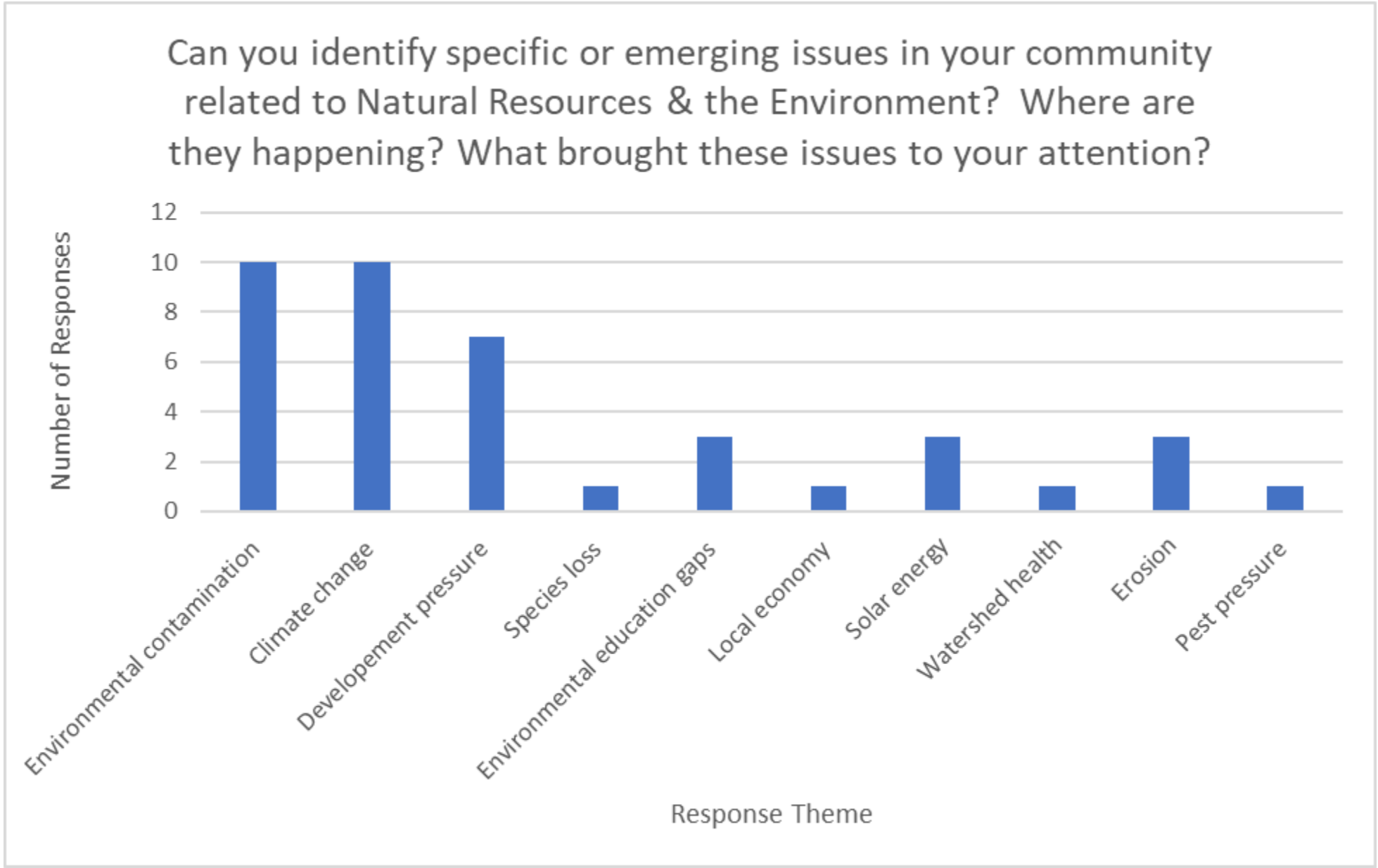

Can you identify specific or emerging issues in your community related to Agriculture & Food Security? Where are they happening? What brought these issues to your attention?
Number of Responses
20
18
16
14
12
10
8
6
4
2
0
Food security
Loss of farms
Development pressure
Profitability
Youth farm exposure
Pollution
Climate change
Water managemnt
Too much regulation
Response Theme

Quotes from surveys

Can you identify specific or emerging issues in your community related to Natural Resources & the Environment?

- Climate change is impacting all aspects of food production; Climate change changing the sugaring season; Climate change has brought new challenges for both foresters and farmers. The emergence of new pests and diseases are putting strains on all our natural systems. SWD, ticks and tree diseases and insects such as emerald ash borer and changing to ecological balance/ Alternating drought and excess rains are causing soil loss and crop stress

- More people moving to the area wanting to build large second homes; Development pressure, poor infrastructure.


Can you identify specific or emerging issues in your community related to Natural Resources & the Environment? Where are they happening? What brought these issues to your attention?
Number of Responses
12
10
8
6
4
2
0
Environmental contamination
Climate change
Developement pressure
Species loss
Environmental education gaps
Local economy
Solar energy
Watershed health
Erosion
Pest pressure
Response Theme

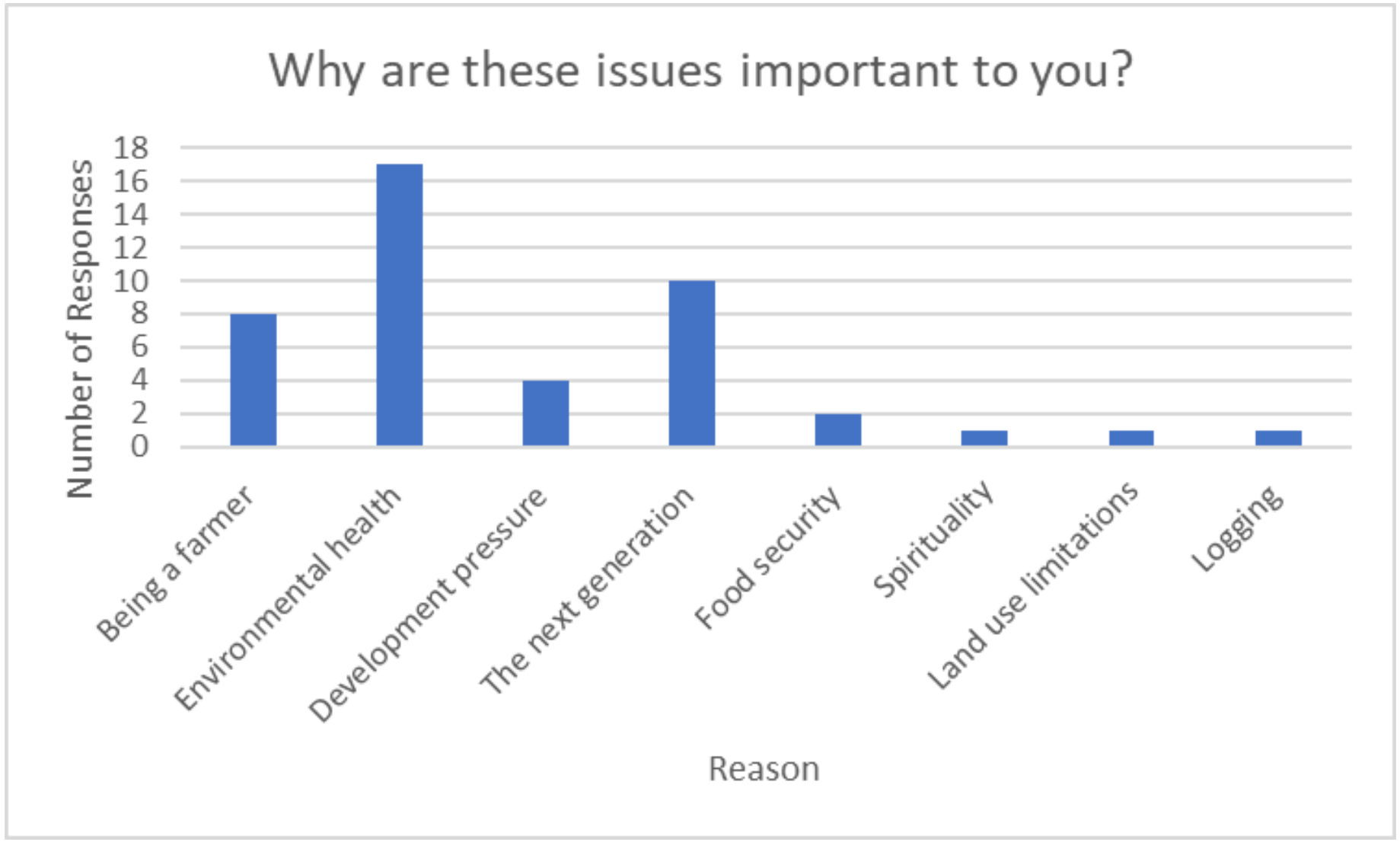
Quotes from surveys

Why are these issues important to you?

- Helping farmers and improving environmental health are important to me.

- I have children and I am concerned for their future. These changes affect all my community and their children as well. We, as leaders of today, need to make sure their future is guaranteed to be better than ours/ I fear that will not be the case unless we act in a meaningful way to address climate change which is the primary driver for many of these emerging issues.

- Our ability to live and work in this state is under threat. Pretty soon Vermont will be a bedroom community for wealthy urbanites and suburbanites who work remotely.


Why are these issues important to you?
Number of Responses
18
16
14
12
10
8
6
4
2
0
Being a farmer
Environmental health
Development pressure
The next generation
Food security
Spirituality
Land use limitations
Logging
Reason

Quotes from Surveys

What are the top solutions to address the issues you mentioned above?

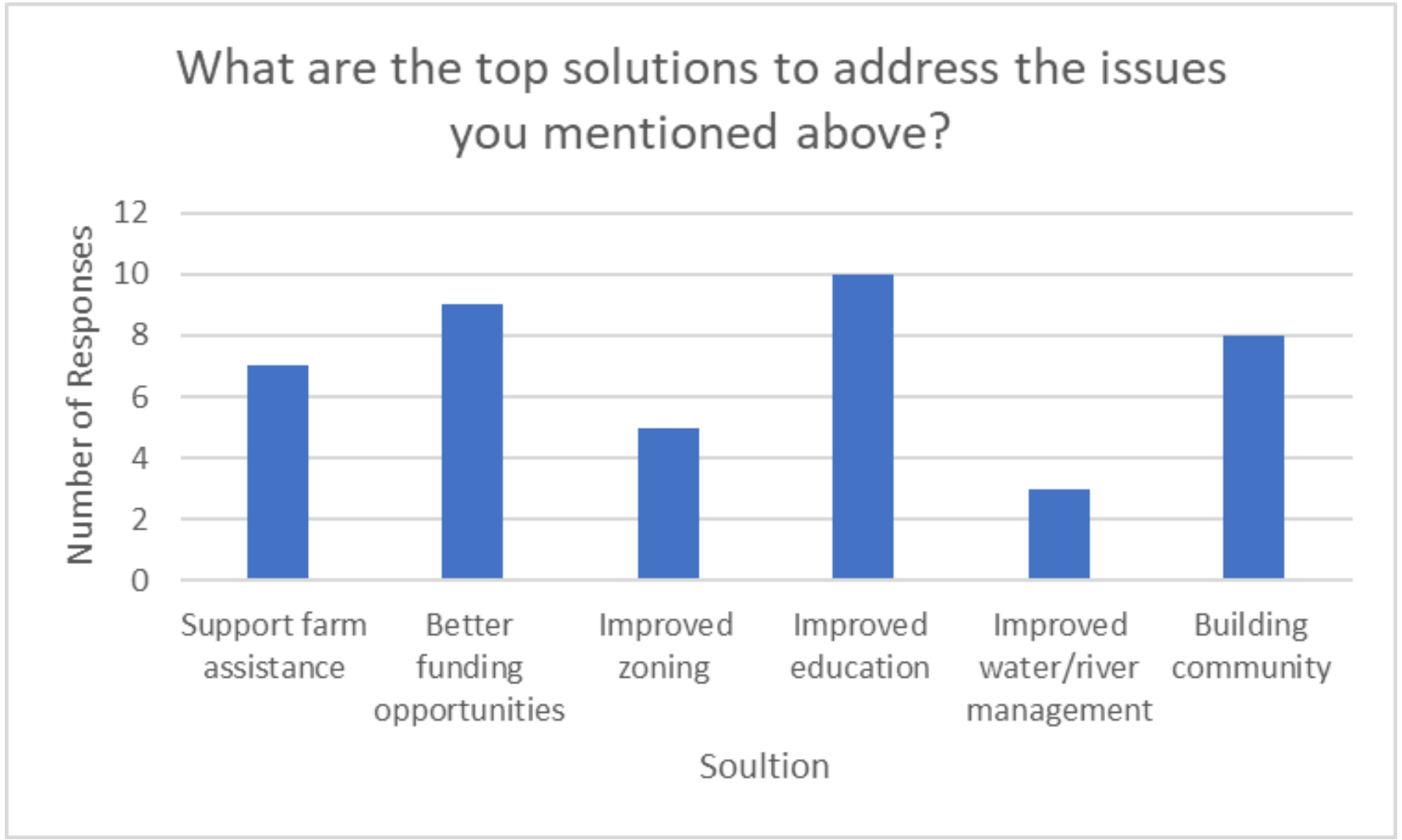
- Maintaining outreach and funding to two audiences 1) the TSPs who assist farms and 2) the farms themselves; helping them to adopt new practices that meet the ESA and are more regenerative or sustainable. We need to keep thinking about climate and flood resilience, as well, so solutions that address floodplains, forest health, and buffered waterways are important.

- Education for all, in whatever ways meet people where they are, based on the natural resources they care most about.

- Community awareness, better funding for agriculture without all the strings

- Hold back water in the uplands

- Perennialization of agriculture. This is namely agroforestry systems and 100% pasture based livestock systems. In particular, as a farmer I am focused on chestnut, hickory, and maple trees for food production.


What are the top solutions to address the issues you mentioned above?
Number of Responses
12
10
8
6
4
2
0
Support farm assistance
Better funding opportunities
Improved zoning
Improved education
Improved water/river management
Building community
Soultion

Quotes from Surveys

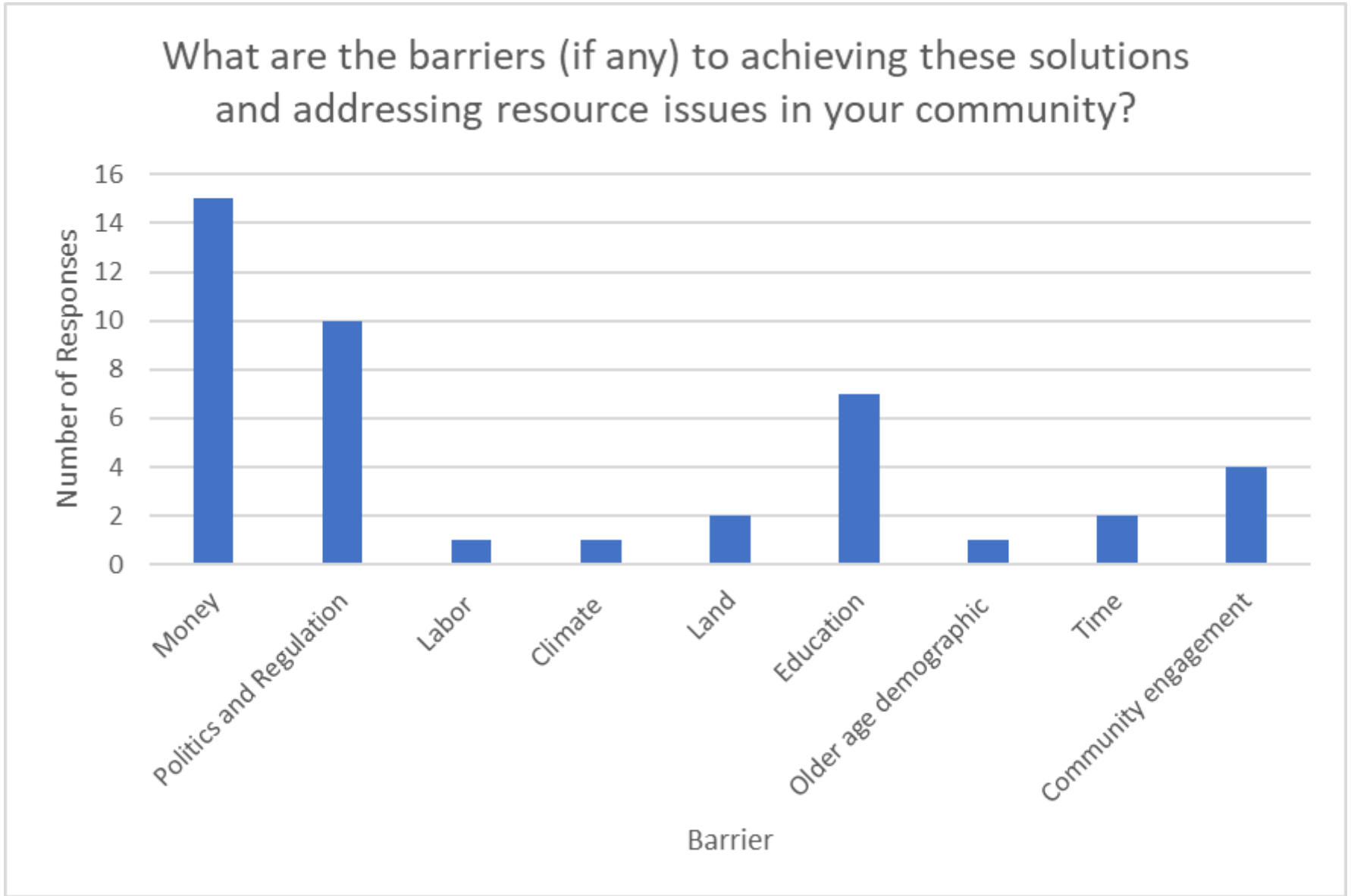
What are the barriers to achieving these solutions and addressing resource issues in your community?

- Funding, Need more people to assist, apathy, politics, disinterest.

- Financial barriers, education barriers, time barriers (often the people making decisions are stretched thin, unpaid)

- A major barrier is effective funding mechanisms and cost-sharing to support adoption of agroforestry.

- Not enough funding, staff, and sometimes program stability (though I'm not sure this is an issue with NRCS, it can be with DEC programs (natural resources and stormwater projects).


What are the barriers (if any) to achieving these solutions and addressing resource issues in your community?
Number of Responses
16
14
12
10
8
6
4
2
0
Money
Politics and Regulation
Labor
Climate
Land
Education
Older age demographic
Time
Community engagement
Barrier

Introduction to the Conservation Action Plan for Bennington County, Vermont

Background

Nestled within the verdant landscapes of Vermont, Bennington County faces diverse environmental challenges that threaten its ecological integrity, economic stability, and community well-being. From deteriorating water quality and recurrent flooding to soil degradation and reliance on external food sources, these issues pose significant hurdles. The ecological resilience of this region is crucial not only for preserving its rich biodiversity and scenic beauty but also for supporting its agricultural sectors and enhancing the quality of life for its residents.

Importance of the Conservation Action Plan

To address these critical issues, the comprehensive Conservation Action Plan (CAP) for Bennington County has been meticulously developed. This strategic blueprint is designed to combat the county's environmental challenges through sustainable practices and improved resource management. The overarching aim of the CAP is to foster sustainable development, safeguard natural resources for future generations, and improve community livelihoods by enhancing the overall quality of life.

Purpose and Objectives

The CAP's primary purpose is to articulate actionable strategies and implement specific measures to mitigate the identified environmental concerns. These strategies are grounded in extensive community input and rigorous environmental assessments. Key objectives of the plan include:

1. Enhancing water management systems to improve quality and reduce flooding impacts, ensuring reliable and clean water for all.
2. Restoring and improving soil health to increase agricultural productivity and environmental sustainability.
3. Bolstering local food systems to enhance food security and reduce dependence on imported goods.
4. Expanding the adoption of climate-smart agricultural and forestry practices to mitigate the effects of climate change and promote biodiversity.
5. Increasing regional capacity to facilitate a just and equitable climate transition.
6. Establish demonstration plots that highlight BMPs for Climate Smart Agriculture & Forestry Practices
7. Fostering the expansion of the Working Lands Workforce.

Methodology

The development of the CAP involved a detailed process of data collection, stakeholder engagement, and expert analysis. Over 294 stakeholders were engaged through various formats to ensure a comprehensive and inclusive approach:

- Conservation District Surveys: Conducted with 55 local landowners and farmers to directly gather data on land use and identify primary conservation issues.
- Environmental Justice Stakeholder Engagement: Included 53 participants from marginalized communities, focusing on equitable access to natural resources and environmental benefits.
- Shires Direct Producer Surveys: Surveyed 165 local food producers to uncover challenges in agriculture and market access.
- Community Resilience Forums: Engaged 21 broader community members in discussions about resilience to environmental changes and community-wide conservation strategies.

These initiatives were instrumental in shaping the priorities and strategies outlined in the CAP, reflecting a diverse range of community insights and expert recommendations.

BCCD also conducted a systematic literature review of previous local, regional, and national assessments and plans including all relevant Tactical Basin Plans, the Future of Agriculture Commission Action Plan Report, the Payment for Ecosystem Services Final Report, the New England Feeding New England Food Security Roadmap, the IPCC AR6 Synthesis Report, and the Vermont Climate Action Plan.

Vision and Commitment

This CAP reflects Bennington County Conservation District's dedication to building a sustainable and resilient future. It envisions a community that prospers in harmony with its environment, where innovative and sustainable practices support both economic and ecological health. The plan's phased implementation strategy, detailed later, allows for continuous progress monitoring and adaptive responses to new challenges as they arise.

By adopting this proactive and collaborative approach, Bennington County aspires to become a leading example of rural sustainability, addressing current environmental challenges while preparing for future needs. This initiative aims to ensure that the county remains a vibrant, thriving community for future generations, setting a benchmark for environmental stewardship and rural community resilience.

II. Setting Measurable Conservation Goals and Objectives

Overview

The Conservation Action Plan (CAP) for Bennington County is designed to strategically address the community's environmental challenges through measurable and targeted actions that enhance ecological integrity and promote sustainable development. This plan aims to achieve these goals by the end of FY 2030, enhancing the community's resilience and sustainability.

Goals and Objectives Framework

This section outlines detailed, quantifiable goals supported by specific objectives, ensuring each initiative within the CAP is actionable and measurable. This structured approach facilitates effective implementation, ongoing monitoring, and adaptability to achieve long-term sustainability.

Goal 1: Enhance Water Management Systems

Objective 1.1: Reduce Surface Water Contamination
- Target: By 2030, implement runoff management practices on 1,000 acres to significantly decrease pollutant levels in surface waters.
- Indicators: Levels of nitrates, phosphates, and other contaminants in water samples from targeted areas.

Objective 1.2: Increase Water Retention and Drought Resilience
- Target: By 2030, develop advanced water retention systems and infrastructure improvements on 1,000 acres to mitigate flooding and enhance drought resilience.
- Indicators: Increased water retention capacity measured in cubic meters; reduced frequency and severity of flood events; improved drought resilience.

Goal 2: Restore and Enhance Soil Health

Objective 2.1: Improve Soil Organic Matter Content, Soil Aggregation, and Soil Water Infiltration
- Target: By 2030, enhance soil organic matter by applying sustainable practices on 1,000 acres.
- Indicators: Percentage increase in soil organic content verified by soil assessments.

Objective 2.2: Promote Regenerative Farming & Forestry Practices
- Target: By 2030, transition 1,000 acres to regenerative management using methods that reduce input dependencies.
- Indicators: Number of acres employing agroforestry practices, prescribed grazing and other core regenerative practices.

Goal 3: Strengthen Local Food Systems

Objective 3.1: Increase Local Food Production

- Target: By 2030, increase food production capabilities on 1,000 acres to enhance local food security.
- Indicators: Increase in economically viable local food production; number of new viable agricultural producers.

Objective 3.2: Enhance Supply Chain Capacity and Market Access
- Target: By 2030, improve infrastructure and market mechanisms on 1,000 acres to increase market access for local producers.
- Indicators: Establishment and success of new supply chain facilities; increase in accessible market outlets.

Goal 4: Promote Climate Smart Agriculture and Forestry

Objective 4.1: Increase Agroforestry Adoption
- Target: By 2030, implement agroforestry practices across 1,000 acres to improve land sustainability and biodiversity.
- Indicators: Acres under agroforestry; carbon sequestration and erosion control data.

Goal 5: Increase Regional Capacity to Facilitate a Just and Equitable Climate Transition

Objective 5.1: Establish Perennial Crop Nurseries
- Target: By 2030, develop nurseries to support perennial agriculture on 1,000 acres.
- Indicators: Number of perennial plants produced; diversity of plant species.

Objective 5.2: Provisioning Shared Equipment Access
- Target: By 2030, facilitate shared equipment access to reduce costs for 1,000 acres of agricultural land.
- Indicators: Acreage supported by shared equipment; types and frequency of equipment use.

Goal 6: Establish Demonstration Plots for Climate Smart Practices

Objective 6.1: Develop Educational Demonstration Sites
- Target: By 2030, establish 50 acres of demonstration plots to showcase effective climate-smart practices.
- Indicators: Number of plots; range of practices demonstrated; visitor and participant numbers.

Goal 7: Fostering the Working Lands Workforce

Objective 7.1: Establish Incubator Farms and Workforce Development Programs
- Target: By 2030, set up multiple incubator farms and initiate comprehensive workforce training programs focused on climate-smart agriculture across the county.
- Indicators: Number of incubator farms established; number of individuals trained in climate-smart practices.

Objective 7.2: Expand the Network of Technical Service Providers
- Target: Significantly increase the number of qualified technical service providers and specialists in climate-smart agriculture available to the community by 2030.
- Indicators: Number of certified technical service providers and qualified individuals operating within the county.

Implementation and Monitoring

These goals and objectives are set to be implemented through a series of strategic actions detailed in subsequent sections of the CAP. Each objective includes specific indicators for measuring progress towards the FY 2030 targets, ensuring that all conservation efforts are aligned with the county's strategic priorities and adapt dynamically to outcomes and community feedback.

III. Identify Conservation Technology Needed to Achieve Goals and Objectives

Overview

To successfully implement the Conservation Action Plan (CAP) for Bennington County, the deployment of advanced conservation technologies and innovative tools is crucial. This section provides detailed insights into the essential technologies required to achieve the goals and objectives set out in the CAP, ensuring efficient and sustainable outcomes.

Key Technologies and Infrastructure Requirements

The following technologies are aligned with specific conservation goals, designed to maximize efficiency and effectiveness across different environmental and agricultural domains:

Goal 1: Enhance Water Management Systems

GIS and Remote Sensing Technologies
- Purpose: Essential for mapping water flow and identifying flood-prone areas to optimize water retention and distribution systems.
- Application: These technologies will be used to enhance water retention and manage drought resilience, supporting precise planning and infrastructure development.

Advanced Hydrological Modeling Software
- Purpose: To model water behavior under various scenarios to aid in flood risk mitigation and water management planning.

- Application: This software will guide the development and operationalization of infrastructure improvements such as retention ponds and advanced drainage systems.

Goal 2: Restore and Enhance Soil Health

Mobile Soil Health Laboratories
- Purpose: To enable on-site soil assessments, providing immediate data for soil management decisions.
- Application: These labs are crucial for monitoring soil improvements and implementing sustainable agricultural practices effectively.

Soil Sensors and Data Analytics Platforms
- Purpose: To continuously monitor soil conditions, providing real-time data crucial for the adoption of sustainable farming techniques.
- Application: These technologies support comprehensive soil health monitoring across the county, facilitating informed management decisions.

Goal 3: Strengthen Local Food Systems

Supply Chain Management Software
- Purpose: To enhance the logistical efficiency of food distribution within the county.
- Application: This software improves the integration and functionality of new and existing farmers' markets and cooperative selling points, optimizing the local food supply chain.

E-commerce Platforms
- Purpose: To expand market access for local food producers by facilitating direct sales to consumers.
- Application: These platforms are critical for increasing the economic opportunities for local farmers by providing new sales channels.

Goal 4: Promote Climate Smart Agriculture and Forestry

Agroforestry Modeling Tools
- Purpose: To assist in the design and implementation of agroforestry projects, combining agricultural and forestry practices to maximize land use efficiency.
- Application: These tools will be used extensively to plan and manage the integration of agroforestry practices on designated lands.

Goal 5: Increase Regional Capacity to Facilitate a Just and Equitable Climate Transition

Community Resource Management Systems

- Purpose: To efficiently manage resources such as perennial crop nurseries and shared agricultural equipment.
- Application: Essential for the operational management of nurseries and equipment sharing initiatives, these systems facilitate access to innovative tools like the Vermont Ripsower, mechanical tree planters, and precision agriculture equipment.

Goal 6: Establish Demonstration Plots for Climate Smart Practices

Educational Multimedia Tools
- Purpose: To develop engaging educational content for demonstration sites that illustrate sustainable practices effectively.
- Application: Used to enhance visitor engagement and learning at demonstration plots, these tools help communicate the benefits and methods of climate-smart practices.

Goal 7: Fostering the Working Lands Workforce

Peer Learning and Support Software
- Purpose: To create a collaborative environment where farmers and agricultural workers can share knowledge and experiences.
- Application: This software facilitates peer-to-peer learning and community support, crucial for spreading innovative farming techniques and fostering a robust agricultural community.

Implementation and Monitoring

The deployment of these technologies will be coordinated by a specialized team within the Bennington County Conservation Office, ensuring optimal usage and integration into various CAP initiatives. Regular assessments will monitor the effectiveness of these technologies and adapt strategies as necessary to meet evolving needs and conservation goals.

IV. Identify Responsibility for Action and Create a Time Schedule for Completion of Elements

Overview

The effective implementation of the Conservation Action Plan (CAP) for Bennington County requires precise assignment of responsibilities and a well-defined timeline. This section details the entities responsible for each goal within the CAP and outlines the scheduled actions and milestones for timely and efficient execution.

Responsibility Allocation and Partner Roles

Goal 1: Enhance Water Management Systems

- Primary Responsible Party: Bennington County Conservation District
- Supporting Partners: Vermont Agency of Natural Resources (ANR), Vermont Agency of Agriculture, Food, and Markets (VAAFM), Natural Resource Conservation Service (NRCS)
- Partner Roles:
  - ANR will provide technical expertise and regulatory oversight for water quality initiatives.
  - VAAFM and NRCS will contribute resources and support for infrastructure projects aimed at improving water retention and managing drought resilience.

Goal 2: Restore and Enhance Soil Health
- Primary Responsible Party: Bennington County Conservation District
- Supporting Partners: Vermont Agency of Natural Resources (ANR), Vermont Agency of Agriculture, Food, and Markets (VAAFM), Natural Resource Conservation Service (NRCS)
- Partner Roles:
  - ANR will assist with environmental impact assessments and soil conservation strategies.
  - VAAFM and NRCS will support the implementation of sustainable farming practices and soil health improvement programs.

Goal 3: Strengthen Local Food Systems
- Primary Responsible Party: Bennington County Conservation District
- Supporting Partners: Farm Service Agency (FSA), USDA Rural Development, Vermont Agency of Agriculture, Food, and Markets (VAAFM), Natural Resource Conservation Service (NRCS), Agricultural Marketing Service, Bennington Fair Food Initiative (BFFI)
- Partner Roles:
  - FSA and USDA Rural Development will provide financial aid and technical support for local food infrastructure projects.
  - Agricultural Marketing Service will assist with market expansion and the development of new trade channels.
  - BFFI will focus on community engagement and promotion of local food initiatives.

Goal 4: Promote Climate Smart Agriculture and Forestry
- Primary Responsible Party: Bennington County Conservation District
- Supporting Partners: Farm Service Agency (FSA), Vermont Agency of Agriculture, Food, and Markets (VAAFM), Natural Resource Conservation Service (NRCS), Bennington Fair Food Initiative (BFFI), Municipalities, Merck Forest & Farmland Center, Hildene Farm, Smokey House Center
- Partner Roles:
  - FSA, VAAFM, and NRCS will provide expertise and resources for developing agroforestry projects and other sustainable practices.
  - Merck Forest & Farmland Center, Hildene Farm, and Smokey House Center will offer demonstration sites and educational programs.

Goal 5: Increase Regional Capacity to Facilitate a Just and Equitable Climate Transition
- Primary Responsible Party: Bennington County Conservation District
- Supporting Partners: Farm Service Agency (FSA), USDA Rural Development, Natural Resource Conservation Service (NRCS), Agricultural Marketing Service, Vermont Land Trust, Bennington Fair Food Initiative (BFFI)
- Partner Roles:
  - USDA Rural Development and FSA will help fund and develop resource management systems.
  - Vermont Land Trust will facilitate land acquisitions and management strategies for conservation purposes.

Goal 6: Establish Demonstration Plots for Climate Smart Practices
- Primary Responsible Party: Bennington County Conservation District
- Supporting Partners: Natural Resource Conservation Service (NRCS), Vermont Land Trust, Bennington Fair Food Initiative (BFFI), Municipalities, Merck Forest & Farmland Center, Hildene Farm, Smokey House Center
- Partner Roles:
  - NRCS will provide technical guidance on best management practices and sustainable agriculture.
  - Municipalities and educational centers like Merck Forest & Farmland Center, Hildene Farm, and Smokey House Center will participate by hosting demonstration plots and assisting public outreach and education efforts.

Goal 7: Fostering the Working Lands Workforce
- Primary Responsible Party: Bennington County Conservation District
- Supporting Partners: Vermont Agency of Agriculture, Food, and Markets (VAAFM), Natural Resource Conservation Service (NRCS), Bennington Fair Food Initiative (BFFI), Farm Service Agency (FSA), USDA Rural Development, Department of Veterans Affairs
- Partner Roles:
  - VAAFM and NRCS will assist in developing and implementing training programs.
  - Department of Veterans Affairs will help integrate veteran farmers into the agricultural workforce through specialized programs.

Detailed Implementation Schedule

2023-2024: Planning and Initial Setup
- Funding and regulatory approvals are secured.
- Detailed project planning and feasibility studies commence.
- Partnerships are established, and roles are defined.

2025-2026: Early Implementation and Pilot Testing
- Initiatives for water management and local food systems begin.
- Pilot projects for soil health and small to medium-scale agroforestry are initiated.

2027-2028: Mid-Term Expansion and Evaluation
- Successful pilot projects are expanded.
- Major infrastructure projects are developed and implemented.
- Workforce training and community resource management programs are enhanced.

2029-2030: Full-Scale Implementation and Final Assessments
- All infrastructure and enhancement projects are completed.
- Demonstration plots and workforce development initiatives are finalized and evaluated.
- Comprehensive evaluations and transitions to maintenance and monitoring phases are made.

Monitoring and Adaptive Management

- Continuous Monitoring: Conducted by all involved parties under the leadership of the Bennington County Conservation District, using specific performance indicators.
- Adaptive Management: Adjustments are made based on empirical data and community feedback to optimize the CAP's effectiveness and ensure it remains responsive to evolving needs.

V. Identify Federal, State, Tribal, Local, and Nongovernment Programs and Services Needed to Address Specific Conservation Needs

Overview

This section outlines the various federal, state, tribal, local, and nongovernmental programs and services crucial for addressing specific conservation needs in Bennington County as described in the Conservation Action Plan (CAP). Information for this analysis is derived from the comprehensive 2024 Guide to Assistance for Agricultural Producers in Vermont prepared by the Franklin County Natural Resources Conservation District.

Federal Programs

- Natural Resources Conservation Service (NRCS): Offers programs such as the Conservation Stewardship Program (CSP) and Environmental Quality Incentives Program (EQIP) that provide technical and financial support for sustainable agricultural practices.
- U.S. Fish & Wildlife Service (FWS): The Partners for Fish and Wildlife Program supports habitat restoration on private lands to enhance biodiversity.
- Regional Conservation Partnership Program (RCPP): Enhances regional conservation strategies; notable projects include the American Farmland Trust RCPP which focuses on preserving agricultural lands and promoting sustainable practices.
- Climate Smart Commodities Program: Part of a broader effort to support initiatives that aim to reduce environmental impact and promote sustainable commodity production.

- Multi-State Specialty Crop Block Grant: Supports the specialty crop industry across multiple states by funding innovative projects that enhance the competitiveness of specialty crops.
- Congressionally Designated Spending Requests: Provides targeted funding for specific congressional interests, often related to regional conservation and development projects.
- Federal Supply Chain Grants, Market Expansion Grants: These grants aim to strengthen supply chains and expand markets for U.S. producers, critical for enhancing local agricultural economies.
- Farm Service Agency (FSA) Insurance Programs: Offers a variety of insurance schemes to protect farmers against revenue losses due to price fluctuations and natural disasters, ensuring financial stability.
- USDA Rural Development Revolving Loan Programs: Provides loans to support the development and maintenance of housing, community facilities, and businesses in rural areas, promoting economic growth and sustainability.

State Programs

Vermont provides several targeted grant programs to support agricultural and environmental initiatives:

- Farm to School & Early Childhood Capacity Building Grant: Supports integration of local food systems into schools and early childhood programs to improve nutrition and food education.
- Capital Equipment Assistance Program (CEAP): Financial aid for purchasing environmentally friendly equipment to help modernize agricultural operations.
- Organic Certification Cost Share Program: Assists farms in achieving organic certification to enhance organic agriculture practices.
- Vermont Farmer Ecosystem Stewardship Program: Offers incentives for farmers to adopt conservation practices that improve soil health, water quality, and wildlife habitats.
- Pay for Performance Program: Provides payments based on the environmental benefits produced by farm conservation practices, encouraging effective and verifiable improvements in ecosystem services.
- Vermont Working Lands Enterprise Initiative: Supports innovative projects that enhance economic viability and conservation effectiveness in the agricultural sector.
- Agricultural Clean Water Initiative Program (AgCWIP): Encourages agricultural practices that protect water quality.
- Specialty Crop Block Grant: Aims to boost the competitiveness of specialty crops within the state through various developmental projects.

Tribal Programs

- Indigenous Peoples Engagement: Recommends active engagement and coordination with the Stockbridge Munsee and Abenaki tribes to incorporate traditional ecological knowledge into conservation practices.

Local Programs

- Bennington County Conservation District (BCCD): Implements local conservation initiatives and serves as the liaison for state and federal programs, ensuring that projects are community-focused and effectively managed.

Nongovernmental Organizations

- Merck Forest & Farmland Center, Hildene Farm, and Smokey House Center: Provide education and demonstration sites that promote sustainable land management practices.
- Bennington Fair Food Initiative (BFFI): Focuses on enhancing local food systems and promoting sustainable agricultural practices within the community.

Additional Resources

While the above list is comprehensive, it is not exhaustive. The Bennington County Conservation District (BCCD) will utilize the Annual Producers Guide to Assistance generated by the Franklin County NRCD as an annual resource to keep updated on available funding opportunities. This guide is an essential tool for staying informed about new and continuing grants, programs, and resources that can support conservation efforts in Bennington County.

Integration and support among these diverse programs will ensure that Bennington County's ecological and agricultural challenges are addressed comprehensively. By utilizing federal and state funding, technical assistance, and community engagement through local and nongovernmental efforts, the CAP aims to create a sustainable and resilient environmental landscape for the future.

VI. Identify Needs for New Programs or Processes to Address Gaps in Existing Conservation Efforts

Overview

Despite an extensive range of existing conservation initiatives, Bennington County still faces areas where support and resources are lacking. This section outlines proposed new programs and improvements to existing ones to ensure comprehensive sustainability and environmental stewardship in the county.

Proposed New Programs and Processes

1. Regenerative Food Commons

- Need: To leverage the unique statutory abilities of the Conservation District for sustainable land use and financial sustainability through innovative agricultural practices.
- Proposal: Develop a Regenerative Food Commons that utilizes Conservation District land for agricultural practices like Yellowbud Hickory groves, bee hives, and nurseries. Products such as timber, honey, nursery stock, and hickory oil will be sold to generate revenue. This revenue will then be used to provide supplemental payments or resources to local farmers, promoting sustainable practices across the community.

2. Community Resilience Trust & Revolving Loan Fund
- Need: For a sustainable funding model to support long-term conservation and economic resilience within the community.
- Proposal: Establish a Community Endowment and Revolving Loan Fund modeled on successful sovereign wealth funds. This fund will manage community resources to provide stable financing for local projects and conservation practices, ensuring ongoing support for the district's initiatives.

3. Payment for Ecosystem Services (PES) Program
- Need: To directly compensate farmers for ecological benefits provided by their land management practices, promoting sustainability without relying on market-based mechanisms like carbon credits.
- Proposal: Adopt a PES program that pays farmers for ecosystem services such as improved water quality and soil health, based on verifiable outcomes. This program will help integrate sustainable practices into farming operations by providing a financial incentive for conservation efforts.

4. Reopen CEAP for Vermont Ripsowers
- Need: Current exclusion of innovative tools like Vermont Ripsowers from CEAP funding.
- Proposal: Advocate for the expansion of CEAP eligibility to include Vermont Ripsowers, enhancing local agricultural sustainability.

5. Rapid Response Outreach Program
- Need: Immediate support for landowners after natural disasters is currently lacking.
- Proposal: Create a rapid response team within the District to provide early support and resources, ensuring that recovery efforts align with sustainable and conservation-friendly practices.

6. Conservation Workforce Development Program
- Need: A gap in hands-on conservation training and job placement opportunities.
- Proposal: Launch a Conservation Corps that offers education, training, and job placement in various conservation fields, helping to build a skilled workforce that can support the county’s sustainability goals.

7. Climate Resilience Outreach Program
- Need: Vulnerable populations face significant risks from climate change without adequate support.

- Proposal: Develop a Climate Resilience Outreach Program that focuses on community education, emergency preparedness, and establishing heat relief zones to support vulnerable communities during climate crises.

8. Urban Water Management Program
- Need: Inadequate stormwater management in residential areas leads to increased flood risk and pollution.
- Proposal: Promote the adoption of small-scale water catchment and retention systems at private residences to manage stormwater runoff. This initiative aims to mitigate flooding and enhance urban water quality.

9. Integrated Pest Management (IPM) Initiative
- Need: For localized pest management strategies that reduce pesticide use and promote agricultural sustainability.
- Proposal: Establish a county-wide IPM program to develop and implement effective pest management solutions tailored to the region's specific challenges.

10. Sustainable Tourism Initiative
- Need: To develop tourism opportunities that are environmentally friendly and support local conservation efforts, boosting the local economy while promoting sustainability.
- Proposal: Create an initiative to develop eco-friendly tourism opportunities that involve local businesses and environmental groups in promoting conservation through tourism, potentially increasing local revenue and awareness of conservation issues.

11. Incubator Farming Cooperatives
- Need: To provide Historically Underserved individuals, with a special focus on veterans, with opportunities for agricultural training and production, leveraging the therapeutic and economic benefits of farming.
- Proposal: Based on the Bennington Veterans Incubator Farm Project, establish a cooperative that offers veterans a structured entry into agriculture. This cooperative will utilize seed capital and free land leases to establish a working farm, fostering veteran engagement in agriculture. It will seek additional funding through Federal and State cost-share programs and grants to expand and sustain its operations, providing a replicable model for sustainable veteran farming

Conclusion and Next Steps

Implementing these programs will require effective collaboration among local government, community organizations, and other stakeholders. These initiatives are designed to address the pressing conservation needs of Bennington County by filling existing gaps in support and resources. The Bennington County Conservation District (BCCD) will use the Annual Producers Guide