

# Vermont Agriculture Recovery Task Force **Extreme Weather Impact & Recovery**

#### **Executive Summary**

In July 2023, persistent rainstorms set records that caused catastrophic flooding throughout Vermont and the Northeast. The flooding prompted emergency evacuations, closed downtown Montpelier, and devastated other farms and communities throughout the State. The end result claimed thousands of homes and businesses and the full scope of losses remains undetermined.

The agriculture sector was hit incredibly hard this growing season. After a late freeze in May 2023 that destroyed fruit and berry crops, the flooding and heavy rain in July 2023 decimated crops and infrastructure. Many crops were destroyed prior to harvest and without an opportunity to replace them during the growing season. Lost crops and revenue put Vermont's food system at risk.

In August 2023 the Vermont Agricultural Recovery Task Force was established to coordinate recovery efforts for Vermont's agriculture and food systems. The Extreme Weather Impact & Recovery report includes impact details and data, an overview of many recovery efforts, and the Vermont Agriculture Recovery Task Force recommendations to continue, expand, and improve our response.





# Agriculture Recovery Task Force

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The Agriculture Recovery Task Force was established in August 2023 to coordinate recovery efforts for Vermont's agriculture and food system in response to the 2023 severe weather and flooding disasters.

#### Charge:

- Identify key priorities through community engagement and subject matter experts.
- Coordinate implementation strategy proposals that support Vermont farmers in recovering lost revenue and assets.
- Communicate critical needs of Vermont's food system to State and Federal policy makers.

Members		
Organization	Representative(s)	
Vermont Agency of Agriculture, Food & Markets	Anson Tebbetts, Abbey Willard, Nina Gage, Steve Collier Hannah Yindra	
Vermont Agency of Commerce and Community Development	Lindsay Kurrle	
US Small Business Administration	Darcy Carter	
Vermont Agency of Natural Resources	Julie Moore, Marli Rupe	
Vermont Association of Conservation Districts	Jill Arace, Jennifer Byrne	
Vermont Emergency Management	Ben Rose, Stephanie A. Smith	
Federal Emergency Management Agency	Terry Hermins	
University of Vermont Extension	Dan Lerner	
Vermont Farm and Forest Viability Program, Vermont Housing Conservation Board	Liz Gleason, Calley Hastings	
Vermont Farm to Plate, Vermont Sustainable Jobs Fund	Ellen Kahler, Jake Claro, Kelly Dolan	
Vermont Farm Bureau	Amber Perry, Joe Tisbert	
Northeast Organic Farming Association of Vermont	Grace Oedel	
USDA Farm Service Agency	John Roberts, Eileen Powers, Julie Jacque	
USDA Natural Resources Conservation Service	Travis Thomason	
USDA Rural Development	Sarah Waring	

# Agriculture Recovery Task Force Subcommittees

**Farmer Empowerment** – Focus on economic recovery, training, and resilience during and following a natural disaster.

#### Members:

Liz Gleason Grace Oedel
Abbey Willard Calley Hastings
Lindsay Kurrle Jake Claro
Darcy Carter Joe Tisbert
Ellen Kahler Roy Beckford
Amber Perry Kelly Dolan

**Government Systems** – Focus on current and potential government programs available for the agriculture sector to recover from natural disasters.

#### Members:

Steven Collier Sarah Waring Ben Rose Marli Rupe

Terry Hermins Stephanie A. Smith John Roberts Eileen Powers Travis Thomason Julie Jacque

**Regulatory Recovery** – Focus on supporting farmers' ability to maintain or defer regulatory compliance during and following a natural disaster.

#### Members:

Nina Gage Laura DiPietro Hannah Yindra Anson Tebbetts Marli Rupe Julie Moore Jill Arace Jennifer Byrne Nicole Dubuque Dan Lerner



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### **Impact Summary**

The Extreme weather during the 2023 growing season devastated Vermont's already strained food system and agricultural economy. Vermont experienced not one, but two separate Federal Disaster Declarations this year. Estimated financial impacts of the losses this growing season are upwards of \$69,000,000 across Vermont's food system. Many farms are out of options to continue producing or return to production. They are overfinanced, underinsured, and in danger of losing their livelihoods. Agriculture is a strong economic driver for Vermont but unfortunately, many of our critical food businesses are at risk without immediate financial relief and resiliency planning.

First, farmers were shocked by a late season freeze when temperatures plummeted to at least as low as 20 degrees on May 17<sup>th</sup> and 18<sup>th</sup>. The University of Vermont's (UVM) Tree Fruit Program and Vermont Vegetables and Berry Growers Association (VVBGA) conducted preliminary surveys and performed a quantitative assessment on selected farms. The tree fruit survey received 37 reports from at least nine counties recounting widespread damage to fruit crops, including apples, grapes, peaches, other stone fruit, and blueberries. Farmers reported debilitating damage with most orchards describing at least 95% crop losses. The VVBGA survey received 70 additional responses, representing 55 towns, and 70% implemented frost protection measures and still experienced significant overall damage to crops.

In total, farmers reported approximately \$5,800,000 in projected orchard losses. UVM's Program estimates more than \$10,000,000 in total losses when including orchards that did not participate in the survey. Vineyards were also hard hit, and farmers reported an average 52% crop loss. The reported losses equal approximately \$927,000 in damages, and UVM's Program estimates \$1,200,000 in total losses when including non-reporting vineyards. Many growers reported their worst damage ever.

Second, historic rainstorms starting on July 7<sup>th</sup> and continuing through the summer caused catastrophic flooding and wiped-out farmers' crops and fields. The flooding and



subsequent wet conditions had tremendously negative effects on impacted Vermont farms. Crops, soil, critical infrastructure, and equipment were destroyed all over the state. Livestock were displaced. Flood waters contaminated unharvested crops and made them worthless.

The Vermont Agency of Agriculture, Food & Markets (VAAFM) conducted a survey to understand the overall impact of the flooding and invited responses from July 30<sup>th</sup> - August 28<sup>th</sup>, 2023. The survey was open to businesses, organizations, and individuals who raise animals and/or grow feed or crops for anyone beyond their immediate family. The survey received 264 responses. Damage was reported in every county, with estimated total losses of \$16,063,054. According to the survey, respondents reported damage on 27,318 acres, with the average respondent suffering \$61,000 in damages to 103 impacted acres.

The survey results capture the enormity of loss producers experienced across the state. The most reported damages were to soil or land, feed crops, and crops meant for wholesale or retail markets. Respondents suffered a myriad of other damages, including but not limited to damage to infrastructure, equipment, and market access. The results indicate that farmers across all categories suffered greatly, are mostly uninsured or underinsured, and lack liquid resources. The combination of natural disasters left Vermont farmers in an incredibly vulnerable position.





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### **Impact Survey Data**

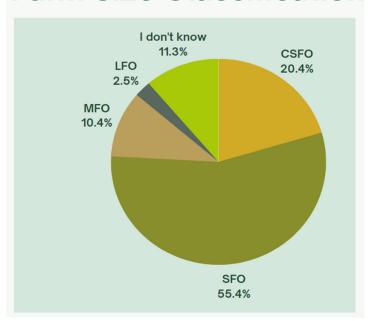
VAAFM conducted a survey to understand the overall impact of the flooding. The survey was open July 30th - August 28th, 2023, to businesses, organizations, and individuals who raise animals and/or grow feed or crops for anyone beyond their immediate family.

Breakdown of the 264 survey respondents by type of operation and farm size below. Of note, the large majority are small farm operations (SFO).

### **Type of Operation**

Hay or feed crops	124
Livestock	99
Vegetables	84
Dairy (fluid milk)	52
Berries	51
Maple Products	41
Eggs	47
Other (all other responses)	192

### **Farm Size Classification**



#### **Most Significant Damages**

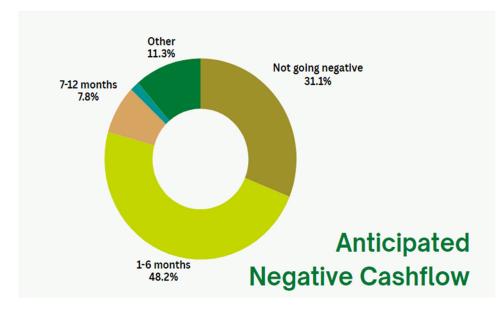
34% of respondents said their loss of feed crops was the most significant damage to their operation. This was followed by loss of crops meant for resale or wholesale markets (29%), and damage to soils or land (16%).

#### **Percentage of Annual Income Lost**

On average, respondents lost 28.2% of their annual income as a direct result of the severe weather and flooding. Responses ranged from 1% of lost annual income up to 225% (for producers who lost multiple years of crops, e.g. Christmas trees).

#### Feed Shortages and Problems with Feed Quality

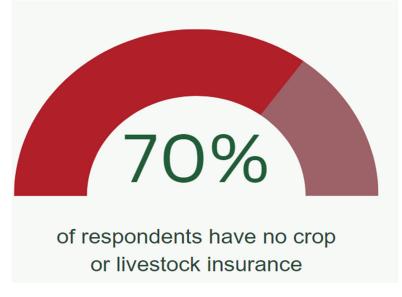
53% of respondents anticipated a feed shortage or problems with feed quality as a result of the severe weather and flooding.



56% of respondents said their cash flow will go negative in the next year as a result of the severe weather and flooding.

One of the most striking metrics measured by the survey is the percentage of respondents without crop or livestock insurance. A huge majority, 70%, have no crop or livestock insurance.

Those who do have crop insurance did not receive sufficient premium payouts to cover losses and unfortunately did not know this information until after the growing season ended.



The survey captured the immediate scope of need in the agricultural community and served a critical purpose in communicating that need to policymakers and others. A full six months after the flood, the full picture of how much loss the agricultural community sustained is clearer. When combining total damages from the survey with reported damages (physical and economic) that agricultural applicants reported to the Business Emergency Gap Assistance Program, agricultural producers disclosed \$44,678,570 in combined damages. That number grows to \$69,592,774 when food services, food and agriculture related retail, and manufacturing and processing from the BEGAP application are included.

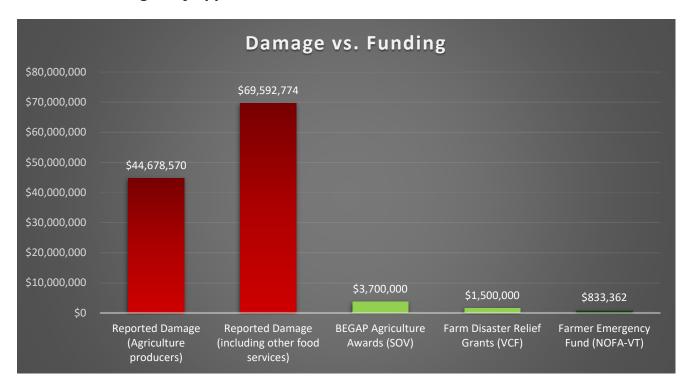


### **Recovery Efforts**

#### **State Level Disaster Assistance Programs**

Multiple recovery assistance programs were implemented after the flooding event in July. Below is a list of statewide flood recovery efforts specific to agriculture.

<u>Disclaimer:</u> This section of state-level programs does not include reference to the countless invaluable local and community led efforts that took place after the flood and continued for many months afterwards. Countless Vermonters who intersect with the agricultural community played a crucial role in providing support and information to farms impacted by floods and severe weather. These efforts indicate the strength and resilience of Vermont communities coming together in times of need. These initiatives often involved dedicated individuals and volunteers who have existing relationships with producers, understand the local context, and could provide more personalized assistance. Efforts include organizing community clean-up initiatives, providing immediate relief and assistance, and offering information and resources tailored to the needs of farms. The tremendous support and assistance across Vermont from non-profit organizations, neighbors, volunteers, and municipal officials was and continues to be greatly appreciated and cannot be underestimated.





The Vermont Agency of Agriculture, Food & Markets (VAAFM) in collaboration with The Vermont Agency of Commerce and Community Development (ACCD) administered the **Business Emergency Gap Assistance Program** (BEGAP). The program provided grants to food and farm businesses, organizations, and individuals who raise animals and/or grow food or crops for sale, or who operate on-farm processing operations that experienced physical damage from due to the flooding event. Eligible applicants, qualified for a payout of 30% of their total physical damages. The application deadline was October 23<sup>rd</sup>. Physical damage reported on 133 agricultural BEGAP applications totaled roughly \$20,000,000. A total of \$3,700,000 in grant payments was disbursed to agricultural applicants. This program did not account for nor compensate for economic injury or revenue loss.

The Vermont Community Foundation administered the <u>Farm Disaster Relief Grant Program</u>. This program provided grants of up to \$10,000, through two rounds of applications, to Vermont farms directly impacted by the flooding event. The application deadline was September 27<sup>th</sup>. The program was designed to meet unmet need, and help farms and farmers continue or return to production. This opportunity was funded through donations made to the VT Flood Response & Recovery Fund 2023. The total awards allocated in this program was \$1,500,000.

#### Grants supported:

- Replacement of seed, feed, livestock, supplies or equipment.
- Infrastructure and/or capital repairs.
- Loss of revenue due to closure or damages.
- Outstanding bills.
- Unexpected expenses related to storm and flood impacts.

The Northeast Organic Farming Association of Vermont (NOFA-VT) administers the **Farmer Emergency Fund**. The fund was established in 1997 to support organic and NOFA-VT member farmers who are in financial need and have been adversely affected by a disaster. The program provides grants of up to \$5,000 and is funded through donations and fundraising. Applications are accepted on an ongoing basis and decisions regarding flood response awards were made within two weeks. The funds may be used to help replace infrastructure (for example greenhouse, barn, fencing), seed, feed, livestock, equipment and other losses caused by the disaster. It can also be used to pay outstanding farm-related bills. The fund does not cover loss of projected revenue or losses that are covered by other sources. As of December 12, 2023, 194 farms had applied for these emergency funds and 175 were found eligible and awarded. The total amount paid out so far is \$833,362. Acknowledging that the maximum award



is \$5,000 and the average total loss reported from their program applicants is \$82,013 per farm, NOFA-VT recently launched a second round of Emergency Fund awards aimed at getting more support for farmers who have already received an award but have incurred additional losses or have a better calculation of losses as the growing season progressed.

The VAAFM <u>Dairy Section</u> sprang into action and supported dairy farmers and milk processors by driving milk pick up routes ahead of milk trucks to identify potential unmarked road closures, and by communicating road closures to the State Emergency Operations Center (SEOC). The process of scouting routes for milk trucks proved to be a huge success and is a practice other New England states have inquired about implementing. Staff also worked with milk processors after initial flooding to understand the extent of issues and milk storage capacity. Numerous processing facilities were unable to get staff to their plants during the first 24-36 hours of the flood. The Agency filed an emergency extension with the Food and Drug Administration (FDA) to alleviate pressure on milk storage deadlines which ultimately required an increase in staff time to maintain quality control.

The VAAFM, and the Vermont Agency of Digital Services (ADS) created the <u>Vermont</u> <u>Online Farm Feed-Finder Marketplace</u> for those looking to buy and/or sell feed. "The constant rain this summer has created a feed shortage for many farmers. This new, free directory is an easy way for those looking for feed to connect with those with feed for sale," said Anson Tebbetts, Vermont's Secretary of Agriculture.

Those selling hay, alfalfa, corn, soy, silage, and haylage can easily advertise their feed on the directory and can include details like whether the feed is organic and if the seller can deliver. For farmers looking for feed, the directory provides an easy platform through which they can quickly view availability, location, and pricing for a variety of feed.

In the immediate aftermath of the July 2023 floods in Vermont, <u>University of Vermont</u> <u>Extension Soil Testing</u> faculty and staff embarked on soil testing on farms and other agricultural establishments.

The goal of soil testing was to help farmers assess the extent of contamination on their farms following the expansive July 2023 floods by providing valuable information about the presence of pollutants, chemicals, and other harmful substances in the soil. By conducting soil tests, farmers were able to identify the specific contaminants present in their soil and determine the level of contamination. This information allowed them to make informed decisions about the safety of their soil for planting crops and grazing



animals, as well as to develop appropriate remediation and mitigation strategies to address the contamination. Additionally, soil testing helped farmers to meet regulatory requirements and access financial assistance for soil restoration efforts. Overall, soil testing on farms in the aftermath of the floods in Vermont is a crucial step in understanding the impacts of the disaster on agriculture and public health, and in supporting the long-term recovery of affected communities.

Various assessments were done as Extensionists, and other collaborating soil scientists walked the affected farm fields with farmers and/or ranchers. With funding from an expedited Specialty Crop Block Grant provided by the VAAFM, and UVM Extension funds, 166 soil tests were conducted at no cost by the UVM Agricultural and Environmental Testing Lab (AETL), plus an additional 28 soil tests were conducted by the University of Maine soil test lab. Standard soil test results (normally \$17 each) plus a heavy metal screen (normally \$10) were provided to commercial farms, community gardens, and some gardeners across Vermont. Producers were able to assess macro and micro-nutrient levels, soil pH, and heavy metal levels on at least 391 acres of flooded soils.

To inform re-planting decisions, UVM Extension personnel developed a soil sampling protocol to compare flooded and non-flooded fields on vegetable farms, with funding from the VAAFM and UVM's OVPR Rapid Response Program. Soil samples were collected approximately 30 and 60 days after flooding from 9 farms across Vermont. Samples were taken on the same day and in the same manner from flooded and non-flooded fields on 8 of the farms, and from a flooded field only on one farm where there was no control (unflooded) field.

<u>Dig Deep Vermont</u> is a fundraising effort established by a group of volunteers working with government agencies, state associations, and business leaders. Their grassroots coalition is focused on raising funds to support family farmers in Vermont.

People can donate to either a general state fund or to a specific county of their choosing. Funds raised will be distributed directly to the family farms that have been impacted by the flooding and extreme weather.





#### **Federal Level Disaster Assistance Programs**

The primary entity responsible for administering federal disaster assistance for agricultural operations is the United States Department of Agriculture (USDA) through programs housed within the Farm Service Agency (FSA) and the Natural Resources Conservation Service (NRCS). Additional support was available for all businesses through USDA Rural Development and the U.S. Small Business Administration.



#### **Farm Service Agency**

U.S. DEPARTMENT OF AGRICULTURE

The <u>Noninsured Crop Disaster Assistance Program (NAP)</u> provides financial assistance to producers of noninsurable crops when low yields, loss of inventory, or prevented planting occur due to natural disasters. Applications are accepted on an ongoing basis. 204 applications submitted.

The <u>Emergency Conservation Program (ECP)</u> helps farmers and ranchers to repair damage to farmlands caused by natural disasters and to help put in place methods for water conservation during severe drought. The ECP does this by giving ranchers and farmers funding and assistance to repair the damaged farmland or to install methods for water conservation. The deadline to apply was November 17<sup>th</sup>, 2023, and 60 applications were submitted.

The Emergency Assistance for Livestock, Honey Bees, and Farm-raised Fish (ELAP) provides financial assistance to eligible producers of livestock, honeybees and farm-raised fish for losses due to disease, certain adverse weather events or loss conditions, including blizzards and wildfires, as determined by the United States Secretary of Agriculture. The deadline to apply is January 30<sup>th</sup>, 2024, and as of January 22<sup>nd</sup>, 2024, 35 applications have been submitted. 108 potential applicants expressed interest in applying.

The <u>Emergency Forest Restoration Program (EFRP)</u> helps the owners of non-industrial private forests restore forest health damaged by natural disasters. The EFRP does this by authorizing payments to owners of private forests to restore disaster damaged forests. The deadline to apply was December 8<sup>th</sup>, 2023, and 30 applications were submitted.

The <u>Livestock Forage Program (LFP)</u> provides compensation to eligible livestock producers that have suffered grazing losses for covered livestock on land that is native or improved pastureland with permanent vegetative cover or is planted specifically for grazing. The grazing losses must be due to a qualifying drought condition during the normal grazing period for the county.



The <u>Livestock Indemnity Program (LIP)</u> provides compensation to eligible livestock producers who have suffered livestock death losses in excess of normal mortality due to adverse weather and attacks by animals reintroduced into the wild by the federal government or protected by federal law. The deadline to apply is January 30<sup>th</sup>, 2024, and as of January 22<sup>nd</sup>, 2024, 2 applications have been submitted. 4 potential applicants expressed interest in applying.

The <u>Tree Assistance Program (TAP)</u> provides financial cost-share assistance to qualifying orchardists and nursery tree growers to replant or rehabilitate eligible trees, bushes and vines damaged by or lost due to a natural disaster. Applications are accepted on an ongoing basis. 7 potential applicants have expressed interest and 2 applications have been submitted.



The Emergency Watershed Protection (EWP) Program offers technical and financial assistance to help local communities relieve imminent threats to life and property caused by floods, fires, windstorms, and other natural disasters that impair a watershed. EWP does not require a disaster declaration by federal or state government officials for program assistance to begin. The NRCS State Conservationist can declare a local watershed emergency and initiate EWP program assistance in cooperation with an eligible sponsor (cities, counties, towns, conservation districts, or any federally recognized Native American tribe or tribal organization). NRCS offers financial and technical assistance for various activities under the EWP Program, including:

- Remove debris from stream channels, road culverts and bridges;
- reshape and protect eroded streambanks;
- correct damaged or destroyed drainage facilities;
- establish vegetative cover on critically eroding lands;
- repair levees and structures;
- repair certain conservation practices, and
- purchase of EWP Buyouts.

The Environmental Quality Incentive Program (EQIP) Disaster Assistance Program provided support to address resource concerns that threaten the ongoing agricultural operation or create an imminent threat to agricultural operations. The only eligible practices under the EQIP-Disaster Assistance signup were the following seven practices: Cover Crop; Critical Area Planting; Fence; Pasture and Hay Planting; Mulching; Residue and Tillage Management, Reduced Till; Feed Management.

The EQIP Disaster Assistance Program awarded \$4,379,882 to 88 Vermont farms.

#### Recommendations

While state, non-profit, and federal recovery efforts were substantial, they have overall demonstrated inadequacy in effectively addressing the challenges at hand. The Agriculture Recovery Task Force has developed recommendations to continue, expand and improve our response to the 2023 severe weather and the consequential impacts on Vermont farms.

"Vermont's farms faced significant challenges this year from freezing to floods. The loss is significant, and farmers need our help." Governor Phil Scott

These recommendations also serve as lessons we will carry into the future as Vermont continues to experience increased precipitation, more extreme weather events, warmer temperatures, and increased periods of drought because of climate change. These changing climatic conditions are anticipated to further complicate food production and increase the likelihood of crop damage and crop failure in Vermont and throughout the Northeast. Simultaneously, disparate climatic changes in other regions of the U.S. pose threats to food production and supply chain resiliency. Vermont must develop a more robust disaster response to ensure agricultural recovery from natural disasters and to ensure a resilient food system.

#### **Farmer Empowerment**

1. Grow and enhance investment into critical funding opportunities for farms, such as grant programs.

These resources are needed for ongoing assistance as agricultural businesses struggle to recover from this natural disaster, enable a swift response following the next emergency for our agricultural community, and offer overarching investment in farm resiliency to ensure food security and utilization of our working landscape into the future. There is recognition that state resources may not be immediately available, and the emergency response and recovery efforts may be contingent upon federal assistance, philanthropy, and nonprofit organizations.

In addition, farmers need additional technical resources to help them navigate the myriad of grants and programs that are available, both as a response to disasters but also for proactive resiliency practices. Investment in partners will increase farmers' access to and implementation of funds.

# 2. Maintain access to essential technical and mental health support services for farmers, such as Farm First.

Mental health support needs doubled immediately following this event and Farm First capacity to adequately respond was limited. Establishing more staff resources and expanding program services to include farmworkers would be valuable recovery improvements. In addition to mental health support, business technical assistance, housing, and childcare needs were also identified during this challenging time period. Many agricultural businesses needed support in applying for grants, navigating support programs, and making business and land management decisions or improvements following the flooding events. Ongoing and expanded technical support availability will aid in recovery and improve business viability for the future.

# 3. Establish a public/private council focused on coordinating efforts and planning resiliency strategies for the agriculture sector.

This effort should include maintaining data from farmers on what is working well and where there are gaps in available support. The charge should include not only strategies to prepare and recover from natural disasters but also streamline and expedite funding, and mitigate ongoing stressors to the industry that are made worse by natural disasters such as labor and housing shortages.

#### **Government Systems**

# 1. Advocate for revision of federal level disaster relief programs and creation of a flexible emergency agricultural fund.

Crop insurance programs should be restructured to meet regional needs. The currently available insurance programs are largely inadequate and not designed for smaller scale farming practices. Crop insurance can be cost prohibitive, administratively burdensome, and has a low rate of payout to smaller diversified farms, which are the bulk of Vermont operations.

Additionally, federal level disaster relief programs are an important resource but the timeline from application to award is months to years and the programs lack flexibility. The task force recommends continued advocacy efforts at the federal level for updates to disaster relief programs and for an emergency agricultural fund that is flexible and can be deployed quickly.

Typically, once a Secretarial Disaster Declaration is established, the only form of immediate relief for farmers is access to low-interest loans. There are programs such as the <u>Single Family Housing Rural Disaster Home Repair Grants</u> through USDA Rural Development that provide grants to low-income homeowners to repair homes damaged in a Presidentially Declared Disaster Area that could be a valuable resource but unfortunately, most farmers are excluded because they generate



income from their properties. In Vermont, many farmers and agriculture producers sustained damage to their primary residences due to their locations along waterways, but neither USDA nor the Small Business Administration were able to support repairs. In the future, home repair programs in a disaster, should be made available to farmers.

While refinancing and/or establishing new low-interest loans can be beneficial to some, many Vermont farmers are already over-financed and unwilling or unable to take on more debt to stay in business.

#### 2. Create additional emergency response capacity.

A further recommendation is to develop a quick disaster deployment process for additional USDA employees, state employees, and potentially Conservation District employees or other partners to assist quickly to assess damages, provide data to state and federal agencies, and assist farmers in accessing resources. By doing so, farmers would receive more immediate assistance in developing plans for remediating damage. For example, following the July flood, farmers were instructed to leave debris in their fields until USDA field staff could visit the site and assess. This practice slowed cleanup and put farmers in a vulnerable position to choose between potentially forfeiting eligibility for a disaster relief program or removing debris to salvage what they could of the growing season. Furthermore, many farmers were unaware of available programs until after they had already removed flood debris.

#### **Regulatory Recovery**

#### 1. Grow and enhance investments in agricultural resilience and adaptation.

Existing programs, both water quality and agricultural development programs, can support farms to increase their resilience to extreme weather. For example, the Best Management Practice (BMP) Program provides engineering design and technical assistance to Vermont farms to build waste storage facilities, runoff collection and/or treatment, and more. These practices can assist with regulatory compliance with non-point source requirements, as well as improve farm infrastructure to be more resilient to extreme weather events.

# 2. Provide clear, coordinated education and assistance for farms regarding post flood regulatory considerations.

Under U.S. law, crops where the edible portion of the plant has contacted flood waters are considered adulterated and cannot be sold for human consumption. Because floodwaters may contain sewage, chemicals, heavy metals, pathogens, or



other contaminants, these crops should be discarded, destroyed, or tilled into the soil.

Regarding replanting after flooding there isn't a specific regulatory threshold for a safe replanting interval because it depends on many factors. VAAFM and other agricultural service providers spent considerable time providing technical assistance to growers on what factors they should consider when replanting to mitigate risks.

Some farmers were unaware of floodplain regulations and appropriate actions and contacts for management of debris and sediment covered fields. ANR and AAFM should coordinate to develop clear educational materials (factsheets, websites) on subjects related to flood response and recovery regulations and recommendations.

3. Create an interagency working group with AAFM, ANR and NRCS to develop climate change resilient stormwater best management practices for farms to reduce risks to waste storage capacity.

Vermont experienced unprecedented rainfall this summer, and these conditions reduced manure spreading opportunities and stressed manure storage capacity for farms. The annual winter manure spreading ban also restricts the spread of manure between December 15<sup>th</sup> and April 1<sup>st</sup>. The concept of traditional stormwater management in non-agricultural sectors often involves the use of systems like retention basins and other measures to control and treat stormwater runoff before it is then released. Farm operations are currently limited from implementing these types of stormwater practices. Farms are required to capture and store any contaminated stormwater runoff or divert it to ensure it does not enter surface water. This paradigm puts undue pressure and risk on storage facilities which are designed to store farm waste until they can be field applied according to nutrient recommendations. Additional resources are needed to identify and implement practices on farms that will prevent stormwater from being contaminated and reduce the volume of stormwater being collected. Interagency coordination between AAFM, NRCS and DEC is necessary to begin to look at alternative ways for farms to manage stormwater.



- 2023 Flooding Disaster Response and Recovery Resources | Agency of
   Agriculture Food and Markets
- Loss & Damage Survey Dashboard | Agency of Agriculture Food and Markets
- Business Emergency Gap Assistance Program (BEGAP) for Agriculture
   Operations | Agency of Agriculture Food and Markets
- Farm Disaster Relief Grant Program The Vermont Community Foundation
- Farmer Emergency Fund | NOFA Vermont
- <u>Disaster & Flood Recovery Resources | UVM Extension Cultivating Healthy</u>
   <u>Communities | The University of Vermont</u>
- Farm Feed-Finder Marketplace | Agency of Agriculture Food and Markets
- Dig Deep VT
- USDA Farm Service Agency Vermont Disaster Assistance Programs
- Disaster Recovery | Natural Resources Conservation Service