



# *Vermont's State Hazard Mitigation Plan*

Minimal Executive Oversight and Low  
Completion Rate of Actions Reduces  
Effectiveness of Vermont's State Hazard  
Mitigation Plan



## Mission Statement

The mission of the Auditor's Office is to hold State government accountable by evaluating whether taxpayer funds are being used effectively and identifying strategies to eliminate waste, fraud, and abuse.

## Audit Team

Andrew Keegan, Senior Auditor  
Jonathan Kingston, Audit Manager

Dear Colleagues,

Natural disasters such as floods, the COVID-19 pandemic, and extreme heat have resulted in death and destruction across our State in recent years. Although Vermont cannot prevent natural disasters from occurring, the State can reduce the impact of these events through the implementation of hazard mitigation efforts. Vermont's State's Hazard Mitigation Plan (the Plan), developed every five years by Vermont Emergency Management (VEM) based on federal requirements, is intended to identify the natural hazards facing Vermont, establish actions that reduce risk from those hazards, and serve as a resource for State agencies and stakeholders to implement those actions.

However, it is unclear how effective the Plan has been in actually reducing the State's risks from natural disasters because the State has not implemented most of the mitigation actions identified by the Plan. **Of the 96 mitigation actions in the 2018 Plan, the State reported that only 33 percent had been implemented by 2023.** Even actions that the Plan identified as priorities were frequently not done. Additionally, the State did not evaluate whether the Plan was effective, despite describing a process for such an evaluation within the Plan.

These issues can be partially attributed to a lack of executive leadership. Specifically, the Plan assigns responsibility to the Secretaries and Commissioners who are members of the State Hazard Mitigation Planning and Policy Committee for ensuring mitigation actions are implemented and for reviewing how well actions have contributed to the State's mitigation goals and strategies. However, there is no evidence that this committee took steps to ensure mitigation actions were completed or reviewed whether the Plan's mitigation strategy was effective.

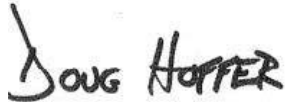
Additionally, VEM was supposed to be involved in monitoring and evaluating the Plan. For example, VEM was supposed to provide an annual report about the status of mitigation actions to the State Hazard Mitigation Planning and Policy Committee. VEM staff collected information for the report, but they were unable to provide evidence that they had sent it to the committee as required. This annual report was also supposed to include an evaluation of how actions contributed to the mitigation goals and strategies, but VEM did not include this information in the report.

Another issue we identified is that the 2023 Plan does not include any mitigation actions that specifically address the risk of infectious disease, even though the Plan was developed and approved after the COVID-19 pandemic began.

Recent weather events highlight the need to make the implementation of the Plan as successful as possible. This report includes recommendations to address the issues identified with the implementation of the Plan.

I would like to thank VEM staff, as well as staff at various entities associated with mitigation actions, for their cooperation and professionalism throughout the course of this audit. I would also like to thank all the State employees, first responders, and other individuals who have helped our fellow Vermonters in need because of recent disasters.

Sincerely,

A handwritten signature in black ink that reads "DOUG HOFFER". The signature is written in a cursive, slightly stylized font.

DOUGLAS R. HOFFER  
State Auditor

ADDRESSEES

The Honorable Jill Krowinski  
Speaker of the House of Representatives

The Honorable Philip Baruth  
President Pro Tempore of the Senate

The Honorable Phil Scott  
Governor

Ms. Sarah Clark  
Interim Secretary, Agency of Administration

Mr. Adam Greshin  
Commissioner, Department of Finance and Management

Ms. Jennifer Morrison  
Commissioner, Department of Public Safety

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# Highlights

Natural disasters create risks for people and property. Floods, the COVID-19 pandemic, and other disasters have killed Vermonters and caused hundreds of millions of dollars in damage to Vermont's economy, environment, and infrastructure.

To reduce or eliminate these risks, Vermont produces a State Hazard Mitigation Plan (Plan) every five years that outlines a strategy to mitigate the effects of natural disasters. Vermont Emergency Management (VEM), a division of the Department of Public Safety, is responsible for developing this Plan. However, the State reported in 2023 that it had only completed 33 percent of the mitigation actions from the 2018 Plan. That included less than 50 percent of the actions identified as a "priority" in that Plan.

The stated mission of Vermont's State Hazard Mitigation Plan is to "protect life, property, natural resources and quality of life in Vermont by reducing our vulnerability to climate change and natural disasters."

In light of this, the State Auditor's Office (SAO) decided to conduct an audit to (1) determine whether the Plan is an effective tool to reduce or eliminate the State's most significant vulnerabilities and (2) determine why the State reported a completion rate of less than 50 percent for priority actions from the 2018 Plan.

## Objective 1 Finding

It is unclear how effectively Vermont's 2018 Plan reduced the risks associated with natural disasters. One reason is that only 33 percent of mitigation actions from the 2018 Plan were implemented by 2023. This is because the State Hazard Mitigation Planning and Policy Committee (hereafter referred to as the Planning and Policy Committee) did not fulfill its responsibility to ensure entities completed mitigation actions. The 2018 Plan stated that the Planning and Policy Committee is responsible for coordinating agency action around hazard mitigation and is "tasked with implementation of Plan actions" that are the State's responsibility. In 2019 and 2020, VEM had information that some actions were at risk of not being completed, but we found no evidence that the Planning and Policy Committee took steps to resolve these issues and ensure the actions were completed.

It is also unclear if the 2018 Plan reduced the risks from natural hazards because neither VEM nor the Planning and Policy Committee evaluated whether the Plan was effective. The 2018 Plan described a process to evaluate the effectiveness of the State's hazard mitigation efforts, but that process did not happen.

Additionally, data about the status of mitigation actions from the 2018 Plan was not always reliable. Staff at the various entities assigned to lead efforts provided this information to VEM, but some of these individuals were unfamiliar with the intent and status of the actions assigned to their entity. This was often because staff turnover meant the individuals currently in that role were not involved in the development of the 2018 Plan and VEM did not provide the new individuals with training or guidance related to their role.

Lastly, the 2023 Plan, does not include any mitigation actions meant to address the risk of an infectious disease outbreak, even though the 2023 Plan was prepared after the start of the COVID-19 pandemic and acknowledges that COVID-19 highlighted areas of health policy and infrastructure that could be improved.

### **Objective 2 Finding**

The 2018 Plan identified 24 mitigation actions as priorities, but VEM reported that 14 of these actions had not been completed by 2023. The 2019 status update noted that there had been no progress on 11 of these actions. One year later, the status update indicated there was still no progress on four of the actions. The 2020 status update also included statements indicating that entities no longer considered three of the actions as a priority.

Overall, priority actions were identified as such because of their potential to significantly benefit Vermont's people, environment, or economy. Therefore, failure to complete them represents significant missed opportunities for the State.

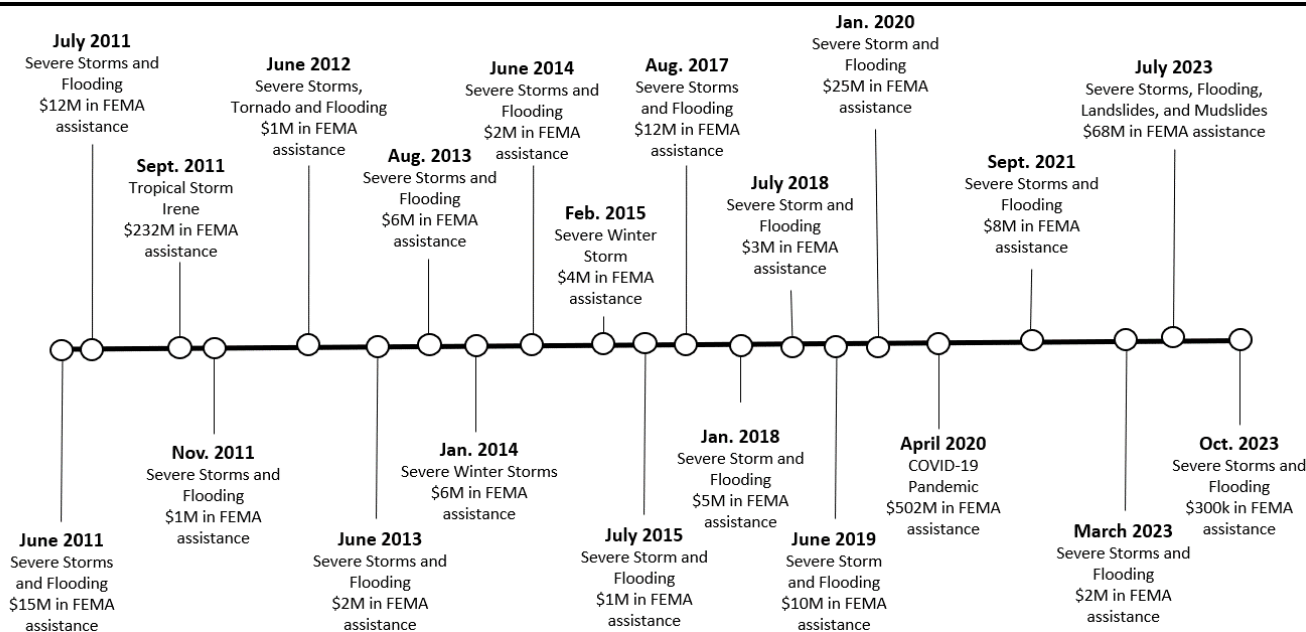
### **Recommendations**

We made several recommendations intended to improve the State's hazard mitigation efforts. This includes recommending that the Secretary of Administration ensures the Planning and Policy Committee monitors and evaluates the Plan and takes necessary steps to ensure the most significant hazard mitigation actions are completed. We also recommend that the Commissioner of Public Safety ensures that the VEM Director takes steps to address the issues we noted, such as developing training and guidance for entities assigned to lead mitigation actions when the Plan is adopted and when there is staff turnover and including mitigation actions for the most significant hazards in future versions of the Plan. The Interim Secretary of Administration agreed to one recommendation and agreed to bring the other recommendation to the Planning and Policy Committee. The Commissioner of Public Safety accepted all their recommendations.

## Background

Natural disasters can severely impact Vermont’s people, property, environment, and economy. Between 2011 and 2023 there were 21 federally declared disasters in Vermont.<sup>1</sup> As shown in Exhibit 1, these disasters included floods, winter storms, and the COVID-19 pandemic. As of May 2024, the Federal Emergency Management Agency (FEMA) has provided Vermont with nearly \$1 billion dollars to assist with recovery and mitigation efforts.<sup>2</sup> The State has also dealt with the impact of other natural disasters that didn’t result in a federal disaster declaration, such as hotter temperatures, invasive species, and air quality issues from wildfire smoke.

**Exhibit 1: Federal Disaster Declarations in Vermont Since 2011<sup>a</sup>**



<sup>a</sup> Dates are based on when the President approved the federal disaster declaration. This may be several months after the disaster occurred.

Many natural disasters result from factors outside of Vermont’s direct control (e.g., climate change), meaning the State can do little to prevent them from occurring. **Hazard mitigation** refers to actions that reduce or eliminate long-term risk to life and property and represents a way for the State to manage the impact of these events. FEMA notes that hazard mitigation is intended to break the cycle of repetitive damage and reconstruction after a disaster, make communities more sustainable, and save money.

<sup>1</sup> When disasters exceed the response capabilities of state and local governments, governors can request the United States President declare a federal disaster and provide federal resources to support response and recovery efforts.  
<sup>2</sup> This does not include other funding sources, such as the American Rescue Plan Act.



Hazard mitigation is one component of emergency preparedness, which also includes prevention, protection, response, and recovery. The State has developed an Emergency Management Plan to address each of those components for threats and hazards facing the State. This includes natural disasters, as well as human-caused and technological hazards such as hazardous material spills and terrorism. The State’s Emergency Management Plan includes “mission area plans” focused on the various emergency preparedness components. The mission area plan related to mitigating the impacts of natural disasters is the State Hazard Mitigation Plan (Plan), which is the focus of this audit.

To qualify for certain federal disaster funding and various hazard mitigation grant programs, states must develop a Plan every five years. FEMA is responsible for reviewing the Plans to ensure that they comply with [federal requirements](#).<sup>3</sup> FEMA approved Vermont’s current Plan in November 2023, and the previous Plan in 2018.

The 2018 and 2023 Plans both note that Vermont understands that it is not only less costly to reduce vulnerability to disasters than to repeatedly repair damage, but that we can also take proactive steps to protect our economy, environment, and people from inevitable natural hazard events.

Vermont Emergency Management (VEM), a division of Vermont’s Public Safety Department, was the lead agency responsible for developing the Plan. The Plan development process was overseen by the State Hazard Mitigation Planning and Policy Committee (hereafter referred to as the Planning and Policy Committee), which consisted of various state leaders listed in Exhibit 2. This included the VEM Director and the Secretary of Administration, who also adopted the Plan as the “Governor’s Authorized Representative.” According to FEMA, the intent of having a state’s Governor (or designee) adopt the Plan is because the Governor has authority over the state agencies that may be responsible for parts of the mitigation strategy.

**Exhibit 2: Planning and Policy Committee Members for the 2023 Plan**

Entity	Position
Agency of Administration	Secretary Kristin Clouser
Agency of Administration (alternate)	Deputy Secretary Douglas Farnham
Agency of Natural Resources	Secretary Julie Moore <sup>a</sup>
Agency of Commerce and Community Development	Secretary Lindsay Kurrle
Agency of Transportation	Secretary Joe Flynn <sup>a</sup>
Buildings and General Services	Commissioner Jennifer Fitch

<sup>3</sup> FEMA also encourages local governments to develop Local Hazard Mitigation Plans and has authorized VEM to approve those local plans. While not the focus of this audit, Local Hazard Mitigation Plans are a component of Vermont’s hazard mitigation efforts.

Entity	Position
Agency of Agriculture, Food and Markets	Secretary Anson Tebbetts <sup>a</sup>
Public Services Department	Commissioner June Tierney
Agency of Human Services	Secretary Jenney Samuelson
Vermont Emergency Management	Director Erica Bornemann <sup>a</sup>
Vermont Emergency Management	Director Eric Forand

<sup>a</sup> These individuals were also Planning and Policy Committee Members for the 2018 Plan.

One federal requirement is that states identify and assess potential hazards within the Plans. Vermont’s Plans identified 14 natural hazards that affect Vermont and ranked the probability and potential impact of each one. A higher ranking meant the hazard was more likely to occur or would have a high average impact across four areas (infrastructure, life, economy, and environment). As shown in Exhibit 3, both the 2018 and the 2023 Plans identified the same hazards, but the hazards had different rankings in each plan. The [2023 Plan](#) includes details about each hazard, including historic incidents and trends.

### Exhibit 3: Vermont’s Assessment of Various Potential Hazards in 2018 and 2023

Hazard	2023 Ranking	2018 Ranking	Change
Fluvial Erosion	1	1	-
Inundation Flooding	2	2	-
Heat	3	6	↑3
Wind	4	5	↑1
Snow	5	4	↓1
Ice	6	3	↓3
Drought	7	8	↑1
Infectious Disease	8	13	↑5
Cold	9	7	↓2
Invasive Species	10	12	↑2
Landslides	11	9	↓2
Wildfire	12	10	↓2
Earthquake	13	11	↓2
Hail	14	14	-

Another requirement is that the Plan include a mitigation strategy with goals and actions to reduce the identified vulnerabilities. Vermont’s 2018 Plan identified four goals and 96 mitigation actions, while the 2023 plan included 112 actions for the same four goals. For each action, the plans identified the hazard(s) that the action addressed, the entities responsible for implementing the action, potential funding resources, and a timeline for completing the action.

## Finding 1: It Is Unclear How Effectively Vermont's State Hazard Mitigation Plan Has Reduced the Risks from Natural Hazards

Vermont's 2018 Plan notes that it presents "a mitigation strategy to reduce or eliminate our most significant vulnerabilities." However, it is unclear how effectively Vermont's mitigation strategy has achieved its purpose of reducing Vermont's risks from natural hazards, because:

- VEM reported in 2023 that only 33 percent of mitigation actions from the 2018 Plan had been completed,
- VEM and the Planning and Policy Committee did not follow through on the process they had developed to evaluate whether hazard mitigation efforts were effective,
- information about the status of mitigation actions was sometimes unreliable, and
- no mitigation actions specifically addressed the risk of an infectious disease outbreak in the 2023 Plan.

### Vermont Reported that Most Mitigation Actions Were Not Implemented

VEM reported as part of the 2023 Plan that **only 33 percent of the 96 mitigation actions from the 2018 Plan had been completed.**<sup>4</sup> While VEM staff stated that each action does not have the same value in implementation, VEM also reported that less than 50 percent of priority actions from the 2018 Plan had been completed.<sup>5</sup>

The 96 mitigation actions in the 2018 Plan were organized into four mitigation goals, which collectively represented the State's mitigation strategy. As shown in Exhibit 4, VEM reported that less than half of the actions had been completed for three of the four mitigation goals. This means that the State did not successfully implement its mitigation strategy. And since the Plan states that it was developed to establish actions that reduce risk, by not completing these actions the State has missed opportunities to reduce risks associated with natural disasters.

<sup>4</sup> Based on limited testing discussed later in this report, the information VEM reported was not always reliable.

<sup>5</sup> The completion of priority actions is covered in Objective 2.

**Exhibit 4: The State Did Not Complete Most Hazard Mitigation Actions from the 2018 Plan**

Plan Goal	Not Completed	Completed
Create a <b>common understanding</b> of - and coordinated approach to - mitigation planning and action.	85%	15%
Enhance the resilience of our <b>built environment</b> - our communities, infrastructure, buildings, and cultural assets.	70%	30%
Develop and implement <b>plans and policies</b> that create resilient natural systems, built environments and communities.	67%	33%
Protect, restore and enhance Vermont’s <b>natural resources</b> to promote healthy, resilient ecosystems.	43%	57%

Staff responsible for completing some actions cited the COVID-19 pandemic as one reason why actions were not completed. While the pandemic disrupted government operations and reduced staff capabilities, VEM reported that a similar percentage of actions from the 2013 Plan had not been completed. This indicates that the reason why the State did not implement its mitigation strategy is more systemic and cannot be attributed solely to the pandemic.

**Executive Leadership Did Not Ensure Mitigation Actions Were Implemented**

**The Plan states that the Planning and Policy Committee is “tasked with implementation of Plan actions that are the responsibility of State government.”** While the Plan describes a process to monitor the Plan, VEM and the Planning and Policy Committee did not implement this process. **As a result, the Planning and Policy Committee did not fulfill its responsibility to ensure mitigation actions were implemented.**

For example, the 2018 Plan stated that the Planning and Policy Committee would “carefully review” an annual report prepared by VEM which defined the progress of mitigation actions. According to VEM staff, this report contained updates about the status of mitigation actions provided by the entities assigned to lead the action. In 2019 and 2020, this information indicated multiple actions were at risk of not being completed. In some cases, the status update noted that lead entities lacked the resources to complete an action, or that the entity no longer considered the action a priority. VEM staff said these annual reports were provided to the Planning and Policy Committee, but they were unable to provide evidence that they had. And neither VEM nor Planning Committee members provided any evidence that the mitigation action report was reviewed or discussed. As a result, **there is no evidence that the Planning and Policy Committee reallocated resources, assigned actions to other entities, or took other steps to ensure mitigation actions were completed.**

Some committee members incorrectly indicated that VEM is responsible for the implementation of the Plan. Not only is this contradicted by the description of the Planning and Policy Committee's role in the 2018 Plan, but VEM's ability to ensure mitigation actions are implemented is limited. While VEM staff noted that they are working on a "more robust implementation strategy" for the 2023 Plan, they also noted that they do not have the authority to compel other entities to complete actions. In the 2018 Plan, entities other than VEM were assigned to lead more than half of the 96 mitigation actions.

Responsibility for implementing the Plan rests with the members of the Planning and Policy Committee, and ultimately with the Secretary of Administration who adopted the 2018 Plan as the "Governor's Authorized Representative." According to FEMA, the intent of having the Governor (or designee) adopt the Plan is because the Governor has authority over the state agencies that may be responsible for parts of the mitigation strategy.

## VEM and the Planning and Policy Committee Did Not Evaluate Whether the Plan was Effective

[FEMA requires](#) that the Plan describe the State's process for assessing the effectiveness of the Plan in achieving its stated purpose and goals. However, FEMA does not verify that this process is followed, and **Vermont did not fully implement the process outlined in the Plan. Because of this, the extent to which hazard mitigation efforts have reduced the State's vulnerability to natural disasters is unknown.**

According to the process described in the 2018 Plan, VEM and the Planning and Policy Committee were supposed to review the progress and efficacy of the Plan actions in reaching the stated goals and strategies each year. According to VEM staff, this was done through the annual status report that VEM was supposed to prepare. The 2018 Plan notes that in addition to the status of mitigation actions, the report was supposed to include information about how well each action has contributed to the mitigation goals and strategies. While VEM did produce an annual report, it only included information about the status of mitigation actions. And as noted above, there is no evidence that this report was even shared with the Planning and Policy Committee. As a result, neither VEM nor the Planning and Policy Committee evaluated whether the Plan was effective.

## Information about Whether Mitigation Actions Were Completed Was Not Always Reliable

As previously noted, various entities were tasked with leading mitigation actions in the 2018 Plan and VEM relied on staff at these entities to provide information about whether mitigation actions had been completed. **Despite this, VEM had not developed training or guidance for entities assigned to lead mitigation actions.**<sup>6</sup> Some of these individuals lacked historical knowledge about the mitigation actions their entity was tasked with completing, and as a result, the status of mitigation actions was not always reliable.

For example, VEM reported that two actions from the 2018 Plan were not completed, but staff at the entities assigned to lead these actions told us that the intent of these actions had been achieved. In another case, a manager at an entity assigned to lead an action said that the status reported by VEM in the 2023 Plan was not correct.

These issues appear to relate to staff turnover. Several contacts stated they had not participated in the development of the 2018 Plan and **were unable to answer questions about their entity's mitigation actions or how the Plan was developed.** Some of these individuals also said they were unsure how mitigation actions were identified, how entities were selected to lead the implementation of actions, or how often VEM monitored the status of mitigation actions.



Significant rainfall in July 2023 resulted in flooding that caused significant damage to homes, businesses, and infrastructure across Vermont.

[FEMA's guidelines](#) note that tracking the status of mitigation actions ensures the Plan is implemented, and VEM has added an implementation dashboard to the [Plan website](#). This is expected to provide information about the status of actions from the 2023 Plan.<sup>7</sup> However, the usefulness of these tools in supporting the implementation of Vermont's hazard mitigation strategy depends on having accurate information about the status of mitigation actions.

<sup>6</sup> VEM staff stated during the audit that they were working with a consultant to develop training documents for entities assigned to lead actions.

<sup>7</sup> As of June 2024, the dashboard does not include status updates for any actions. VEM plans to request status updates from lead entities in October/November.



## 2023 Plan Did Not Include Mitigation Actions for Infectious Disease Outbreaks

Vermont's 2023 Plan states that it outlines a mitigation strategy meant to "reduce or eliminate our most significant risks." The 2023 Plan was developed after the COVID-19 pandemic started, and it states that the pandemic highlighted areas of health policy and infrastructure that could be improved. The Plan also notes that an infectious disease outbreak is likely to occur and have a major impact on people and the economy. Even though the Plan states that Vermont will continue to develop infectious disease mitigation strategies, **there are no mitigation actions in the Plan that specifically address the risk of an infectious disease outbreak.**<sup>8</sup>

According to VEM staff, the 2023 Plan does not include actions for mitigating infectious disease because it is more plausible to respond to an infectious disease outbreak. However, the Vermont Department of Health (VDH) has several plans for dealing with infectious diseases that identify potential mitigation actions. This includes VDH's Emergency Operations Plan, which includes public education programs as an example of a mitigation action for health-related hazards. Such actions could be included in the Plan.

The COVID-19 pandemic began in early 2020 and disrupted the entire world. In addition to killing more than 1,000 Vermonters, the disease significantly impacted communities and the economy.

There is no federal requirement that the Plan include actions to address each identified hazard, but four hazards (invasive species, landslides, wildfire, and earthquake) ranked *lower* than infectious disease in the 2023 Plan *do* have specific mitigation actions. Additionally, FEMA's guidelines note that the Plan provides "critical information and guidance to local jurisdictions" about the state's priorities and action plans. The lack of specific mitigation actions for the risk of an infectious disease outbreak in Vermont's 2023 Plan means that the Plan does not fully meet that intent. The lack of any specific actions to address the risks of an infectious disease outbreak also means that it is unclear how effectively the 2023 Plan will reduce Vermont's risks from that hazard, if at all.

<sup>8</sup> Two other hazards (hail, extreme cold) in the 2023 Plan also do not have mitigation actions. However, both of those hazards are ranked lower than infectious disease, and the Plan notes that mitigation actions such as development of resilient building standards will indirectly address these hazards.

## Finding 2: Priority Actions from the 2018 Plan Were Not Completed Because They Did Not Appear to Have Been Prioritized

VEM reported that more than half of the 24 priority actions from the 2018 Plan were not completed by 2023. The reason appears to be that the entities simply did not prioritize completing these actions. While most of these previously uncompleted actions are included in the 2023 Plan, the failure to complete them earlier represents a missed opportunity to mitigate future natural disasters.

### Many Priority Actions Were Not Completed

Of the 96 actions in the 2018 Plan, 24 were identified as priority actions. These actions were expected to have a high impact (e.g., significantly benefit people, the environment, or the economy) and were likely to be completed (e.g., they had political and community support). Five years later though, VEM reported that 14 (58 percent) of these priority actions had not been completed. For 2 of these 14 actions, staff provided evidence that demonstrated the intent of the action had been completed. However, staff stated they wanted to expand their efforts so they did not report these actions as complete. This still means 50 percent of the priority actions were not completed.<sup>9</sup>

#### Entities Did Not Prioritize Completing Priority Actions

VEM staff cited the COVID-19 pandemic as a reason the actions were not completed. However, some of these actions were supposed to have been completed before the pandemic started, with most due to be completed by the end of 2020. It appears that the entities simply didn't prioritize completing the actions.

Specifically, there were four priority actions in the 2018 Plan that were supposed to be completed in 2019, but the 2019 status update indicates the entity had made no progress on three of those actions in that year. In fact, **the 2019 annual update indicates that no progress had been made on 11 of the 12 priority actions that were ultimately not completed.** For two of these actions, staff resource limitations were noted as the reason no progress had been made. According to the 2020 update, there was still no progress on four of these actions, including the two that had staff resource limitations.

<sup>9</sup> See Appendix III for a list of the priority actions that were not completed. Many of these actions are included in the 2023 Plan.



The 2020 update also explicitly notes that a non-state entity no longer considered three of the actions a priority.

The 2018 Plan states that the Planning and Policy Committee is responsible for coordinating agency action around hazard mitigation. Although VEM staff did not provide evidence that this information had been provided to committee, committee members should have been aware of the status of these actions since they headed the State entities responsible for completing most of these actions. However, the Planning and Policy Committee did not provide any evidence that it took steps (e.g., reassigning actions to other entities) to ensure that actions were completed.

One issue that complicates the Planning and Policy Committee's role is that non-state entities were assigned as the sole lead for four priority actions that were not completed.<sup>10</sup> The State cannot direct how non-state entities allocate resources or prioritize their work, which limits the Planning and Policy Committee's ability to ensure the lead entity completes the actions.

#### Effect of Not Completing Priority Actions

The 2018 Plan stated that it was developed to establish actions that reduce risk, which means Vermont missed opportunities to reduce risk when these actions were not completed. And this is amplified because these actions were expected to have a high impact.

One example of a missed opportunity to reduce risk involves a priority action to develop sample building standards for resilient design and construction. FEMA notes that adopting and following hazard-resistant building codes is one of the most cost-effective ways to safeguard communities against natural disasters. If this action had been completed, it could have served as a resource for communities affected by recent floods to rebuild in ways that would help them better withstand future floods.<sup>11</sup>

Another example relates to a 2018 priority action, assigned to the Agency of Natural Resources (ANR), to track development in river corridors. If ANR had



Tropical Storm Irene struck Vermont in August 2011 causing widespread damage across the State.

<sup>10</sup> Overall, 7 of the 96 mitigation actions were assigned to non-state entities. VEM reported in the 2023 Plan that none of these actions had been completed.

<sup>11</sup> Resilient design and construction standards could also address other hazards (e.g., wildfire), but would be unlikely to reduce damage if a flood washed out land from underneath buildings.

completed this action, data about the amount and type of development happening in the State's river corridors may have been useful in discussions about [Act 121 \(2024\)](#), since this established regulations for development in the river corridors.

Additionally, the long-term impact of one completed priority action to design a program to purchase and remove structures on flood-vulnerable properties is uncertain. The State used federal funds from the American Rescue Plan Act to implement this program and buy out several properties, but these funds were temporary. The 2023 Plan notes that a top priority is securing long-term funding for this program.

## Matters for Legislative Consideration

The [statute](#) requiring VEM to prepare an all-hazards mitigation plan does not require VEM to evaluate or report to the Legislature on the State's efforts to mitigate natural hazards. Also, despite its important responsibility to ensure mitigation actions are implemented, the membership, duties, and responsibilities of the Planning and Policy Committee have not been established in statute.

By comparison, the Legislature passed the [Global Warming Solutions Act](#) (GWSA) in 2020, which created the Vermont Climate Council and established the Secretary of Administration as the chair. The GWSA outlined the required duties of the Vermont Climate Council, one of which was to identify a way to accurately measure the effectiveness of programs and strategies set forth in Vermont's Climate Action Plan. The GWSA also requires that VEM submit biennial reports to the Vermont Climate Council on the progress in local resilience efforts and requires annual reports from the Vermont Climate Council to the General Assembly.

### Suggestions for Legislative Consideration

Establish the membership, duties, and responsibilities of the Planning and Policy Committee in statute. This could include requiring the Planning and Policy Committee to track and regularly report to relevant legislative committees on the overall effectiveness of the Plan. These reports should identify reasons why actions have not been completed.

## Conclusions

Vermont's State Hazard Mitigation Plan includes a strategy to mitigate the damage caused by natural disasters, but it is unclear if this is an effective tool to reduce or eliminate the State's most significant vulnerabilities because the State only completed 33 percent of the mitigation actions in the strategy, including most of the actions that were identified as priorities. Although those priority actions were considered to have the most potential impact, the

entities assigned to lead the action did not appear to prioritize them. Additionally, there was no evaluation to determine if the State’s mitigation strategy was effective, and data about the status of some mitigation actions was unreliable. Lastly, even though the 2023 Plan was developed after the COVID-19 pandemic, the Plan does not include any mitigation actions to address the risk of an infectious disease outbreak.

## Recommendations

We make the recommendation in Exhibit 5 to the Secretary of Administration.

### Exhibit 5: Recommendations and Related Issues

Recommendation	Report Pages	Issue
<p>1. As the Governor’s Authorized Representative, ensure that the Planning and Policy Committee follows the monitoring and evaluation process outlined in the Plan.</p>	<p>7-8</p>	<p>The Governor’s Authorized Representative is the person with the authority over state agencies responsible for implementing the mitigation actions. The Plan notes that the Planning and Policy Committee, of which the Secretary of Administration is a member, is tasked with implementing mitigation actions led by the State.</p> <p>The Plan describes a process to monitor and evaluate the Plan, but the Planning and Policy Committee did not implement this process.</p>
<p>2. As the Governor’s Authorized Representative, ensure that the Planning and Policy Committee only assigns State entities to lead priority mitigation actions in future versions of the Plan and takes necessary steps to ensure the most significant hazard mitigation actions are completed.</p>	<p>6-7 &amp; 11-13</p>	<p>The Governor’s Authorized Representative is the person with the authority to commit state agencies responsible for implementing the mitigation actions. The Plan notes that the Planning and Policy Committee, of which the Secretary of Administration is a member, is tasked with implementing mitigation actions led by the State.</p> <p>VEM reported that only 33 percent of mitigation actions from the 2018 Plan were completed by 2023. VEM obtained annual status updates from entities assigned to lead actions, and as a result, VEM had information in 2019 and 2020 that indicated that some actions were at risk of not being completed. However, there was no evidence that the Planning and Policy Committee took steps to address those issues.</p> <p>The 2018 Plan identified 24 priority actions, but VEM reported in 2023 that 14 were not completed. Non-state entities were assigned to lead four of the priority actions that were not completed. Because they were led by non-State entities the State did not have the authority to ensure the lead entity completed the actions.</p>

We make the recommendations in Exhibit 6 to the Commissioner of Public Safety.

**Exhibit 6: Recommendations and Related Issues**

Recommendation	Report Pages	Issue
1. Ensure that the VEM Director implements the monitoring and evaluation process outlined in the Plan.	7-8	<p>The Plan describes a process to monitor and evaluate the Plan, but VEM did not implement this process. One element of the process was the preparation of an annual report which defined the progress of mitigation actions. VEM was supposed to send this report to the Planning and Policy Committee each year, but they were unable to provide evidence that they had.</p> <p>Additionally, although the annual report was supposed to include how well each action contributed to the mitigation goals and strategies, the report VEM prepared did not include this information.</p>
2. Ensure that the VEM Director provides relevant training and guidance for staff assigned to lead hazard mitigation actions, including when there is staff turnover.	9	<p>VEM relied on staff at entities tasked with leading mitigation actions to provide information about whether those mitigation actions had been completed. However, VEM has not developed training or guidance for these entities. Due to staff turnover, some individuals lacked historical knowledge about the mitigation actions their entity was tasked with completing which resulted in unreliable information about whether mitigation actions were completed.</p>
3. Ensure that the VEM Director includes mitigation action(s) in future versions of the Plan that directly address the most significant hazards identified in the plan.	10	<p>The 2023 Plan identified infectious disease as a hazard that is likely to occur and have a major impact on people and the economy. However, there are no mitigation actions that directly address this hazard in the Plan, although Department of Health plans include mitigation actions for infectious disease.</p>

## Management’s Comments

The Commissioner of Public Safety responded via email (see Appendix IV) to a draft of this report on August 29, 2024, which included responses from the Interim Secretary of Administration. The Interim Secretary of Administration agreed to the first recommendation and agreed to bring the second recommendation to the Planning and Policy Committee. The Commissioner of Public Safety accepted all their recommendations.

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## Appendix I

### Scope and Methodology

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#### Audit Scope

The audit scope included actions taken by the State related to the design, implementation, and monitoring of the 2018 Plan and the design of the 2023 Plan.

#### Audit Methodology

To address both audit objectives, we reviewed VEM's statutory responsibilities in 20 V.S.A. § 3a, the State's Emergency Management Plan, and the 2018 and 2023 Plans. We also reviewed FEMA's State Mitigation Planning Policy Guide and interviewed FEMA officials.

##### Objective 1

For the first objective, we interviewed VEM staff, Planning and Policy Committee members, staff involved in the development of the Plan, and staff from entities assigned to lead various actions from the 2018 Plan. These interviews were done to identify how mitigation actions in the State's hazard mitigation plans were developed, implemented, and monitored.

We judgmentally selected a sample of 16 mitigation actions that VEM had reported as complete in the 2023 Plan to determine if they had actually been completed. This included all 10 priority actions reported complete and 6 non-priority actions. The non-priority actions were selected based on the hazard(s) the action was purported to address, the entity assigned to lead the action, and the action itself. Because this sample was judgmentally selected, the results cannot be projected to the entire population of actions VEM reported as complete.

We also identified other State actions and plans related to mitigating natural hazards, specifically the Climate Action Plan and VDH's plans related to infectious diseases, and compared these actions and plans to the 2023 Plan.

We evaluated internal controls relevant to this audit objective. Specifically, we evaluated how the state determined whether mitigation efforts were effective, the process to determine the status of mitigation actions, and whether the reported statuses were accurate.

##### Objective 2

For the second objective, we reviewed the entire population of priority actions from the 2018 Plan that VEM reported had not been completed. We reviewed annual status updates collected by VEM about these actions and interviewed staff at the entities assigned to lead these actions to identify reasons why the actions had not been completed.

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## Appendix I

### Scope and Methodology

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We evaluated internal controls relevant to this audit objective. Specifically, we evaluated whether and how the Plan is monitored and assessed, how lead entities are identified, and the responsibilities of entities assigned to lead mitigation actions.

#### Compliance with Auditing Standards

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## Appendix II Abbreviations

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VEM	Vermont Emergency Management
FEMA	Federal Emergency Management Agency
ANR	Agency of Natural Resources
VDH	Vermont Department of Health
GWSA	Global Warming Solutions Act
SAO	State Auditor's Office

## Appendix III

### 2018 Priority Actions Reported as Not Complete

Vermont’s 2018 State Hazard Mitigation Plan included 96 total actions, 24 of which were identified as priority. Of the 24 priority actions, Vermont reported that 14 were not complete in the 2023 mitigation plan. As noted in Objective 2, staff provided evidence that demonstrated the intent of two actions had been achieved. This appendix includes details about each of the remaining 12 actions that were not reported as complete, along with the status reported by VEM in the 2023 Plan.

### 2018 Plan Goal: Create a common understanding of - and coordinated approach to - mitigation planning and action.

Action Not Completed	Lead Entity	Status Reported by VEM in 2023 Plan
Develop strategic capital budgeting training and materials to incorporate mitigation and water quality projects, explain the cost of no action and include municipal liability concerns.	VEM & Agency of Commerce and Community Development	This action was revised and included in the 2023 Plan. No progress was made.
Coordinate State programs to promote development, sharing and maintenance of hazard-related data and mapping across a common platform.	VEM	This action objective was incorporated into other 2023 Plan actions. Work is in progress through the CAO and Enterprise GIS Consortium.
Develop a common and consistent statewide platform for collecting local and regional response and recovery data.	VEM	This action is included in the 2023 Plan. Progress on this action included the Reduce Repeat Damages tool from VTrans.



Appendix III  
 2018 Priority Actions Reported as Not Complete

2018 Plan Goal: Enhance the resilience of our built environment - our communities, infrastructure, buildings, and cultural assets.

Action Not Completed	Lead Entity	Status Reported by VEM in 2023 Plan
Develop a mechanism for tracking new structural development in the river corridor so development patterns can be tracked over time.	ANR	This action is captured by Vermont river corridor regulations.
Research reasonable steps developers can take to site new structural development outside of hazard-prone areas when the State is involved in funding, consistent with State river corridor standards and land use goals.	VEM	This action objective is addressed through multiple actions in the 2023 Plan actions in the land use management category.
Develop sample building standards for resilient design and construction (for buildings, construction sites, transportation infrastructure, etc.).	Norwich University	This action was incorporated into 2023 Plan actions to develop resilient design and construction standards.
Research how applicants can demonstrate they have taken reasonable steps to incorporate resilient design and construction in hazard-prone areas when the State is involved in funding, consistent with the objectives of the funding source.	VEM	This action objective is incorporated into a new action for transportation system resilience.
Utilize updated Dam Inventory to support the expansion of the Dam Removal Screening Tool beyond Champlain Basin.	The Nature Conservancy	This action is removed due to changed priorities. It is covered by a new action adopted from the CAP.

Appendix III  
 2018 Priority Actions Reported as Not Complete

2018 Plan Goal: Develop and implement plans and policies that create resilient natural systems, built environments and communities.

Action Not Completed	Lead Entity	Status Reported by VEM in 2023 Plan
Audit all state/federal funding/technical assistance programs to determine the degree to which they directly or indirectly help or hinder the ability of the State to achieve Vermont’s State Hazard Mitigation Plan goals.	ANR, VEM	This action was revised and included in the 2023 Plan. No progress was made.
Convene State, federal and private funders annually to identify ways to better leverage existing funding, fill funding gaps, increase funder alignment, and strengthen funding criteria that relate to hazard mitigation and climate adaptation.	VEM, Norwich University	This action is included in the 2023 Plan. No progress was made.

2018 Plan Goal: Protect, restore, and enhance Vermont’s natural resources to promote healthy, resilient ecosystems.

Action Not Completed	Lead Entity	Status Reported by VEM in 2023 Plan
Develop an inventory of critical headwater and floodplain storage areas that would result in a measurable abatement of flooding.	The Nature Conservancy	This action is in process and is included in the 2023 Plan strategy with updated language to reflect progress in new resources and tools available for implementation.
Complete a pilot project in a strategic watershed, using the above inventory, to prioritize land conservation and determine the cost of averted flood damage.	The Nature Conservancy	This action was removed and incorporated into the above action in the 2023 Plan. This action is also addressed in the CAP actions related to Vermont Conservation Design priority areas.

## Appendix IV Management's Comments

The following is a reprint of management's comments to a draft of this report.

**From:** [Morrison, Jennifer](#)  
**To:** [Hoffer, Doug](#); [Keegan, Andrew](#)  
**Cc:** [Batsie, Daniel](#); [Farnham, Douglas](#); [Forand, Eric](#); [Morrison, Jennifer](#); [Clark, Sarah](#)  
**Subject:** AOA and DPS responses to Auditor's report  
**Date:** Thursday, August 29, 2024 9:22:27 AM

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Good Morning Andrew,

I hope you are enjoying the last few days of summer.  
Please find below the joint response from Interim Secretary Clark and myself.

Regarding the Recommendations for the Secretary of AOA found in Exhibit #5,  
please see the responses below:

1. The Secretary of Administration appreciates the Auditor's recommendation and will ensure that the Planning and Policy Committee follows the monitoring and evaluation process outlined in the State Hazard Mitigation Plan.
2. The Secretary of Administration appreciates the Auditor's recommendation and will place the recommendation on the agenda for the next meeting of the Planning and Policy Committee.

Regarding the Recommendations for the Commissioner of Public Safety found in Exhibit #6, please see the responses below:

1. Accept with no comment
2. Accept with no comment
3. Accept with comment:
  - o The Commissioner of Public Safety appreciates the Auditor's recommendation and it will be addressed by: In the 2024 annual review of the State Hazard Mitigation Plan, VT Emergency Management will incorporate by reference the VT Department of Health plan for infectious disease response to link it the State Hazard Mitigation Plan. The VDH plan will also be incorporated in the 2028 SHMP update.

Please let me know if there are any outstanding items from our team. Thank you for your partnership during this important process.

Best,  
Jen

**Jennifer L. Morrison**  
Commissioner  
VT Department of Public Safety  
45 State Drive  
Waterbury, VT 05671