**6: Mitigation Strategy**

The State of Vermont intends to create an efficient, effective, and consistent Hazard Mitigation Strategy that will focus efforts and priorities, enhance mitigation capabilities, and integrate State, regional, and local planning and risk assessment efforts in the short-term and long-term. The goals, objectives and actions stated herein are meant to serve as practical policy guidance for State of Vermont decision-makers in allocating resources for the Building Resilient Infrastructure and Communities (BRIC) program, Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA) program, and the Flood Resilient Communities Fund (FRCF), among many others.

Additionally, this action list is intended to be a resource to VEM and partner agencies, as they continue to collaborate with non-governmental stakeholders throughout Vermont during implementation. As the actions contained within this Plan reach significantly beyond what any one entity would be able to implement or fund, continued collaboration is considered necessary for more effectively leveraging resources, thereby improving likelihood of implementation.

The State mitigation strategy is also linked to local government mitigation strategies. As one product of mitigation actions implemented by State agencies, the State mitigation strategy aims to create the environment in which local governments can implement effective mitigation actions that meet the needs of local communities. Given the resources needed, many mitigation actions will need to be identified and implemented at the local level to meaningfully involve residents and stakeholders in aligning community resilience building with community vision and needs.

For an overview of the robust stakeholder engagement process undertaken to develop the vision, mission, goals, guiding principles, and actions that follow, see: Planning Process. To better understand how the actions relate to the identified hazards and the specific vulnerabilities created by those hazards, see: Hazard Assessment and Vulnerability Summary.

**VISION:** Vermont will be safe and resilient in the face of climate change and natural disasters.

**MISSION:** To protect life, property, natural resources, and quality of life in Vermont by reducing our vulnerability to climate change and natural disasters.

GOALS

* Protect, restore, and enhance Vermont’s natural resources to promote healthy, resilient ecosystems.
* Enhance the resilience of our built environment – our communities, infrastructure, buildings, and cultural assets.
* Develop and implement plans and policies that create resilient natural systems, built environments, and communities.
* Create a common understanding of – and coordinated approach to – mitigation planning and action.

Guiding Principles for Mitigation Planning and Action:

* We will ensure that hazard mitigation work strengthens and protects Vermont’s economy and affordability.
* We will reduce the risks and impact of hazards on frontline communities.
* We will ensure that hazard mitigation action accounts for – and helps us adapt to – climate change.
* We will work to build relationships and partnerships for action across sectors and disciplines.

**Action Development & Prioritization Process**

The 2023 SHMP continued to follow the Plan goals from the 2018 SHMP to help guide the mitigation strategy planning process. Actions identified by stakeholders through the mitigation action workshops were sorted by goal and then further sorted according to similar themes, called “strategies”.

The mitigation actions were ranked based on the below criteria (Table 42), developed by the Steering Committee. Using the High, Medium, and Low rankings for Positive Impact, Potential Negative Impact, and Feasibility within the action list, VEM began the process of defining priority actions under each goal, which were reviewed and modified by the Steering Committee. Overall Impact score was determined by weighing positive impacts against potential negative impacts.

It was important to the Steering Committee that both the positive and negative unintended consequences of an action were identified during the action development stage. Furthermore, potential negative impacts to *people* were the focus of the action impact analysis. Potential negative impacts move Vermont away from goals of greater equity, and increase environmental, social, and/or financial disparities between people and communities. For example, an action that is intended to protect one group of households from flooding cannot redirect the flood waters to another group of households that may have lower socio-economic standing due to current or historic disenfranchisement. The Steering Committee and other stakeholders recognize that unintended consequences of an action are not always immediately apparent, therefore all projects will have systems of monitoring and evaluation tied to them to identify negative impacts to environment, people, economy, or built environment. Actions with known negative impacts that cannot be feasibly reduced or minimized, are not included in the mitigation strategy.

Any action that received a High Positive Impact, Low Negative Impact, and High Feasibility score, were automatically considered to be a priority action. The Steering Committee decided to also consider inclusion of certain High Impact actions with lower Feasibility scores in the priority action list based on Feasibility being potentially flexible or subject to future change. Additional actions were added to the priority list based on the discretion of the Steering Committee.

For more information on the process for development of the 2023 SHMP actions, the criteria and action prioritization, see: Planning Process.

**NEW TABLE 42:**

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| **Positive Impacts** | |
| High | Tangible, and measurable outcomes that directly:   * Benefit the environment, OR * Benefit people/disproportionately impacted populations, OR * Reduce risk in our built environment, OR * Benefit the economy, OR * Create the opportunity to do one of the above (e.g. filling a data gap), AND * **Reduce vulnerability to a high priority hazard** (erosion, inundation, heat, wind) |
| Medium | Outcomes that may be more difficult to measure, that directly or indirectly:   * Benefit the environment, OR * Benefit people/disproportionately impacted populations, OR * Reduce risk in our built environment, OR * Benefit the economy, OR * Create the opportunity to do one of the above (e.g. filling a data gap), AND * **Reduce vulnerability to a profiled hazard** |
| Low | Outcomes that may be difficult to measure, but have the potential to directly or indirectly:   * Benefit the environment, OR * Benefit people/disproportionately impacted populations, OR * Reduce risk in our built environment, OR * Benefit the economy, OR * Create the opportunity to do one of the above (e.g. filling a data gap), AND * **Reduce vulnerability to a profiled hazard** |

|  |  |
| --- | --- |
| **Potential Negative Impacts/Consequences** | |
| High | Potential negative impacts were identified, **and/or** further study is needed to identify unintended consequences and methods to reduce the impacts.  Additional resources need to be secured and/or substantial effort and/or time is needed to monitor projects for unintended consequences and to reduce or eliminate negative consequences. |
| Medium | Potential negative impacts were identified, **and** further study is needed to identify unintended consequences and methods to reduce the impacts. Potential negative impacts include perceived impacts.  Additional resources and time that **are readily available** are necessary to monitor projects for unintended consequences and to reduce or eliminate negative consequences. |
| Low | No or minimal negative impacts identified. Minimal negative impacts are easily addressed or eliminated.  Resources for monitoring the project for unintended consequences are available. |

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| --- | --- |
| **Feasibility** | |
| High | Have political and community support, AND  Are consistent with current state laws/policies, AND  Have funding/ other required resources available or identified, AND  Are technically/ logistically feasible |
| Medium | Have political and community support, OR  Are consistent with current state laws/ policies, OR  Have funding/ other required resources available or identified, AND  Are technically/ logistically feasible |
| Low | Have political and community support, OR  Are consistent with current state laws/ policies, OR  Have funding/ other required resources available or identified, OR  Are technically/ logistically feasible |

In addition to the priorities that were High Positive Impact, Low Negative Impact, and High Feasibility, the Steering Committee also voted individually on their top three actions from the priority list, resulting in the following top priority actions:

* ***Natural Resources:*** 
  + Utilizing existing FEMA mapping updates and the Functioning Floodplain Initiative, develop an inventory of critical headwater and floodplain storage areas that would result in a measurable abatement of flooding. (DEC Rivers)
  + Develop a drought plan for Vermont to include analyzing water level/monitoring data to use as predictor of drought and rates of recovery. (UVM VSCO)
  + Develop a wildfire mitigation plan, to include research on the long-term future risk of wildfire due to climate change, determine existing infrastructure for wildfire suppression, and develop wildfire mitigation options. (FPR)
* ***Built Environment:*** 
  + Support municipalities in developing a prioritized list of transportation infrastructure improvements that increase resilience using PROTECT and/or other funding sources. (VTrans)
  + Increase Public Service Department capacity to maximize utilization of available federal dollars (including IIJA, IRA, ARPA, and EDA) towards utility resilience implementation work. (PSD)
* ***Plans & Policies:*** 
  + Assess all State/federal funding/technical assistance programs, as well as State permitting programs, to determine areas for better alignment around state hazard mitigation priorities.
  + Identify sustainable, long-term funding to support hazard mitigation and local match, to include: purchase of hazard-prone properties and easements to conserve river corridors, floodplains, and wetlands identified as key flood attenuation areas. (VEM)
  + Complete an assessment of heat risks in urban areas of Vermont and expected impacts on historically disadvantaged populations, identify strategies for mitigating impacts (e.g., urban forestry, green roofs, green infrastructure, and/or other vegetative strategies; increased use of highly reflective and/or high emittance materials for pavement, roofs, and building). (VDH)
* ***Education & Outreach:*** 
  + Develop a methodology and protocol for quantifying climate mitigation, resilience, and adaptation impacts (Climate Action Office measuring and assessing progress tool). (CAO)
  + Develop an analysis of existing Resilience Hub locations, including identification of new locations, and identification of key components that should be co-located within a Resilience Hub.

The complete mitigation action list includes all 112 actions, categorized by similar themes into 22 strategies that then fall under the appropriate overarching goal, of which there are four. The list also identifies the:

* source of the action,
* pertinent category (e.g., technical assistance, data gap),
* hazard(s) that the action addresses,
* entity(ies) responsible for implementing the action,
* potential resources to fund action implementation,
* timeline for completing the action, and
* the overall Impact and Feasibility ratings.

For those actions that use the term “hazard-prone areas”, the Steering Committee aimed to address all hazards to which that specific action may reduce vulnerability. To that end, “hazard-prone areas” can mean a FEMA-mapped Special Flood Hazard Area, an area identified as vulnerable to landslides, or those regions of the State that are more vulnerable to drought or extreme cold, for example.

Though the mitigation action list identifies the hazard(s) addressed, some hazard-specific actions and capabilities can also be found and further explained in the mitigation subsection within each of the hazard profiles (see: Hazard Assessment).

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| **Table 43: 2023 State Hazard Mitigation Plan Actions Acronym List:** | | | | |
| AAFM | Vermont Agency of Agriculture, Food & Markets |  | NRCD | Vermont Natural Resources Conservation Districts |
| ACCD | Vermont Agency of Commerce & Community Development |  | NRCS | USDA Natural Resources Conservation Service |
| ADS | Vermont Agency of Digital Services |  | PSD | Vermont Public Services Department |
| AHS | Vermont Agency of Human Services |  | RM | Readiness Matrix |
| ANR | Vermont Agency of Natural Resources |  | RPC | Regional Planning Commission |
| AOA | Vermont Agency of Administration |  | SHPO | Vermont State Historic Preservation Officer |
| ARC | Academic Resilience Collaborative |  | SC | Steering Committee |
| BGS | Vermont Buildings & General Services |  | TNC | The Nature Conservancy |
| CDBG | Community Development Block Grant |  | USDA | United States Department of Agriculture |
| CLF | Conservation Law Foundation |  | USDA-RD | USDA - Rural Development |
| COAD | Community Organizations Active in Disaster |  | USGS | United States Geological Survey |
| CRO | Community Resilience Organizations |  | UVM | University of Vermont |
| CVOEO | Champlain Valley Office of Economic Opportunity |  | VAAHM | Vermont Association of Hospitals and Health Systems |
| DPS | Vermont Department of Public Safety |  | VCGI | Vermont Center for Geographic Information |
| EMPG | Emergency Management Performance Grant |  | VEM | Vermont Emergency Management |
| EPC | Emergency Preparedness Conference |  | VHCB | Vermont Housing & Conservation Board |
| ERAF | Emergency Relief & Assistance Fund |  | VHS | Vermont Historical Society |
| EWP | Emergency Watershed Protection Program |  | VLCT | Vermont League of Cities & Towns |
| FEMA | Federal Emergency Management Agency |  | VLT | Vermont Land Trust |
| FHWA | Federal Highway Administration |  | VNRC | Vermont Natural Resources Council |
| FRCF | Flood Resilient Communities Fund |  | VOAD | Voluntary Organizations Active in Disaster |
| GMP | Green Mountain Power |  | VRC | Vermont River Conservancy |
| HWA | FEMA Hazard Mitigation Assistance |  | VTrans | Vermont Agency of Transportation |
| HMGP | FEMA Hazard Mitigation Grant Program |  | WG | Working Group |
| HMTAP | FEMA Hazard Mitigation Technical Assistance Programs |  | WUV | Watersheds United Vermont |
| NESEC | Northeast States Emergency Consortium |  |  |  |
| NFIP | FEMA National Flood Insurance Program |  |  |  |