

# VERMONT'S ROADMAP TO RESILIENCE

Preparing for Natural Disasters and the  
Effects of Climate Change in the Green Mountain State



## Know Our Risks

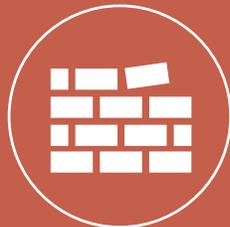
Vermont needs to not only conduct the research to be well informed about risks posed by a changing climate, but also fully utilize the data we already have by making information easily accessible, in formats and tools that are useful to communities and individuals as they plan for the future.



## Elevate & Integrate Emergency Management

The work to plan, prepare, respond to and recover from disasters is ongoing, it shouldn't receive attention only in the immediate aftermath of disaster and it shouldn't be isolated within one department, division or local organization.

Vermont needs to elevate emergency management as critically important at all times, and integrate it throughout local, regional and statewide work.



## Align Rules & Investments for Stronger Communities

We know that our state is vulnerable to climate change, and that our risks grow as the climate becomes more unstable. Yet, we also have inherited a system of incentives, rules, and frameworks for decision making that don't reflect this reality. We need to structure rules and direct our investments towards greater resilience and create disincentives for actions that increase vulnerability.



## Working Together & Learning Together

The challenges Vermont faces in establishing resilience are complex, they reach across sectors and across jurisdictions, and require collaboration and continuous learning. It is easy for communications and collaboration to break down, even in a small state like Vermont, and we need to remain proactive in continuing to work, and learn, together.



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# List of Recommendations



## Know Our Risks

1. Develop and disseminate best available climate and risk information in user-friendly formats that can be incorporated into local, regional, and statewide plans and used to inform priorities and investments.
2. Institute a sustained river corridor mapping program that provides information about flood and erosion risk to inform local, regional and state plans and the identification of hazard mitigation projects.
3. Conduct a statewide transportation vulnerability assessment that produces a statewide data set and map that shows areas of highest relative vulnerability and is used to guide prioritization of investment.
4. Incorporate vulnerable population data and analysis into municipal, regional, and state hazard mitigation plans with the help of social service providers so that the needs of Vermont's vulnerable populations are clearly identified and represented at all levels of hazard mitigation planning.
5. Take advantage of a strategic opportunity to forge a public-private partnership between IBM, electric utilities and the state to utilize a state-of-the art weather model, in combination with state data, to improve the accuracy of storm predictions, enable early warnings, and efficiently mobilize emergency equipment and personnel.



## Elevate & Integrate Emergency Management

6. The State of Vermont should become an innovator in instituting resilience in emergency management in ways that best serve the needs of Vermonters.
7. Within state government, assign a champion responsible for resilience and risk management who is authorized to coordinate the work across state agencies to achieve a consistent approach, identify and advance state priorities, and ensure accountability.
8. Elevate the position of the Division of Emergency Management and Homeland Security within state government to increase their authority and ability to effectively integrate preparedness and risk management into all state government functions.
9. Increase emergency management capacity at the local/municipal level to ensure that those who are responsible for emergency management functions before, during, and after disasters have the skills, training, and equipment they need.
10. Regionalize key emergency management functions to provide more efficient and effective support to communities, improve communications, and create strong regional coordination.



## Align Rules & Investments for Stronger Communities

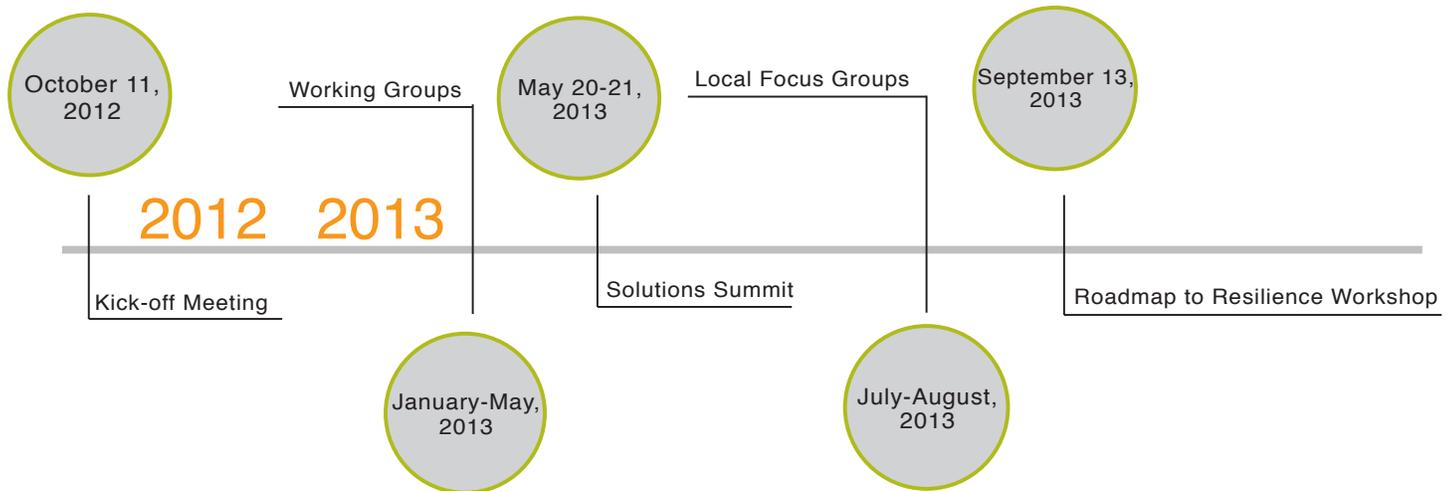
11. Provide guidance and incentives for proactive investment in transportation infrastructure.
12. Prioritize investment in resilient water and wastewater infrastructure.
13. Invest in training and technical assistance programs to promote cost-effective action and preparedness, and reduce future disruptions to state and municipal infrastructure systems.
14. Engage private landowners as key partners to implement land management practices that reduce hazards and support healthy ecosystems.
15. Leverage existing investment in conservation and stormwater management to maximize resilience benefits.
16. Create a regulatory framework/approach to land use that does not create any new or additional vulnerabilities along Vermont's waterways ("No Adverse Impact" approach).
17. Develop model flood resiliency bylaws for compact communities located in river corridors.
18. Establish a dedicated fund to support the purchase of hazard-prone properties that are at high risk but are not eligible for funding through FEMA or other programs.
19. Designate pilot adaptation areas and direct investments into those areas.



## Working Together & Learning Together

20. Create the Vermont Strong Network – a cross-sector collaboration that includes nonprofit, public and private organizations involved in resilience work to align efforts, share best practices, and leverage resources to advance resilience efforts statewide.
21. Use regional networks to support watershed-scale planning and enable municipalities to collaborate across jurisdictions to set priorities and make cost-effective investments that reduce hazards for downstream communities and development.
22. Support local resilience networks that bring together planning boards, conservation commissions, emergency managers, social service providers and other leaders to develop a shared vision for resilience within a community.
23. Invest in education and outreach to increase public literacy regarding river science and floodplain management practices.

# Creating the Roadmap



## Acknowledgements

Our work on this project has benefited from the help of numerous organizations and individuals who have shared generously of their time, their knowledge, and their perspectives.

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- We deeply appreciate the participation of many of Vermont's social service organizations, particularly those engaged in Irene recovery, that have provided a wealth of information and perspective about the challenges faced by our most vulnerable Vermonters and the strength of our community fabric.
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