

## Seismic Hazard Communication and Education for Vermont

Prepared by: Vermont Geological Survey, January 2021.

Vermont is among four New England states at risk of moderate seismic activity (USGS, 2018). As part of the State Hazard Mitigation Plan (SHMP) development process, Vermont Emergency Management asked the 11 Regional Planning Commissions (RPCs) to rank hazards based on perceived vulnerability. Earthquake hazard scored low and received the lowest average score (SHMP 2018, p 49). In addition, only 27/170 approved Local Hazard Mitigation Plans address earthquake hazard. Clearly, outreach to build awareness of these low frequency, high impact events and to communicate preparedness, mitigation and risk reduction options is warranted. This communication plan is designed to address the seismic hazard knowledge gap in Vermont, communicate risk and impacts for seismic events with the potential to cause damage, particularly in northwestern Vermont and to support the State Hazard Mitigation Plan.

### Goals:

- Broaden public understanding of earthquakes in Vermont.
- Provide latest news and updates about earthquakes and other physical hazards via the Vermont Geological Survey hazards webpage (<https://dec.vermont.gov/geological-survey/hazards>).
- Encourage hazard avoidance and preparedness through communication of risk.

*The target audience for this plan are the general public, educators, local and state government organizations, museums and members of the media.*

### Messages:

- Earthquake risk is highest in northwest Vermont and damage is projected to be mainly non-structural or due to the contents of buildings. Some regions, buildings and infrastructure are more vulnerable than others in this area based on technical information and reports from the past decade.
- Earthquakes happen without warning, so be prepared and know what to do. Everyone should practice “Drop, Cover and Hold On”. ShakeOut, an earthquake preparedness organization, provides a national opportunity for participation (<https://www.shakeout.org/northeast/>).
- The Vermont Geological Survey has information about earthquakes in our state, general science information and links to preparedness information.

### Regional Planning Commission Newsletter Messages:

- Vermont is considered by the United States Geological Survey to be of moderate risk for seismic hazards. Earthquake risk is highest in northwest Vermont, but since these events are not common in our state, we may not readily recognize an earthquake or know how to react.
- What should you do during and after an earthquake? The simple answer is “Drop, Cover and Hold On”, but the answer is different if you are in a car, in a wheelchair, in a high rise or in a store. The main danger is from broken glass, falling objects, or from tripping and falling due to the swaying ground or building.
- Ready for more information? Read more about earthquake hazards and how you can prepare at the Vermont Geological Survey’s webpage: <https://dec.vermont.gov/geological-survey/hazards/earthquakes>. Check out <https://www.ready.gov/earthquakes> and practice during the Great ShakeOut Earthquake Drill every year on the third Thursday of October.

### Multi-Hazard Analysis - Northeast States Emergency Consortium

The Northeast States Emergency Consortium prepared multi-hazard analyses reports for Washington and Chittenden Counties in 2018 and 2019, respectively. The report’s objective was to 1) compare and contrast earthquake hazards with flooding and landslide events, 2) identify estimated number and type of structures affected in each hazard scenario tested, and 3) generate maps and tables detailing the results.

The reports can be found here:

<https://dec.vermont.gov/sites/dec/files/geo/HazDocs/WashingtonCountyNESECRReport.pdf>

<https://dec.vermont.gov/sites/dec/files/geo/HazDocs/Chittenden%20County%20Report.pdf>

### Educational Material:

Seismic Hazard Presentation (Marjorie Gale, former State Geologist) –

<https://dec.vermont.gov/sites/dec/files/geo/HazDocs/Seismic%20PrepHazard2016.pdf>

### Coordinate with the Vermont Geological Survey:

The Vermont Geological Survey is available to answer questions and assist interested parties looking to educate the public about seismic hazards. Please visit the VGS contacts page (<https://dec.vermont.gov/geological-survey/contacts>) for current staff and contact information.

Vermont Geological Survey Web Resources:

General Information –

<https://dec.vermont.gov/geological-survey/hazards/earthquakes>

Earthquake Facts –

<https://dec.vermont.gov/dec.vermont.gov/geological-survey/hazards/earthquakes/eqfacts>

Earthquake Preparedness –

<https://dec.vermont.gov/geological-survey/hazards/earthquakes/eqprep>

Recent Earthquakes –

<https://dec.vermont.gov/geological-survey/hazards/earthquakes/recentquake>

Seismic Hazard Maps –

<https://dec.vermont.gov/geological-survey/hazards/earthquakes/EQhazmap>

Seismic Hazard Projects –

<https://dec.vermont.gov/geological-survey/hazards/earthquakes/seismicprojects>

Additional Web Resources:

Ready.gov –

<https://www.ready.gov/earthquakes>

How to Prepare for an Earthquake –

<https://www.ready.gov/sites/default/files/2020-03/how-to-prepare-for-an-earthquake.pdf>

Why Does the Earth Quake in New England? –

[http://aki.bc.edu/why\\_quakes.html](http://aki.bc.edu/why_quakes.html)