## TSUNAMI INTENSITY SCALE

### I. Not Felt

- II. Scarcely Felt
- III. Weak
- IV. Largely observed
- V. Strong (wave height 1 meter)
- VI. Slightly damaging. (2 meters)
- VII. Damaging (4 meters)
- VIII. Heavily damaging (4 meter)
- IX. Destructive. (8 meter)
- XI. Devastating (16 meter)
- XII. Completely devastating (32 meters)

#### How Tsunamis Work: Tsunamigenesis





UNITED STATES VIRGIN ISLANDS OFFICE OF THE LIEUTENANT GOVERNOR DIVISION OF BANKING, INSURANCE AND FINANCIAL REGULATION

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Preparation Through Education |s Less Costly Than Learning Through Tragedy -Max Mayfield, Director National Hurricane Center







# What is an Earthquake?

An earthquake is a tremor of the structure of the Earth, sometimes severe and devastating, which results from shock waves generated by the movement of rock masses deep within the Earth, particularly near boundaries of tectonic plates. They are usually followed by aftershocks.

An earthquake strikes suddenly, violently and without warning. Identifying potential hazards ahead of time and advance planning can reduce the dangers of serious injury or loss of life from an earthquake.

- Repairing deep plaster cracks in ceiling and foundations;
- Anchoring overhead lighting fixtures to the ceiling;
- Following local seismic building standards, will help reduce the impact of earthquakes.

### Activities that you can undertake now in preparing your home for any possible Earthquake:

Make your home safer to be in during earthquakes and more resistant to earthquake damage by assessing its structure and contents. Depending on when and how it was designed and built, the structure you live in may have weaknesses that make it more vulnerable to earthquakes. Common examples include structures not anchored to their foundations.

If you own your home, find and correct any such weaknesses, yourself or with professional help. If you are a renter, ask what has been done to strengthen the property against earthquakes, and consider this information in deciding where to rent. If you are building or buying a home, make sure that it complies with the seismic provisions of the Virgin Islands Building Code.

What is in your home can be as or more dangerous and damage-prone than the structure itself. Any unsecured objects that can move, break, or fall as an earthquake shakes your home are potential safety hazards and potential property losses. Walk through each room of your home and make note of these items, paying particular attention to tall, heavy, or expensive objects such as bookcases, home electronics, appliances (including water heaters), and items hanging from walls or ceilings. Secure these items with flexible fasteners, such as nylon straps, or with closed hooks, or by relocating them away from beds and seating, to lower shelves, or to cabinets with latched doors. Ensure that plumbers installed flexible connectors on all gas appliances.

## Earthquake Magnitude Scale

Magnitued Earthquake Effects Estimated Number Each Year

2.5 or less	Usually not felt, but can be recorded by seismograph	900,000
2.5 to 5.4	Often felt, but only cause minor damage	30,000
5.5 to 6.0	Slight damage to building and other structures	500
6.1 to 6.9	May cause a lot of damage in very populated areas	100
7.0 to 7.9	Major earthquake. Serious damage	20
8.0 or greater	Great earthquake. Can totally destroy communities near the epi-enter	One every 5 to 10 years

### Earthquake Magnitude Classes

Class	Magnitude
Great	8 or more
Major	7 – 7.9
Strong	6 – 6.9
Moderate	5 - 5.9
Light	4 — 4.9
Minor	3 - 3.9

### What is a Tsunami?

A Tsunami is formed by a displacement of water. This can come from the slippage of the boundaries between two tectonic plates, volcanic eruption, under-water earthquake, or even landslides.

Out in the open ocean, a Tsunami might only be 1 meter in height, but as it reaches the shore in shallow water, it can rise to heights of 15-30 meters or more. Think about how normal waves comes into a shore: the water moves away from the shore and then comes crashing back. This movement "heightens" the destruction power of a Tsunami.

A Tsunami may occur as a result of an Earthquake or shift in the ocean floors tectonic plates.

If a Tsunami is likely to strike your area after an earthquake or volcanic eruption move inland to higher ground and stay away from the beach.