

# Alert Level Table for Onshore Volcanoes in the Eastern Caribbean

ALERT LEVEL	SYMPTOMS	ACTION BY SCIENTISTS	RECOMMENDED ACTION: CIVIL AUTHORITIES
	Volcano is quiet; earthquakes and fumarolic (steam) activity are at or below the historical level at this volcano. No other unusual activity has been observed.	Normal Monitoring	Undertake on-going public awareness campaigns and work on volcanic emergency plans.
	Volcano is restless; earthquakes and/or fumarolic (steam) activity are above the historical level at this volcano or other unusual activity has been observed (this activity will be specified at the time that the recommendation for raising the alert level is made).	Monitoring system will be brought up to full capability. Civil authorities alerted. Communications system tested.	Undertake on-going public awareness campaigns and work on volcanic emergency plans. Advise vulnerable communities of evacuation procedures in the event of an emergency.
	Highly elevated level of earthquakes and/or fumarolic activity, or other highly unusual symptoms. Eruption may occur with less than twenty-four hours' notice.	Monitoring system continuously manned. Regular visual inspection of potential vent areas. Continuous ground deformation and hydrothermal monitoring. Daily assessment reports to civil authorities.	Coordinate evacuation (if necessary) based on hazard zones. Entry to the restricted-access zone by scientists will be permitted after evaluation on a case by case basis. Organize regular radio and television announcements.
	Eruption is in progress or may occur without further warning.	Measurements as permitted by safety conditions. Civil authorities advised continuously.	Coordinate continued evacuation as necessary. Organise regular radio and television announcements.

## MT. ST. CATHERINE VOLCANO IS AT ALERT LEVEL GREEN

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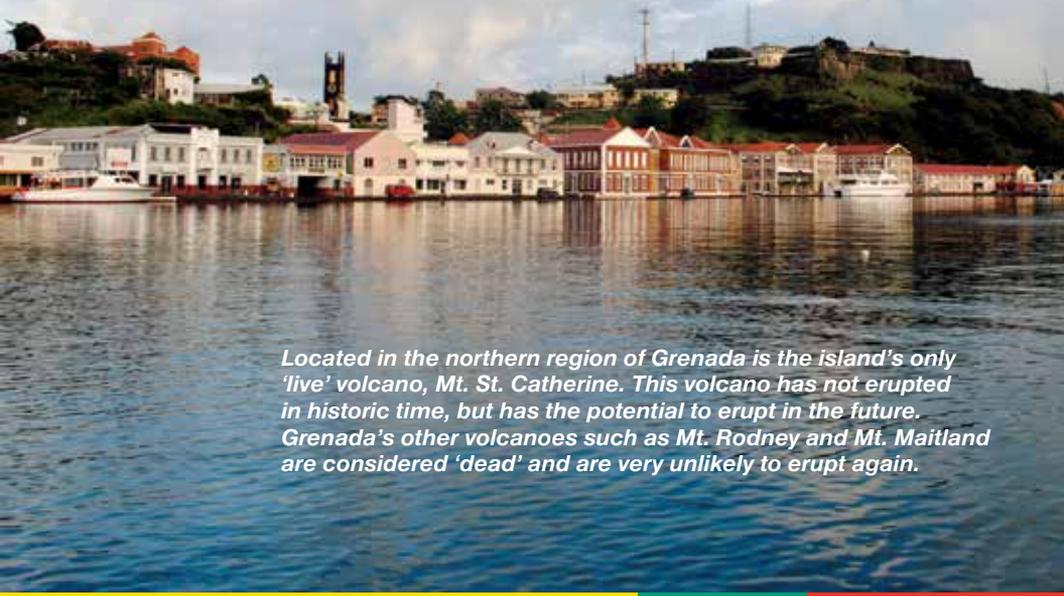
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# Volcanoes of Grenada



*Located in the northern region of Grenada is the island's only 'live' volcano, Mt. St. Catherine. This volcano has not erupted in historic time, but has the potential to erupt in the future. Grenada's other volcanoes such as Mt. Rodney and Mt. Maitland are considered 'dead' and are very unlikely to erupt again.*



Caribbean Volcanoes

## EXPLOSION CRATERS

Numerous explosion craters such as Lake Antoine and Grand Etang, represent the most recent volcanic activity on Grenada. These are volcanic craters formed by explosion when rising magma reacts with groundwater or lake water. Most of them are filled with water forming lakes but others such as St. George's and Queens Park craters are dry and populated. They are often referred to as monogenetic volcanoes since they were formed in a single episode of volcanic activity and these are not expected to erupt again, however, new craters can be formed in the future. It is not possible to say exactly where these new explosion craters will form.

## KICK 'EM JENNY

Kick 'em Jenny is an underwater volcano about 8 km north of Grenada. It is the only known 'live' underwater volcano in the Eastern Caribbean. It has erupted 12 times since 1939 with the most recent eruption occurring in December, 2001. Currently, Kick 'em Jenny is most dangerous for ships and boats since the gases released by the volcano can lower the density of the water in its vicinity causing them to sink even if it is not erupting.

## VOLCANIC HAZARDS

### Pyroclastic Flows & Surges

Very hot, fast-moving mixtures or avalanches of rock fragments, ash and gas. These deadly phenomena travel down valleys and cause total devastation of the area over which they flow. Pyroclastic surges are lethal hurricane-like, hot ash clouds that can travel uphill and over ridges at high speed.

### Volcanic Ash & Bombs

Ash falls can blanket the entire island, affect neighbouring islands and may be thick enough to collapse roofs of buildings and destroy vegetation. Volcanic ash is very corrosive to machinery including boats and planes and may also affect human health if inhaled. Large rocks called bombs may also be hurled from the volcano.

### Volcanic Gases

Dangerous gases such as carbon dioxide and sulphur dioxide are present in toxic amounts close to the vent of an erupting volcano and may be present close to hot springs around any 'live' volcanoes. Carbon dioxide is invisible and has no taste or smell, so people and animals are unable to notice it and may suffocate if exposed to high concentrations for prolonged periods.

### Lahars (mudflows)

Dense mixtures of volcanic mud and rock fragments which rush turbulently down the slopes of a volcano, filling surrounding valleys. Lahars resemble wet concrete and they can move and contain large boulders, trees and may even bury entire towns.

