



# Montserrat Volcano Observatory

20 December 2024  
9:00 am

## MVO Weekly Report for the Period 13 to 20 December 2024

Activity at the Soufrière Hills Volcano remains low.

The seismic network recorded 98 volcano tectonic (VT) earthquakes this week. 93 of these events occurred during a brief but intense swarm which started around 10:20 a.m. on 19 December which lasted approximately 90 minutes. The two largest events had magnitudes of 3.3. The VTs were located at depths of 2-3 kilometres beneath the dome, similar to almost all VT events during the current pause.

This swarm was probably the most intense seen since the current pause began on 11 February 2010. It is comparable to a VT swarm on 23 March 2012, which lasted almost three hours and was accompanied by ash venting. That swarm contained fewer VTs (54) than the one on 19 December but its largest VT had a magnitude of 3.6.

There was no observed surface activity associated with the VT swarm and no changes in fumarole or rockfall activity were observed.

The observed activity prompted a recommendation from the MVO to the authorities to temporarily suspend activities in Zone V. The activity was confirmed to have returned to background levels by about 12:40. This was communicated to the authorities who subsequently restored access to Zone V.

Measurements of the SO<sub>2</sub> flux were taken by helicopter on 18 December. There were ten traverses with an average flux of 187 tonnes per day.

Due to the large size of the lava dome, pyroclastic flows can occur at any time without warning on any side of the volcano, including Gages from where they can travel rapidly into Plymouth. Tracks across the Belham Valley can be destroyed or heavily modified by flash flooding or lahars, and caution should be exercised crossing the valley during and after rainfall.

The Hazard Level is 1. There is no public access to Zone V, including Plymouth. Maritime Zones E and W are daytime transit only between sunrise and sunset (boats may sail through the zone but must not stop). Anyone who ignores these restrictions is liable to be prosecuted.

This report along with additional information on the Soufrière Hills Volcano and the Hazard Level System can be found at the MVO website: [www.mvo.ms](http://www.mvo.ms). Old weekly reports can be downloaded from [http://www.mvo.ms/pub/Activity\\_Reports/](http://www.mvo.ms/pub/Activity_Reports/). You can also follow @mvoms on both Facebook, Instagram, and Twitter.



**Graham A. Ryan**  
**Director**

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### Monitoring Data Summary

#### Seismic Activity (number of events)

	This week	Last week	Last 4 weeks (weekly average)
Rockfalls	0	0	0
VT earthquakes	98	3	7
Hybrid earthquakes	0	1	1
LP earthquakes	0	0	0

#### Sulphur Dioxide Flux (tonnes per day)

	This week	Last week	Last 4 weeks
Average	187	274	265
Maximum	247	354	355
Minimum	160	191	210

*Note: The numbers provided in the tables above are provisional and may be subject to change after further analysis of the data.*