

Wellington Volcanic Ash Advisory Centre (VAAC)

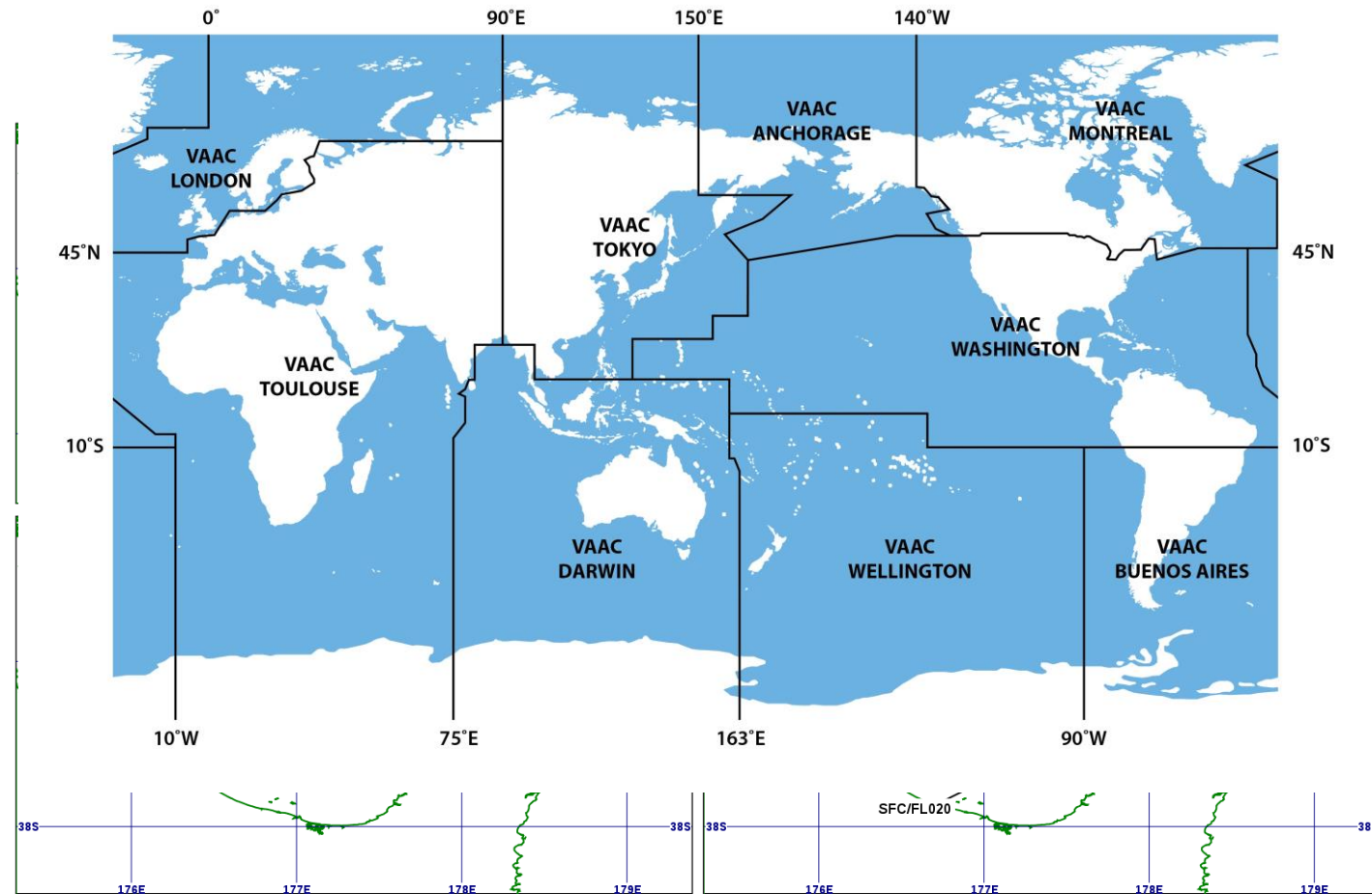
Chelsea Glue

Meteorologist – Aviation Weather Services



What is the VAAC?

- 9 VAACs across the world
- Monitor volcanic ash hazards for aviation
- Model ash trajectories
- Issue Volcanic Ash Advisories/Graphics (VAA/VAG)
- Issue SIGMETs
- FIRs include Nadi, Nauru, Honiara, Tahiti, Isla De Pascua



VOLCANIC ASH ADVISORY

DTG: 20221007/0635Z
VAAC: WELLINGTON
VOLCANO: WHAKAARI/WHITE ISLAND 241040
PSN: S3731 E17711
AREA: NEW ZEALAND

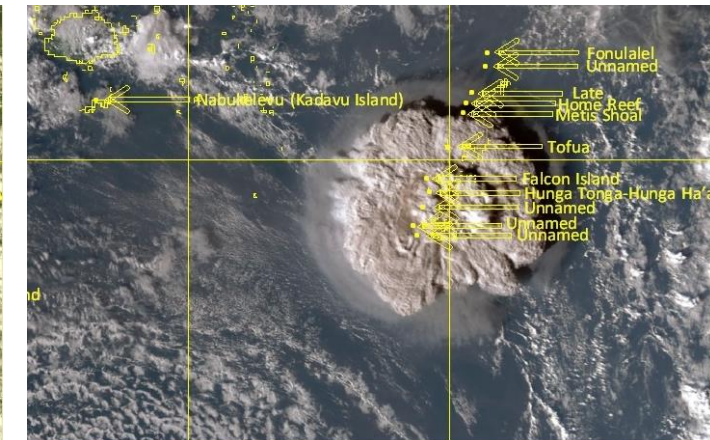
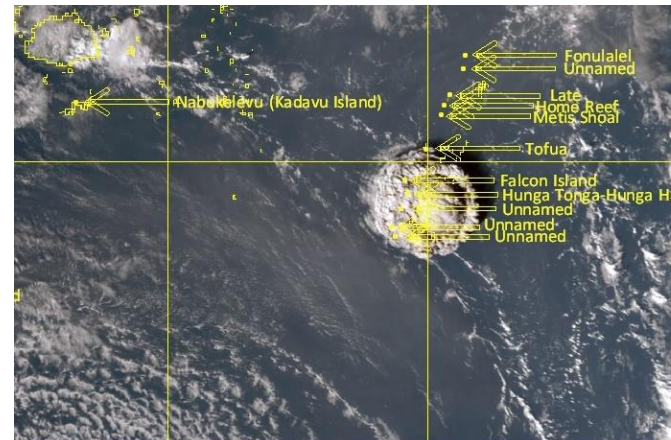
SUMMIT ELEV: 294M
ADVISORY NR: 2022/2
INFO SOURCE: WEBCAM, SATELLITE IMAGERY, GNS
AVIATION COLOUR CODE: YELLOW
ERUPTION DETAILS: LOW LEVEL DIFFUSE VOLCANIC ASH COMING FROM VOLCANO VENT
RMK: LOW LEVEL DIFFUSE VOLCANIC ASH REMAINS VISIBLE ON WEBCAM AND SATELLITE IMAGERY. ONLY IN DAYLIGHT IMAGERY. POLYGONS ESTIMATED FROM CHANGES IN LOW LEVEL WINDS
NXT ADVISORY: NO LATER THAN 20221007/1235Z=



2022 VAAActivity

- 141 VAA/VAGs issued
- 96% related to eruptions/VA events
- Remainder for test/exercise/backup
- HTHH notable event this year
- Monitoring Metis Shoal, Tofua, Tinakula, American Samoa, Erebus, Ruapehu

Volcano	Date	VAAs/VAGs issued
White Island	7-Oct	5
Hunga Tonga - Hunga Ha'apai	<i>period 20 Dec 2021 - 3 Jan 2022</i> 14 Jan-18 Jan 2022	53 26 (inc rebroadcast)
Yasur	15, 17 and 18 Jan 2022	7
	12, 17 and 19 Feb 2022	16
	9 and 11 Apr 2022	9
Ambrym	25 Jan 2022	2
Ambae	12 and 17 Feb 2022	10
Gaua	3 May 2022	2
Home Reef	20 Sept 2022	3
	21 Sept 2022	2
VAAC backup notices	10-Mar-22	1 Following handover to/from VAAC DARWIN
Annual VAAC DARWIN backup test		16-Jun-22 1
Exercise notices	20 Apr 2022 (SIMBO & TINAKULA)	4
ICAO APAC VAA test	<i>sch 16 Nov 2022</i>	



Collaboration

- GNS + NEMA (*Teams*)
- Tonga Met (*Teams*)
- American Samoa - USGS
- Vanuatu Geohazards
- Australian Bureau of Meteorology – VAAC Darwin (*Teams*)



USGS HAWAIIAN VOLCANO OBSERVATORY

TA'Ū ISLAND INFORMATION STATEMENT REGARDING FELT EARTHQUAKES IN AMERICAN SAMOA: August 15, 2022

Summary:

No significant changes over the past 24 hours. The earthquake swarm in the Manu'a islands of American Samoa continues, with a source closer to Ta'ū island than Vailulu'u seamount. A microseismometer (earthquake-detecting device) installed in Fiti'uta village on Ta'ū island on August 13 is recording approximately 30-60 earthquakes per hour; most events are too small to be felt. Estimated magnitudes of the largest earthquakes, including the felt events, are between magnitude 2 and 3.



Monitoring

- Collaboration partners – VONA and Teams chat (GNS, Vanuatu, Tonga, USGS, Darwin VAAC)
- Webcams
- Satellite imagery (VOLCAT/CIMMS)
- Lightning alerts
- PIREPs

The screenshot displays a volcanic monitoring interface. At the top, there are two satellite images of the Pacific region, one in false color and one in a different spectral band, both showing a plume from Ambrym. A red warning popup is centered on the screen, reading: "POSSIBLE VOLCANO ERUPTION", "Possible eruptions: Ambrym, Vanuatu-SW Pacific (-16.250, 168.120)", and "Please check latest satellite imagery." Below the popup, the interface shows a "Volcan" header, navigation tabs, and a data table for the eruption event. The table includes details such as Country/Countries (Vanuatu), Volcanic Subregion(s) (Vanuatu), VAAC Region(s) of Nearby Volcanoes (Wellington), Identification Method (Plume/Puff Extraction (SECO+)), Mean Object Date/Time (2022-11-08 19:26:41UTC), Radiative Center (Lat, Lon) (-16.250°, 168.120°), and Maximum Height [AMSL] (8.80 km ; 28871 ft). There are also two zoomed-in satellite images at the bottom left and a "Show More" button at the bottom right.

Country/Countries	Vanuatu
Volcanic Subregion(s)	Vanuatu
VAAC Region(s) of Nearby Volcanoes	Wellington
Identification Method	Plume/Puff Extraction (SECO+)
Mean Object Date/Time	2022-11-08 19:26:41UTC
Radiative Center (Lat, Lon):	-16.250°, 168.120°
	Ambrym (0.00 km) [Thermal Anomaly Present]
Nearby Volcanoes (meeting alert criteria):	Lopevi (37.40 km) Epi (54.80 km) Kuwae (78.30 km) Unnamed (96.70 km)
Maximum Height [AMSL]	8.80 km ; 28871 ft
Maximum Height (opaque assumption) [AMSL]	10.00 km ; 32808 ft
Minimum IR Window BT	239.90 K

Thank you! ☀️