

Makushin Volcano

Recent Eruptive History and Ash Hazards



USGS Geologist Jim Vallance describes ash and tephra deposits that outcrop along the runway in Dutch Harbor.

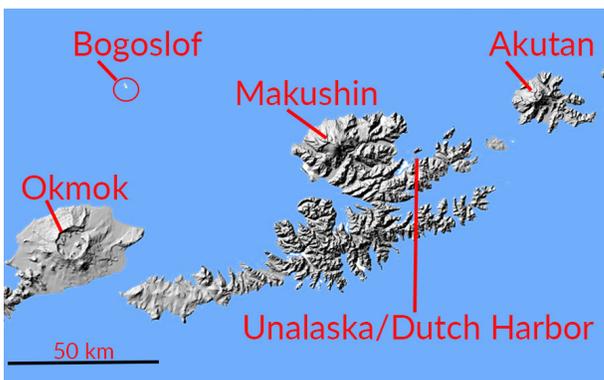
Makushin's Eruptive History



Three large explosive eruptions occurred at Makushin between 6,000–9,000 years ago, depositing volcanic material many meters thick near the volcano, and several centimeters deep in Dutch Harbor/Unalaska.

In historical times, Makushin eruptions have been primarily small explosive events; at least 10 since 1769, most recently in 1995. Today, steam and sulfur gases vent from fumaroles near the summit.

Makushin is ranked as a “Very High” threat volcano, with ash as the greatest hazard to aviation and nearby communities. AVO monitors Makushin with seismic stations, satellite data, infrasound, GPS, a webcam, and eyewitness reports from pilots and residents.



▲ A large explosive eruption about 9,000 years ago produced this pyroclastic flow deposit in Makushin Valley.

◀ Location of volcanoes in the Unalaska/Dutch Harbor region.

Other Volcanoes Near Unalaska Island

Bogoslof Island – (60 mi. W)

Stratovolcano, last eruption in 2016–17, volcanic ash plume up to 40,000' and over Unalaska Island.

Okmok – (70 mi. SW)

Large caldera on Umnak Island. Last eruption in 2008; plumes to 50,000' and trace ash deposits in Dutch Harbor and Unalaska.

Akutan – (28 mi. NE)

Stratovolcano with active cinder cone inside an older caldera. Last eruption was a low-level explosive ash event in 1992.

Ash Hazards

Transportation

Ash is easily remobilized, abrasive, and corrosive, damaging vehicle and airplane engines and windshields. Airports could be shut down.

Health

Breathing ash can harm airways. Wear masks, avoid using contact lenses, and stay inside during ashfall events.

Electrical Utilities

May interrupt generators and distribution. Plan for outages.

Heating/Ventilation

Air filters and intake systems may become clogged. Have extra air filters on hand for homes, cars, and boats.

Ash Removal

Wash ash from windshields with water. Ash is abrasive if dry brushed. Mix ash with snow or water during removal to prevent remobilization.

Volcanic Eruption Reporting

What can you do to help?



Ash Collection and Reporting

The **Alaska Volcano Observatory (AVO)** collects volcanic ashfall to record and research eruptive activity. Changes in the chemical composition of ash can explain behavior changes at the volcano and its magma supply, and can inform our response to and forecasting of volcanic events.

Recording ashfall from eruptions also provides an important record of volcanic activity.



Trace ashfall on a vehicle in Unalaska, January 31, 2017. Photo: Andy Dietrick

If you see it, report it! You can report any volcanic activity that you see.

To report anomalous volcanic activity, such as unusually strong sulfur smells or changes in fumarolic activity, call or email AVO at **907-786-7497** or avo.alaska.edu/contact.php

To report ashfall, visit: avo.alaska.edu/ashfall/ashreport.php

Instructions for collecting ash for scientific research at: avo.alaska.edu/ashfall.php

Volcano Monitoring & Eruption Response

The **Alaska Volcano Observatory** is a joint program of the **U.S. Geological Survey**, the **Geophysical Institute at UAF**, and the **Alaska Division of Geological and Geophysical Surveys**. Staff participate in around-the-clock volcano monitoring using satellite and seismic data to assess activity levels at volcanoes. Detailed records of eruption timelines, pilot reports, and monitoring data **help make informed decisions before, during, and after a volcanic event.**

Follow Ashfall Alerts and Hazards

Email/Text alert subscription: volcanoes.usgs.gov/vns2/

For Ashfall forecasts: weather.gov/afc

More information on Alaska volcano hazards from AVO: avo.alaska.edu/volcanoes/hazards.php

**Your reports help
AVO track and respond to
volcanic events.
Thank you!**

Makushin summit lake and fumarole field, August 19, 2019. Photo: Christopher Kern (USGS).

Contact AVO:
avo.alaska.edu | 907-786-7497
avo.alaska.edu/contact.php

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