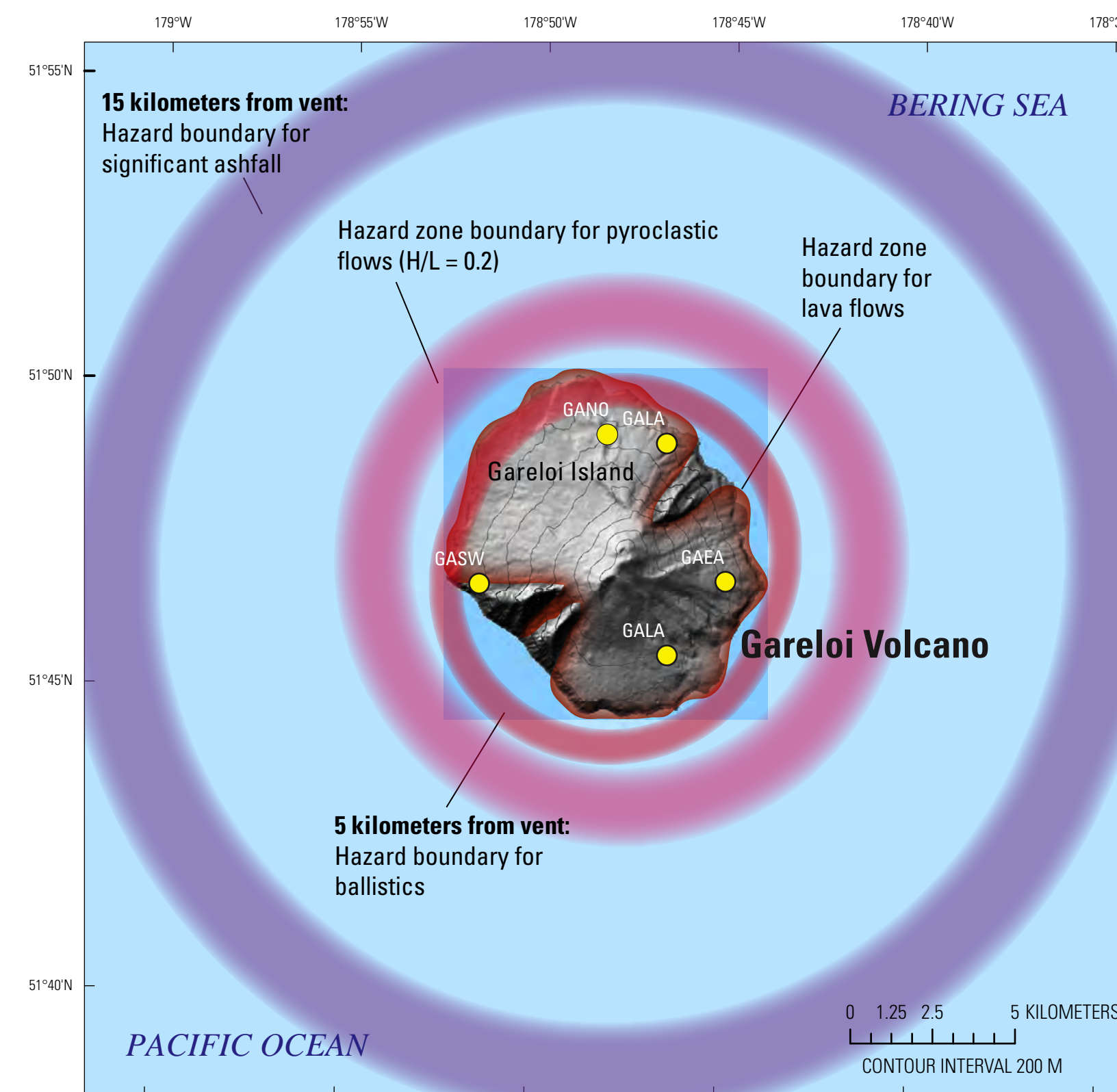
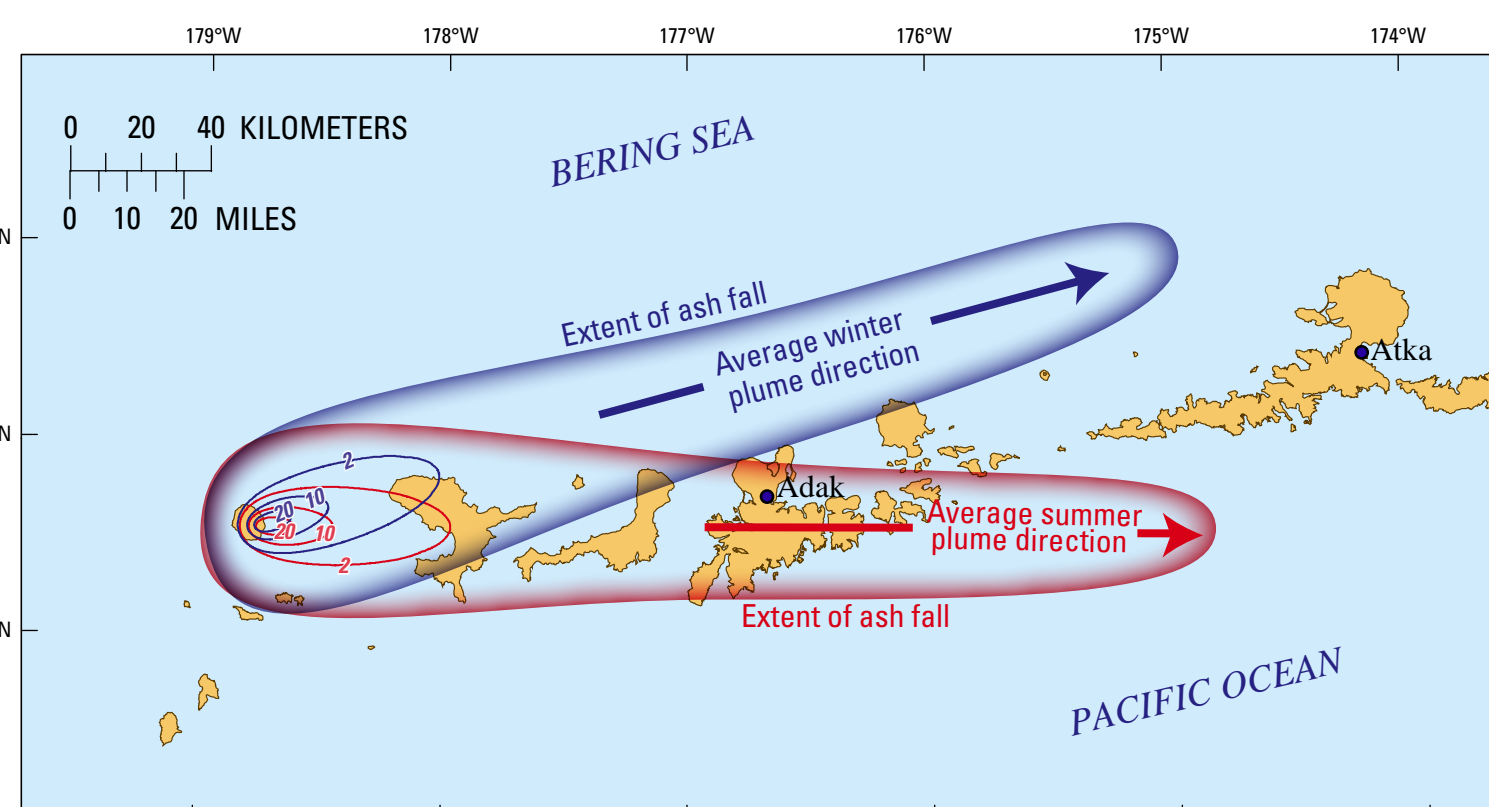
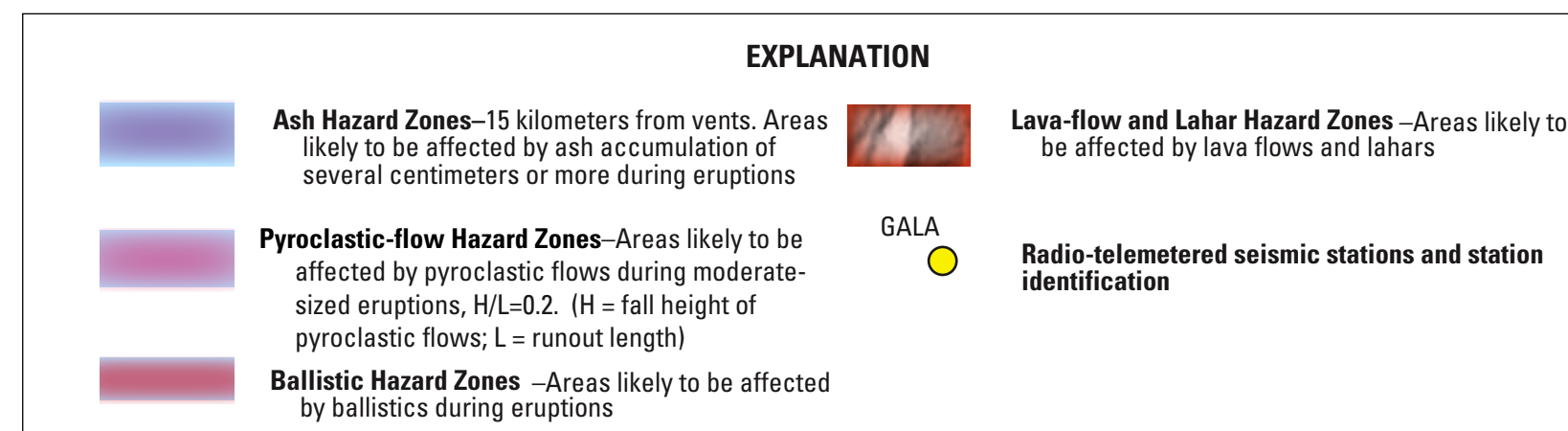


Map showing location of Gareloi Volcano in the Aleutian volcanic arc, Alaska.



Map projection: UTM Zone 1 North, WGS84 Datum



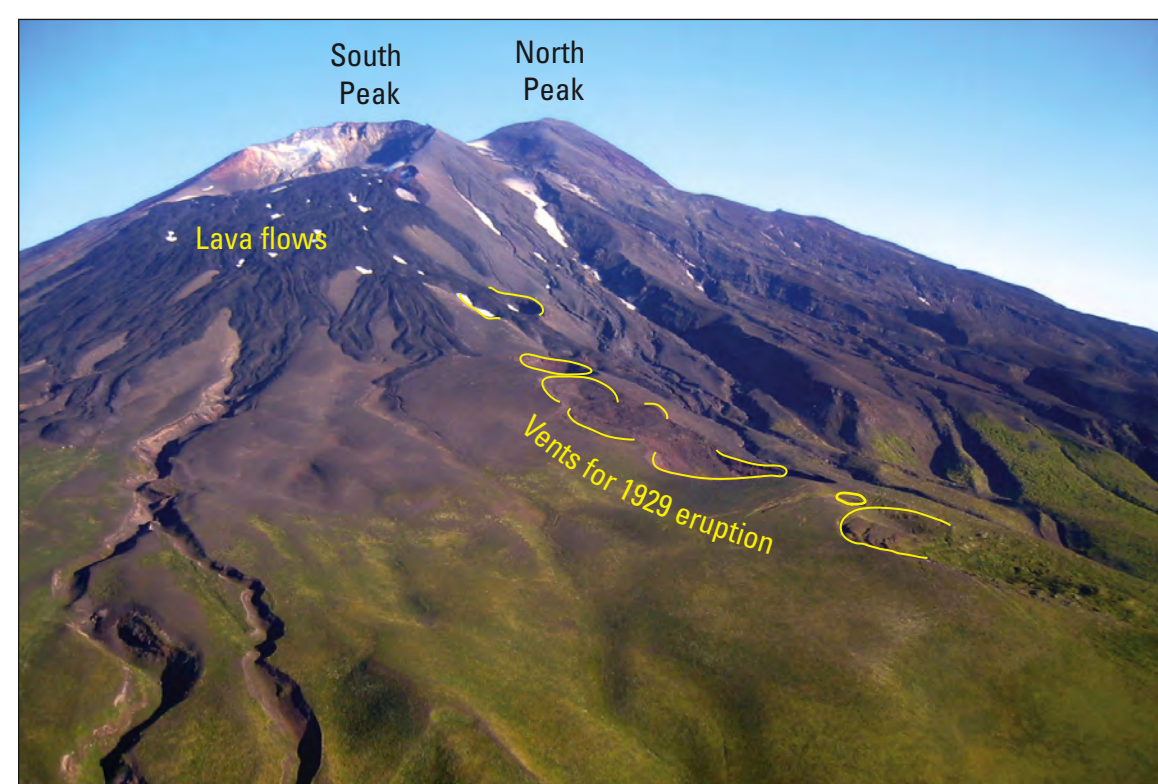
Projection: WGS84 UTM Zone 1N, Datum WGS84.

Map showing areas of potential ash fall during a moderate eruption of Gareloi Volcano. Hypothetical ash fall contours, in millimeters, are generated for average summer (red) and winter (blue) winds. Ash fall during an actual eruption will depend on the wind velocity at that time, and may deviate from these examples. See text for further explanation.

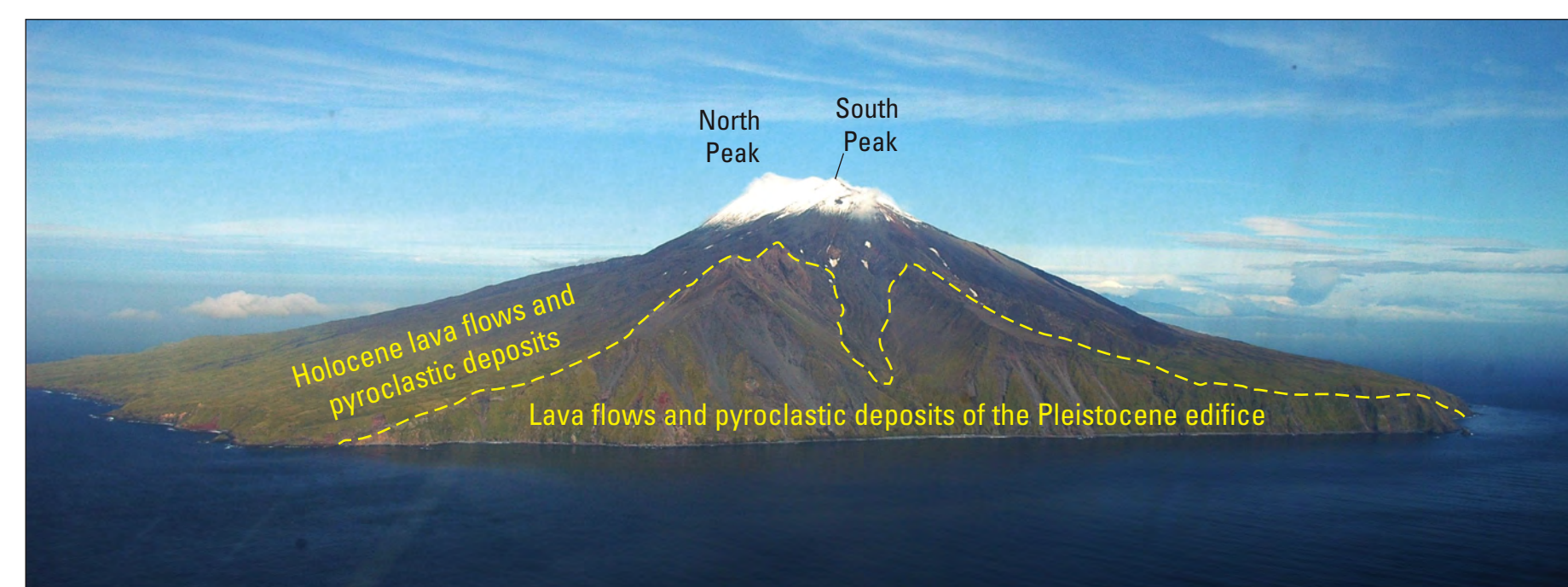
SUMMARY OF VOLCANIC HAZARDS AT GARELOI VOLCANO

[See figure 12 and text for schematic representation and description of these processes]

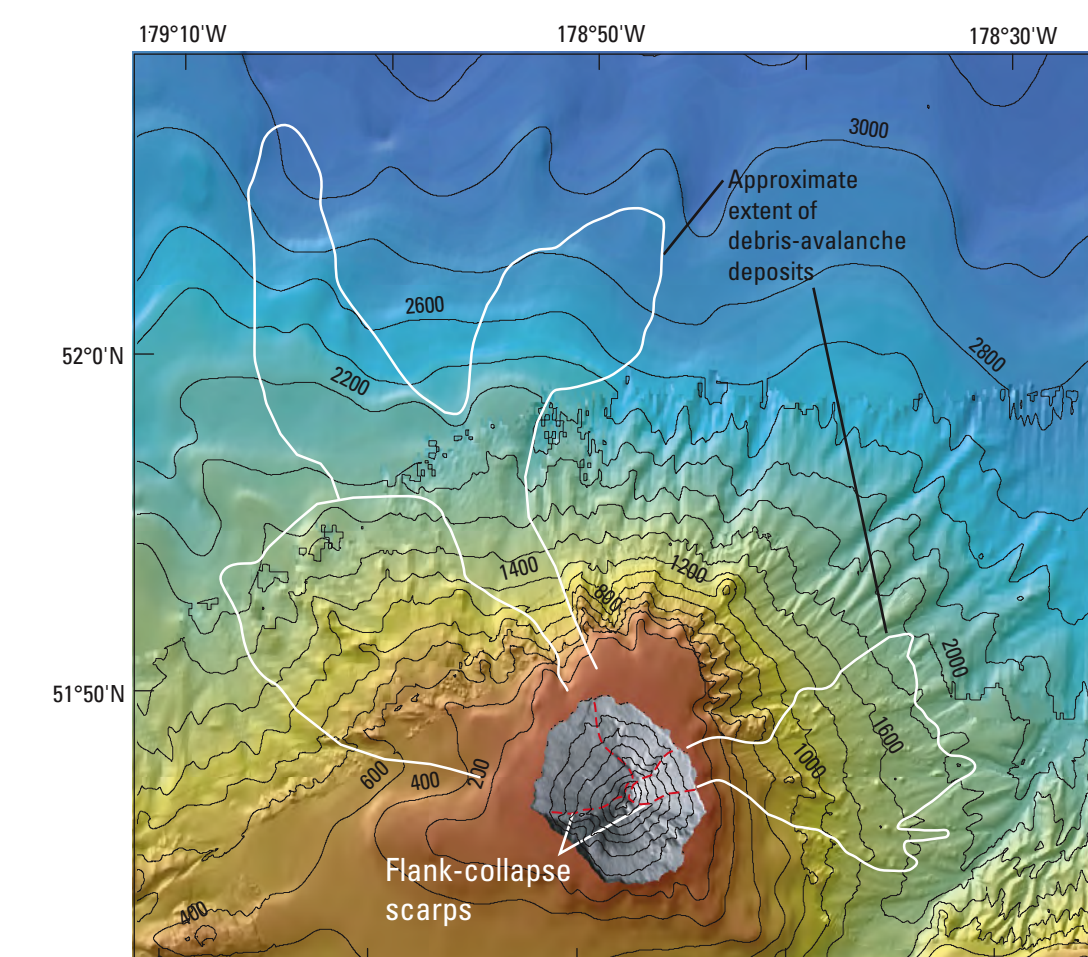
Type of hazard	Degree of Impact			Comments
	Proximal (Gareloi Island and immediately offshore)	Distal (>10 km from Gareloi Island)	Airborne	
Ash clouds	Substantial	Substantial to slight	Substantial	Severe hazard to aircraft even hundreds or thousands of kilometers downwind.
Ash fall	Substantial	Substantial to none	Substantial	Significant hazard to anyone around volcano and to nearby communities. Minor hazard or nuisance in distant communities.
Ballistics	Substantial	None	None	Significant hazard to anyone on or around volcano during explosive eruptions.
Pyroclastic flows and surges	Substantial	None	Slight	Significant hazard to anyone on or near the volcano during explosive eruptions. Possible hazard to overlying aircraft during large eruptions.
Lava flows	Substantial	None	None	Significant hazard to anyone near flows; attendant pyroclastic flows, ash fall, or ballistics increase the area potentially affected.
Lahars	Substantial	None	None	Significant hazard limited to drainages downstream from erupting vent.
Rockfalls and landslides	Substantial	None	None	Persistent hazard to anyone near steep slopes especially those that are hydrothermally altered.
Volcanic gases	Moderate	None	Slight	Significant hazard during periods of strong degassing from fumaroles or vents.
Debris avalanches	Substantial	Moderate	Slight	Significant hazard to anyone around volcano during event, especially in low-lying areas. Larger debris avalanches could extend offshore.
Volcanic tsunamis	Substantial	Substantial	None	Very low probability, but significant hazard during large debris avalanche or eruption that produces large pyroclastic flows that enter the sea; could occur off the north or west shore of the island, affecting areas on nearby islands, shipping routes, and the Bering Sea.



Looking north, a series of lava flows, erupted sometime between 1946 and 1980, emanates from Gareloi Volcano's South Peak crater. A chain of flank vents, formed during the 1929 eruption, reach from the South Peak's summit to the southeast coastline. Gullies cut into pyroclastic deposits from the 1929 eruption. Photograph by R.G. McGimsey, USGS, August 2003.



Gareloi Volcano, looking east. The steep cliffs of Gareloi Island's west coast are composed of stacks of Pleistocene lava flows and pyroclastic deposits. Holocene lava flows from the two active summit craters drape the older rocks. Photograph by M.L. Coombs, USGS, October 2005.



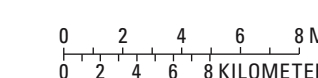
EXPLANATION

Bathymetry, in meters below sea level. Contour interval 200 meters.

Location of cross section in figure 10

Map showing topography of Gareloi Island and bathymetry of the surrounding seafloor. At least three debris-avalanche deposits have been identified on the seafloor around Gareloi Volcano.

Modified from Coombs and others (2007).



Preliminary Volcano-Hazard Assessment for Gareloi Volcano, Gareloi Island, Alaska

By
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2008