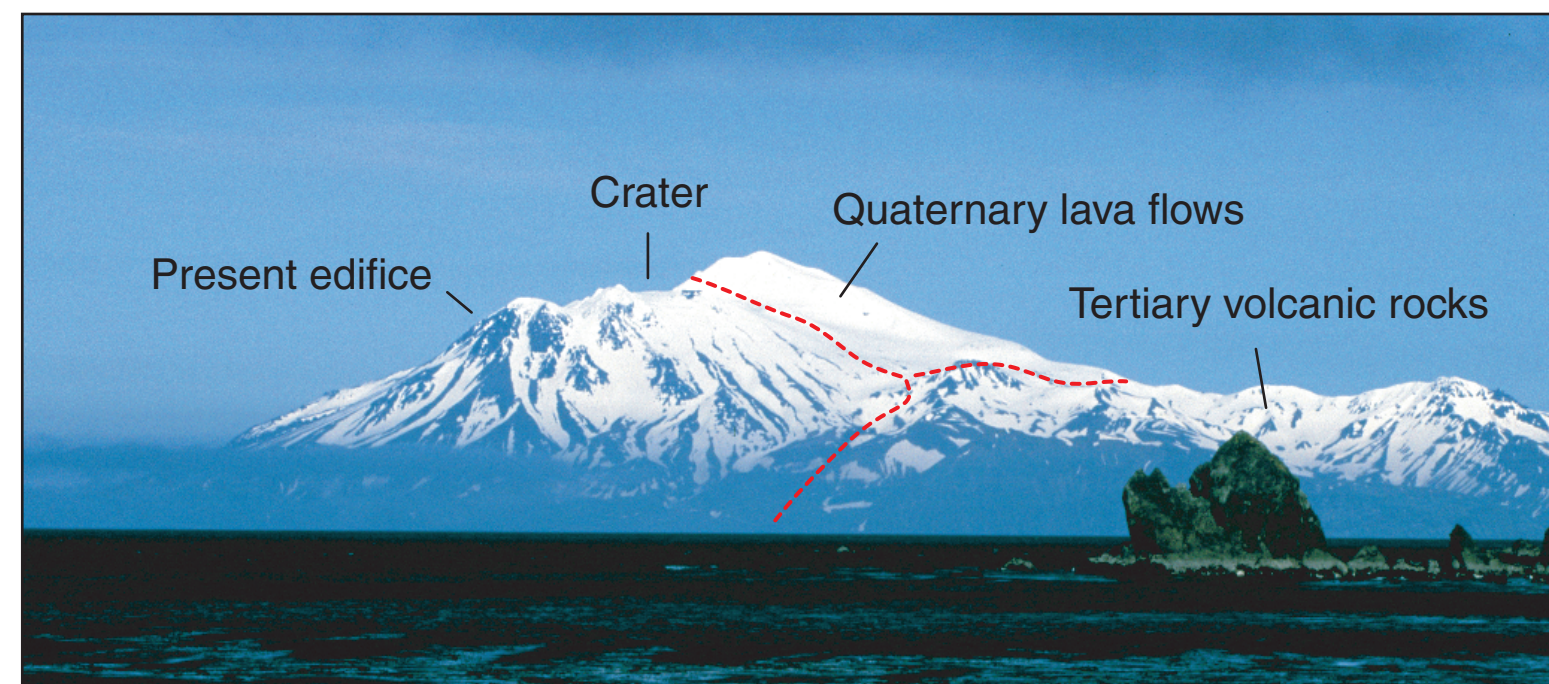


### EXPLANATION

- LAHAR HAZARDS**  
 Areas likely to be inundated by lahars, lahar-runout flows, and floods during eruptions of all sizes, but especially during pyroclastic eruptions. Extent of inundation depends on the volume of the snow-pack and the duration of the eruption.
- PYROCLASTIC-FLOW HAZARDS**  
 Areas that could be swept by pyroclastic flows to small to moderate eruptions from the present crater. Hazard boundaries correspond to  $H/L = 0.3$  (inner zone) and  $H/L = 0.2$  (outer zone).  
 Known pyroclastic-flow deposits.  
 Likely flow paths for pyroclastic flows.  
 Lava domes and possible vent areas that could be a source of pyroclastic flows.
- DEBRIS-AVALANCHE HAZARDS**  
 Areas likely to be traversed by debris avalanches. Most likely are small-scale collapses of lava-flow fronts and spatter piles.
- VOLCANIC GAS HAZARDS**  
 Areas where volcanic gas may be emitted.
- VOLCANIC ASH HAZARDS**  
 Thickness of <300-year-old pumice fall deposit, in centimeters.  
 Crater rim
- Note: All areas of Great Sitkin Island are susceptible to ash fall.

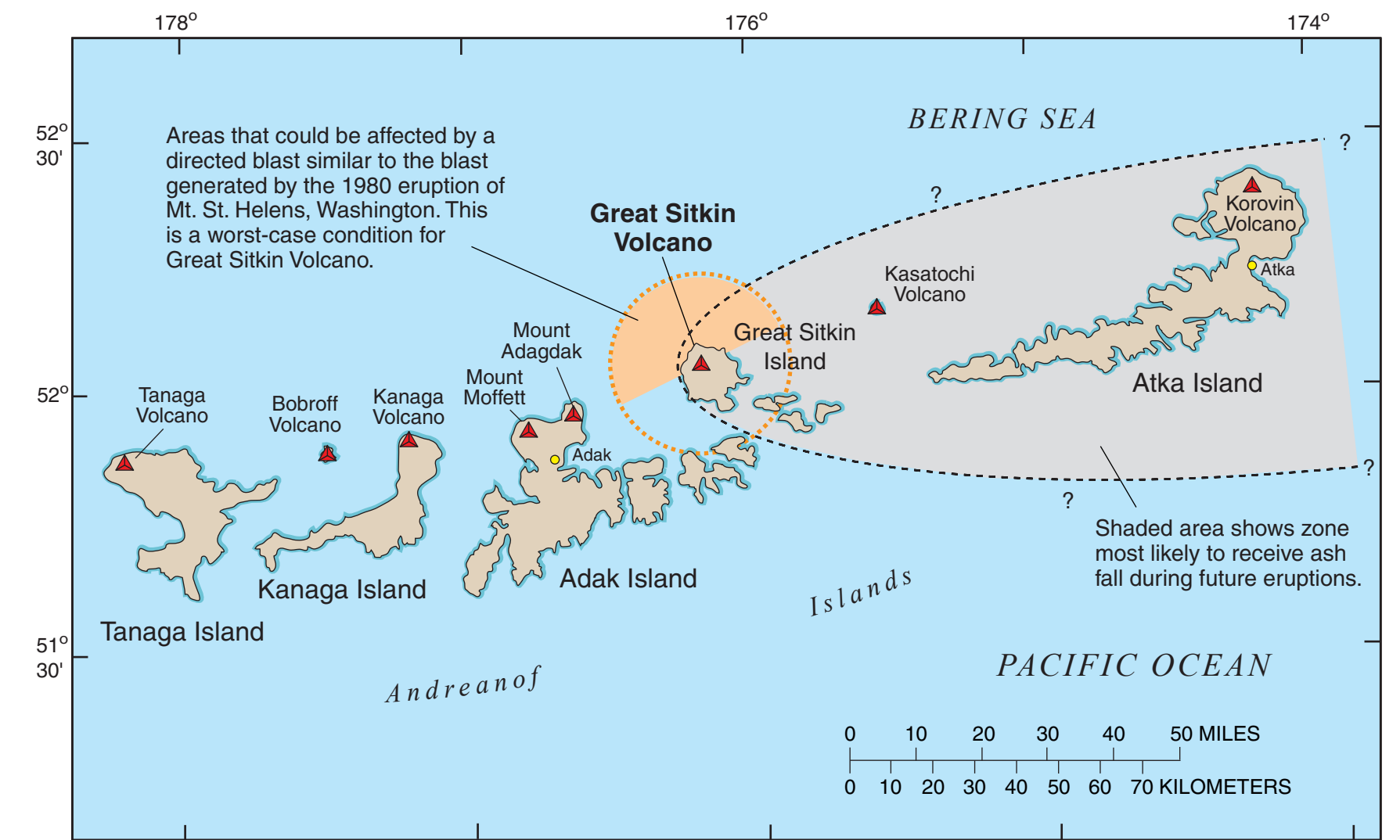
### HOLOCENE ERUPTIONS

TIMING OF VOLCANIC ACTIVITY	EVIDENCE
<280 yr B.P.	<ul style="list-style-type: none"> <li>Lahar deposits in Sitkin and Akuyan Creek valleys</li> <li>Pyroclastic-flow deposits in Glacier Creek valley</li> <li>Pumice lapilli tephra deposits</li> </ul>
550-700 yr B.P.	<ul style="list-style-type: none"> <li>Lahar deposits in Sitkin Creek valley</li> <li>Pumice lapilli tephra deposits</li> </ul>
1150-1300 yr B.P.	<ul style="list-style-type: none"> <li>Lahar deposits in Sitkin Creek valley</li> <li>Pumice lapilli tephra deposits</li> </ul>
34-3700 yr B.P.	<ul style="list-style-type: none"> <li>Pumice lapilli tephra deposit (Sandwich ash?)</li> </ul>
3600-4000 yr B.P.	<ul style="list-style-type: none"> <li>Pumice lapilli tephra deposit</li> </ul>
5900-6600 yr B.P.	<ul style="list-style-type: none"> <li>Pumice lapilli tephra deposit</li> </ul>
7300-7600 yr B.P.	<ul style="list-style-type: none"> <li>Pumice and lithic lapilli tephra deposit (Main ash?)</li> </ul>
8400-8900 yr B.P.	<ul style="list-style-type: none"> <li>Lahar deposits in Sitkin Creek valley</li> <li>Pumice lapilli tephra deposits</li> <li>Pumiceous pyroclastic-flow deposits north of Sitkin Creek valley</li> </ul>
>9500 yr B.P.	<ul style="list-style-type: none"> <li>Lahar deposits in Sitkin Creek valley</li> </ul>

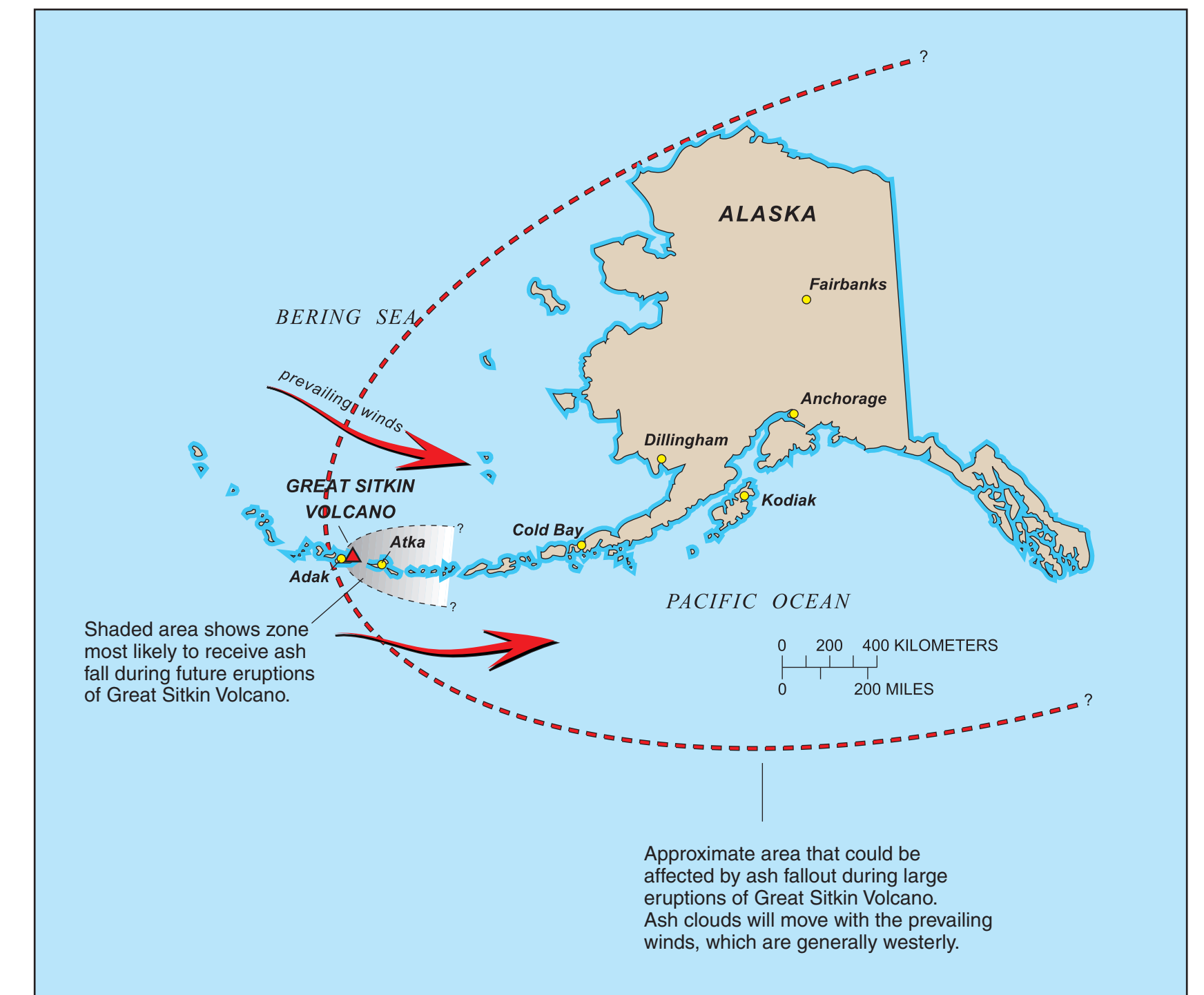


View of Great Sitkin Volcano from the north shore of Adak Island.

### VOLCANIC ASH FALLOUT AND DIRECTED BLAST



### REGIONAL VOLCANIC ASH FALLOUT



## PRELIMINARY VOLCANO-HAZARD ASSESSMENT FOR GREAT SITKIN VOLCANO, ALASKA

by  
Christopher F. Waythomas, Thomas P. Miller, and Christopher J. Nye  
2003

