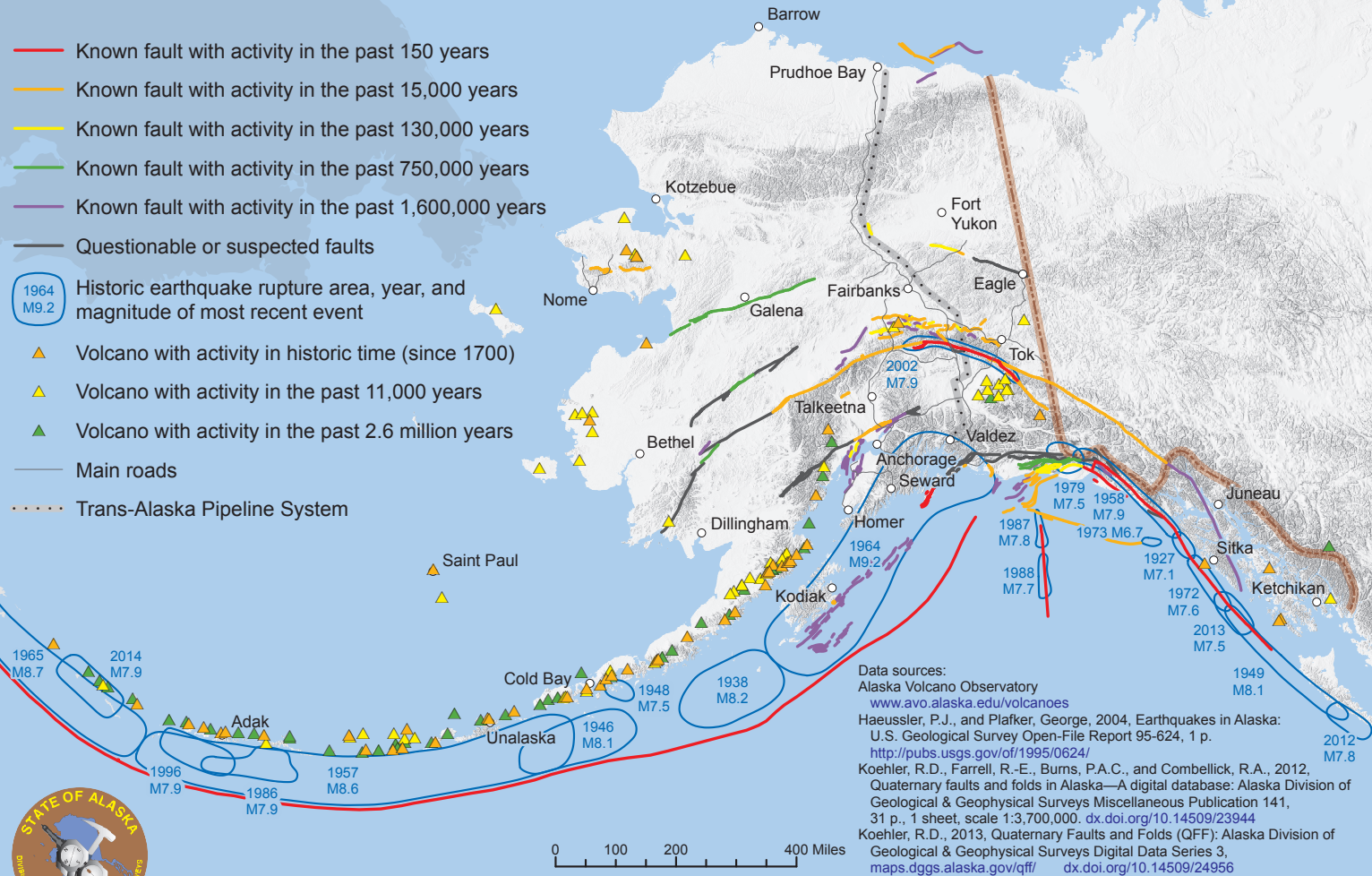


ACTIVE FAULTS AND VOLCANOES OF ALASKA



Division of Geological & Geophysical Surveys

ACTIVE FAULTS AND VOLCANOES OF ALASKA

Alaska is the most seismically active state in the United States and accounts for 11 percent of the world's recorded earthquakes. Nine of the ten largest earthquakes in the United States and two of the ten largest in the world have occurred in Alaska. About 2,000 earthquakes are recorded in Alaska every month. Since 1900, Alaska has had an average of:

- ▶ A 'great' earthquake (magnitude 8 or larger) every 13 to 15 years
- ▶ A magnitude 7 to 8 earthquake every 1 to 2 years
- ▶ About 6 magnitude 6 to 7 earthquakes per year
- ▶ About 50 magnitude 5 to 6 earthquakes per year
- ▶ About 340 magnitude 4 to 5 earthquakes per year

This map shows faults that have demonstrated geologic evidence of activity during the past 1.6 million years (Quaternary age; purple line), <750,000 years (mid-Quaternary; green), <130,000 years (latest Quaternary; yellow), <15,000 years (latest Pleistocene–Holocene; orange), and <150 years (Historic; red). Rupture area boundaries delineate the approximate extent of the initial epicenter and aftershocks of large earthquakes recorded since 1900. Based on distributed seismicity throughout the state and numerous mapped bedrock faults, additional Quaternary faults likely exist yet remain undiscovered or unstudied.

Alaska has more than 50 volcanoes that have been active during historic time (since about 1700). These volcanoes in Alaska make up well over three-quarters of U.S. volcanoes that have erupted in the past 200 years. An additional ~90 volcanoes in Alaska show evidence of activity during the Holocene or Pleistocene epochs.

DGGS- and University of Alaska-affiliated websites about earthquake and volcano hazards in Alaska:

ALASKA VOLCANO OBSERVATORY – www.avo.alaska.edu

ALASKA QUATERNARY FAULT AND FOLD DATABASE – www.maps.dggs.alaska.gov/qff

ALASKA EARTHQUAKE CENTER – www.aec.alaska.edu

ALASKA SEISMIC HAZARDS SAFETY COMMISSION – www.seismic.alaska.gov

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Cartography by P.E. Gallagher. Updated December 2014.

