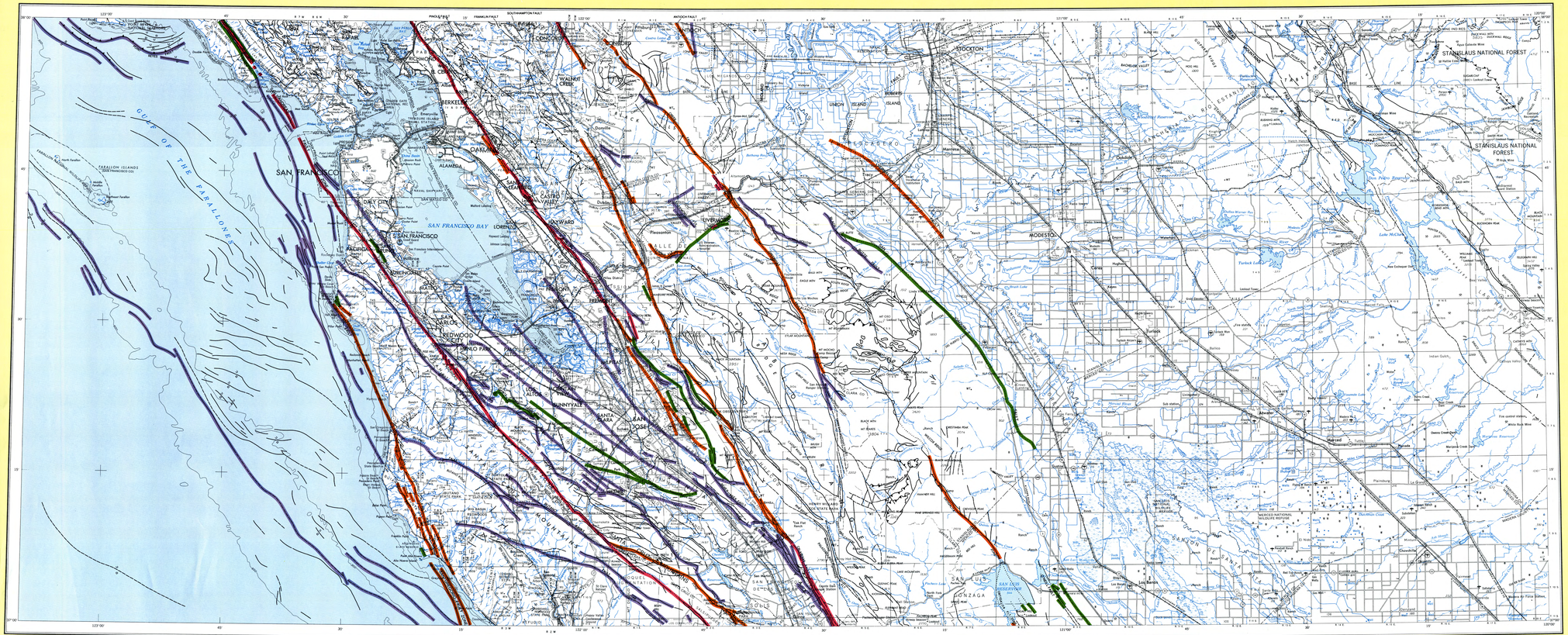


BASE MAP

Base map is a composite of part of the San Francisco 1:250,000 scale map (reference code 37122-A1-TP-250-00, 1980) and the San Jose 1:250,000 scale map (reference code 37120-A1-TP-250-00, 1969). For cartographic details, refer to these maps. Bathymetric information is not intended for navigational purposes.

Transverse Mercator Projection. 10,000-meter Universal Transverse Mercator grid, zone 10.

Minor corrections and additions to culture by California Division of Mines and Geology 1987.

Scale 1:250,000

CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS

MAGNETIC DECLINATION FOR 1980 IS 15½° (1790 MILS) EASTERLY FOR THE ENTIRE AREA

INDEX TO ADJOINING SHEETS

Graphics by C. A. Allen

Geologic Time Scale			Years Before Present Approx.	Fault Symbol	Recency of Movement on Land Offshore[1]	DESCRIPTION
Quaternary	Holocene (Recent)	Late Quaternary	200			Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault steep.
			10,000			Displacement during Holocene time[2]
	Pleistocene	Early Quaternary	700,000			Faults showing evidence of displacement during late Quaternary time[2,3]
						Quaternary (undifferentiated) faults — most faults in this category show evidence of displacement during the last 2,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.
Pre-Quaternary	Pliocene		2,000,000			
	Miocene		5,000,000			Fault showing evidence of no displacement during Quaternary time or faults without recognized Quaternary displacement.

FOOTNOTES

[1] Offshore faults classified according to McCulloch and Greene (1989).

[2] Geomorphic evidence for Holocene faulting includes: sag ponds, or the following features in Holocene deposits: offset stream courses, linear scarps, shutterridges, and triangular faceted spurs.

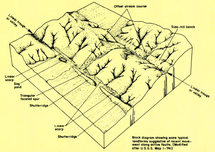
[3] Geomorphic evidence for late Quaternary faulting includes such features as offset stream courses, linear scarps, shutterridges, and triangular faceted spurs.

[4] Faulting may be younger but lack of younger overlying deposits precludes more accurate age classification.

RECENCY OF FAULTING

This map depicts recency of activity along faults on the San Francisco-San Jose Quadrangle. Data for this map were compiled from a large body of literature, published and unpublished, regarding faulting in the central part of the Coast Ranges, San Joaquin-Sacramento Valley, and the Sierra Nevada. Faults shown are identical to those shown on the Geologic Map of the San Francisco-San Jose Quadrangle. The purpose of this compilation is to depict what is currently known about the recency of displacement along these faults. Future studies in this region may discover additional faults, require relocation of faults as they are presently mapped, or change the age designations as shown here.

Age designations are assigned by examining geologic evidence along faults to determine the youngest faulted unit, the oldest unfaulted unit, and the relative age of geomorphic features that were produced from faulting. Faults with evidence for displacement of Holocene within the past 200 years), Holocene (rupture within the last 200-11,000 years), Late Quaternary (rupture within the last 700,000 years), Quaternary (undifferentiated) (displacement within the last 1,900,000 years or faults that displace rocks of undivided Plio-Pleistocene age). Faults with evidence for no displacement in Quaternary time are classified as pre-Quaternary. Faults with insufficient evidence for classification and faults which may not have been fully evaluated for recency of displacement, are grouped with the pre-Quaternary faults.



Block diagram showing some typical geomorphic features produced by fault movement along strike-slip faults. (Modified after U.S.G.S. Misc. Inv. Map I-1182)

The reliability of the fault age designations on this map are dependent upon several factors. First, data used to classify faults particularly those faults classified as pre-Quaternary, are derived from studies directed toward deciphering the recency of fault displacement. East of the Calaveras fault zone, most of the data used to classify faults were based on studies not directed toward determining the recency of movement along faults. Second, important evidence for recency of faulting may be obscured by cultural, natural or human activities. Third, geologists may differ in their interpretations of the geologic evidence for recency of faulting. Fourth, the ages of rock and alluvial units used to classify the faults may not be accurately known, and fifth, varying climatic conditions may affect the preservation of fault-related geomorphic features.

This is a small scale (1:250,000) regional map, and should be used only as a first approximation of potential seismic hazards in an area. A detailed geologic investigation should be the core of any site-specific study for planning or development purposes.

FAULT MAP SYMBOLS

Faults On Land

Solid where well located; dashed where approximately located or inferred; dotted where concealed by younger rocks, lakes, or bays; queried where evidence is conflicting or doubtful. Bar and ball on reverse thrust fault (barbs on upper plate). Arrows indicate relative or apparent direction of movement. U, upthrown side and D, downthrown side (relative or apparent).

Faults Offshore

Solid where well-defined, dashed where approximately located or inferred. Thrust barbs shown on upper plate. U, upthrown and D, downthrow side (relative or apparent).

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MAP SHOWING RECENCY OF FAULTING, SAN FRANCISCO-SAN JOSE QUADRANGLE, CALIFORNIA, 1:250,000

Compilation by
E. J. Bortugno, R. D. McJunkin and D. L. Wagner

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