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Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the interactive fault map.

Oak Ridge fault (offshore) (Class A) No. 136

Last Review Date: 2006-07-15

citation for this record: **Fisher, M.A., compiler, 2006, Fault number 136, Oak Ridge fault (offshore), in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 12/14/2020 02:05 PM.**

Synopsis	The Oak Ridge Fault offshore is a steeply south-dipping reverse fault and is the w continuation of the fault that forms the south boundary of the Ventura Basin.
Name comments	**Fault ID:** This number refers to fault 335 of Jennings (1994).
County(s) and State(s)	VENTURA COUNTY, CALIFORNIA
Physiographic province(s)	PACIFIC BORDER
Reliability of location	Poor Compiled at 1: scale. *Comments:* Location of fault from Qt_flt_ver_3-0_Final_WGS84_polyline.shp (I written communication to K.Haller, August 15, 2017) based on geometric represe ramp from Community Fault Model (Plesch and others 2007).

Geologic setting	The Oak Ridge Fault is important to an assessment of earthquake hazards becaus the westward extension of the fault system along which the Northridge earthquak and Huftile, 1995). Onshore the Oak Ridge Fault forms the south boundary of the (Yeats, 1983, 1988; Yeats and others, 1988). This fault extends offshore, west of t to underlie the low-relief shelf beneath the eastern Santa Barbara Channel (Fisher 2005). The fault has been interpreted, using balanced structural sections, to exten horizontal or gently south-dipping decollement at about 8 km depth (Huftile and and Namson, 2006). The Oak Ridge Fault formed initially during the Pliocene, as Basin was strongly compressed in a north-south direction. An alternative opinion about the structure of the Oak Ridge Fault concerns the pa lies north of Santa Cruz Island. There the fault may not really be a fault at all but active kink band above a ramp associated with a north-dipping thrust fault that is (Shaw and Suppe, 1994 but see also discussion in Stone, 1996 and Shaw and othe
Length (km)	km.
Average strike	
Sense of movement	Thrust
Dip	32–60° S. *Comments:* Huftile and Yeats (1995) and Fisher and others (2005) depict a steepl reverse fault in the near surface. Huftile and Yeats (1995) extend the fault to a de where it flattens to a sub-horizontal detachment and then extends along a 32°sout about 15 km.
Paleoseismology studies	
Geomorphic expression	Onshore the Oak Ridge Fault [94] has clear geomorphic expression in the South anticline. West of the town of Saticoy, however, the fault underlies the low-relief the shallow featureless marine shelf to the west. During the Quaternary, this plain repeatedly exposed and eroded by the Santa Clara River, which apparently erased for faulting. The only likely geomorphic expression of the fault west of Saticoy is Mounds (Hall, 1998), a series of pressure ridges that overlie the fault and may be Holocene left-lateral strike-slip motion along the fault.
Age of faulted surficial deposits	Several ages have been proposed for the most recent movement along the Oak Ri Huftile and Yeats (1995) propose that onshore the fault has not moved since 200– fault may offset Holocene deposits (Redin and others, 2005). (3) It appears to hav during the late Quaternary (Sorlien and others, 2000). (4) The main strand of the offshore is beveled by an unconformity believed to be at the base of late Pleistoce

	(~11 ka) sediment, but another strand of this fault, showing left-lateral slip, may b (Greene and others, 1978; Dahlen and others, 1990; Fisher and others, 2005). (5) Namson and Davis (2006), the fault is blind, but sediment as young as Quaternary the fault's tip.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:*
Recurrence interval	
Slip-rate category	Greater than 5.0 mm/yr *Comments:* 8.5 mm/yr, left lateral and 8.0 mm/yr contraction (Meade and Hager,
Date and Compiler(s)	2006 Michael A. Fisher, U.S. Geological Survey
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