

## **GLIMPSES INTO HISTORY**

Predicting the exact timing of an earthquake is tricky and, on the San Andreas Fault it is also challenging. Scientists use historical data, geological studies, and seismic monitoring to estimate probabilities.

### **Current Insights:**

#### **1. Historical Context:**

- The San Andreas Fault has a history of significant earthquakes, with major events occurring roughly every 150 years on certain segments.

#### **2. Monitoring:**

- Ongoing seismic monitoring and research help refine these estimates. The U.S. Geological Survey (USGS) regularly updates probabilities based on new data.

#### **3. Preparedness:**

- Regardless of the odds, experts emphasize the importance of preparedness due to the potential impact of such an event.

In summary, while the exact timing of an earthquake on the San Andreas Fault cannot be predicted, there is a measurable probability of significant seismic activity in the coming decades. Staying informed and prepared is essential for residents in the area.

## **Historical Quakes in California**

Here is a list of significant historical earthquakes in California, focusing on those with a magnitude of 6.0 or greater:

### **19th Century**

#### **1. Fort Tejon Earthquake**

- **Date:** January 9, 1857
- **Magnitude:** ~7.9
- **Location:** San Andreas Fault near Fort Tejon

## 20th Century

### 2. San Francisco Earthquake

- **Date:** April 18, 1906
- **Magnitude:** ~7.9
- **Location:** San Francisco

### 3. Long Beach Earthquake

- **Date:** March 10, 1933
- **Magnitude:** 6.4
- **Location:** Long Beach

### 4. San Fernando Earthquake (Sylmar)

- **Date:** February 9, 1971
- **Magnitude:** 6.6
- **Location:** Sylmar

### 5. Imperial Valley Earthquake

- **Date:** October 15, 1979
- **Magnitude:** 6.6
- **Location:** Near El Centro

### 6. Loma Prieta Earthquake

- **Date:** October 17, 1989
- **Magnitude:** 6.9
- **Location:** Santa Cruz Mountains

### 7. Northridge Earthquake

- **Date:** January 17, 1994
- **Magnitude:** 6.7
- **Location:** Northridge, San Fernando Valley

### 8. Landers Earthquake

- **Date:** June 28, 1992
- **Magnitude:** 7.3
- **Location:** Near Landers

### 9. Big Bear Earthquake

- **Date:** April 22, 1992
- **Magnitude:** 6.1
- **Location:** Near Big Bear Lake

10.      **Hector Mine Earthquake**
- **Date:** October 16, 1999
  - **Magnitude:** 7.1
  - **Location:** Near Hector Mine

## **21st Century**

11.      **Searles Valley Earthquake**
- **Date:** July 8, 2005
  - **Magnitude:** 6.0
  - **Location:** Near Searles Valley
12.      **Napa Earthquake**
- **Date:** August 24, 2014
  - **Magnitude:** 6.0
  - **Location:** Near Napa

## **Other Notable Earthquakes**

### **1872 Owen's Valley**

**Date:** March 26, 1872

**Magnitude:** 7.9

**Location:** Independence

### **1940 Imperial Valley**

**Date:** May 18, 1940

**Magnitude:** 7.1

**Location:** El Centro

### **1952 Kern County**

**Date:** July 21, 1952

**Magnitude:** 7.3

**Location:** Tehachapi

**Most recently:**

### **2019 Ridgecrest Earthquake**

**Date:** July 4 and 5, 2019

**Magnitude:** 6.4 & 7.1 respectively

**Location:** Ridgecrest area

This list captures the most significant earthquakes in California's history. For more detailed accounts, including damage assessments and historical context, the US Geological Survey (USGS) provides extensive resources.

### **Earthquake History**

Knowledge of past earthquakes indicates what sizes of earthquake to expect in the future. The most accurate locations and magnitudes exist for earthquakes recorded on seismographs, which came into widespread use about 1900. However, this record is too short to understand the pattern of earthquakes over geologic time. Historical accounts of damage help identify and locate earthquake that occurred before there were adequate seismographic records (seismograms).

To go back even further in time, geologists dig trenches across faults to uncover earthquake ruptures that once reached the surface but now are buried. For example, a trench in El Cerrito revealed evidence of four to seven large earthquakes on the Hayward Fault during the past 2,200 years.