

The Coalinga Earthquake: A Report on Schools

At 4:42 P.M. on Monday, May 2, 1983, an earthquake registering 6.5 on the Richter magnitude scale struck the Coalinga, California, area. Within seconds an aftershock of 5.0 magnitude occurred.

There are three elementary schools, one junior high, and one high school in Coalinga. The school buildings were constructed between 1939 and 1955. They contain 75 classrooms, a gymnasium, auditorium, libraries, and multi-purpose rooms. There are approximately 1,900 students enrolled in this school district.

The following is an account of the non-structural damage to these schools.

Glass Damage

- Windows broke in direct proportion to the size of the windows; small windows held up much better than large ones.
- The 31-year-old junior high library had eight-by-ten foot double-height glass windows on the north and south walls. All windows imploded and completely littered the room. There were dagger-shaped pieces throughout the room. The floor tile and wooden furniture were gouged with flying glass.
- The school superintendent believes that, had school been in session, death and serious injury would have occurred in the library. The glass in the library windows was not tempered.

Lighting Damage

- Approximately 1,000 fluorescent bulbs fell from their fixtures and broke. Many fixtures also came down. There were no safety chains on the fixtures.
- Although hanging fixtures suffered much more damage than recessed fixtures, glass in the older recessed fixtures was shaken out and broke.
- The elementary school library lost all its fixtures.

Excerpts from a report prepared by E. Robert Bulman for Charles S. Terrell, Jr., San Bernardino County, CA, Superintendent of Schools. Reprinted with permission from Mr. Bulman and Ray Simpson, Coalinga Unified School District.

Ceiling Damage

- Improperly installed T-bar ceilings came down.
- Glued ceiling tiles came down, especially around vent ducting and light cut-outs.

Water Damage

- Most district buildings have basements. Where water pipes entered through concrete walls, they were severed by the movement of the walls. Basements were flooded to five feet.

Electrical Damage

- All electrical supply and switching mechanisms were in the basement; all were destroyed by water.

Chemical Spill Damage

- In the second-floor high school chemistry lab, sulfuric acid and other chemicals stored in glass containers in open cabinets overturned and broke. Acid burned through to the first floor.
- Cupboard doors sprang open and glass cabinet doors broke, allowing chemicals to fall.
- The lack of electric ventilation caused toxic fumes to permeate the building.

Furnishings and Miscellaneous Items Damage

- File cabinets flew across the room; bookcases fell over; free-standing cupboards, cabinets, and miscellaneous shelving fell.
- Machine shop lathes and presses fell over.
- Typewriters flew around.
- Metal animal cages and other paraphernalia stored on top of seven-foot cabinets crashed to the floor.
- Movie screens and maps became projectiles.
- High school storage cabinets had been "molly-bolted" to walls, but not into studs. They pulled out of the wall and fell to the floor.