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The Earth Science Picture of the Day (EPOD) highlights the diverse processes and phenomena which shape our planet and our lives. EPOD will collect and archive photos, imagery, graphics, and artwork with short explanatory captions and links exemplifying features within the Earth system. The community is invited to contribute digital imagery, short captions and relevant links.

Heath Canyon Landslide

June 03, 2009





10 miles

Photographer: [David Lynch](#)

Summary Author: [David Lynch](#)

The village of [Wrightwood](#) in the [San Gabriel Mountains](#) of southern California sits squarely on the [San Andreas Fault](#) (SAF). A number of prominent fault features run through town including [scarps and sag ponds](#). The southern part of the village sits on [the Pacific Plate](#). The rock here is mostly [Pelona schist](#) and [actinolite](#). On the north side of town, on the [North American Plate](#), the rock is primarily ancient [gneiss](#). Movement along the SAF has placed the two different rocks together. At the same time, the grinding motion has profoundly fractured the rock, and [fault gouge](#) is widespread throughout the area.

Overlooking the village is a stark, steep, treeless hillside (photo at top). This is the Heath Canyon Landslide, a barren exposure of Pelona schist that produced the [Wrightwood Mudflow](#). In May of 1941, a sudden warming melted the snowpack, lubricating the already weakened schist. The hillside began to slide and formed a massive [mudflow](#). For several days the thick, viscous mud rolled through the eastern part of town and destroyed many homes. The slurry continued north in waves down Sheep Creek Canyon and more than 25 km (15 mi) out onto the [Mojave Desert](#). Even today satellite photos of the area show the dark schist of the Sheep Creek Fan superimposed upon the light tan desert soil (photo at bottom).

Heavy rains and sudden snowmelt occasionally plague the area. The town has constructed a series of diversion channels to guide the mudflows safely through residential areas. Similar flows have occurred over thousands of years. Most recently, less

destructive flows have occurred in 1969, 1975, 1985, and 2004.

Wrightwood, California Coordinates: 34.355833, -117.629167

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