

Project Abstract

We investigated a paleoseismic site on Frazier Mountain, near Frazier Park, California, on the Northern Big Bend section of the San Andreas fault. We cut a 60 m long, 3-4 m deep trench on the site of the Lindvall et al. (2002) trench, beginning at the base of the northern scarp and extending south across a late Holocene fan. The trench walls were cleaned, gridded into 1 x 0.5 m sections, photographed, and logged in the field at a scale of 1:7 or 1:12. Silt, sand, and gravel are interfingering in the trench. The stratigraphy indicates that the primary source of sediment is the late Holocene fan to the northwest, carrying sand and gravel sourced from the Precambrian gneiss of Frazier Mountain. A smaller volume of sediment is shed off the slope that forms the southern slope of the site and is composed of the Hungry Valley Formation. Numerous faults run through these deposits, presenting evidence for episodic earthquake recurrence. Using field logs, I will determine the source of each sedimentary package in the southern portion of the trench in order to understand the relative contributions of each sediment source and to build a sedimentary history of the site.