

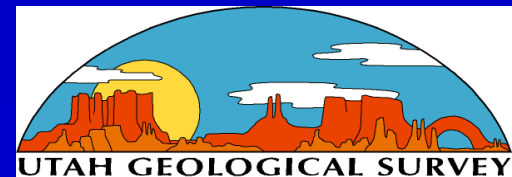
Fire-Related Debris Flows in Utah



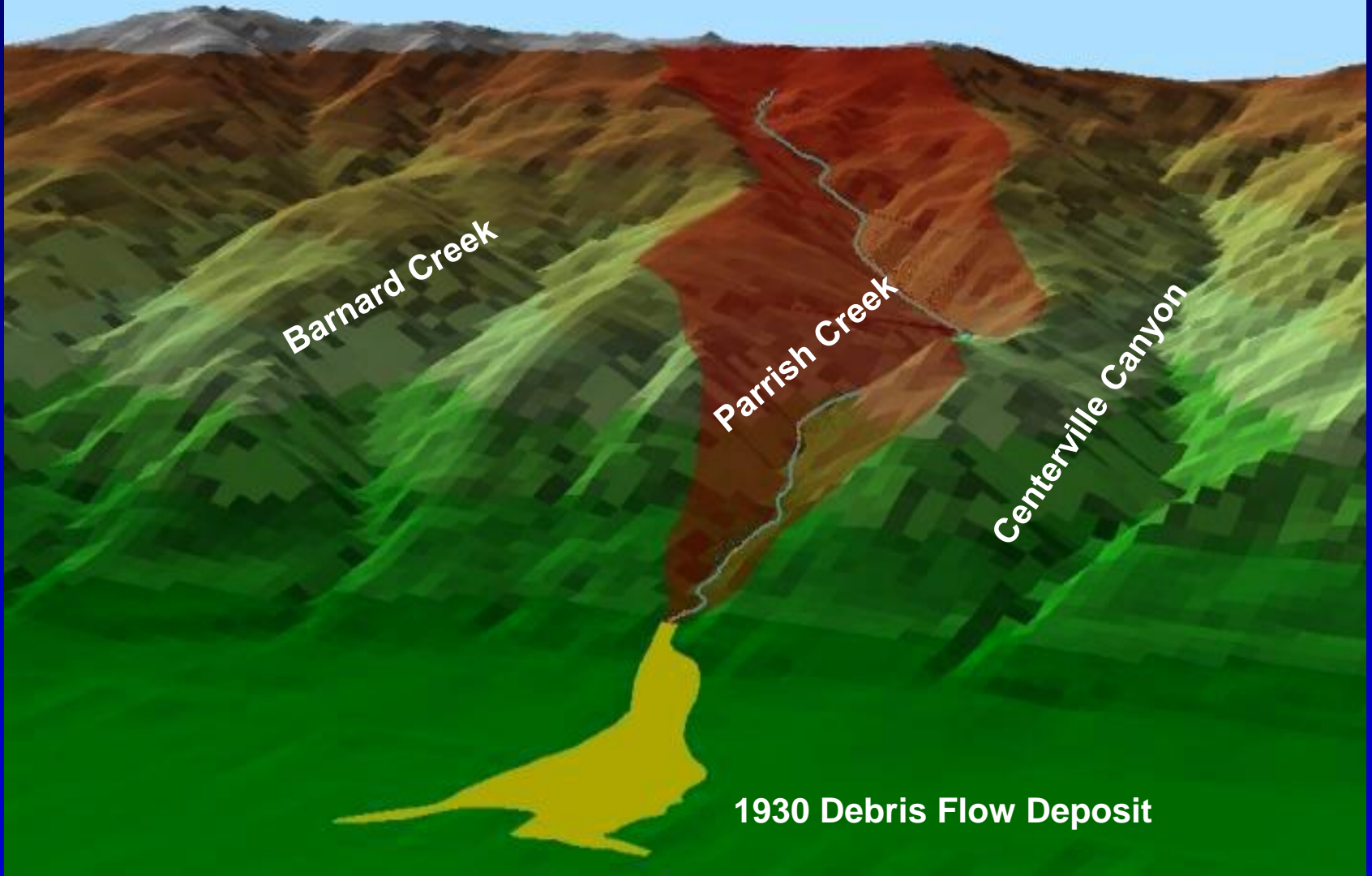
NOAA Photo



Richard E. Giraud
Utah Geological Survey



Drainage Basin and Alluvial Fan



Parrish Creek July 1930



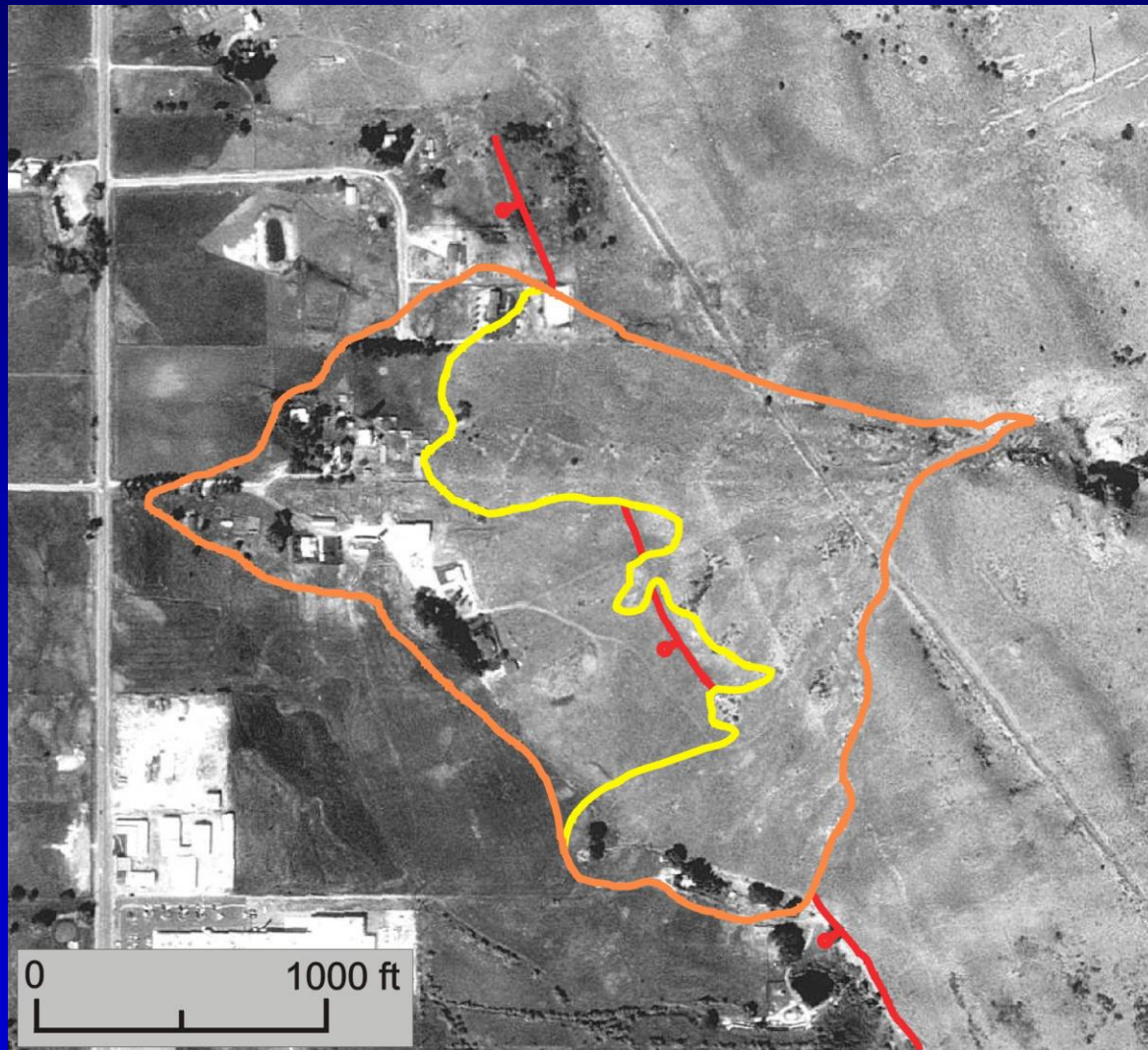
USFS Photo

Parrish Creek July 1930



USGS Photo

Alluvial Fan and Youngest Debris-Flow Deposits



Debris-flow Hazards and Parameters

Hazards

- Catastrophic
- Impact Pressure
- Inundation
- Sediment burial
- Water flooding
- Erosion

Parameters

- Frequency
- Volume
- Runout
- Burial Depths
- Velocity

Debris-flow Hazards

Rudd Canyon May 30, 1983



Y-Mountain Fire



Y-Mountain Fire Water-repellent Soils



Y-Mountain Fire



Preston Canyon Debris Flow

August 21, 2001



Preston Canyon Debris Flow

August 21, 2001



Preston Canyon Debris Flow Sediment Supply



Preston Canyon Debris Flow Sediment Supply



Mapleton Debris Flow

September 18, and 19, 1989



Mapleton Debris Flow

September 18, and 19, 1989



Orem Debris Flow

September 7, 1997



Big Canyon Debris Flow

August 23, 2000



Big Canyon Debris Flow

August 23, 2000

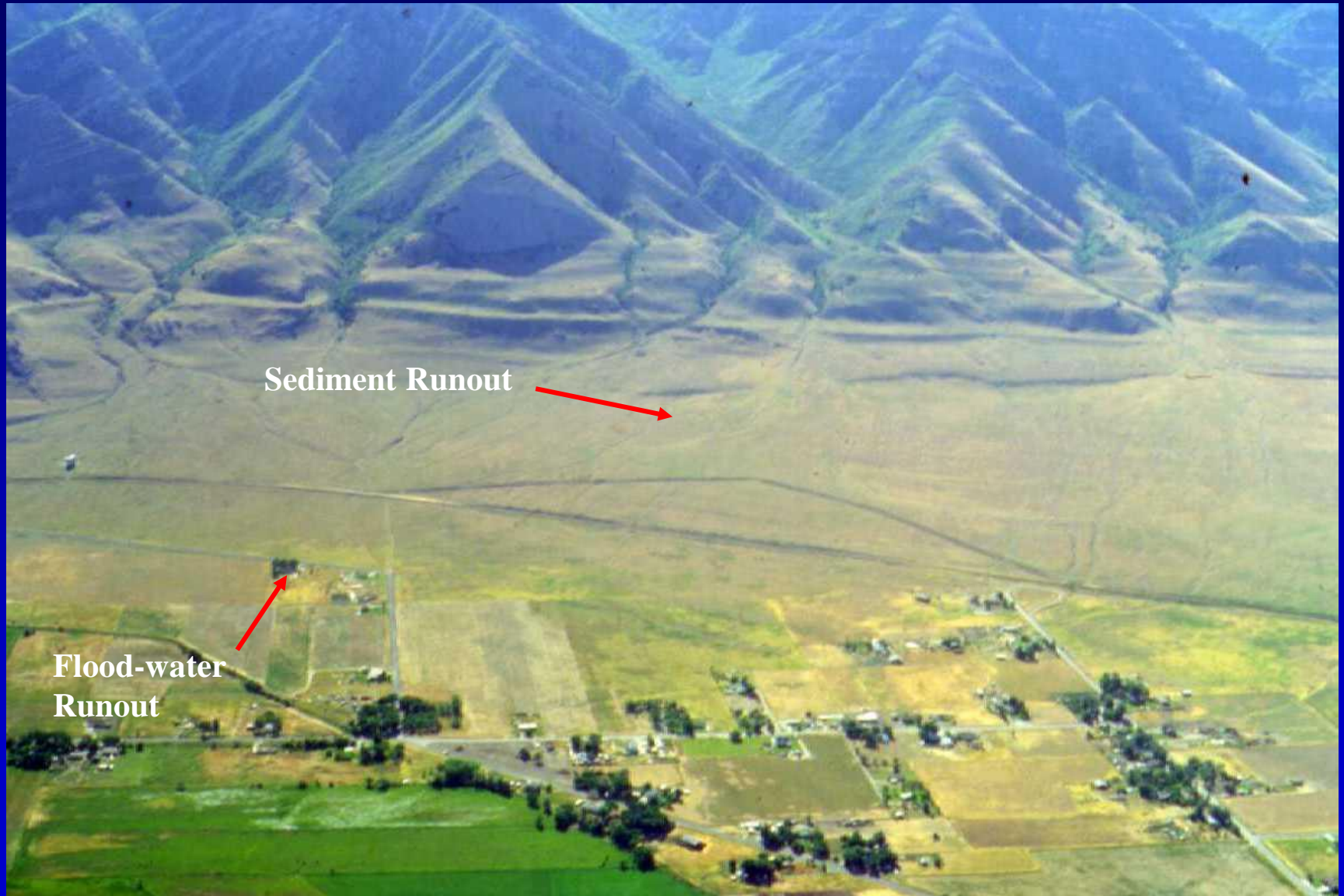


Big Canyon Debris Flow

August 23, 2000



Big Canyon Alluvial Fan



Vivian Park August 31, 2000



USFS Photo

Vivian Park August 31, 2000



USFS Photo

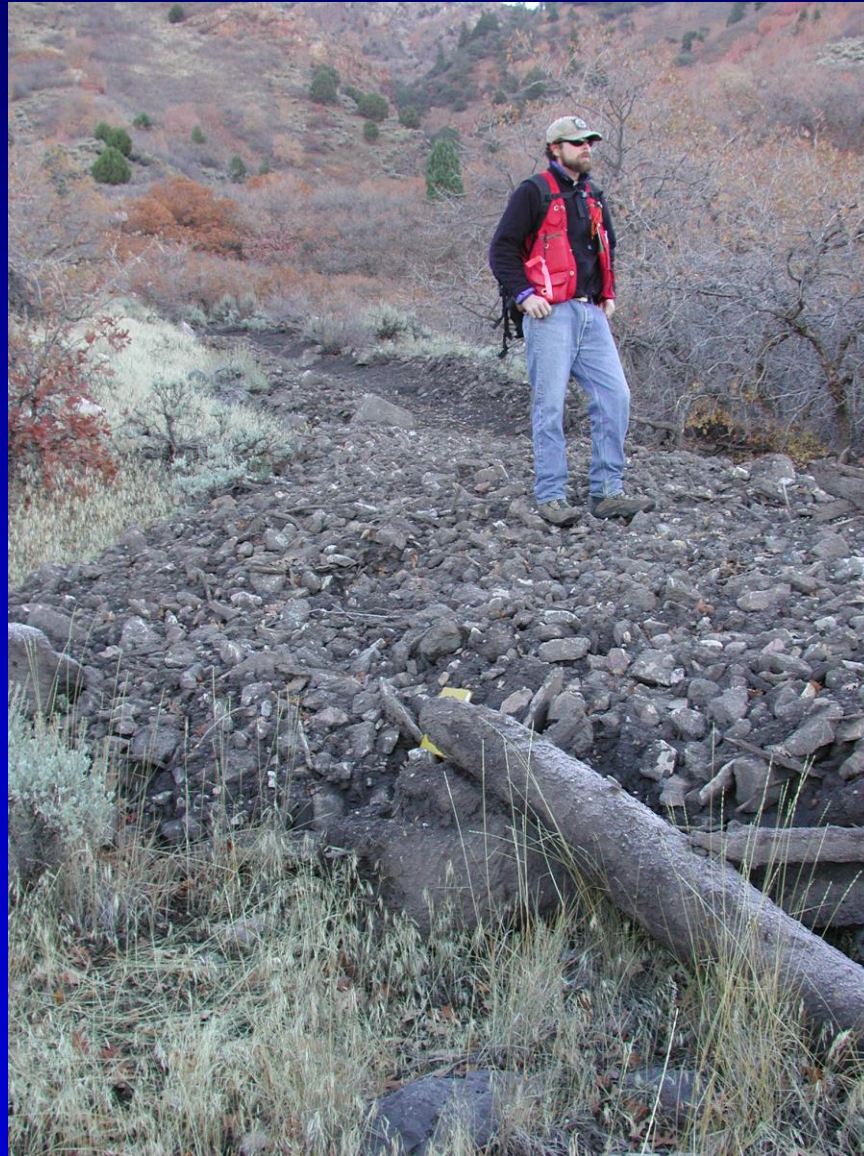
Vivian Park August 31, 2000



USFS Photo

Preston Canyon Debris Flow

August 21, 2001



Preston Canyon Debris Flow

August 21, 2001



Preston Canyon Debris Flow

August 21, 2001



Birch Creek Debris Flow

July 15, 2002



Birch Creek Debris Flow

July 15, 2002



Birch Creek Debris Flow

July 15, 2002



Provo Floods 1847 to 1981

- 1876, 1881, 1913, 1920, 1926, 1930, 1931, 1932, 1934, 1936 (3), 1938, 1954, 1959, 1962, 1967, 1968, 1976 (2), 1978, 1979 (2)

(from History of Utah floods)



