# **Summary of Photographs**

Description: Aerial view of house, road, and vehicles on landslide in

Springdale, UT

Source: Salt Lake Tribune

Info Categories: B, G, L

Description: Break in water pipe; Springdale, UT
Source: Connie Snapp, Springdale, UT

Info Categories: L

Description: Entrance to Zion National Park, UT is closed

Source: Connie Snapp, Springdale, UT

Info Categories: I, L

Description: Landslide viewed from Watchman Trail, Zion National Park

Source: Connie Snapp, Springdale, UT

Info Categories: G

Description: Utility poles turned to kindling by "Slide Hill"; Springdale, UT

Source: Connie Snapp, Springdale, UT

Info Categories: G, L

Description: Rock fall in St. George, UT
Source: Glen Blakley, St. George, UT

Info Categories: G

Description: Fallen plaster in St. George Art Center. St. George, UT

Source: Glen Blakley, St. George, UT

Info Categories: B

Description: Trophy cabinet fallen from wall in St. George Art Center.

St. George, UT

Source: Glen Blakley, St. George, UT

Info Categories: N

Description: Aerial photo of the landslide in Springdale, UT

Source: Utah Geological Survey

Info Categories: G

Description: House in Balanced Rock Hills subdivision destroyed by

landslide, Springdale, UT

Source: Utah Geological Survey

Info Categories: B

Description: House in Balanced Rock Hills Subdivision destroyed by

landslide. Springdale, UT

Source: Utah Geological Survey

Info Categories: B, G

Description: Lateral-spread cracks and caved stream banks due to

liquefaction. Near St. George UT

Source: Utah Geological Survey

Info Categories: G

Description: Sand blows due to liquefaction; St. George, UT

Source: Utah Geological Survey

Info Categories: G

Description: House in Hurricane, UT, damaged by ground shaking

Source: Utah Geological Survey

Info Categories: B

# **Information Categories**

#### A -- Aid:

provide medical services, shelter, donations, loans, advice, encouragement, implement safety measures

### B -- Building Damage:

structure itself plus windows and chimneys (typically damage visible from outside the building)

### **E -- Earthquake Description:**

where, when, duration, direction, sound, motion, number and timing of aftershocks

## **G** -- Geologic Effects:

changes at the Earth's surface, fault scarps, rockfalls, landslides, ground cracks, ground subsidence, sand boils, water spouts; effects on springs, lakes, wells

### H -- Humor:

### I -- Impact:

changes in daily routine; rumors; influx of reporters, politicians, cost in dollars

#### L -- Lifelines:

effects on transportation: roads, bridges, railroads, airports effects on communications: telephone, telegraph effects on power, gas, water, and sewer lines effects on dams

### N -- Nonstructural Effects:

effects on plaster, furnishings (typically damage or rearrangement of furnishings visible inside a building)

### P -- People:

effects on and responses to, during and after; deaths, injuries, near misses

### R -- Recovery:

clean up, rebuild

#### S -- Scientific:

explanation of the day



The couple living in this house was unable to use their vehicles to escape the landslide.

Photo courtesy of Salt Lake Tribune



The water pipe broke just outside the entrance to Zion National Park.

Photo courtesy of Connie Snapp, Springdale, Utah



Zion National Park was closed for one day after the earthquake caused the large landslide and broke the water pipe just outside its southwest entrance.

Photo courtesy of Connie Snapp, Springdale, Utah



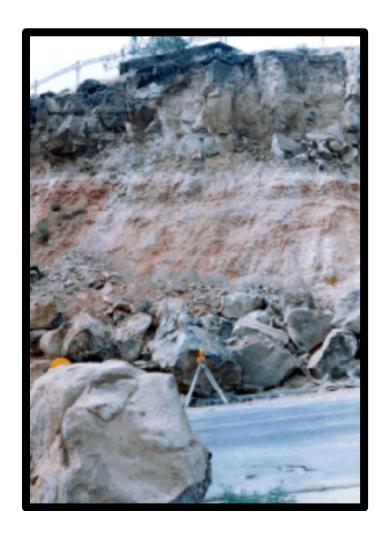
This view of the Springdale landslide is from the Watchman Trail in Zion National Park. The large landslide scarp (as high as 50 feet) is in the lower right corner of photo.

Photo courtesy of Connie Snapp, Springdale, Utah



Utility poles along State Route 9 were turned to kindling by the steep bulging front (toe) of the landslide as it moved laterally several meters.

Photo courtesy of Connie Snapp, Springdale, Utah



In St. George, Utah, rocks fell at the east end of Airport Hill.

Photo courtesy of Glen Blakley, St. George, Utah



Plaster damage occurred in the women's restroom in the St. George Art Center in St. George, Utah. This building is a large, two-story building constructed of unreinforced masonry.

Photo courtesy of Glen Blakley, St. George, Utah



The trophy cabinet fell from the wall on the east staircase of the St. George Art Center.

Photo courtesy of Glen Blakley, St. George, Utah



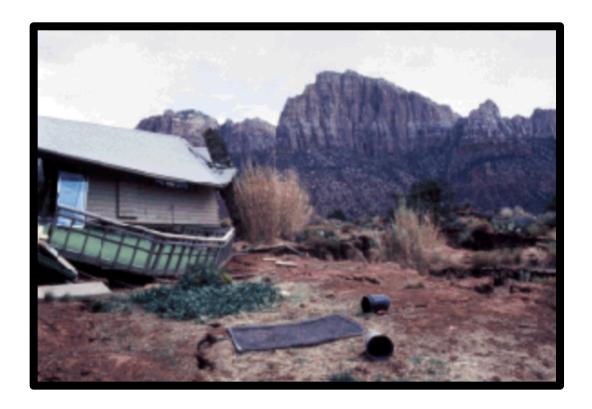
This aerial view to the north of the Balanced Rock Hills Subdivision landslide in Springdale, UT shows the landslide toe covering part of State Route 9 just outside the southwest entrance of Zion National Park. Notice the restaurant that is surrounded, but not touched, by the landslide. Photo by B.J. Solomon, Utah Geological Survey.

Courtesy of Utah Geological Survey



Balanced Rock Hills Subdivision was built on "slide hill" (name given the area by old-timers in the area. The earthquake, whose epicenter was 30 miles away, caused slide hill to slide again. This is one of three homes destroyed in the landsliding. No one was injured. Photo by B.D. Black, Utah Geological Survey.

Courtesy of Utah Geological Survey



One of three homes destroyed when the hillside beneath them slide due to ground shaking. Photo by B.D. Black, Utah Geological Survey.

Courtesy of Utah Geological Survey



Lateral-spread cracks and caved stream banks resulted from liquefaction along the Virgin River near St. George, UT. Photo by W.E. Mulvey, Utah Geological Survey.

Courtesy of Utah Geological Survey



Sand blows resulted from liquefaction along the Virgin River near St. George, UT. Photo by M.A. Mabey, Oregon Department of Geology and Mineral Industries.

Courtesy of Utah Geological Survey



The historical "Stanworth home" in Hurricane, UT, was damaged by the ground shaking. "Chimneys were twisted and partially fell, the walls and foundation were severely cracked, and two walls partially separated from the first-story ceiling, necessitating bracing and eventually structural repair to prevent collapse." [quote from Olig, S.S. (1992). Ground shaking and modified Mercalli intensities, in *The September 2, 1992 M<sub>L</sub> 5.8 St. George Earthquake, Washington County, Utah*, G.E. Christenson (Editor), Utah Geological Survey Circular 88, p. 16. https://ugspub.nr.utah.gov/publications/circular/C-88.pdf] Photo by B.D. Black, Utah Geological Survey.

Courtesy of Utah Geological Survey