

Boulder is Stable

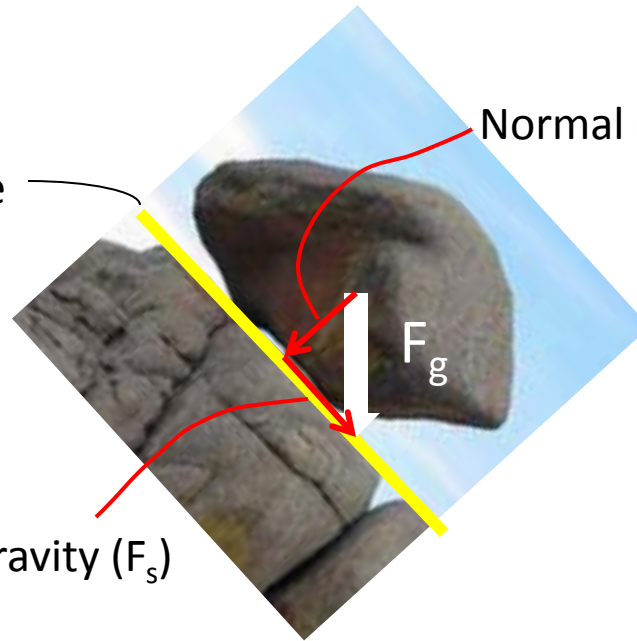
Horizontal surface



Force of gravity acts at right angles to slope – no tangential component exists

Boulder is Unstable

Tilted surface



Normal component of gravity (F_n)

Tangential component of gravity (F_s)

Tangential component of gravity exceeds normal component

Motion occurs rapidly and is discernable to the naked eye

1. Rock falls and topples
2. Rotational, translational, and blocks slumps or landslides
3. Mud flows, earth flows, debris flows, and lateral spreads

Motion occurs so slowly that it is not discernable to the naked eye

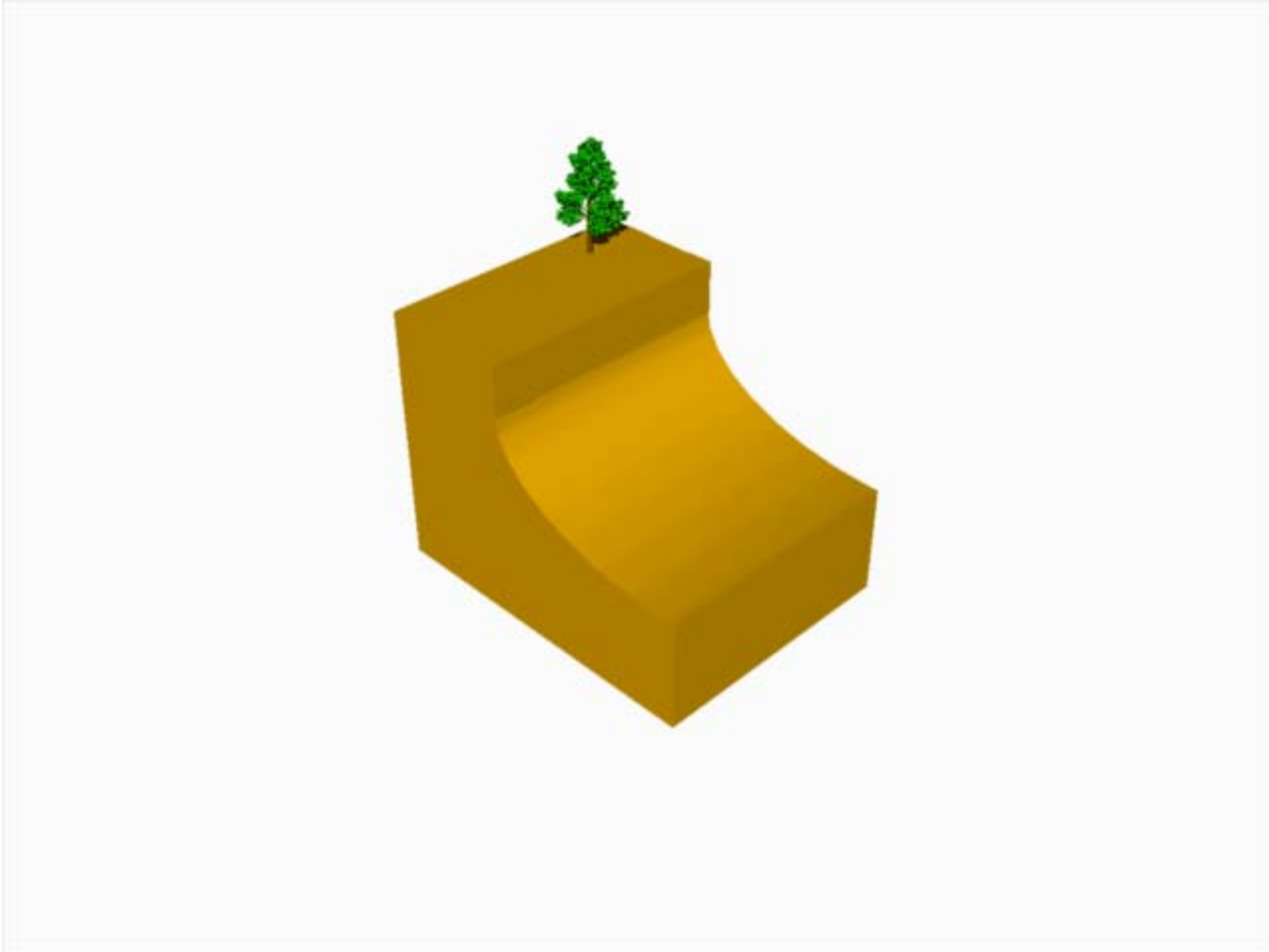
1. Creep
2. Solifluction

Processes that are Perceptible to the Naked Eye

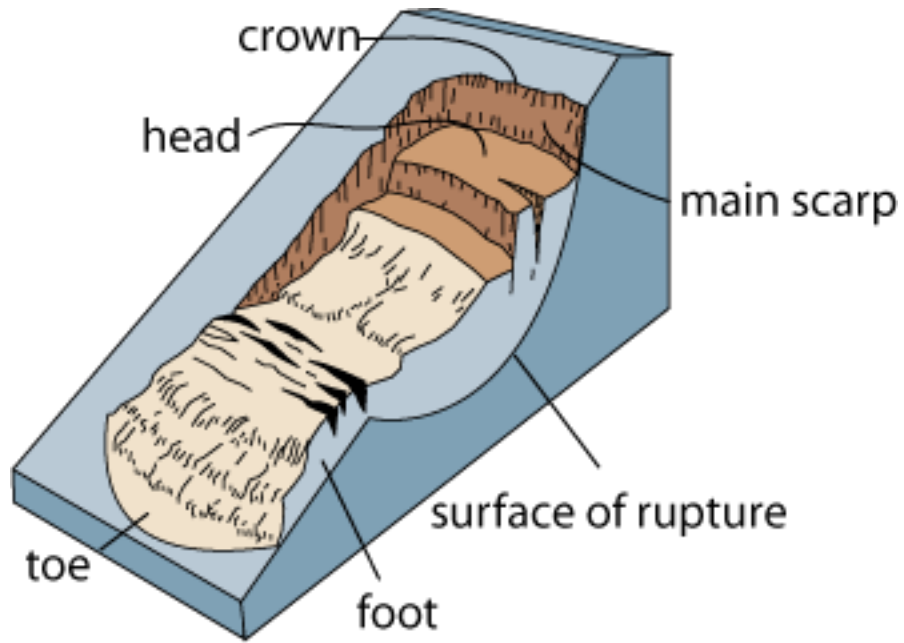
Rock fall



Topple

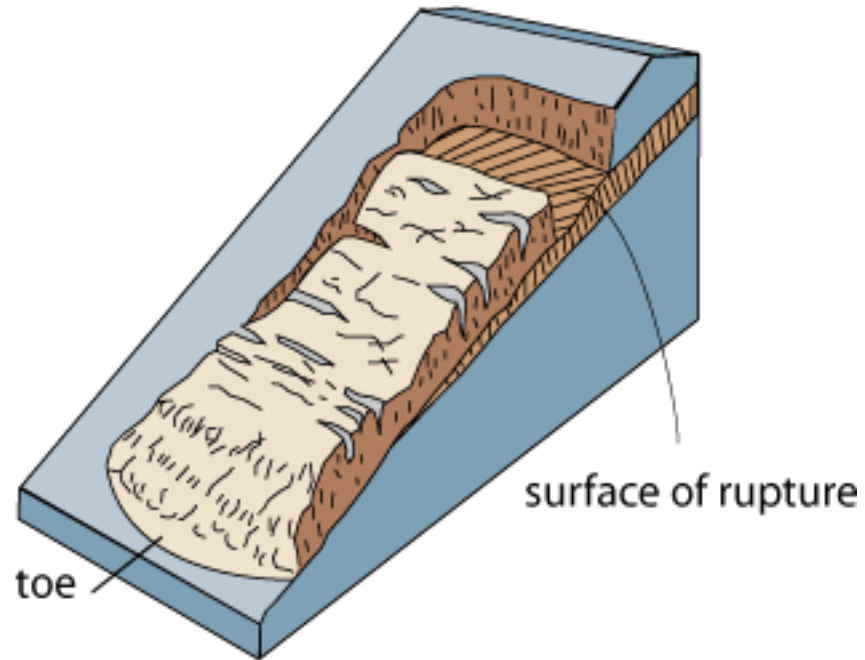


Rotational Slump



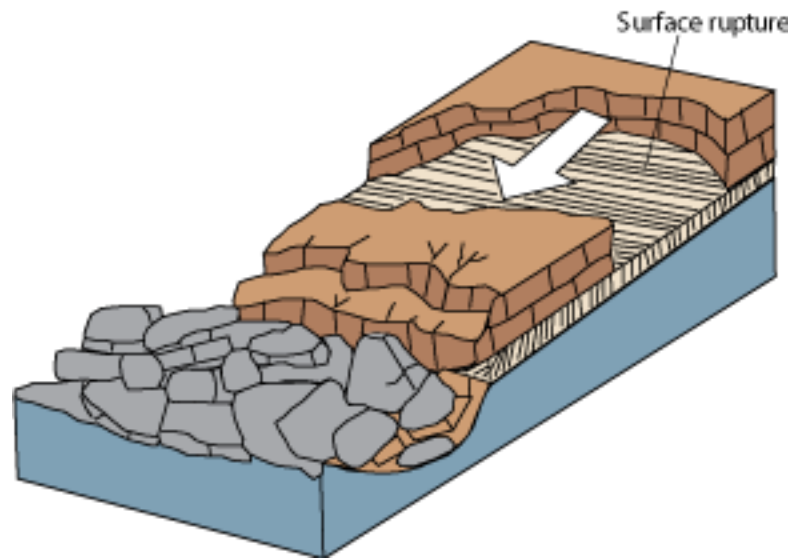
from <http://landslides.usgs.gov>

Translational Slump

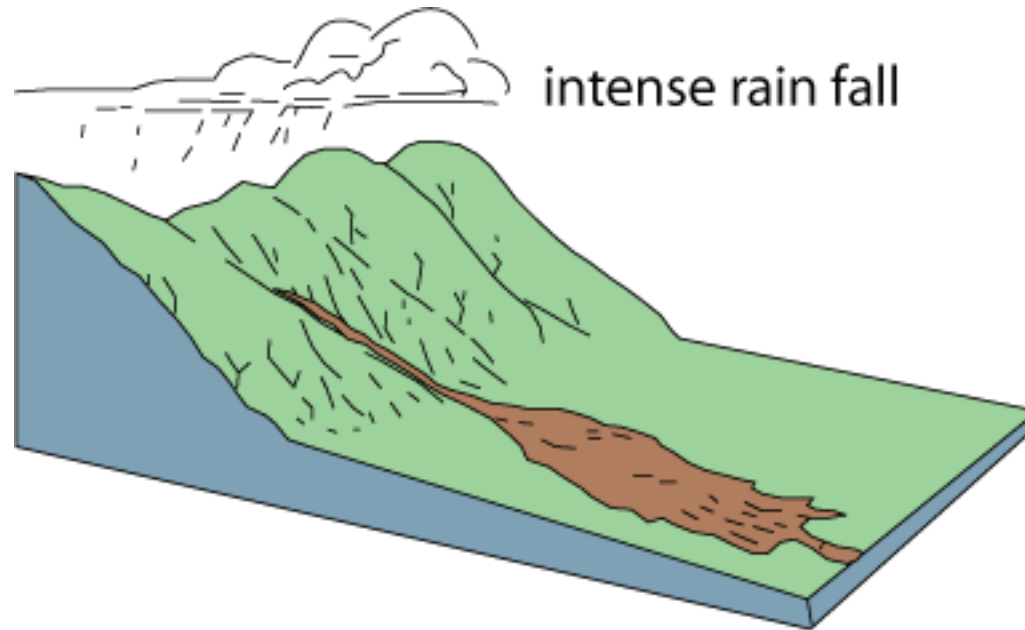


from <http://landslides.usgs.gov>

Block Slump

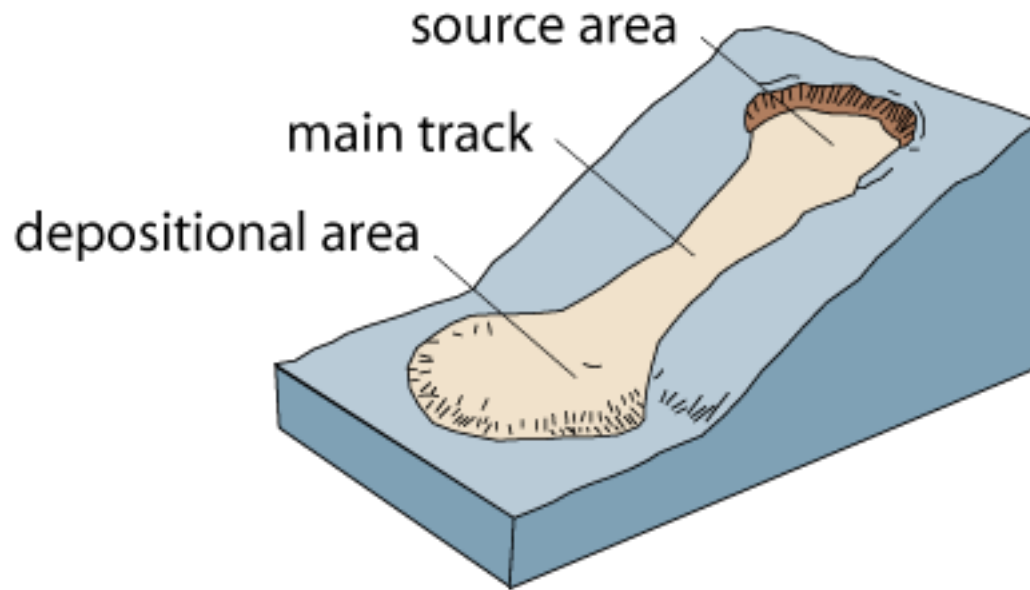


Mudflows and Debris flows



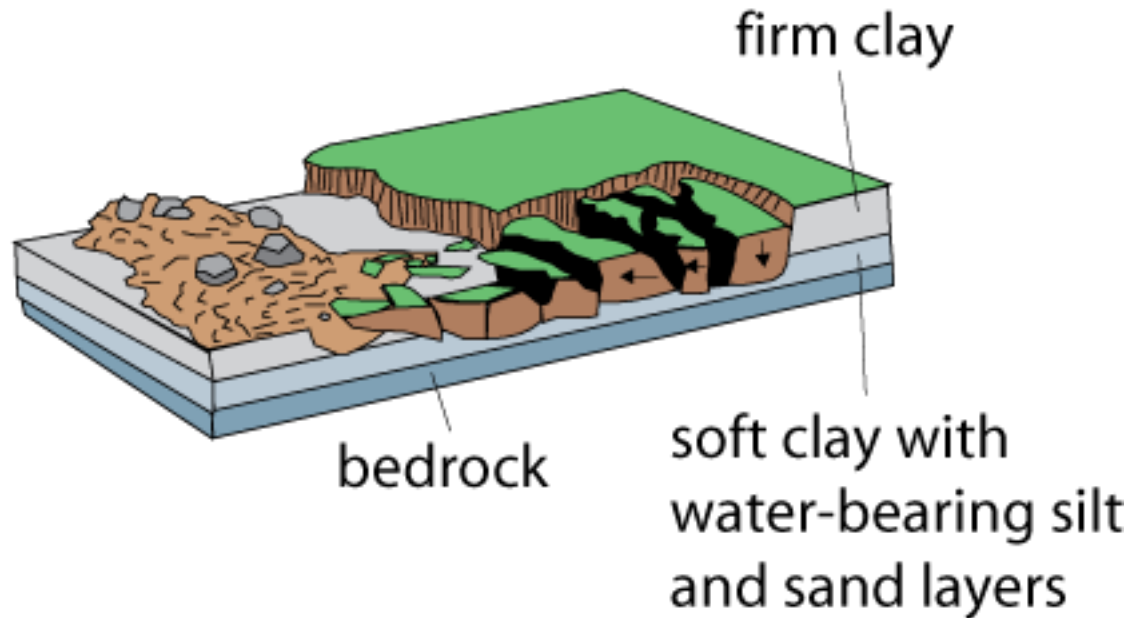
from <http://landslides.usgs.gov>

Earthflow



from <http://landslides.usgs.gov>

Lateral Spread



from <http://landslides.usgs.gov>

Processes that are Imperceptible to the Naked Eye

Creep and Solifluction

