

SUBSIDENCE II (36)

I Main Topics

A Recognition of subsidence hazards (Case histories)

B Characterization of subsidence hazards

II Recognition of subsidence hazards

A Collapse into man-made and natural cavities

<http://www.ene.ttu.ee/maeinstituut/poster/rez.html>

1 Subsidence over coal mines (e.g., Pennsylvania)

<http://www.netcentral.co.uk/steveb/geography/collapse.htm>

http://gsa.confex.com/gsa/2001NC/finalprogram/abstract_5641.htm

2 Sinkholes in carbonate terrains (e.g., Florida)

http://landslides.usgs.gov/html_files/landslides/slides/slide10.htm

<http://waterquality.ifas.ufl.edu/PRIMER/sinks.html>

3 Extraction/dissolution of salt (e.g., New Mexico, Texas, Kansas)

<http://www.sigmaxi.org/amsci/articles/98articles/martinez.html>

B Hydrocompaction (Loess areas, San Joaquin Valley, CA)

Collapse of soil structure due to wetting

<http://ncgmp.cr.usgs.gov/ncgmp/cencol/cencol.htm>

C Natural compaction of sediments (e.g., Mississippi Delta)

<http://abcnews.go.com/sections/science/DyeHard/dyehard000202.html>

D Tectonic subsidence

1 Alaska, 1964

2 Hawaii, 1975

E Volcanic subsidence

1 Calderas (e.g., Kilauea).

Due to magma withdrawal

2 Pit craters (e.g., Devils Throat).

Due to stoping into subterranean fissures

<http://www.pgd.hawaii.edu/~chriso/pubs/gsa97.html>

<http://volcanoes.usgs.gov/Products/Pglossary/PitCrater.html>

III Characterization of subsidence hazards

A Conventional surveying

B GPS

C Interferometric Synthetic Aperture Radar (InSAR)

<http://water.wr.usgs.gov/program/desert/insar/>