

Name _____

Due November 29th

Landslides

As always, web links are on the course web site.
You will need to refer to your textbook or lecture material for some questions

Look at a photo of the Devil's slide area north of Half Moon Bay:

http://www.geog.ucsb.edu/~7Ejoel/g148_f05/lecture_notes/central_coast/devils_slide_5937.jpg

Look carefully near the left side of the photo. Find the bedding (layering) of the rocks along this cliff (don't confuse bedding with the ravines eroded by water).

(1) Which way does bedding dip (how is it angled)?

(2) Why does this increase the vulnerability of this area to landslides? To answer this, think about what you learned during lecture.

Read the description of California's coastal bluffs at:

<http://ceres.ca.gov/ceres/calweb/coastal/bluffs.html>

(3) List at least 6 things that contribute to landslides, cliff retreat, and erosion along California's coastal bluff.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Go to the following web site: <http://ublib.buffalo.edu/libraries/projects/cases/landslide1.html>

This next series of web sites are about litigation concerning the 1956 Portuguese Bend landslide in Los Angeles County, California. Read each page and look at all of the figures; answer the following questions based on these web sites:

(4) What is the scientific basis for the homeowner's lawsuit?

Go to part 2: <http://ublib.buffalo.edu/libraries/projects/cases/landslide2.html>

(5) What natural conditions in this area are conducive to landslides?

(6) What specific type of mass movement is likely to occur in this geologic setting?

(7) Is it possible that the 1956 Portuguese Bend Landslide was triggered entirely by natural causes?

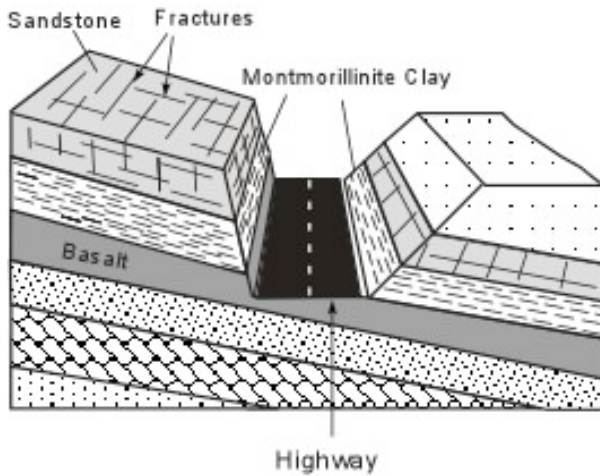
(8) What human action(s) could have contributed or triggered this landslide?

Go to part 3: <http://ublib.buffalo.edu/libraries/projects/cases/landslide3.html>

(9) How would the construction of Crenshaw Boulevard differ from the earlier construction of houses in terms of its ability to trigger a landslide?

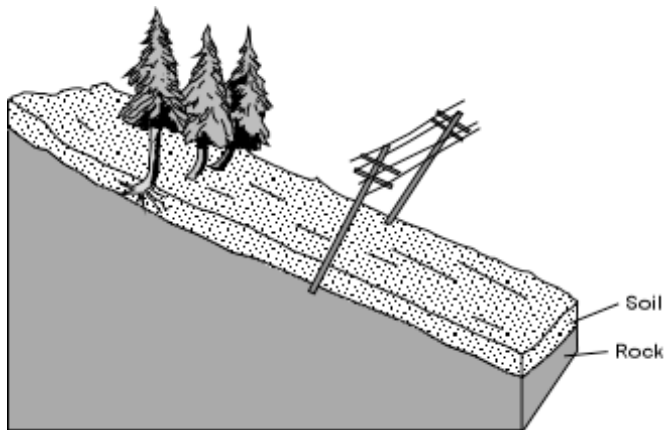
(10) What do the success of various corrective actions taken here suggest was (were) the cause(s) of the landslide?

For each of the following drawings, determine (i) What potential mass-wasting hazards exist and why, and (ii) what might be done to mitigate the hazard or remove the danger. Be sure to consider things such as direction of fractures, type of rock or soil, slope angle, etc.



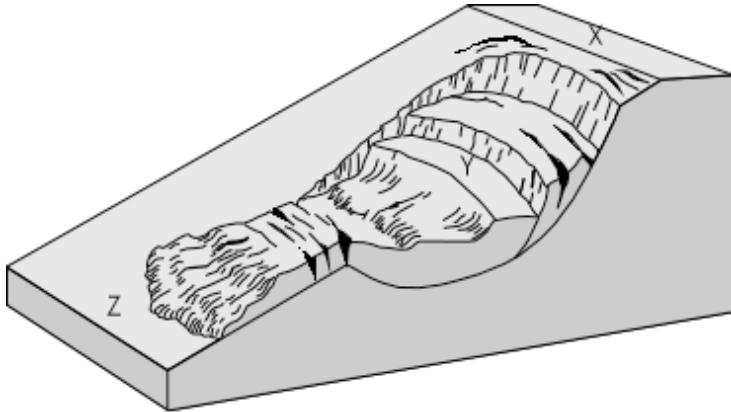
Potential hazards:

Ways to control hazards: _____



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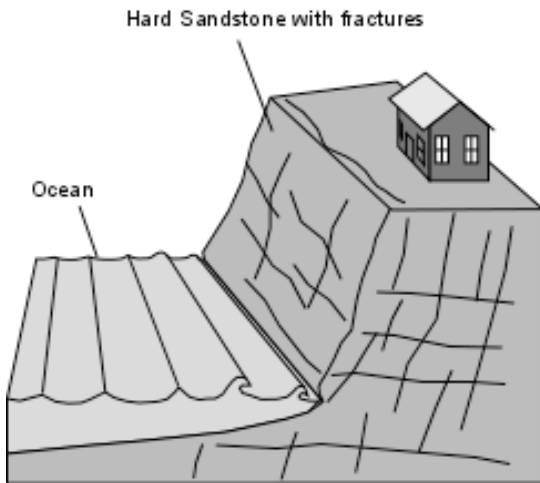


Potential hazards: _____

Ways to control hazards: _____

Which site (X, Y, or Z) would be the best site on which to build your house? _____

Why? _____



Potential hazards: _____

Ways to control hazards: _____