

Answer Key for Environmental Geology Lab 5

1. Removal of groundwater either through installation of pumps or drainage system
2. As the underlying bedrock collapses due to the dissolution of limestone in the subsurface the overlying soil will collapse causing the land surface to become depressed.
3. No sinkholes would not be common in Laredo because of the shale and sandstone bedrock does not dissolve like the limestone bedrock present in the San Antonio area.
4. As circles with hachure lines inside them.
5. Repeated freezing and thawing of water
6. Earthquakes
7. False
8. False
9. True
10. False
11. True
12. Building a subdivision adds mass from buildings and moisture that decrease buildings. Additionally, the addition of moisture can lead to less stable conditions. Finally, locally increasing the slope angle locally along a cut within the hill can decrease stability.
13. After a drought a hillside will have little vegetation growing on it. Vegetation has roots that can hold the soil together. So when it rains there are not roots to prevent the loose soil from moving down the hill.
14.

Angle of Slope Material	Less
Mass Present on Slope	Less
Moisture Content within Slope	Moderate
15.

Angle of Slope Material	Greater
Mass Present on Slope	Greater
Moisture Content within Slope	Saturated

- 16.
- A Adding mass and moisture from pool
 - B Oversteepened slope
 - C Adding mass and moisture from water that leaks from the septic tank
 - D Adding mass of house
 - E Oversteepened slope; Adding Mass, and Traffic causing vibrations on the road deck (local human caused seismic activity)
17. Washington, Oregon, California, Idaho; Nevada, Utah, Wyoming, Colorado, Arizona, New Mexico
18. Seismic activity
19. Because of the limestone bedrock in which sinkholes can form
20. Mostly because Texas lacks the topographic relief present in other regions of the country
- 21.
- 1. Soil Creep
 - 2. Rock Slide
 - 3. Slump
 - 4. Debris Flow
 - 5. Rock Fall
22. Flooding as it is built on the floodplain
- 23.
- | | |
|-------------|----------|
| Soil Creep | Slowest |
| Slump | |
| Debris Flow | |
| Rockslide | |
| Rockfall | Quickest |
24. Absolutely not as this is a potential death trap.