

Answer Key for Environmental Geology Lab 9

Answers for Table 2. Calculated percent abundances of soil type per block.

Soil Type	Northwest Block	Northeast Block	Southwest Block	Southeast Block
Yellow	63.4 %	55.5 %	59.7 %	68.0 %
Green	0 %	14.2 %	0 %	2.1 %
Purple	0 %	17.9 %	3.0 %	6.7 %
Lt Blue	8.6 %	5.3 %	7.4 %	10.1 %
Orange	14.7 %	.5 %	19.7 %	4.5 %
Red	13.3 %	6.6 %	10.2 %	8.6 %

1.

Yellow: Mostly sand with some gravel, silt and clay
Green: Mostly clay with some silt
Purple: Almost all caliche
Lt. Blue: Almost all sand
Orange: Mixed silt and sand
Red: Mostly sand with some clay

2.

Yellow: Poorly sorted
Green: Well sorted
Lt. Blue: Well sorted
Orange: Well sorted
Red: Poorly sorted

3.

Yellow: Sand
Green: Clay
Lt. Blue: Sand
Orange: Silt/Sand
Red: Sand

4. The poorly sorting of yellow lowers its permeability because finer grained material fills in the porosity. Light blue has no finer material and therefore the porosity is unclogged explaining the high permeability of this soil type.

5. Yellow

6. Green

7. No because the green soil has a high shrink-swell potential that can damage any structures built on this soil. Additionally, the low permeability of the green soil causes the potential for flooding to be greater associated with this soil type.

