Using maps to assess volcanic geologic hazards PRELAB

You are a HVO scientist who will be assessing the natural hazards associated with Kilauea’s activity including the dangers to people and properties in the region. There are three parts to this lab assignment: a pre-lab, lab, and news report. **The pre-lab should be completed before attending the lab.** In the pre-lab you will be asked to look at the style of volcanism associated with Pu’u O’o cone, a cinder-and-spatter cone located in the east rift zone.

In the lab you will be provided with 3 topographic and 1 geologic map to assess the natural hazards associated with Kilauea’s activity including the dangers to people and properties in the region. You will be responsible for creating your own set of maps and materials from the pre-lab and lab exercises.

The third part of the assignment involves writing an accompanying news report to communicate the results of your work to the public. While you are encouraged to discuss all parts of the assignment with your peers, you must hand in your own work.

Go to webcam (<https://vepp.wr.usgs.gov/vepp/movies/Ep57_east_vent_flows-20070713-small.mov>) to watch: Episode 57 East Vent Effusion (8.1MB) .

1. What type of material is being erupted? (pyroclastic eruption or lava flow).
2. Does this material have a high or low viscosity?
3. If you were walking across this surface when it cooled would you be walking across:

a)A’A’ b)Pahoehoe c)Ash fall d) Volcanic bombs

4. In general, what is the chemical composition of this material?

5. Based on the previous questions, what type of volcano are we looking at?

6. What are the main gasses emitted from a volcano?

7. What are some potential hazards to someone living in the vicinity of the eruption?