1) Natural Factors

For my natural factors maps, I decided to investigate the threat of fire and land stability in the Berkeley area. I have chosen to display faults, streams, slope stability, and the rate at which fire spreads in particular areas. I also decided to include buildings of the UC Campus for aerial context. Identifying these risk factor zones helps people determine which areas in Berkeley are safe and unsafe to reside. Poor slope stability has been marked on the map with cross-hatching to indicate which areas are the most unstable. Fault lines have been marked yellow and the rate at which fire spreads is displayed at varying shades of red. Specifically, higher rates of spread correlates to darker shades of red. This layer is displayed at 65% transparency in order to see the topographic features of the surrounding area.

2.1) Natural Factor: Flame Length

For the next few maps, I decided to focus on wild vegetation to analyze fire susceptibility in the Berkeley vicinity. For this map, I created 5 separate classes of flame length – the variation of color represents sequentially longer flames.

2.2) Natural Factor: Heat Per Unit Area

In this map, I am displaying heat per unit area to indicate areas with higher fire risk. I have chosen again to display 5 classes, utilizing darker colors to represent areas with higher heat per unit area.
2.3) Natural Factor: Rate of Spread
For this final natural factor map I decided to analyze the rate of a fire spreading in the designated area. The darker shades in the map indicate areas where a fire would spread very rapidly, while lighter zones show a slower rate of spreading flames. I used 5 classes for this particular quantity because it presents an adequate range of fire susceptibility for the Berkeley area.

3) Human Factors
For the human factors map, I decided to display the UC campus, along with on-campus parking structures, buildings, and roads. I outlined the UC boundary in dark grey, highlighted roads in yellow, and indicated parking structures in orange cross-hatch. The underlying image brings context to this particular area of Berkeley.

4.1) Greatest Fire Danger
To determine the greatest fire danger, I examined only the highest level of each factor: rate of spread (orange cross-hatch), heat per unit area (outlined yellow), and flame length (shaded red). The areas that displayed the highest susceptibility of each factor have been circled in red. The east side of the UC boundary appears to have the greatest risk of fire danger.
4.2) Unstable Landscape
Poor slope stability (cross-hatch) and previous landslides (red) indicate that the most unstable landscape lies in the east, specifically southeast, portion of the UC boundary.

4.3) Steepest Slope
To determine the areas with the steepest slope, I included values of slope percentage within UC wild vegetation. Only the steepest areas have been selected to show on the map (red). The steepest slopes are shown to occur on the easternmost side of the UC boundary due to the fact that the slope percentage is highest in that zone.

4.4) Greatest Risk of Earthquake Damage
To determine the greatest risk of earthquake damage, I highlighted existing fault lines in yellow. It is likely the greatest amount of damage would occur in and around parking structures and buildings on campus, therefore I highlighted parking in orange cross-hatch and buildings in pink. I also displayed poor slope stability in black cross-hatch. As indicated on the map, a fault line goes directly through Memorial Stadium, posing great risk for damage, and injury, if an earthquake were to occur on that particular fault line.