

GEOG 653: Lab 7 (3D Visualization)

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Overview

For lab 7, we will explore 3D Visualization and Analysis.

Question 1.

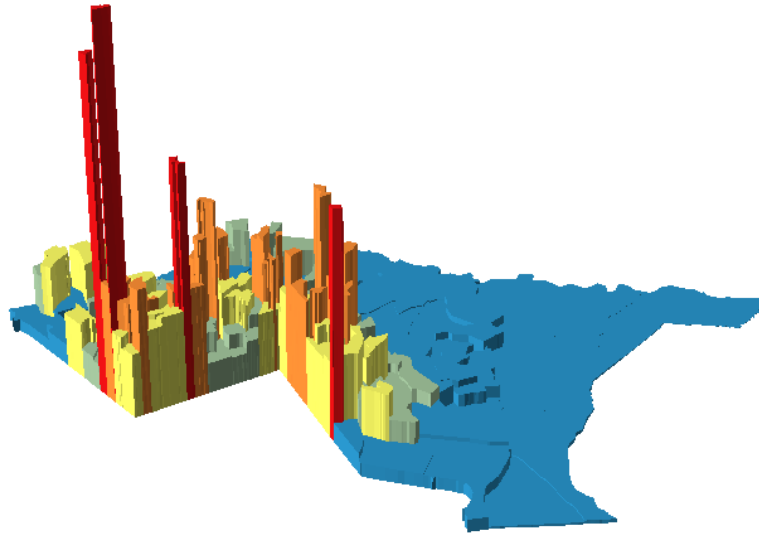


Figure 1: ArcScene Extrusion of PG County Layer (POP90_SQMI/100,000).

Question 2.



Figure 2: ArcScene Extrusion of PG County Layer (POP 2000).

Question 3.

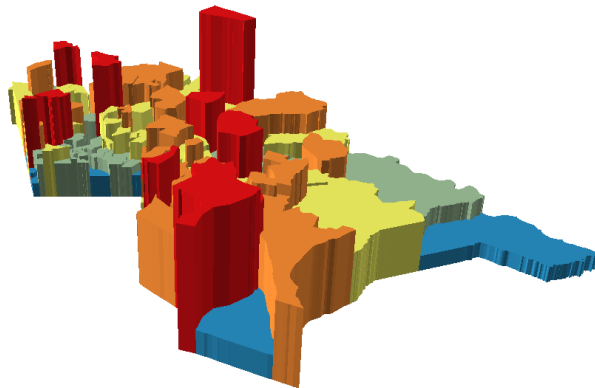


Figure 3: ArcScene Extrusion of PG County Layer (Projected).

Question 4.



Figure 4: Ithaca DEM in 3D.

Question 5.

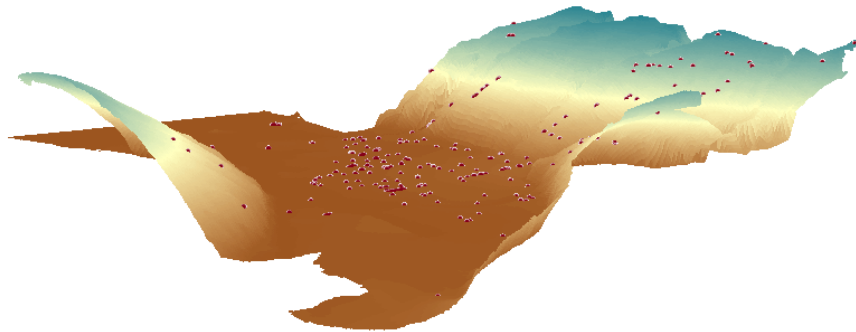


Figure 5: Ithaca DEM in 3D with Trees draped over.

Question 6.

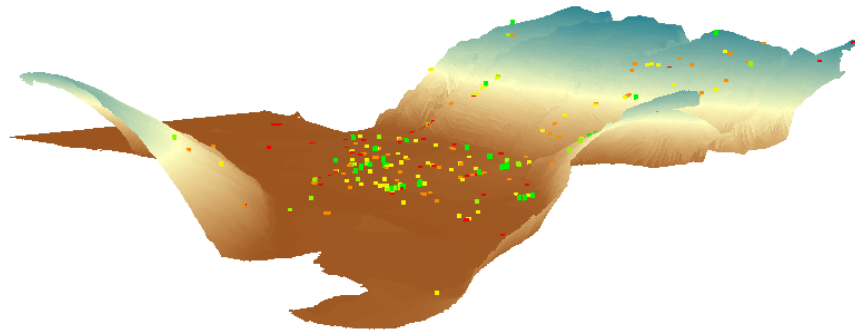


Figure 6: Ithaca DEM in 3D with Trees extruded.

Question 7.

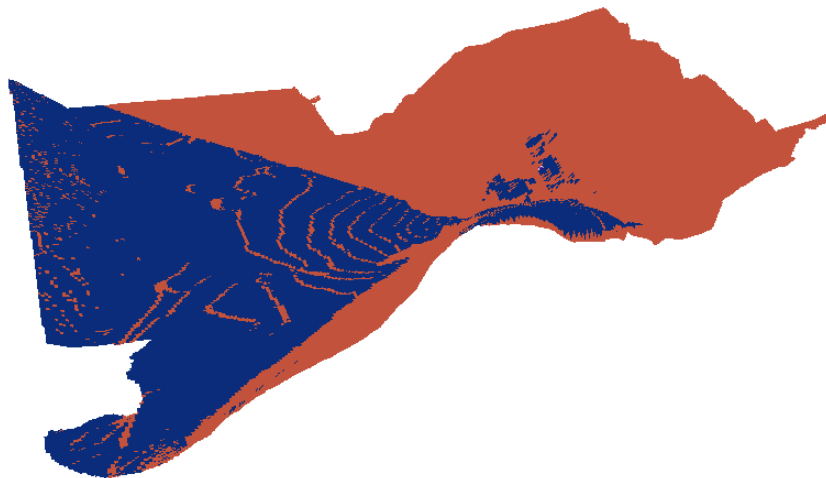


Figure 7: Ithaca DEM 3D Viewshed.

Question 8.

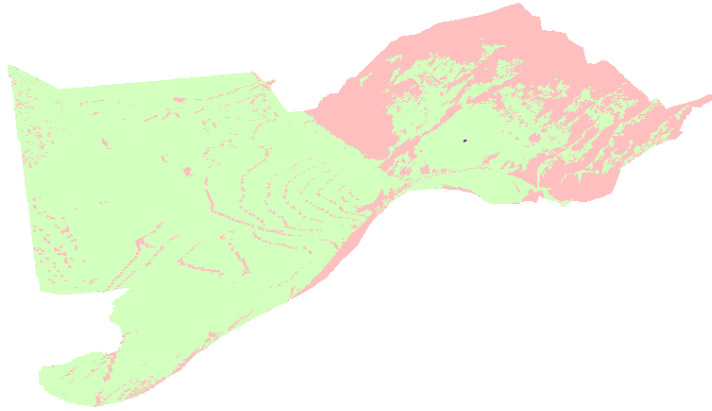


Figure 8: Ithaca DEM 3D Visibility Analysis.

Question 9.

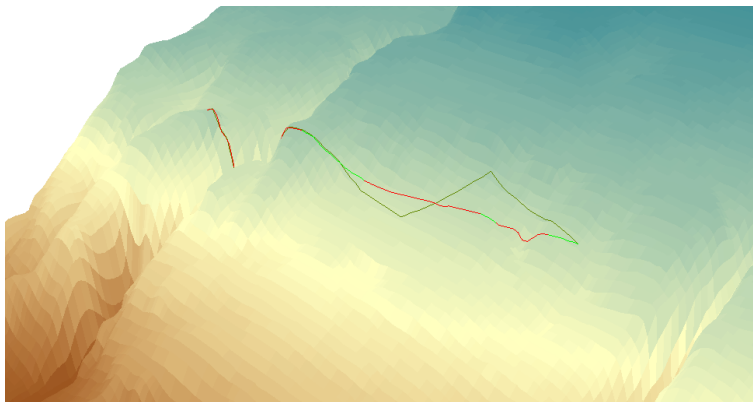


Figure 9: Fishing Trail Line of Sight.

Question 10.

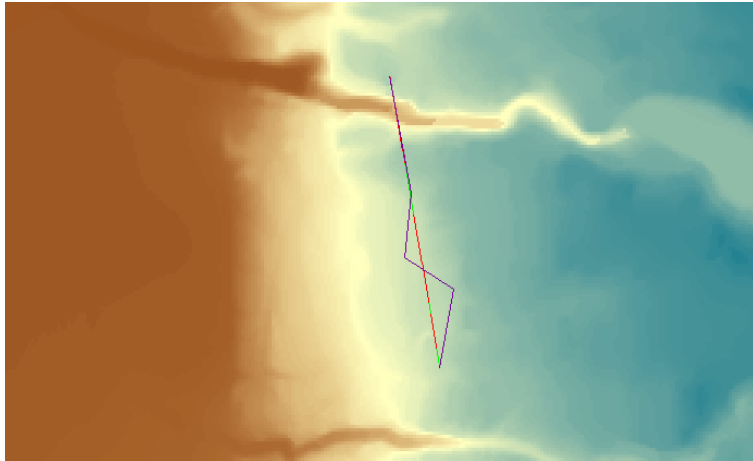


Figure 10: Fishing Trail Line of Sight (ArcMap).

Question 11.

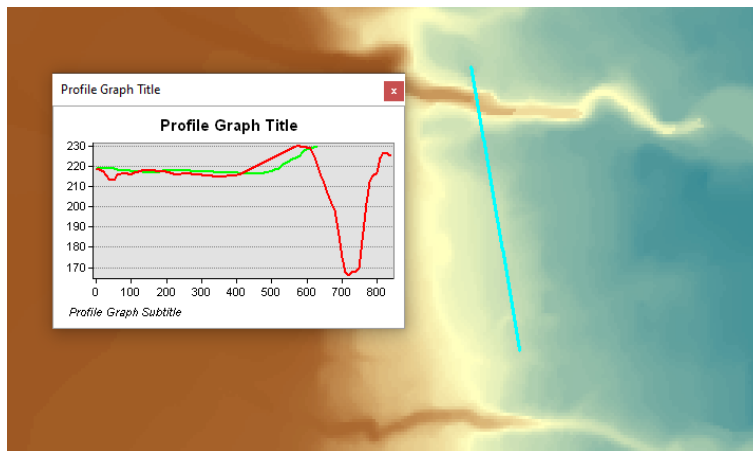


Figure 11: Fishing Trail Line of Sight Profile Graph.

Question 12.

	Height	Reference	Area (m^2)	3D Area (m^2)	Vol (m^3)
Scenario 1	116.00	ABOVE	15619700	15839220	648294575
Scenario 2	278.00	BELOW	15619700	15839220	1882096775
Scenario 3	195	ABOVE	4104404	4180081	157730907

Table 1: Table of Surface Volume Calculations

Question 13.

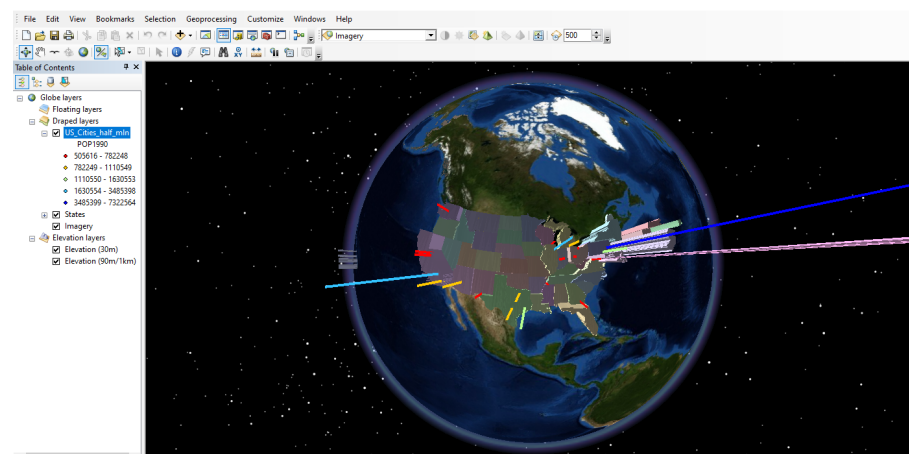


Figure 12: 3D Visualization in ArcGlobe.