

Discovering GIS and ArcGIS
Chapter 15

Name: _____

Question 15.1: Which land-cover type (i.e., open water, pasture/hay, etc.) is the most prevalent in Hocking County?

Question 15.2: Which land-cover type (i.e., open water, pasture/hay, etc.) is the least prevalent in Hocking County?

Question 15.3: How does the hillshade help in visually examining the landscape (in terms of seeing the hills, valleys, and flat areas in the county)?

Question 15.4: Where, spatially, are the least-steep slopes in the county located?

Question 15.5: Examine the hillshade in relation to the slope raster. What kinds of areas are those areas with the least-steep slopes in the county (i.e., your answer to Question 15.4)?

Question 15.6: What direction is the steepest slope facing at the Logan Dam location?

Question 15.7: What is the degree of slope at the Logan Dam location?

Question 15.8: Hocking County Hospital cannot be seen from Logan Dam. What (specifically) is in the way? (*Hint:* You may have to turn on the NLCD or 3DEP layers to answer this question.)

Question 15.9: Can Hocking County Fairgrounds be seen from Logan Dam?

Question 15.10: Examine the information on the Profile Graph. At what elevation is the Dam? What is the elevation of the terrain feature blocking your immediate view of the Fairgrounds?

Question 15.11: What land-cover type on the terrain surface is blocking your immediate view from the dam?

Question 15.12: You still cannot see the Fairgrounds from a 5-m-high observation platform at the dam, but more of the terrain is now visible. Based on the information on the LOS and its Profile Graph, what can you now see that you couldn't see before?

Question 15.13: What is the minimum observation platform height required to see the Fairgrounds from the Logan Dam? (*Important Note:* This should be the height of the platform itself—e.g., a 15-m-tall platform—not the height the platform will be above the vertical datum.)

Question 15.14: What is the percentage of the area within the boundaries of Logan that can be seen from the height of the platform? (*Hint:* Use the histogram to find the total number of cells that have a 0 or a 1, then determine the percentage of the whole that can be seen.)

Question 15.15: Why can the whole of Logan not be seen from the height of the platform? (*Hint:* You may want to refer to both the viewshed results and your final Profile Graph to answer this question.)

Step 15.9:

Print a layout with the features listed here.