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GEOG/WILD 1800
Final Project – Identifying the most remote location in Cache County

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The Basics: Your task is simple: utilize the bevy of mad GIS skills you acquired during the semester to identify the most remote location in Cache County.

Lab objectives and skills:
1. Apply spatial reasoning and data awareness to perform a sophisticated spatial analysis
2. Use GIS problem solving skills
3. Troubleshoot GIS problems and obstacles
4. Present your analysis in a comprehensive and articulate form.

Data Provided:
5. Cache_municipalities (UT AGRC)
6. SGID93_BOUNDARIES_Counties (UT AGRC)
7. SGID93_DEMOGRAPHIC_CensusBlocks2010 (UT AGRC)
8. SGID93_TRANSPORTATION_RoadsTIGER2009 (UT AGRC)
9. SGID93_LOCATION_ParksGNIS (UT AGRC)
10. SWReGAP Landcover grid (earth.gis.usu.edu/swgap/landcover.html)
11. Cache_DEM (UT AGRC)

Additional data can be downloaded from many online sources. Use the link below to visit the University library Data Source page. There are tabs along the top with links to various GIS data sources. http://libguides.usu.edu/c.php?g=52417&p=338349 You can also google "free GIS data" with some other key words to limit your search.

Getting Started:

Think about what makes an area remote; is it distance from civilization? How do you define civilization? Is proximity to a dirt road more remote than a paved road? Does nearness to high density housing versus nearness to one isolated house impact remoteness? How about the terrain and land cover? If the terrain is steep, rocky, and difficult to traverse, does that make a location more remote than if the landscape is flat and grassy?

You will define remoteness. You can work within the constraints of the data supplied to you or retrieve additional data to round out your definition.

The steps of the analysis are up to you. There is no right way to resolve this remoteness question and it is likely that everyone will identify a different location(s) as the most remote in Cache County. *Your grade will reflect the sophistication and complexity of the analysis you choose to perform as well as the professionalism in your results presentation.*

Be sure to evaluate your results as you go. We will be looking at your ability to test whether you've used the tools correctly.

Hints:

Think about and report correct units and significant digits. You may need to run a tool several times, changing inputs (take notes). Predict outputs as best you can.

Capture screenshots of your process as you work. A well captioned screenshot goes a long way convincing us that you understand your process.

What to turn in:

1. One report walking through the steps of your analysis. (50%)
    a. Think of this like lab instructions. You should be able to hand this to someone who could follow your steps and recreate your results.
       In the report include:
    b. Screenshots illustrating critical steps of your analyses (more than one will certainly be necessary)
        i. Cropped to data extent, expanded to fill page
        ii. Captioned with full description and data credits
    c. Explanation of your process, descriptions of your tool inputs, details regarding threshold values or other tool variables when appropriate.
    d. Text laying out the set of rules defining 'remoteness'

       i. Rules should be concise, organized, well thought out, specific

      ii. Relate rules to data used

2. *At least* one formal map effectively displaying remote location(s). (50%)
   (This is not a map displaying the steps or outputs of your analysis.)
   a. Context
      i. Does the title tell us what the map is demonstrating?
      ii. Can the viewer determine clearly what is being presented?
      iii. Include only data layers as they inform the final results
      iv. Informative base layers (inset maps showing important details or effective use of locator maps will be evaluated)
   b. Cartography
      i. Hierarchy
      ii. Alignments
      iii. Deliberate and intuitive symbology
      iv. Effective use of map elements
      v. Required elements

Grading guidelines:

Complexity of analysis will be taken into consideration.

- If you do the minimum required you can receive a *maximum* of 85%. But the analysis must be wholly convincing, well documented, and your results products professional, effective, flawless (to achieve 85%).
- Performing multi-layered analyses (as you did in the yurt lab for example) can earn you additional points.
- **To earn the maximum available points**
  o Download additional data, introduce new tools, include a digitizing component, create composite layers (the possibilities are endless).
  o Your presentation must be effective, deliberate, and flawless.
  o Your screenshots should clearly demonstrate the use of each tool and be convincing that you applied tools logically.