

03 Lab Problem

Community-Based Planning or Planning for Communities?

On September 9, 2016, the [Mad River Valley Planning District](http://www.mrvpd.org/) (MRPD) contacted the Geography Department to inquire if we could help them with a GIS project. Here's what the Executive Director said:

"The MRV has the need for commuter lots. Thankfully, the VTTrans has an established [Park-and-Rides Grant Program](http://vtrans.vermont.gov/highway/parkandrides) focused on supporting local communities to develop small municipally owned and maintained Park-and-Ride facilities. Over the program's thirteen years, two have been developed in the Mad River Valley (Warren Village and East Warren). While these are important, they are on the far end of the Mad River Valley. There's a need for additional facilities.

"An inventory of potential commuter lots could provide the foundation and support necessary for the MRV's selectboards to be prepared for the next round of Park-and-Ride grant funds."

Here is the [Scoring Form](http://vtrans.vermont.gov/sites/aot/files/highway/documents/ltf/2017%20ScoringForm.pdf) provided by the state program to evaluate the suitability of parcels for development through this program.

This week, we will focus on two of the criteria:

- (1) Site Development
- (2) Sight Distance

Your goal for this lab is to create a single layer that reports the combined score of these two criteria for each parcel in the planning district.

Tasks

We thought through a plan for the Site Development problem in lecture. In lab, you will need to think through a plan for the Sight Distance problem and then also plan how to bring the two criteria scores together in a final answer.

To help you plan the Sight Distance problem, try thinking about the following tasks:

- (1) Focus on locations within 50 meters of road.
- (2) Find average visibility of locations within 50 meters of a road for each parcel. A viewshed layer has already been made for you.

(3) Score each parcel according to the scoring sheet, where 0 = poor visibility, >0 and <=2 = good visibility, and >2 = excellent visibility.

Data

You can access the data for o3lab through the course data page ([go/gisisfun \(http://geography.middlebury.edu/GIS/\)](http://geography.middlebury.edu/GIS/)).

Flow

- (1) Working in small groups (2-3 people), please develop a plan for solving this problem without executing any of the tools in ArcGIS as a means to check your plan as you develop it.
- (2) When you feel good about your plan, talk through it with an instructor.
- (3) Implement your plan one step at a time. Be critical about the output of each step. Does it look like what you were expecting? Try to troubleshoot as you go rather than waiting until the end.
- (4) When you finish implementing your plan, please show your results to an instructor.
- (5) There is no check-up this week because our first exam starts on Thursday. If you have extra time at the end of lab, please use this to re-take a previous check-up or to ask for clarification on any material we have covered so far.