GIS Project 2: Site Selection

Purpose: Here you use a variety of geospatial data sets, data manipulation tools, and GIS analysis tools to determine the most suitable locations for a new industrial park.

You are a team of GIS Specialist working for the City of Westfield Planning Department. The major wants to stimulate the local economy by creating a new industrial park for Bio-Tech industry based on 3 criteria:

1. The parcel has to be at least 10 acres in area.
2. The parcel has to be at least 100 feet from any wetland or water body.
3. The parcel has to be already industrial or commercial zoned to avoid a contentious rezoning process.

Prepare a meaningful map showing the suitable parcels, the industrial or commercial zoned sections, the roads, and the city limits. Your map can show only features within the Westfield city limits!

Bummer! You just got laid-off after you finished the project for Westfield!

One piece of good news: the town/city of _____ in Western Massachusetts hired you on a part-time basis without benefits to conduct the same site selection project you just completed for the City of Westfield. Luckily you don't have to re-invent the wheel here and you can use a similar approach as you just used for Westfield. That's good because you have to work a second job at night…

This project sounds easy…but the devil is in the details, especially when it comes to translating the three simple site selection criteria into an actual ArcGIS analysis. Create a flowchart to guide your analysis, but trial-and-error can also be useful when exploring options and tools – always critically evaluate your selection results to ensure that you really get what you need!

Mapping Details

- Here you conduct the same analysis twice: once for Westfield as a group and a second time for another city/town in the area on your own.
- Choose between Chicopee, Holyoke, Springfield, West Springfield, Northampton, or Easthampton as your second city or town.
- The data layers, methods, and analysis should be similar or even identical, but the results will be different. Organize you data as a file geodatabase.
- Include a base layer from ArcGIS Online that does not distract from the function of your maps.

Analysis Questions (for each city/town)

1. How many parcels match your site selection criteria?
2. As a regional planner, which of the parcels would be the most or least suitable for a Bio-Tech Industrial Park? Why?
3. What additional site selection criteria could or should be incorporated into the analysis? Why?
4. Given the need for >10 acres – what other options exist to site this Bio-Teach Industrial Park?
5. You just performed this site selection analysis for two cities/towns – 349 more remain in Massachusetts. Is there a way to make this analysis 'portable' and more-efficient?

Deliverables

A map and a report for each city/town – the details are up to you, but here are some parameters to follow:

- Consider your audience when designing the map and preparing the report – the mayor, select board, planning board, etc.
- What information would these folks need or appreciate on the map?
- Present the results of your analysis, in addition to the map, also as a table with relevant attributes.
- What level and detail of background information and methods documentation do you need to include in your report in case there is a law suit and you are called before a court of law?
- Include your flowcharts as part of your project reports.
- Post your maps and reports on your blog or website.
- Due Date: Tuesday, 15 October 2013 at the beginning of class.

➔ *Contact me for help or clarification of this project or my expectations as needed.*