

## EXERCISE 2:

## ADDING GRAPHICS, SUMMARIZING CLUSTERS AND QUERYING DATA

In this exercise you will apply skills you have learned previously to add graphics on top of your current map, summarize industry cluster information for custom region, and perform industry cluster data query. This time we will focus on a custom region in South-Western corner of Indiana (SWI Region or SWIR) which includes the following seven counties: Gibson, Dubois, Pike, Posey, Spencer, Vanderburgh, and Warrick.

## Step 1 : Draw outline of the custom region and add label

1. Using *Zoom to State* tool, navigate to Indiana and further to the south-western corner of Indiana using navigational controls in the top left corner of the map viewer. Using the pan map mode position the area in the center of the map viewer so that all counties of the region are visible on the map. Keep topomap as your background as it provides county boundaries and names. Also, you can turn off a map of counties at this time (“Administrative” layer in the layer list).
2. Using skills you have learned during webinar and from tutorials (*Draw and Measure* tool) draw a polygon or line around SWIR counties, set the color of line to red and thickness to “4”. Remember if you use polygon option you will need to set Alpha value to “0” to make polygon background transparent.
3. Next, add name to your region (e.g. “SWI Region”) using the text option of *Draw and Measure* tool.



Q1. Please print the PDF map of the region with topomap as a background and graphics on top using the following print settings: Letter sized, scale 1:1,000,000 (you may need to pan your map to better center the region on the printed map). Note that pop-up windows will not be printed.

### Step 2 : Calculate industry cluster employment for the custom region

1. Minimize *Draw and Measure* tool pop-up window to preserve graphics on the screen. Use Industry Clusters Summary tool to create a summary of employment for 23 clusters for the entire SWI Region.

Q2. Which industry cluster has the largest number of people employed within SWI Region? Find and turn on the map of that cluster in the layer list.

Q3. Which county within the region contributes most jobs to this cluster?

### Step 3 : Query industry clusters data

1. Zoom to the entire state of Indiana, turn on a map of counties (“Administrative” layer in the layer list) and turn off any cluster maps if you still have them displayed.
2. Open *Data Search* tool. Switch to text search mode by clicking on the icon in the top menu of the tool popup window, select “Forest & Wood products, 2010” from the “Search layer” drop-down list, change “Search layer field” to “Search by criteria” and enter FORSTWOOD\_EMP10 > 2000 in the search string. Do not hit “Search” button yet.
3. Next, switch to graphical search mode by clicking on the icon in the top menu of the tool popup window. Pick “Select by polygon” selection method and check “include text query in selection criteria” check box. Click “Search” button (while still in the graphical search mode). You should see a few counties selected within Indiana, and table with search results pops up.

Q4. How many counties in Indiana have more than 2,000 jobs in Forest & Wood products cluster?

Q5. Which of those counties is within SWI Region (Hint: turn on *Draw and Measure* tool: you should still have region outline available)?

Q6. Export table with results to csv file and send it along with PDF of map (Q1) and your answers to Andrey at [azhalnin@purdue.edu](mailto:azhalnin@purdue.edu)

THANK YOU!