

Lab 11: Portland Layout

• Objectives of this Exercise

Building on your experiences mapping various aspects of Portland's geography, complete a four panel layout showing a reference map of Portland, a transportation locator map, a choropleth map and residuals. This is the lab in which you should make all the corrections that your TA has asked for in grading your labs during the past weeks.

• Scenario (differs from previous Portland labs)

You work for Portland Oregon's City Council, which oversees planning for the Tri-Metro Area. The audience for your map is the City Council and audience, at their upcoming Strategic Planning Meeting, discussing population projections in the context of impact on natural resources and recreation.

• Setup your files

As happened last week the *results* folder created for the previous lab will become your starting point for this week's lab. In previous weeks we showed you what your disk should look like. Do the disk management this week on your own.

Your final layout should contain four panels:

- A panel showing the natural resources of Portland, Including appropriate labeling of streams, as well as parks and summits in the Tri-Metro Area;
- A panel showing transportation infrastructure including (at a minimum) major roads and arterials, and the Portland International Airport, all labelled;
- A panel showing a choropleth map of census tract populations for the entire Tri-Metro Area; and
- A panel showing residuals of the population classes for the entire Tri-Metro Area.

Depending on your final map design, and your experience with past labs, you can either import your previous work into the final map, or re-create these panels. If you copy and paste data frames from previous labs into your .mxd, consider data management. You will need all of your data to be referenced from the lab 11 geodatabase. If your disk management has been correct, all the files you need should be in the geodatabase once you copy and rename it from the Lab 11 results, and all the data frames should be present in the final .mxd. If you need to reconstruct data layers, they can be found in previous labs' geodatabase, or reconstructed from *Portland_data* geodatabase. Ask for help with disk management if you need it.

• Create a Final Planning Map Layout

Your four panel layout must fit onto a 12*16 inch display. Scale of each panel, panel size and panel footprint can vary according to your design, but the page size is constrained. However, the page orientation and panel arrangement are up to you. You will need to choose what mapping scale to use (and whether the scale should be the same across all panels). Likewise, you decide what layers to include in each map panel, beyond the content specified above, and what layers to include in your legend. Logically, natural resources include the major rivers (labelled), streams, vegetation, terrain, and parks.; the transportation includes roads and the airport; and thematic layers include population data or residuals and might include the largest rivers.

We expect to see a complete and polished map layout. Each panel should have a clear title explaining its content---include your classification method and GVF value for the choropleth map. Also include a scale bar (or multiple scale bars if appropriate), an informative umbrella title and a readable legend for thematic data and possibly for some reference features. Keep in mind the design principle that a good reference map design labels features in the map; and this can reduce the size of the reference map legend. Your thematic legends should be clear and logical, with no feature class names. All map labels and text should be legible at 100% display and should follow the conventions discussed throughout the semester.

We strongly urge you to review the comments from your previous labs before starting this project.

Be sure to save your work regularly and double-check to ensure that your map has relative paths set and sources the appropriate layer files in their proper locations.

When you are finished, save your ArcMap document as *layout_final.mxd*. Then, export your map as a JPEG with 150dpi and name it *lastname_layout.jpg*.

• What to Hand

It is expected that you have set up your preliminary map layout, arranged panels appropriately on the page, adding titles, legend/s, scale bar/s; and have begun to address the visual hierarchy within each panel and among the panels (see rubric below for specifics).

Your final layout will be worth 20 points, distributed as follows.

Graded Item	Description	Point Value
Data Management	<ul style="list-style-type: none">Relative paths are properly setOnly the lab 11 results folder and geodatabase are handed inMap is exported to a 12*16 inch page layout at 150 dpi	3 pts
Legend Design	<ul style="list-style-type: none">Legends are legible, consistent, and clearly associated with respective panels.	2 pts
Visual Hierarchy	<ul style="list-style-type: none">Label and layer visual hierarchy is appropriate in each panelColor use is appropriate and cohesiveThe map symbology and text is clear and legible at 100% display size (12*16 inch)Labels associate readily with features, and neither obstructing nor obstructed by other features	6 pts
Balance	<ul style="list-style-type: none">Is the overall design cohesive?Is there appropriate white space?The map content is uncluttered, and also not too sparse	4 pts
Panels	<ul style="list-style-type: none">Layout, including panel size, arrangement, and geographic footprint is logicalContent of each panel is correctIs the visual hierarchy appropriate among panels?	4 pts
Marginalia	<ul style="list-style-type: none">Title and scale bars are present and are:<ul style="list-style-type: none">Legible and consistentClearly indicate what your panels display and how they relate to each otherName and date presentNo north arrow shown	1 pt

Hand in your zipped *lastname_lab11 results* folder before noon on December 10th.