

Problem Set 6

April 5

Links to Pymol and the Protein Data Bank

<http://pymol.sourceforge.net/>

<http://www.rcsb.org/pdb/>

Post on the MIT server about your experiences with the following land cover assignment by Sara Friedman (or if you can't get your computer to handle them -- about another visualization program you have used), being sure to bring in at least one concept or thesis from Edwards or Schienke. extra points if you try both experiments.

Start an internet browser - make sure you know how to enable pop-ups (on IE, hold Control key down).

Go to <http://seamless.usgs.gov/>

Click on the United States map to "View and Download United States Data"

It may take awhile to load. Be patient.

When you move the mouse onto the map, cross-hairs appear. Click and drag to outline an area you wish to find images of - for example, your hometown. When you draw your box, the map zooms in to the extent of the box. Continue zooming in until you can see the name of your town and some neighboring towns.

On the left of your screen, you can see two tabs: Display and Download. Play around with the Display tabs to see what kinds of images are available in your area at the resolution of your map.

You may find that you are too zoomed-in to see some of the images very well. Above the Display and Download tabs is a Scale bar. Make sure you are a little to the left of the middle of the scale. Click on the zoom-out or zoom-in icons around the bar to change the scale.

Click on the Download tab. Deselect the elevation data and any other preselected data you don't want. Click on Land Cover -> NLCD 1992 Land Cover.

To the left of the map on your screen, see Zoom, Query, Download, Documents with little icons under each heading. Under the Download heading, click on the arrow/box icon.

Now when you select your box, you will be selected the areal extent of your downloaded image.

A screen pops up showing the files for the data you selected. (Sometimes this doesn't work. Make sure you have selected the right dataset on the Download tab and you are at

a reasonable scale. Worst comes to worst, start over.)

Click on "Download." A screen appears telling you the progress in filling your request. At this point, enable popups and make sure popups stay enabled throughout the extraction and download process. Otherwise it will fail and you have to go back and send the request through again. The file comes up as a file named <string of digits>.zip. Save the zip file to disk.

Inside the zipped file is a *.TIFF image. This kind of file can be viewed with standard image viewers. Extract the tiff and take a look. Can you recognize your local woods (green), lakes and waterways (blue), and developed areas (pink/red)?

To learn about where the data comes from (satellites and models) and how the classifications (i.e. colors) are assigned, check out:

<http://landcover.usgs.gov/prodescription.asp>