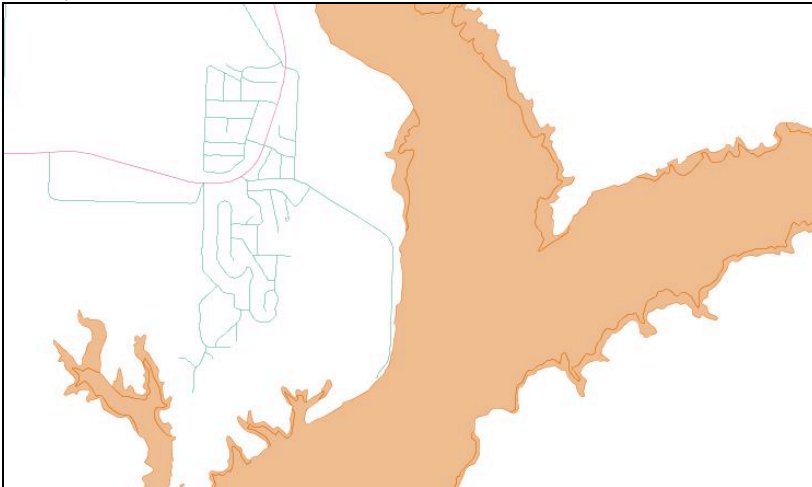


Lesson 3: Digitizing, Labeling, using Map Web Services.

A. PREPARE WORKSPACE

1. Go to CDOT and download the Archuleta shapefile set.
2. Download zip file TO DESKTOP. Then unzip the files to a folder on the desktop.
3. Open uDig. Create a new map (FILE>NEW MAP) and add layers (LAYER>ADD>FILES). Add ONLY these layers (use Ctrl Click):
 - *LROADS.shp
 - *HIGHWAYS.shp
 - *LAKES.shp
 - *cnty.shp
4. Change Projection to NAD 83 UTM 13N
5. Rearrange the order of the two layers so "cnty" is on the bottom (select the layer on the panel on the left, then use the arrow key), then LAKES, then Highways,Roads on "top"
6. Turn off the "cnty" layer (Uncheck the check box in the layers panel on the left).

Next, **ZOOM INTO ARBOLES** to this view:



B. IMPORT WMS Satellite Layer

1. In the "Catalog" tab on the bottom panel, select "JPL Global Imagery Service."
2. Click the + sign, then scroll down to "WMS Global Mosaic, pan sharpened."
3. Select "WMS Global Mosaic", then DRAG it onto the map. After a few moments, the map will connect to the web service, and load a satellite image onto the map.
4. Move the WMS layer to the bottom of the stack, using the layer panel on the left.
5. Note how Navajo Lake is actually much smaller than shown on the CDOT layer, by turning the LAKES layer on and off. We are going to create our own digitized Navajo Lake shapefile next.
6. DELETE the LAKES layer, by right clicking the layer, and select "Delete"
7. "cnty" layer should be unchecked. Keep it unchecked, but select it.
8. Select the TABLE editor on the bottom panel. You should see one feature listed.

C. DIGITIZE NEW FEATURE

1. With the TABLE editor open, the "cnty" layer selected but unchecked, click on the "Create Polygon Geometries" tool on the upper toolbar. You now have to be careful where you click as you are in polygon creation mode. Pick a point at the top of the lake:



2. Now here's the tricky part. Click a succession of points tracing out the lake as seen in the satellite photo. At the bottom of the page, just click horizontally across to the other side of the lake (we are only digitizing what we see in the current view). When you are finished, double click. If you make a mistake, double click and you will see a feature appear in the table editor. You can select it, right click and delete it to start over.
3. If you have finished digitizing by double clicking, then click "Commit Changes" which is a arrow icon in the toolbar. The digitized feature will disappear. Why? Because you have the layer turned off in the Layers list on the left. Turn the layer back on. You still won't see the feature we created because it is the same color as the "cnty" feature.
4. We are going to "borrowing" the "cnty" shapefile to create our new shapefile. You should see two features listed in the Table Editor. Delete the "cnty" feature (the original feature), so that only "new0" remains (the feature you just created). Also, click on some other tool (like the "pan" tool), to prevent a click on the map from creating another unwanted feature.
5. Turn off the WMS Global Mosaic, or delete it from the map.
6. Rename the "cnty" layer in the layer editor to "Navajo Lake" (right click the layer>Rename).
7. Change the FILL color of the new layer to blue.

D. LABEL ROADS

Finally, we are going to label the Roads. Select LROADS, then the properties (the "palette"), and check the LABEL checkbox. In the dropdown box to the right of the checkbox, find and select "ROUTENAME". Also change the font to a 8 point font.

That's it for today. You can also change the color scheme and line thickness of the LROADS and HIGHWAYS if you like.

NOTE: the uDIG version we are using does not have a "Save Image" feature (it is a plug-in that you can download, but it only works on the previous "stable" version of uDig, I have discovered. Therefore, if you want to save an image of your work at home, I recommend downloading a free nifty program called "PrintScreen" available from <http://www.gadwin.com/printscreens/> which allows you to easily capture screenshots.