Determining Hydrologic Groups By land use For Small Watersheds

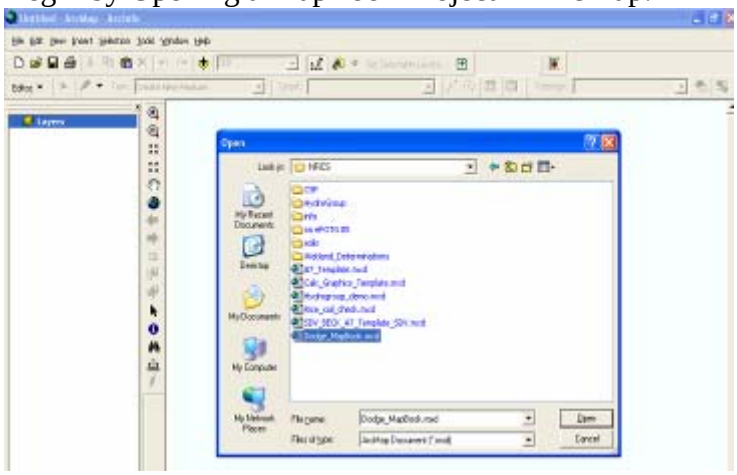
Topics:

1. Define Watershed
2. Intersect with Hydrogroups
3. Estimate acres for Hydrogroups by landuse

Note: These instructions are for use outside of Toolkit. Refer to "Estimating Watershed Hydrogroups.pdf" located in the F:\GEOMGMT_RESOURCES\NRCS\Training\Toolkit\ folder for Toolkit instructions.

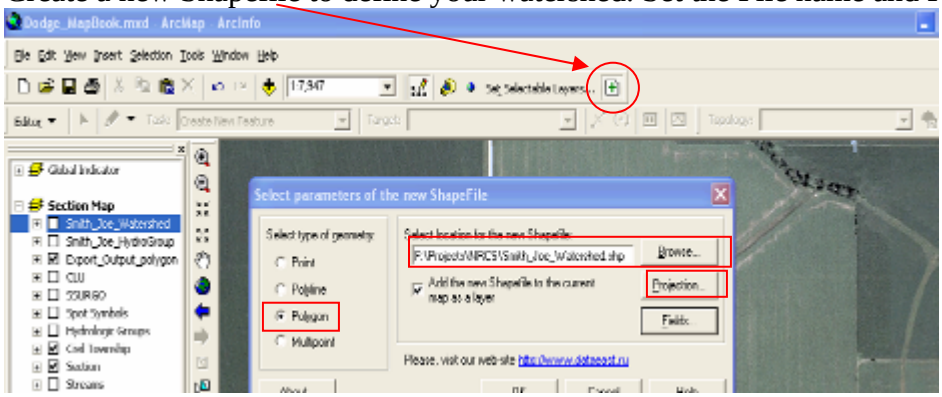
If you are missing any of the tools mentioned below, contact your GIS Specialist.

Begin by Opening a MapBook Project in ArcMap.

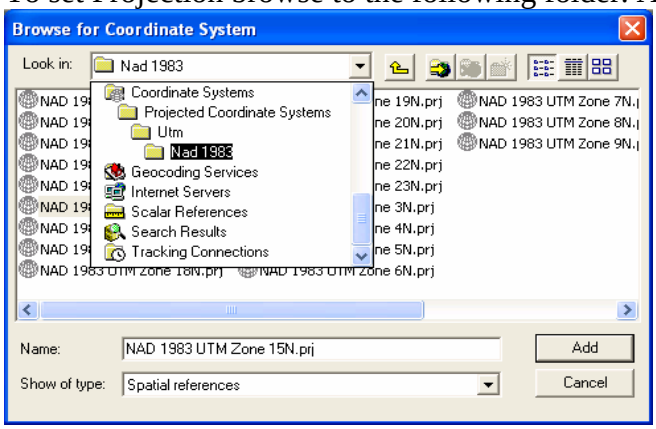


Define Watershed

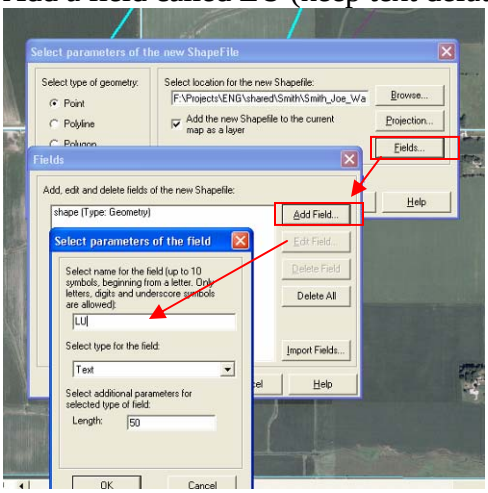
Create a new Shapefile to define your watershed. Set the File name and Projection.



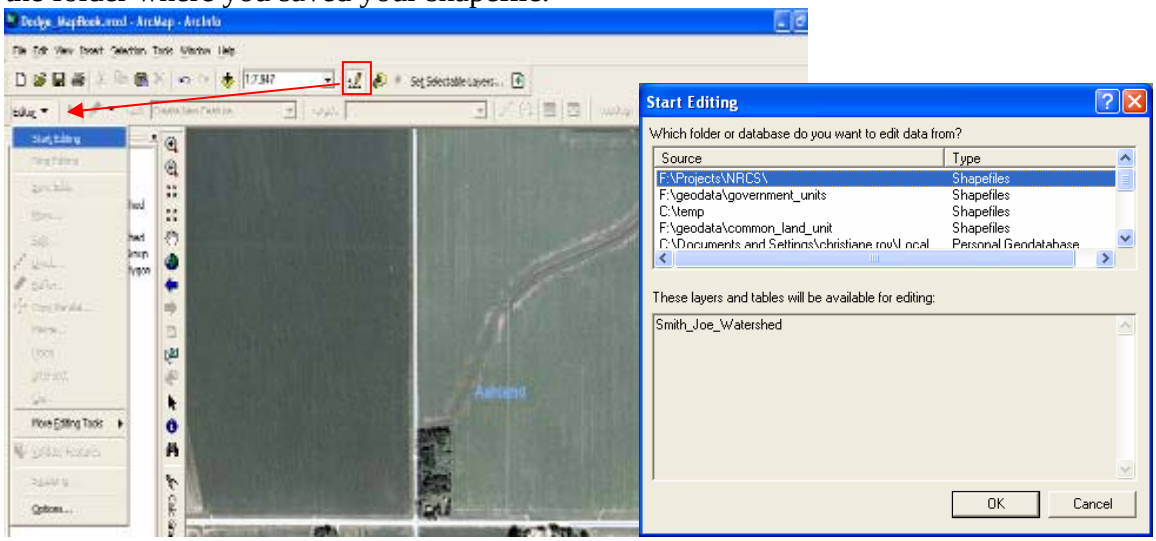
To set Projection browse to the following folder. And select the Zone 15N projection.



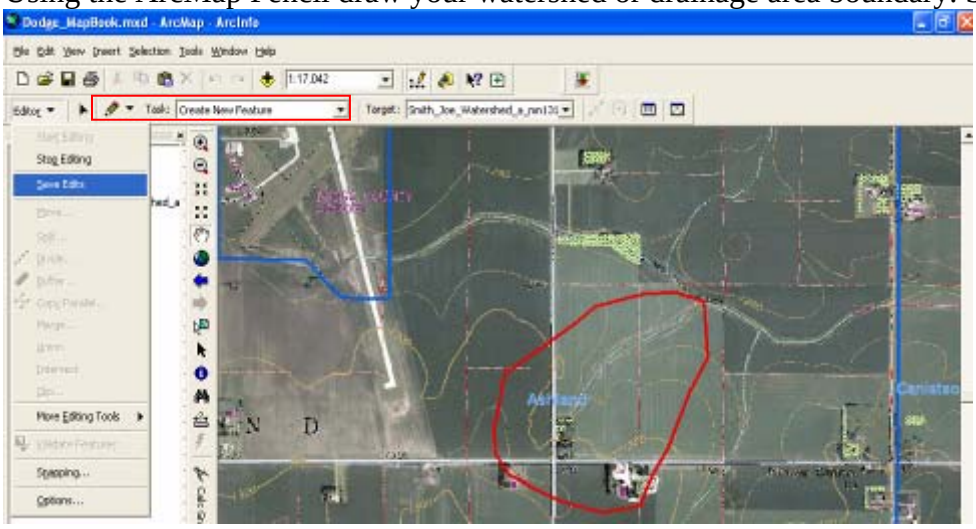
Add a field called LU (keep text default to 50). Then say ok to all.



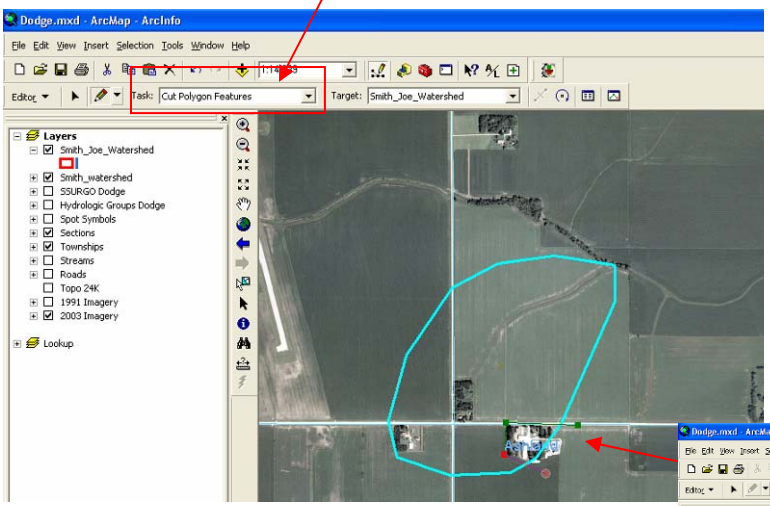
After your shapefile is added to your project, *Start Editing* to define your watershed and select the folder where you saved your shapefile.

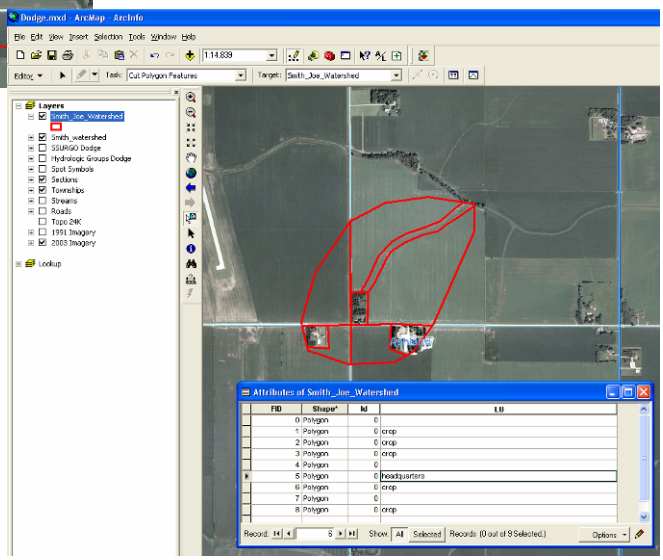


Using the ArcMap Pencil draw your watershed or drainage area boundary. Save your edits.



Change task to Cut Polygon Features. And cut your watershed to define the different LandUse types.



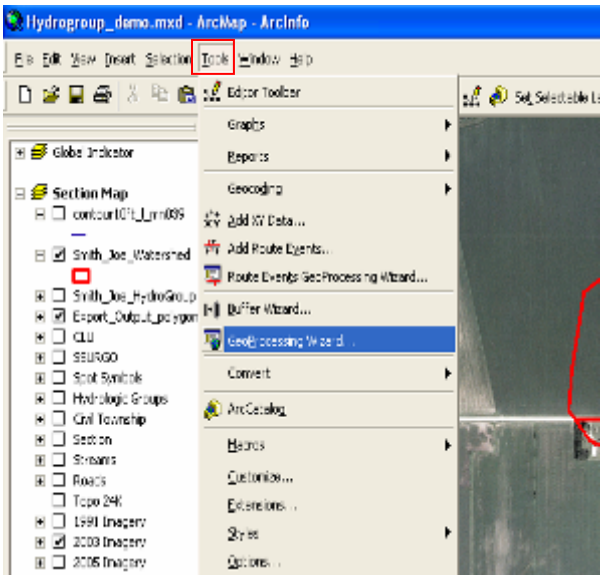


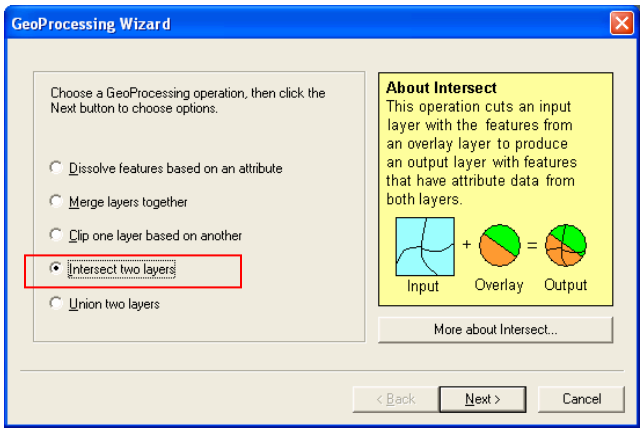
Once and the Land Use are separated, open the attribute table and type in the LU type for each polygon. Save and stop editing.

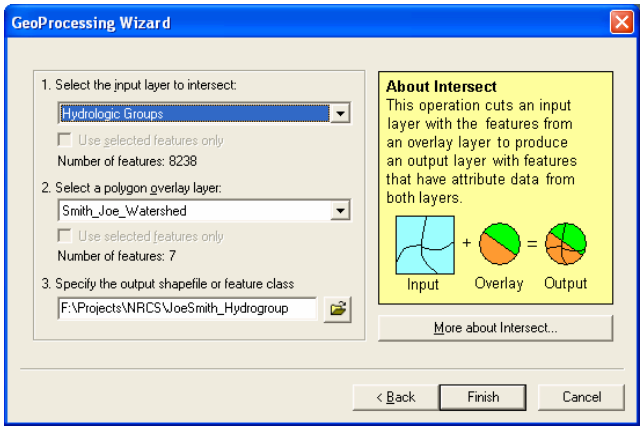
INTERSECTING the Watershed

If the hydrogroup layer is not in your project add from F:\geodata\sols\soil_mnXXX\ HydroGrp_83_mn000.lyr

Select Tools Geoprocessing Wizard with the selections listed below



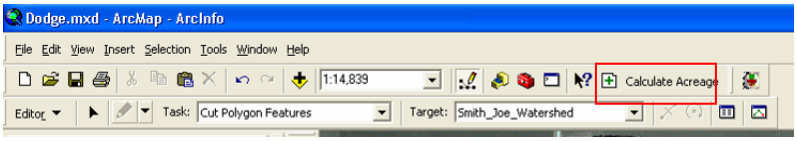




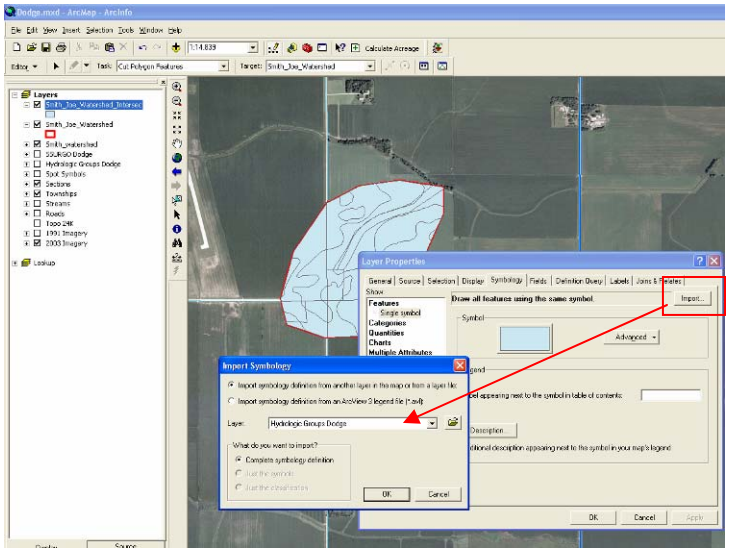
Make sure you change the file name at the bottom where the Hydrogroups will be saved. Example: F:\projects\SWCD\Watersheds\customer name\Smith_Joe_Hydrogroup.shp

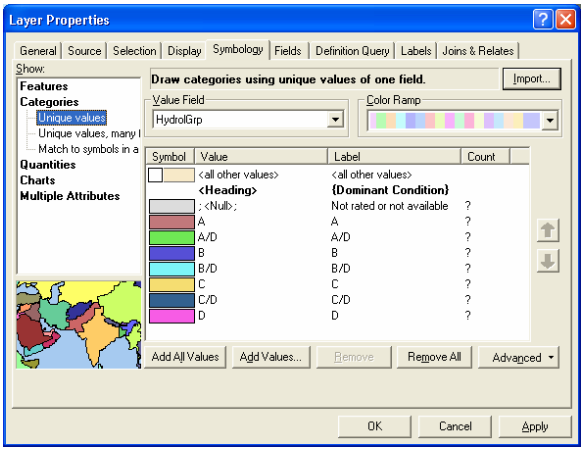
SAVE YOUR PROJECT in the same folder as above.

Use the Calculate Acres button or XTools to recalculate the Acres of your new Hydrogroup layer.



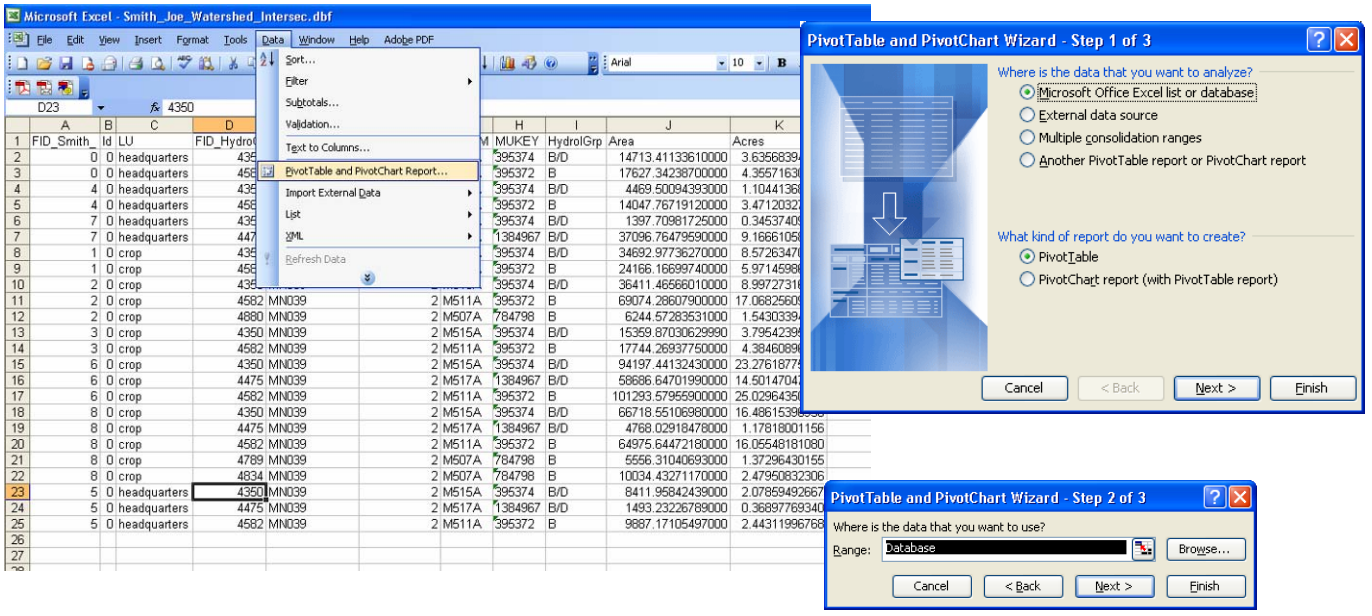
To display your hydrogroup layer with the default Soil Data Viewer color codes, open the layer's properties select Symbology. Click on Import and select the county Hydrologic Groups layer say ok to defaults.



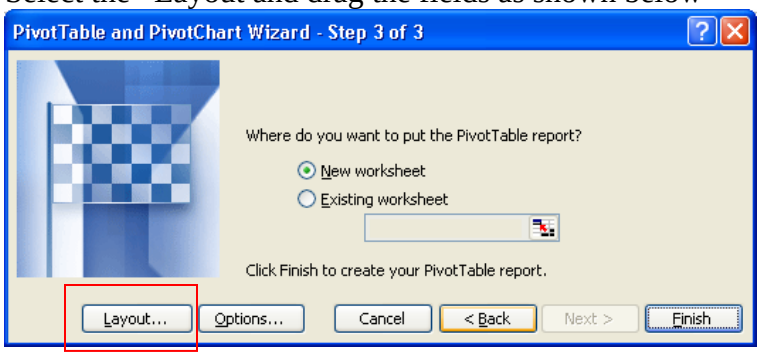


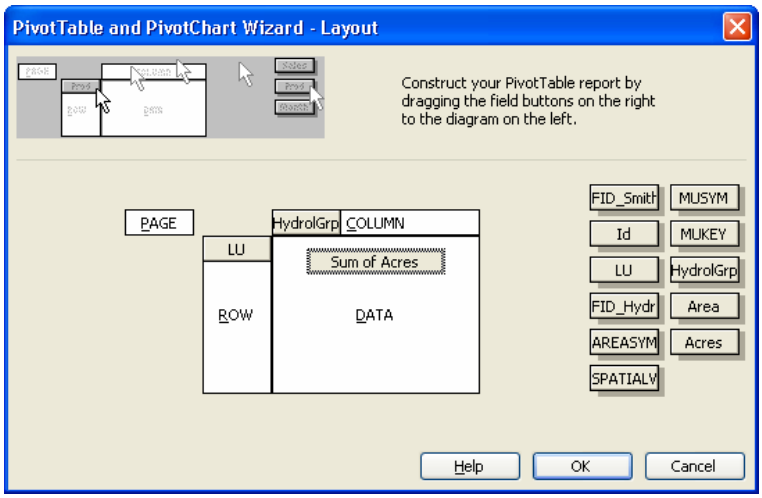
Estimate Hydrogroup in Excel

The simplest way to summarize your values when you have multiple Land Use is to open the Smith_Joe_Hydrogroup.dbf file in Excel.
Select data, Pivot Table, keep defaults.



Select the Layout and drag the fields as shown below





Click finish. A Summary spreadsheet will be displayed.
Example:

Sum of Acres	HydrolGrp		
LU	B	B/D	Grand Total
crop	73.90495681	76.80732403	150.7122808
headquarters	10.27003954	16.69965492	26.96969447
Grand Total	84.17499635	93.50697896	177.6819753

DO NOT save changes to the .dbf
Print the summary. If you want to keep a copy of the report, Select File SAVE AS and save as an xls.