

Department of Forest Resources University of Minnesota
FNRM 3131 & 5131 GEOGRAPHICAL INFORMATION SYSTEMS FOR
NATURAL RESOURCES
Homework 1

Due as stated on the Canvas site.

Beginning Notes, Important:

*Use a browser (i.e. Chrome) on a **Lab computer or your computer** (Mac or Windows) but **NOT via the Citrix virtual Desktop/CFANS Cloud Desktop**; i.e. Start you Chrome, Firefox, Internet Explorer directly from your computer. The browsers within the Citrix virtual desktop/CFANS Cloud Desktop will not allow you to DOWNLOAD data files.*

Once you download the data files to your computer (outside of the Citrix virtual Desktop/CFANS CLOUD DESKTOP), UNZIP the data (if needed) and copy the entire folders to the Citrix Desktop for the homework exercise.

If you have any questions about the MN Geospatial Commons, please use the HELP, it is very good.

Go to the Minnesota Geospatial Commons: <https://gisdata.mn.gov/>

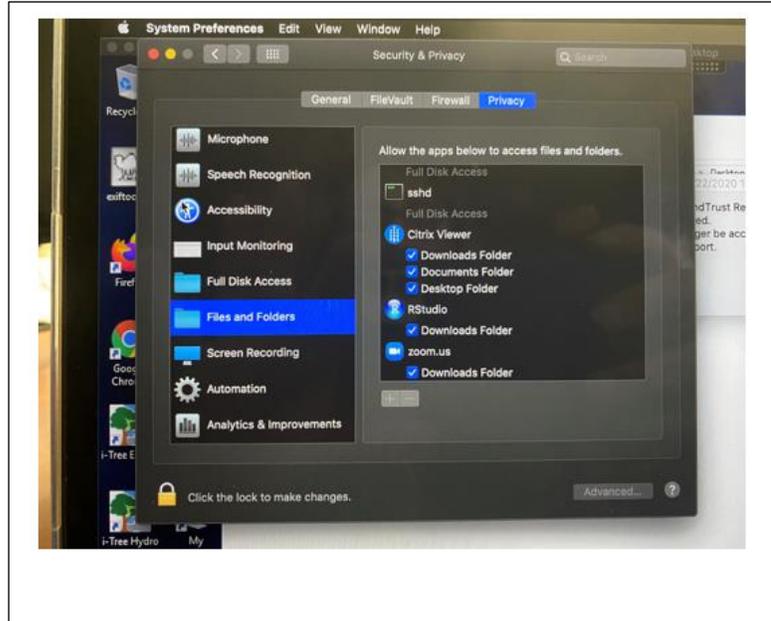
Select data layers on the MN Geospatial Commons that interests you.

Download and if necessary unzip at least 3 data layers for the same an area.

Create a .pdf displaying the 3 layers you chose in ArcGIS Pro (Create a new Map, set layer Properties to meters, add and display your three Data Layers, switch to Print Layout/Composer, add north arrow, legend, scale, title, your name and Export your map as a PDF, submit via the Canvas drop box).

See below for more information.

If using Mac OS, you may not be able to copy from your Local Drives to Citrix Desktop without (on the Mac OS) changing the settings within System Preferences/Security & Privacy. See the three boxes pictured to the right.



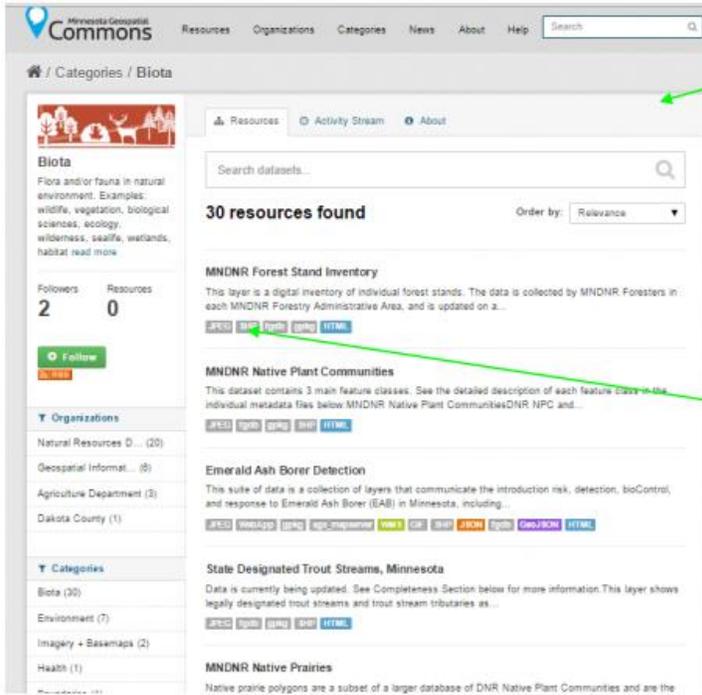
On the Internet go to <https://gisdata.mn.gov/>

The screenshot shows the homepage of the Minnesota Geospatial Commons. At the top left is the logo with a location pin icon and the text "Minnesota Geospatial Commons". A navigation menu includes "Resources", "Organizations", "Categories", "News", "About", and "Help". A search bar is located to the right of the menu. Below the navigation is a large banner with the text "Working Together" and "The Geospatial Commons brings together data from public and private organizations". A blue bar below the banner reads "A collaborative place for users and publishers of geospatial resources in Minnesota".

In the center, there is a "Search For Resources" section with a search input field containing the placeholder text "eg. Water, Counties, Environment, etc..." and a "Search" button. Below this is a "Categories" section with five icons and labels: "Biota", "Boundaries", "Environment", "Climatology, Meteorology, and Atmosphere", and "Economy". A green arrow points from a callout box to the "Boundaries" category.

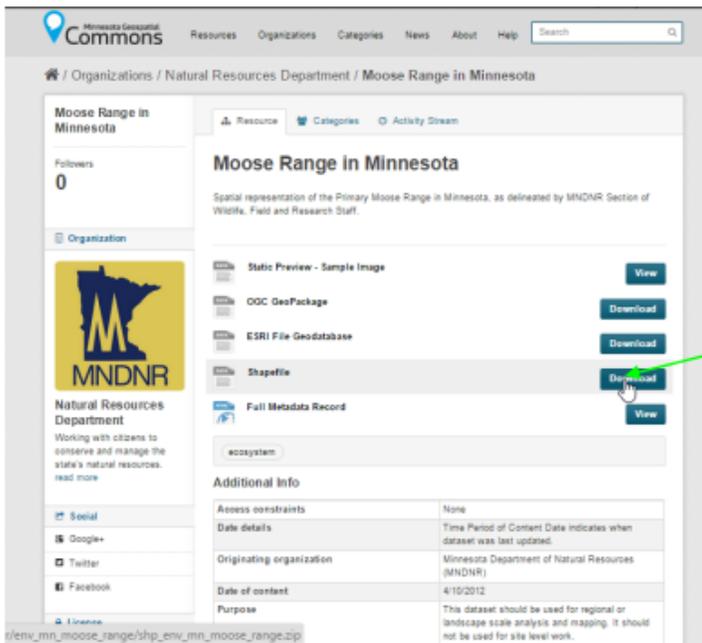
The callout box is a white rectangle with a black border containing the text "Select the a catagory".

At the bottom, there are two sections: "News" with a list of recent events and "Featured organizations" with logos for MNDNR and the Minnesota Department of Transportation.



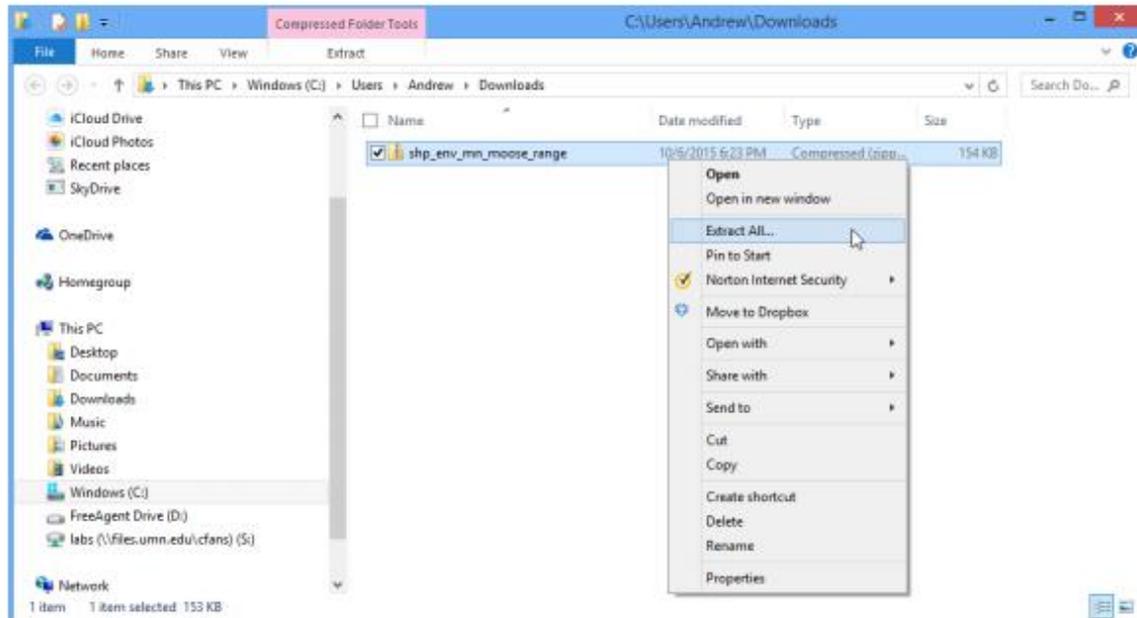
This is what you see next.

1st select a "Available Layer", this is the data you want to download.



You select a data layer and click in the title and it will bring up a detail screen where you can download the SHAPEFILE

Once the file is downloaded, use Windows Explorer to find the file and click on the .zip file and “uncompress” the data; right click and select “Extract All”.



After Unzipping (extracting), transfer the data folders to the Citrix Desktop for mapping. Note, you LOCAL DISK drives are available when in Citrix. Copy and Paste to Citrix Desktop

The data should be ready to open in ArcGIS Pro. Repeat this process for all 3 (or more) of the data layers you want to use for the Homework 1 assignment. All the MN Geospatial Commons data is in UTM 15, NAD83 but sometimes they do not have the projection information included with the data. You should check to see if all your layers have a Projection (NAD_1983_UTM_Zone_15N). If not, use ArcToolbox >Data Management Tools>Projections and Transformations>Define Projection to create the necessary projection file. DO NOT REPROJECT the data, it is already projected correctly, it is just missing the definition file.

Finally

In ArcGIS Pro create a one map with all three layers or three separate maps. Make sure to add Title, north arrow, legend, scale and your name. Export Map to a .pdf or Print the Map to a .pdf and submit on Canvas.

