**Using the PRISM Dataset from Oregon State**

- [**Read about the PRISM Dataset here**](http://www.prism.oregonstate.edu/docs/przfact.html). PRISM data, in a nutshell, is used to estimate climate conditions in mountainous or rural areas where there are few reporting stations. The data format is an interpolated grid which can be used in GIS, based on "...a coordinated set of rules, decisions and calculations designed to mimic the decision-making process an expert climatologist would invoke when creating a climate map."

- To download data, [**go here**](http://www.prism.oregonstate.edu/index.phtml) and click Monthly Data (top left).

- At the top of the next page, choose the product you want (Precipitation, Avg Max, Avg Min, etc).   
- At the top of the table, Switch to Gridded Data. You will get a matrix of data available (green balls indicate final data).   
- Click on one of the green balls. You will get a graphic of the data.   
- At the top of that page, click the link "Download Gridded Data".   
- After you download it you will need to unzip it.

- Next, you will need to rename the file, as per [**these instructions**](http://www.prism.oregonstate.edu/pub/prism/download.html). In summary, if you download a file us\_ppt\_1971\_2000.01, rename it to ppt\_01.txt or ppt\_01.asc). Raster file names cannot be long or have spaces. Also don't store raster data in a path that has spaces (like ...\documents and settings\...).

- Use the import to raster tool in arctoolbox: ArcToolbox -> Conversion Tools -> To Raster -> ASCII to Raster. You want to select float, because with an integer type, "you cannot have fractions or numbers to the right of the decimal place. To store data with decimal values, you will need to use either a float or a double" (from ArcGIS help). You will definitely need numbers to the right of the decimal with precip data.

- According to the metadata, the grids are in a Geographic Coordinate System, World Geodetic NAD1983 GRS 1980. Once you get it imported to a raster, you'll need to define the coordinate system. The easiest way to do this is in ArcCatalog. In the catalog tree on the left, navigate to the folder where your new raster lives and select it. The contents of that folder will be listed to the right (use the contents tab). Right-click on your new raster and select Properties. Scroll down, you will see Spatial Reference "Undefined". Click the Edit... button. Define the coordinate system interactively as Geographic, Units DD.

- Now your data is ready. You can clip it and project just the area you need.