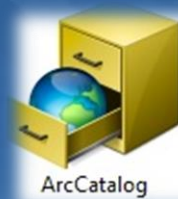
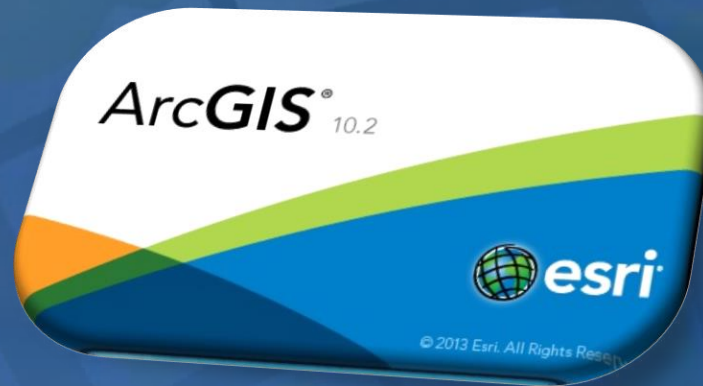


14-МАВЗУ: Excel дастуридаги мавжуд X, Y ва Z ўқларида ётувчи қийматларни маълумотлар базасига импорт қилиш ва қийматлар асосида сирт яратиш..



ArcCatalog



ArcMap



ArcScene



ArcGlobe

DISPLAYING LATITUDE & LONGITUDE DATA (XY DATA) IN ARCGIS

If you have a table of data that has longitude and latitude, or XY coordinates, you can view these data as points on a map in ArcMap. Examples might be school locations, data from a GPS receiver, or a table of violent conflicts.

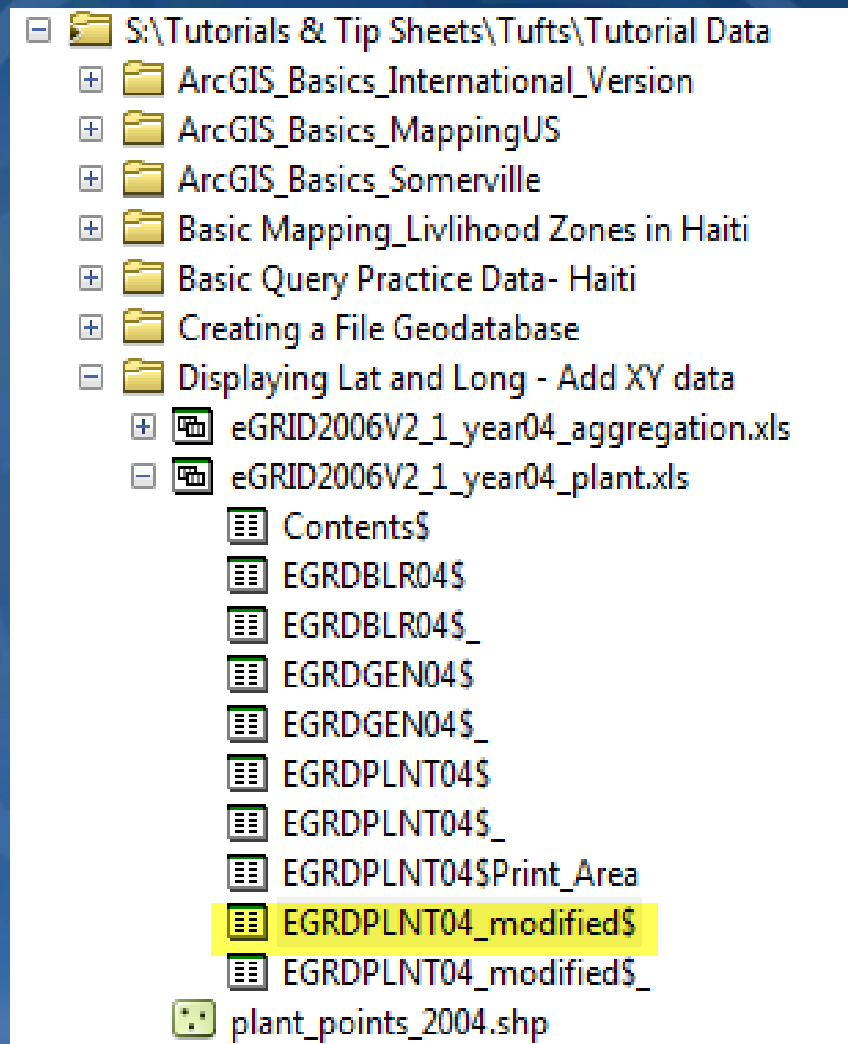
Adding the table first is useful because it allows us to examine the table to make sure it is being read and displayed properly in ArcMap before attempting to map the data.

We are going to use a dataset that is available in the S: drive as well as on our website, where it can be downloaded as a zip file. Follow the steps in the graphics below to add points for all electricity plants in the US based on an Excel file from the EPA called eGRID.

1. To a data, navigate to S:\Tutorials & Tip Sheets\Tufts\Tutorial Data\ Displaying Lat and Long - Add XY data.

2. Expand eGrid006V2_1_year04_plant.xls

3. Pull in EGRDPLNT04_modified\$ into your ArcMap session.



4. Finally, we will add a Basemap by clicking File Add Data .

Add Basemap Topographic.

5. Check that the table loaded properly by opening it. Note the field names where the coordinate numbers are stored. It is important to remember that Lat = Y Coordinate and Long = X Coordinate. These are commonly switched, and will make the data show up in the wrong place!

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Layers

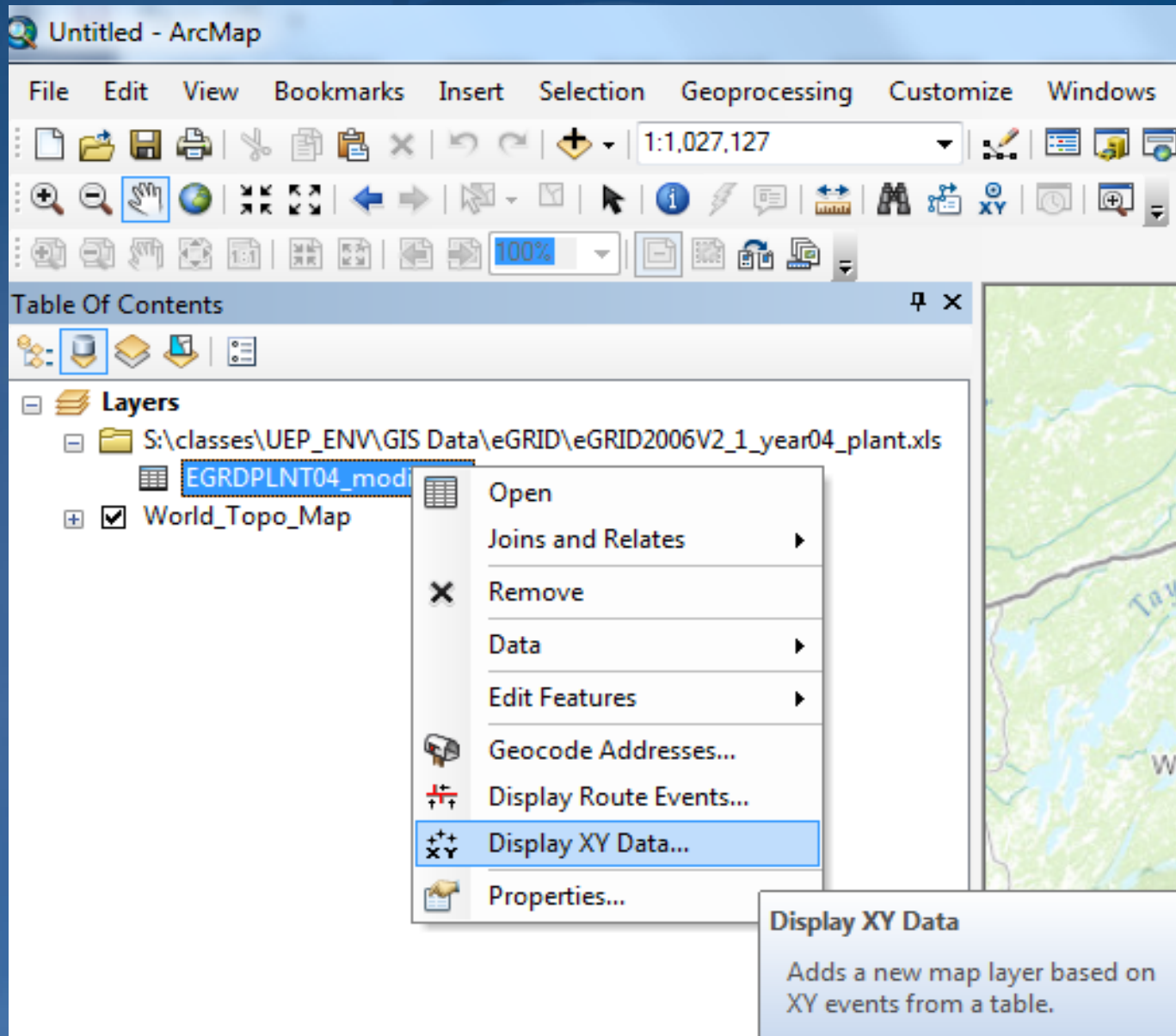
- S:\Tutorials & Tip Sheets\Tufts\Tutorial Data
 - EGRDPLNT04_modified\$
 - World_Topo_Map

Table

EGRDPLNT04_modified\$

CNTYNAME	LAT	LON	NUMBLR	NUMGEN	SOURCEM	PLPRMFL	PLFU
Kenai Peninsula	59.5631	-150.2779	0	5	EF	NG	GAS
Aleutians West	53.4554	-167.0261	0	6	EF	DFO	OIL
Anchorage	61.1496	-149.109	0	6	EF	NG	GAS
Juneau	58.4609	-134.1781	0	3	EF	DFO	OIL
Bethel	60.9214	-159.7663	0	4	EF	DFO	OIL
Juneau	58.4609	-134.1781	0	2		WAT	
Juneau	58.4609	-134.1781	0	3	EF	DFO	OIL
Fairbanks	64.8082	-146.5635	4	4	EF	SUB	COAL
North Slope	69.303	-153.3903	0	7	EF	NG	GAS
Ketchikan	55.5641	-131.3782	0	3		WAT	
Kenai Peninsula	59.5631	-150.2779	0	7	EF	NG	GAS
Kenai Peninsula	59.5631	-150.2779	0	3	EF	NG	GAS
Bethel	60.9214	-159.7663	0	6	EF	DFO	OIL
Prince of Wales	55.9248	-131.1379	0	1		WAT	
Sitka	57.2398	-135.307	0	2		WAT	
Kenai Peninsula	59.5631	-150.2779	0	2		WAT	
Ketchikan	55.5641	-131.3782	0	1	EF	DFO	OIL
Fairbanks	64.8556	-146.2789	0	1	EF	DFO	OIL
Ketchikan	55.5641	-131.3782	0	1		WAT	
Bethel	60.9214	-159.7663	0	3	EF	DFO	OIL
Kenai Peninsula	59.5631	-150.2779	0	2		WAT	
Prince of Wales	55.9248	-131.1379	0	4	EF	DFO	OIL
Dillingham	59.8028	-158.2207	0	7	EF	DFO	OIL
Aleutians West	53.4554	-167.0261	0	8	EF	DFO	OIL
Fairbanks	64.6833	-147.0833	6	10	EF	SUB	COAL
Matanuska-Susitna	62.3146	-149.5714	0	2		WAT	
Bethel	60.9214	-159.7663	0	4	EF	DFO	OIL
Fairbanks	64.8082	-146.5635	0	4	EF	RFO	OIL
Prince of Wales	55.9248	-131.1379	0	1	EF	DFO	OIL
Anchorage	61.1496	-149.109	0	5	EF	DFO	OIL

6. Right-click on the table in ArcMap again (after closing out current table) and choose Display XY Data.



7. Follow the steps in the graphic—do NOT leave out the part about editing the coordinate system and changing it to GCS WGS1984! This is another common mistake,

a. Make sure the X field is set to Lon and the Y field is set to Lat.

b. Press Edit to change the coordinate system. Currently, it is in a projected coordinate system that reads meters. We need to take it out of that projection and put it into a Geographic Coordinate System that works in Decimal Degrees!

Display XY Data

A table containing X and Y coordinate data can be added to the map as a layer

Choose a table from the map or browse for another table:

EGRDPLNT04_modified\$

Specify the fields for the X, Y and Z coordinates:

X Field: LON

Y Field: LAT

Z Field: <None>

Coordinate System of Input Coordinates

Description:

Projected Coordinate System:
Name: WGS_1984_Web_Mercator_Auxiliary_Sphere

Geographic Coordinate System:
Name: GCS_WGS_1984

Show Details

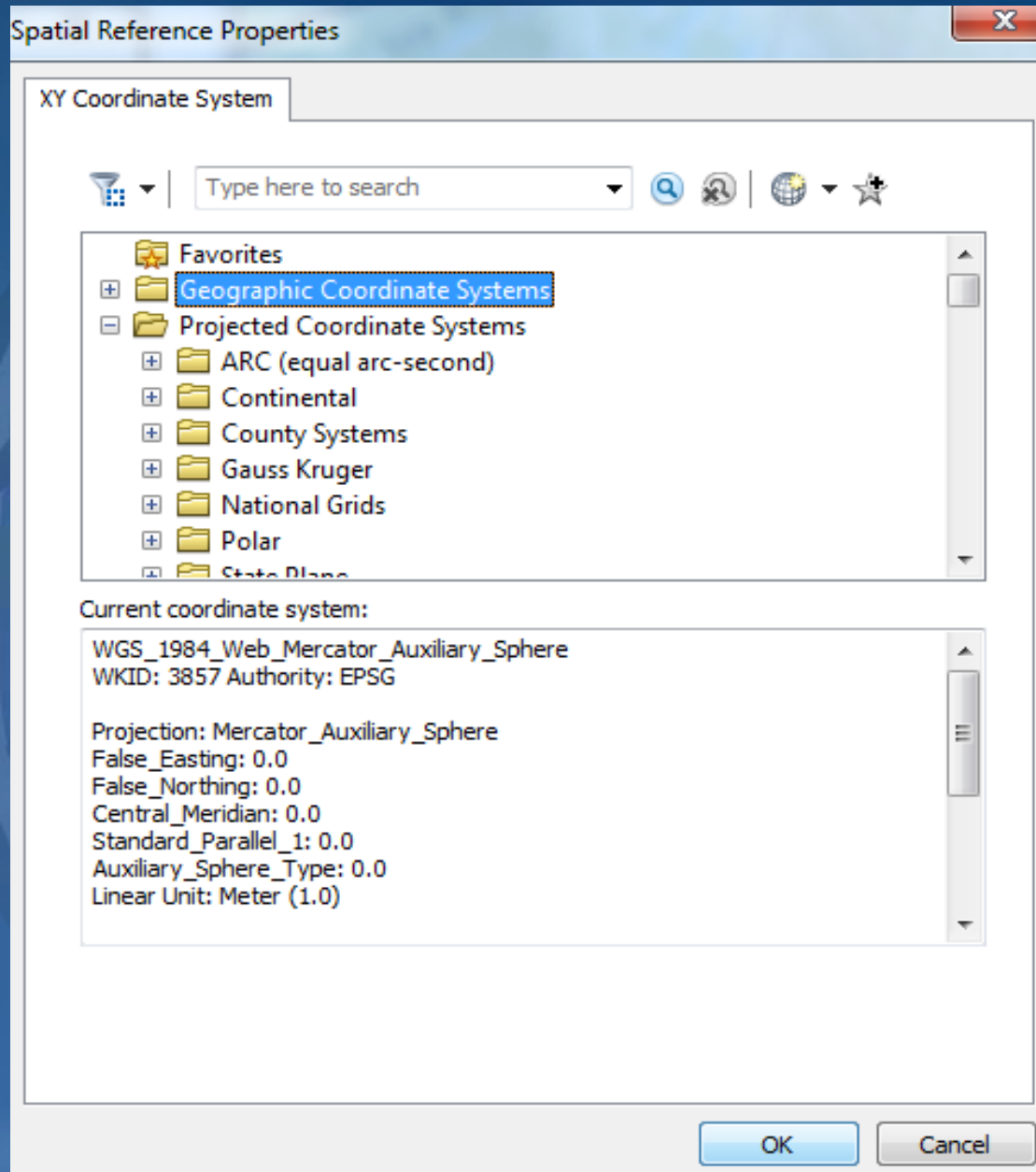
Edit...

Warn me if the resulting layer will have restricted functionality

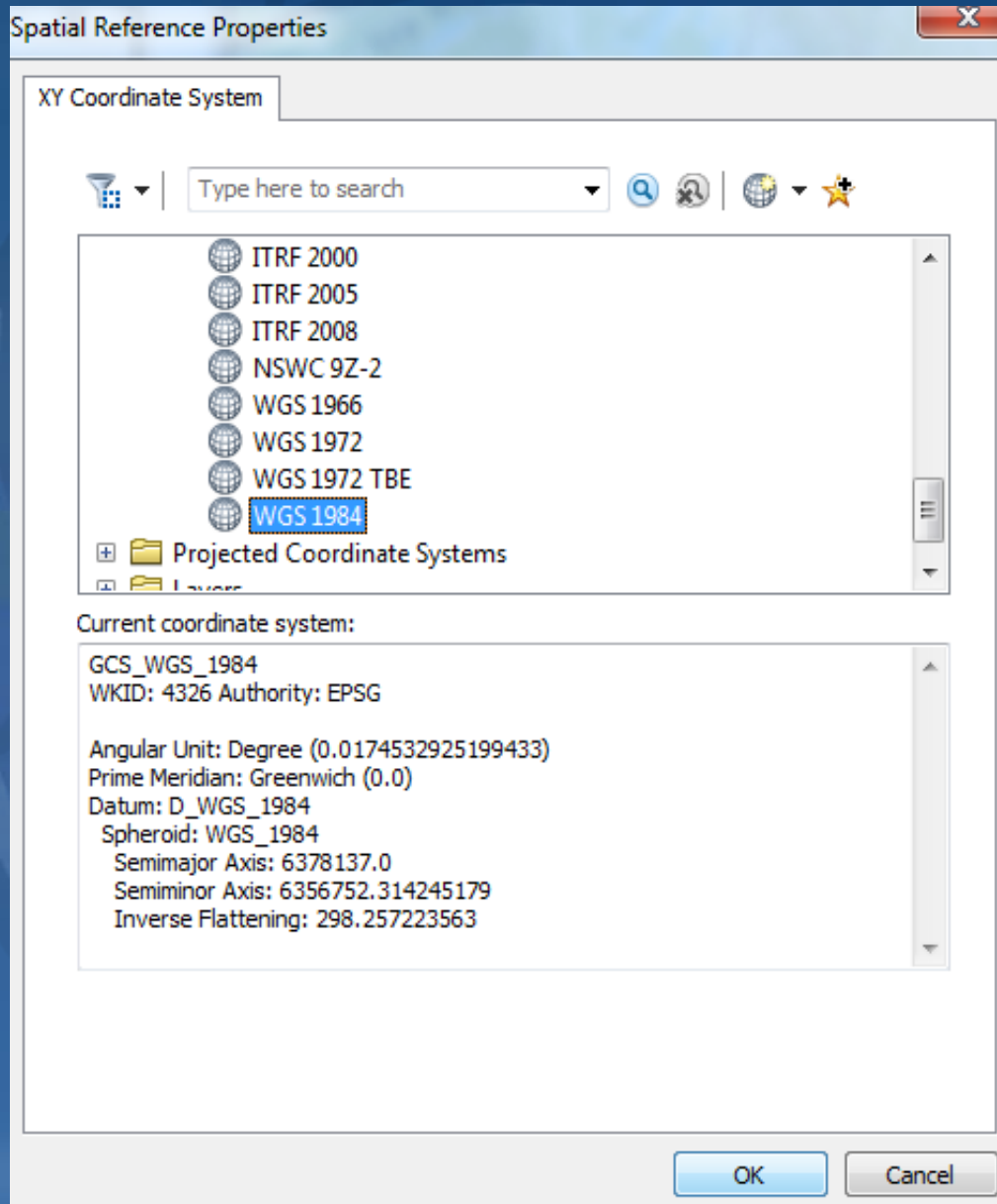
[About adding XY data](#)

OK Cancel

c. Scroll all the way up to Geographic Coordinate System.



d. Expand Geographic Coordinate System and go to World and then select WGS 1984. Press Ok.



e. Now your coordinate system should be correct, as shown in the figure below.

Display XY Data

A table containing X and Y coordinate data can be added to the map as a layer

Choose a table from the map or browse for another table:

EGRDPLNT04_modified\$

Specify the fields for the X, Y and Z coordinates:

X Field: LON

Y Field: LAT

Z Field: <None>

Coordinate System of Input Coordinates

Description:

Geographic Coordinate System:
Name: GCS_WGS_1984

Show Details

Warn me if the resulting layer will have restricted functionality

[About adding XY data](#)

OK Cancel

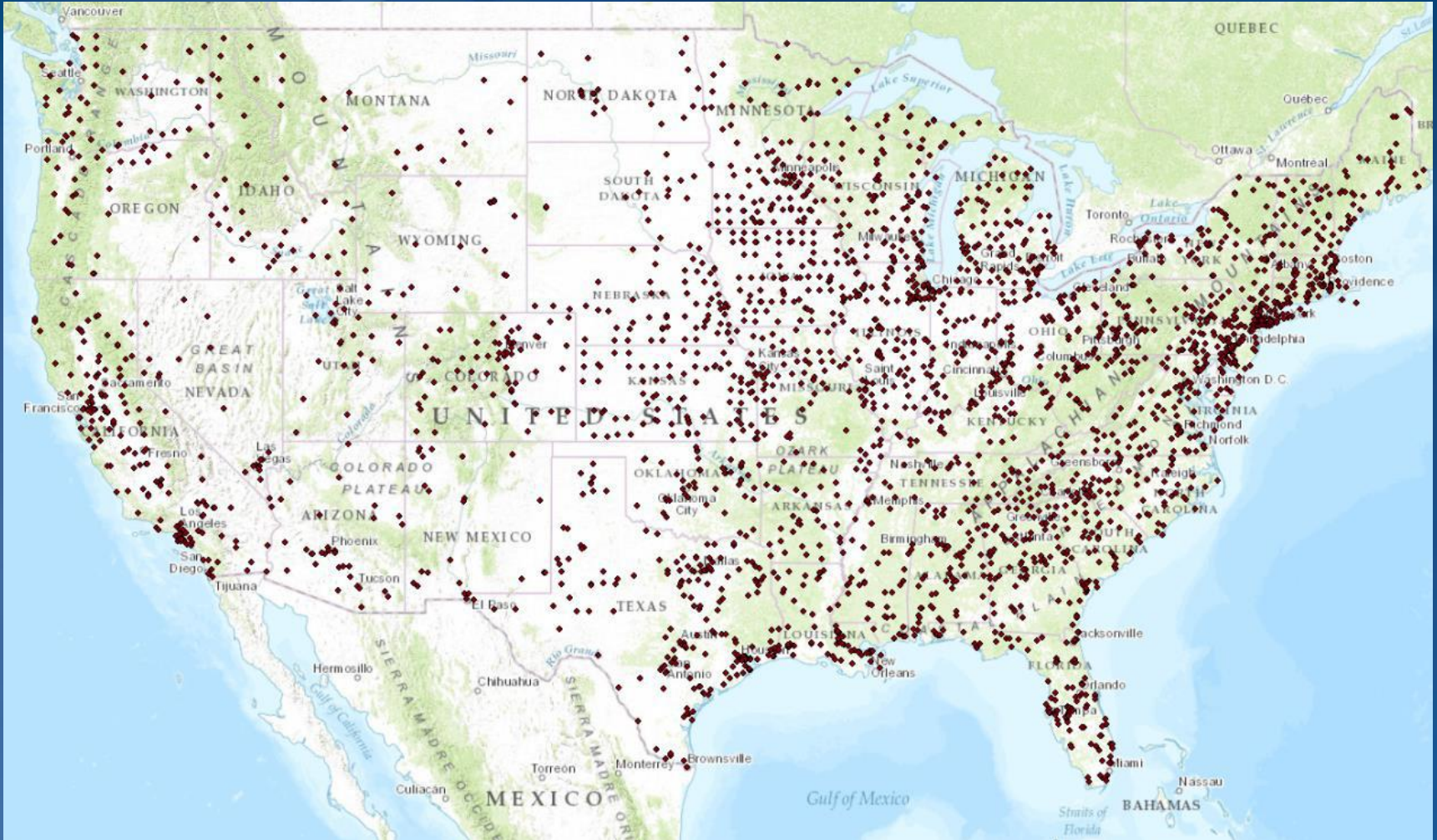
X = Lon
Y = Lat
This is very important!

Lat/Long is in Decimal Degrees!
Therefore, we need to put it in a coordinate system that uses Decimal Degrees. Projected coordinate systems primarily use meters or feet.

8. Click OK and OK again to finish.

9. You'll get a warning – read it and we'll explain below. Respond OK for now.

10. Congratulations, you have turned an excel table into a *temporary* point layer!
In this example, you have displayed points for the electricity generating plants in the United States database.



11. However, this is is a Temporary visualiazation of the excel table in ArcMap. It is not a shapefile that you can pull into another map. To save the data as a shapefile, *right click* on the EGRDPLNT04_modified\$Events and select **Data Export Data.**

12. Navigate to the folder where you would like to save this data and give it a descriptive name. Make sure the save as type is set to shapefile. Press ok and yes when asked if you would like to export it to your map.

13. Now, you have a permanent shapefile of this data that you can use at any point.

Tips to keep in mind when adding XY data:

If your data is in longitude and latitude:

The columns for the X and Y coordinates must be in decimal degrees (not degrees, minutes and seconds) – to get decimal degrees, you keep the degrees as they are, divide the minutes by 60 and the seconds by 3600 and add all these together.

The longitude coordinates for places in the Western Hemisphere should be negative – often in tabular data you acquire, you will find that the longitude coordinates in the Western Hemisphere are given as positive. Before you attempt to use this in GIS, open it in Excel and add a field for negative longitude (e.g., long_neg) and fill it with the negative version of the positive longitude

When you use the Display XY Data function in ArcMap, you will see that the coordinate system is either listed as “undefined” or is listed as the coordinate system of the data frame, which may not be the case – you should press the Edit button to define the coordinate system, and then Select. For data that is in longitude and latitude, you would typically choose Geographic Coordinate System. If your tabular xy data is in another coordinate system (like State Plane or UTM) choose that coordinate system.

When the data initially displays as points on a map, ArcGIS refers to it as an “events” layer – this is a temporary, virtual view of your tabular data. To save this as a permanent shape file that you can edit and analyze, export the “events” layer to a shape file by right-clicking on the points events layer, and choosing Data Export Data. In the Export Data dialog box, you can choose to export the data into the data frame’s coordinate system so it matches your other data.



**Эътиборингиз учун
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