



## Scenario

You are going to use the Earthquake search on the USGS Earthquake Hazards Program website to obtain worldwide earthquake data for your chosen time period.

### Part A: Data Retrieval from USGS web site

First, open a text editor such as Notepad. Then in a separate window open Internet Explorer (or other web browser) and visit the following website to obtain the data:

[http://neic.usgs.gov/neis/epic/epic\\_global.html](http://neic.usgs.gov/neis/epic/epic_global.html)

In order for your GIS to use the information contained on this site, it has to be in a spreadsheet format with commas between the columns. Therefore, choose the following:

#### Select Output File Type:

- 1. Expanded File Format with Headers and Spaces
- 2. Compressed File Format
- 3. Screen File Format (80 columns)
- 4. Generate Map (This option takes time; please be patient.)
- 5. Spreadsheet Format (comma delimited)

Next, set your search parameters by selecting the **Data Base**. If you choose “USGS/NEIC (PDE) 1973 – Present” you will **also** need to set “optional search parameters” further down the page because the data set is very large.

#### Select the Data Base:

- USGS/NEIC (PDE) 1973 - Present
- USGS/NEIC (PDE-Q) Most Recent Events ( 2009 11 26 - 2010 01 27 )


Click on **Submit Search** when you have set your criteria.

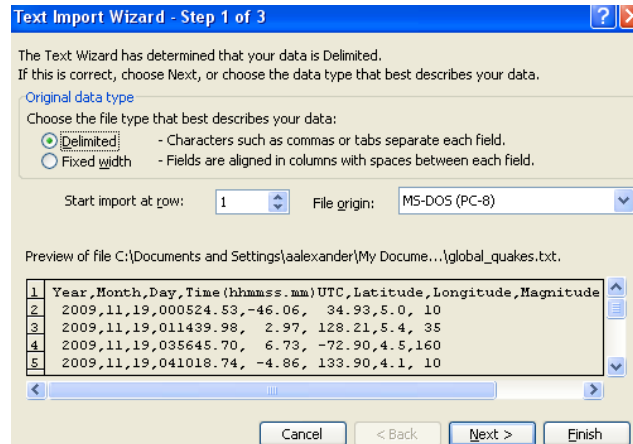
### Part B: Creating a Text file and Importing it into Excel

Once the query has been made on the USGS web site, your screen will change to a strange looking list of information. You need to copy this information into a text file (Notepad).

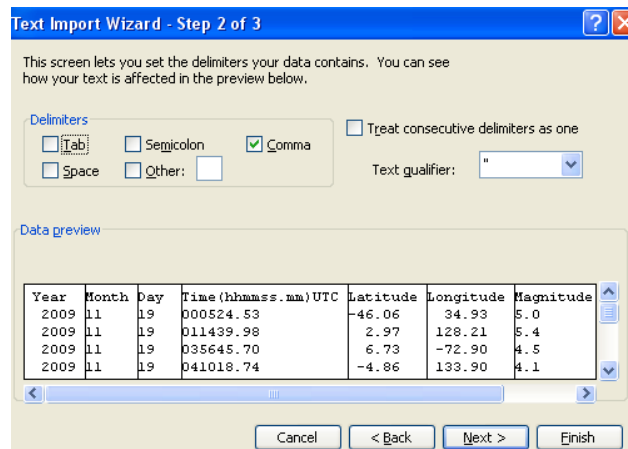
1. Select all information by holding down the **Ctrl** and **A** keys. Then hold down **Ctrl** and **C** to copy.
2. Open Notepad.
3. Hold down **Ctrl** and **V** to paste.
4. In order to be able to use this spreadsheet, you must delete the “extra” text and blank lines at the top and bottom. At the top **delete** “NEIC: Earthquake Search Results”, being careful not to delete the row with the column titles (Year, etc). At the bottom, **delete** everything below the last earthquake record.
5. **Save** the text file and name it **global\_quakes.txt**. Remember where you saved this file.
6. Open **Excel**.



7. Click the **Open** button  and browse to where you saved your text file (global\_quakes.txt). Select it and click **Open**. You may need to change the *Files of type* to **All Files**.
8. A *Text Import Wizard* will appear. Click **Next** on the first screen.



9. On the following screen under *Delimiters*, uncheck **Tab** and check **Comma**. You will notice the Data preview shows how the fields will be divided in the table. Click **Next**.

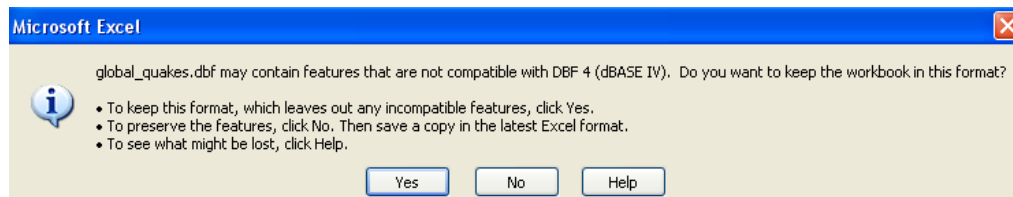


10. Click **Finish** on the last screen.
11. The data will appear in Excel. Go to the **File** menu and click the **Save As**. Change the *Save as type* to **DBF 4**. Click **Save**.





12. Click **Yes** if you receive this warning below:

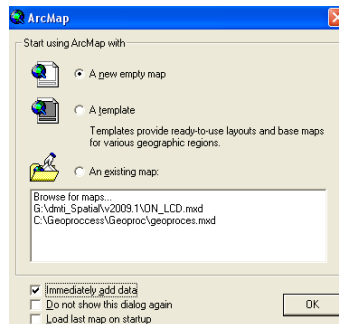


13. Close the **Excel** table and click **No** if you are asked to save the file.

### Part C: Mapping your Earthquakes

Now it is time to create a map showing your earthquakes!

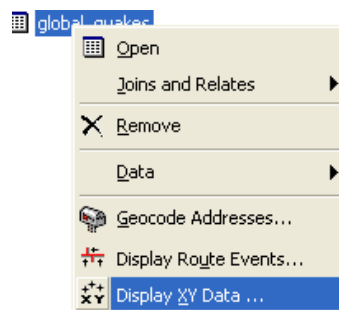
1. Start **ArcMap**.
2. In the welcome window, *Start using ArcMap with* – **A new empty map** and check **Immediately add data** (near the bottom). Click **OK**.



3. Browse to the DBF file (global\_quakes.dbf). Select it and click **Add**.

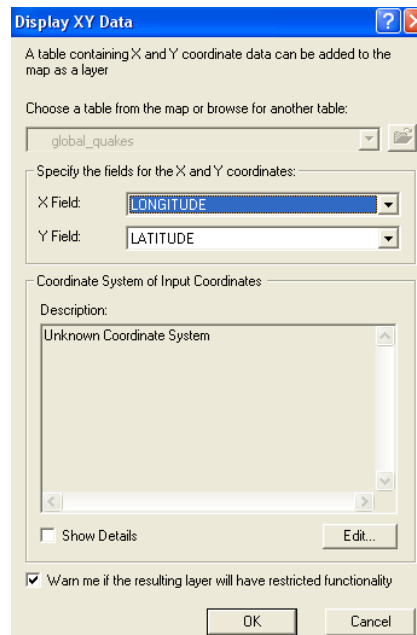
You will now see the table in the **Source** tab under the *table of contents*.

4. Right click on the **global\_quakes** table and select **Display XY Data**.

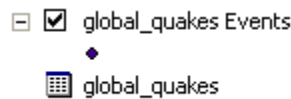




5. A new dialog box will appear with the **Longitude** and **Latitude** specified. Click **OK**.



The earthquake points will now appear on the map screen and a new *events* layer will be added to your *table of contents*.



6. The events layer will need to be exported as a shapefile. Right click on the **global\_quakesEvents** layer and select **Data** and then **Export Data**. Click **Yes** to add the data to your map.

**Congratulations you have recent earthquake data now!**