

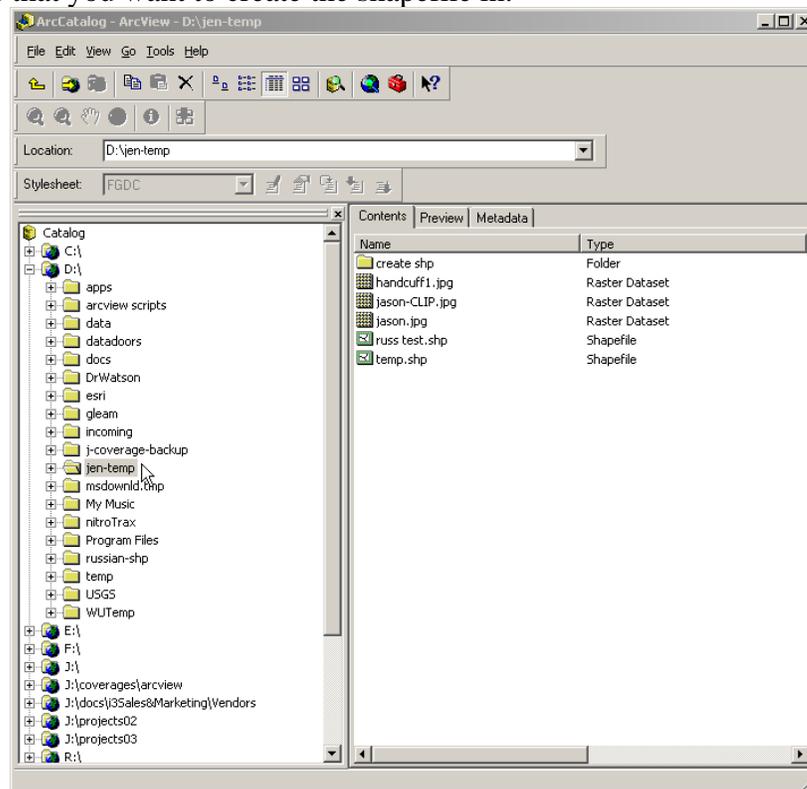
## Create New Shapefile in ArcMap

This section covers:

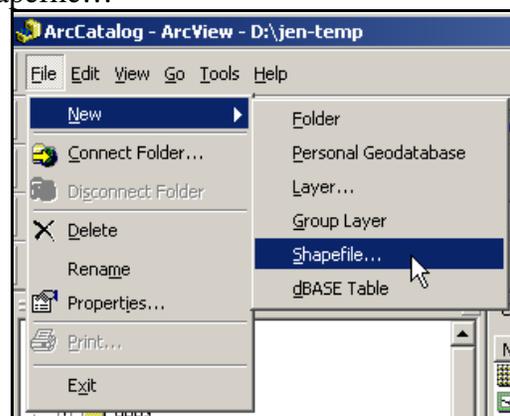
- Creating a new shapefile in ArcCatalog
- Adding shapefile to ArcMap
- Adding polygon/point to shapefile
  - Polygon using supplied corner points
  - Polygon using supplied bounding box
  - Circle using center point & buffer command

### Creating a New Shapefile in ArcCatalog

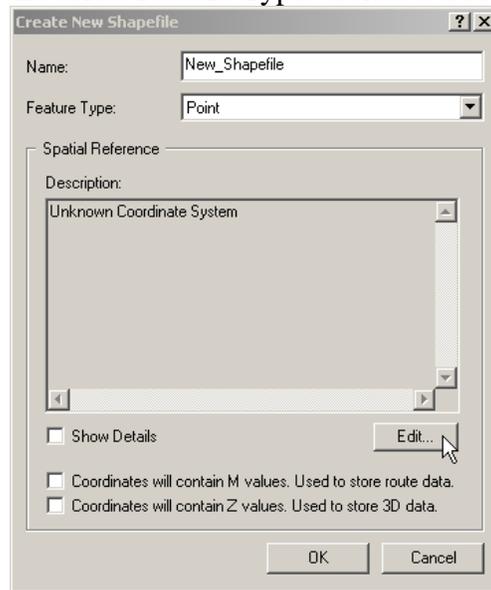
1. Open ArcCatalog
2. Select a folder that you want to create the shapefile in.



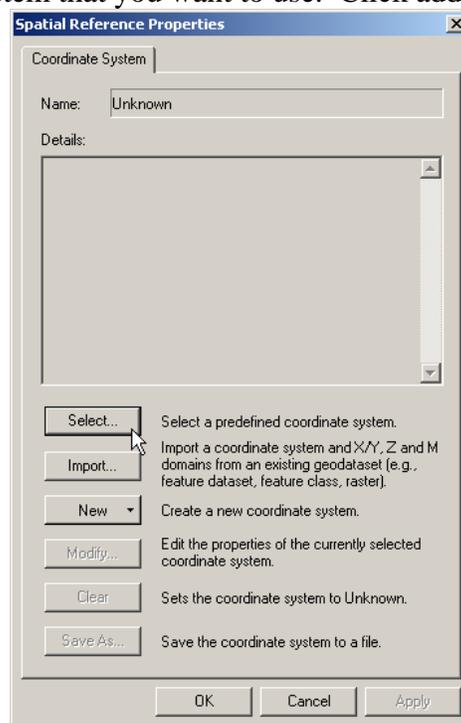
3. File, New, Shapefile...



4. Enter a Name and select Feature Type. Select a Coordinate System by clicking Edit.



5. Choose Select. Go to the appropriate projection, for example, Geographic Coordinate Systems/World/WGS 84.prj. OR choose Import. Browse to a shapefile that has a coordinate system that you want to use. Click add. Click OK.



6. Click OK again.

### **Adding a Shapefile to ArcMap**

1. Open ArcMap
2. There are several ways to add a shapefile to ArcMap:
  - a. Drag and Drop the shapefile from ArcCatalog to ArcMap
  - b. In ArcMap go to File/Open

- c. Click on the black/yellow plus arrow in the toolbar.



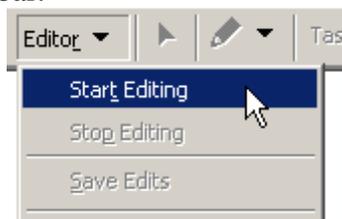
3. Turn on the shapefile in the Table of Contents (TOC).

### **Adding a Polygon/Point to a Shapefile**

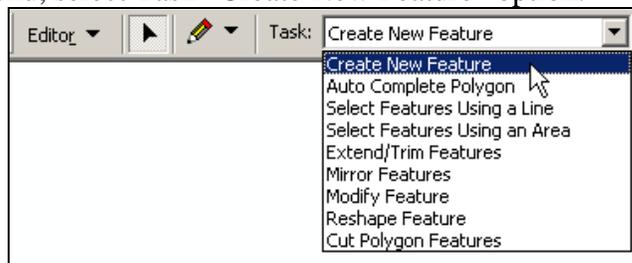
To create a line, polygon or point, you must first create a sketch. A sketch is composed of all the vertices and segments of the feature. Vertices are the points at which the sketch changes direction, such as corners; segments are the lines that connect the vertices. The Sketch tool is the tool you will use most often to create a sketch. It has an accompanying context menu that helps you place vertices and segments more accurately.

### **Step One: Setup**

1. In ArcMap, click on the “Start Editing” option under the “Editor” menu on the Editor extension toolbar.



2. In the Task menu, select Task “Create New Feature” option.



3. When you're creating a new feature, the target layer determines to which layer a new feature will belong. The Target Layer dropdown list contains the names of all the layers in the datasets.



4. Click on the “Create New Feature” tool.



**Step Two: Adding Feature**

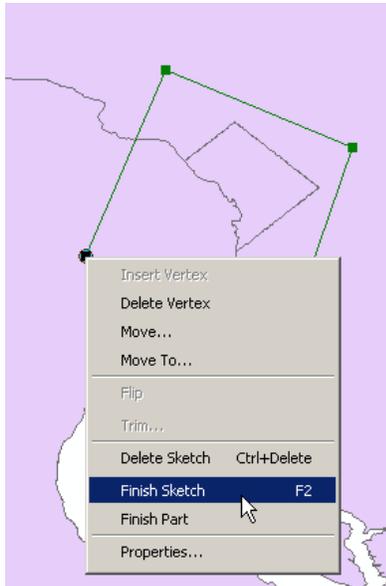
**1. Polygon using supplied corner points**

**Method One:**

1. Right click in the map and select the “Absolute X, Y” option to input the X, Y coordinates. Use the “Enter” key to finish the point input. Repeat until the polygon is complete.



2. Right click in the map and “Finish Sketch” option to input the X, Y coordinates.

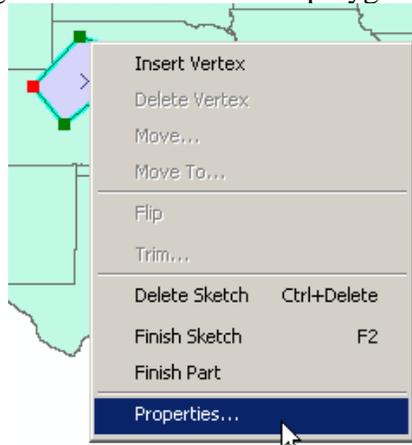


**Method Two:**

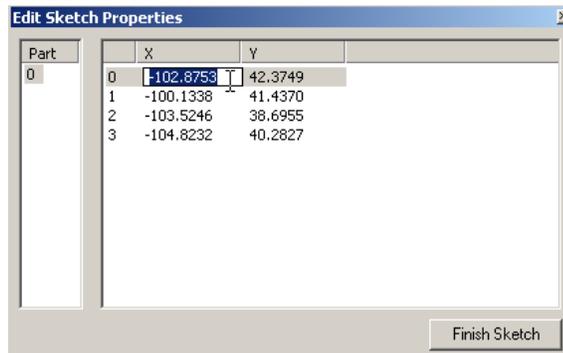
1. Draw a polygon in the estimated location.
2. Double click to Finish Sketch
3. Select the Edit arrow.



4. Change Task to “Modify Feature”.
5. Select the Polygon.
6. Right click on a line in the polygon and select “Properties”.



7. The “Edit Sketch Properties” box will open. Click on one of the points and edit.



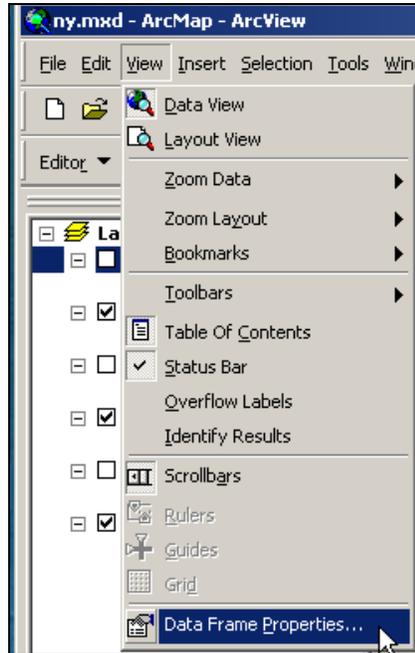
8. When completed, click “Finish Sketch” in lower right hand corner of the Edit Sketch Properties box.

## 2. Polygon using supplied bounding box (example: 20 mile x 20 mile box)

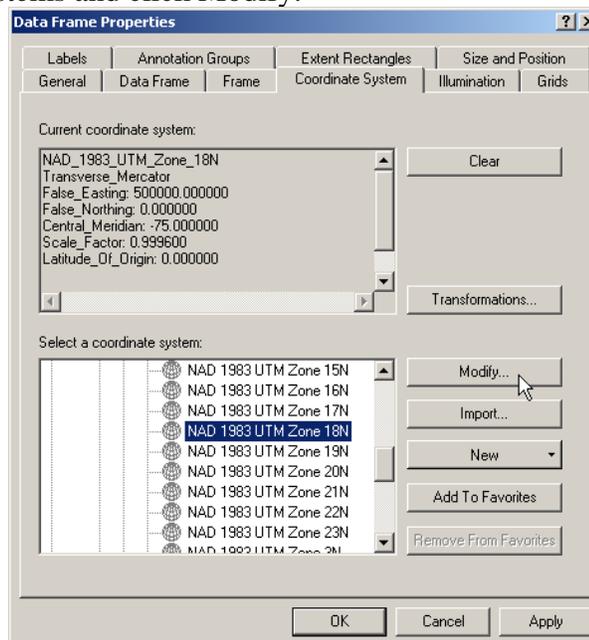
Note: Close all editing sessions.

### Set Map Units to Miles or Kilometers

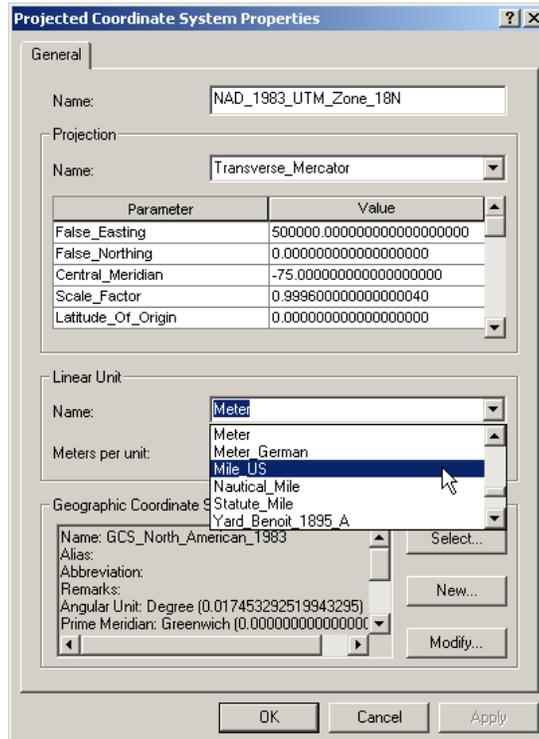
1. Go to View on the menu and select Data Frame Properties.



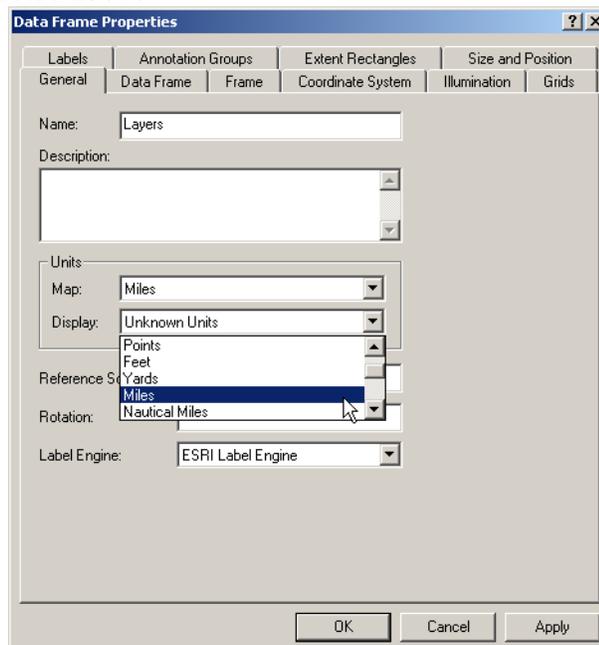
2. Select Coordinates System tab.
3. Select a UTM coordinate system from the Projected Coordinates Systems and click Modify.



4. In the Linear Unit section, select Name and choose miles or kilometers.



5. Click OK.
6. Go to the General tab in the Data Frame Properties.
7. Set the Units Map & Display to the chosen Linear Units Name selected above.



8. Click OK.

### Drawing the Polygon

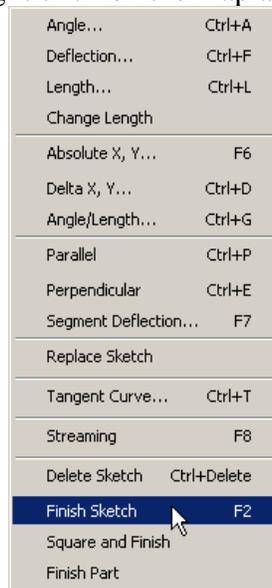
1. Using the Sketch tool, click the first point, draw a line, and then right click on the map and select Angle/Length.



2. The first box is the Angle, the second box in Length. Enter 0 in the Angle box and the number of miles in the Length box. Hit Enter on the keyboard.



3. Right click on the map, enter -90 in the Angle box and the number of miles in the Length box. Hit Enter on the keyboard.
4. Right click on the map, enter -180 in the Angle box and the number of miles in the Length box. Hit Enter on the keyboard.
5. Right click on the map and select Finish Sketch.



6. If needed, to center the box select Edit arrow on the Editor toolbar. Then select the polygon, holding down the right mouse button move the box to the required position.

### 3. Circle using Center Point & Buffer Command

#### Center Point

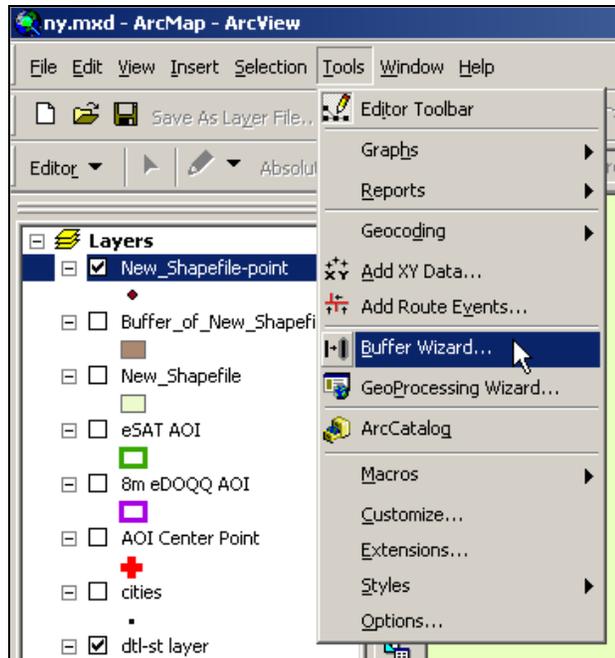
1. Create a point polygon.
2. Add to ArcMap.
3. Start Editing and enter the Center Point.

OR

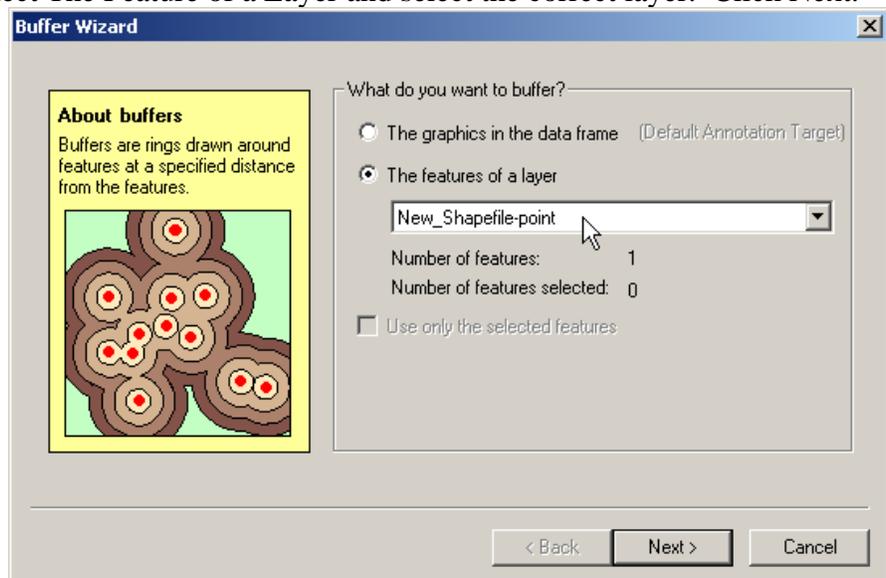
1. Select a point in a pervious shapefile, such as cities shapefile.

#### Buffer

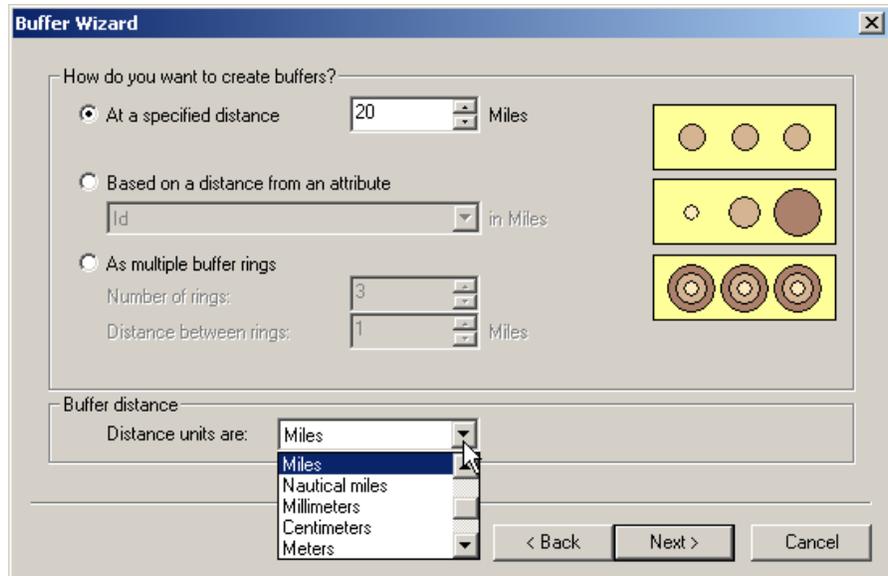
2. Go to Tools on the menu and select Buffer Wizard.



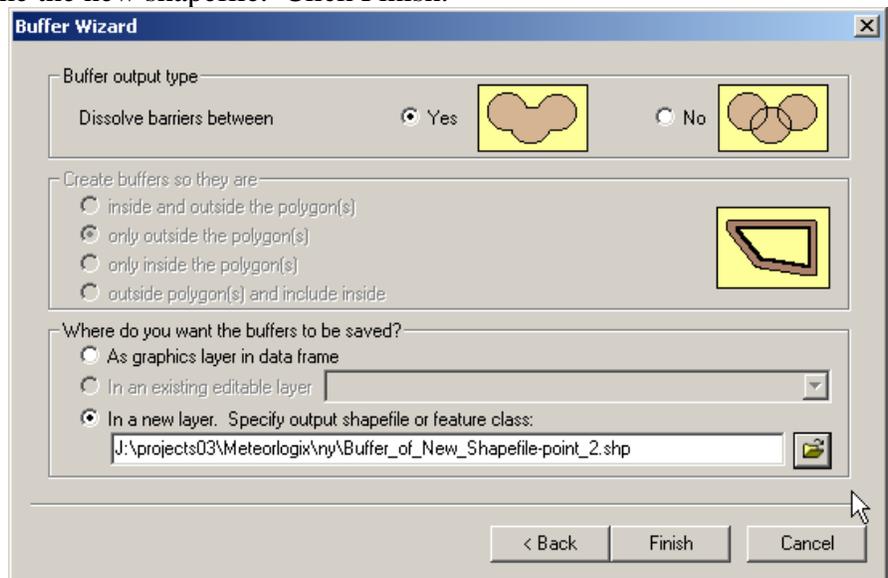
3. Select The Feature of a Layer and select the correct layer. Click Next.



4. Select the Buffer Distance and enter the radius amount in At a Specified Distance. Click Next.

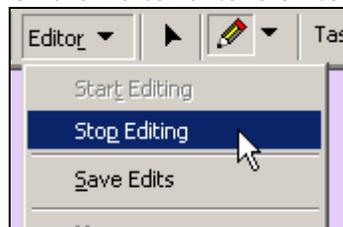


5. Select Yes at Dissolve Barriers Between. And select to save the polygon In a New Layer. Browse to a location on a hard drive and name the new shapefile. Click Finish.



### **Step Three: Stop Editing**

1. When completed editing the shapefile, click on the “Stop Editing” option under the “Editor” menu on the Editor extension toolbar.



2. Select the appropriate answer.

