




There are many ways to create new geospatial layers. Below are some examples.

Creating a new empty shapefile and using Editor to draw features on your map:


This process is used when you want to “draw” a point, line or polygon on your map to create a new shapefile.

1. Open ArcCatalog  *note: or click catalog on the right of the window.*
2. If necessary, use the Connect to Folder button  to connect to the folder in which you wish to save your data.
3. Right-click on **New > Shapefile**.
4. In the **New Shape File** dialog box fill in the following information:
 - a. Name your shapefile
 - b. Select the **Feature type**
 - c. Click the **Edit** button in the **Spatial Reference** section > **Select** to navigate to the appropriate coordinate system.
 - d. Click **OK**.
5. Close ArcCatalog
6. Open a new or existing map, if not already open.
7. Click on the **Add data** button and add the newly created shapefile, if it has not automatically appeared. It will appear in your Table of Contents, but as it is still empty it will not show up on the map yet.


In order to add your features to the map you will need to draw them. To do so you need the **Editor Toolbar**.

1. To add the **Editor Toolbar** to ArcMap click on **Customize > Toolbars** and click on **Editor**. Note: there will be a check mark to the left of **Editor** if it is activated.
2. Click on the **Editor** dropdown box and click on **Start Editing**. The **Create Features** window will open on the right; click the **Create Features** button  in the **Editor** toolbar if it does not appear. This window will display all of the shapefiles in which it is possible to create features. Click on the name of your new shapefile.
3. Zoom in to the area where you want to draw your features.


To draw points:

- a. Click the **Draw** tool  and click on the map in the location where you wish to place the new point.

To draw straight lines:

- a. Click the **Straight Segment** tool . Click on the map in the location where you wish the line to start.
- b. Double click the map in the location where you wish the line to end. Note that there are many other types of lines that can be created; explore the buttons in the **Editor** toolbar to discover more.

To draw straight-sided polygons:

- a. Click the **Straight Segment** tool . Click on the map in one corner where you wish to create a vertex of the polygon.

- b. Click on the next vertex location.
- c. Continue until you reach the last vertex. Double-click to close the polygon. Note that there are many other ways to draw polygons; explore the buttons in the **Editor** toolbar to discover more.
4. After you have finished drawing your features, click **Editor > Stop Editing**. Click **Yes** if you are satisfied with your placement and **No** if you want to try again.
5. Save your map.

Creating a new shapefile from selected data of an existing layer:

You can create a new shapefile based upon selected data from an existing layer.

1. Open ArcMap: **Start > Programs > ArcGIS > ArcMap**. Open an existing or new map.
2. Click the **Add data** button and add the layer from which you wish to make a selection.
3. Use the **Select** tool, **Selection > Select by Attributes** or **Selection > Select by Location** to make a selection. (*Note: For more information on this process see the Selecting help sheet.*)
4. Right click on the layer that you selected from in the Table of Contents > **Data > Export Data**.
5. In the **Export Data** dialog box:
 - a. For the **Export** box, choose **Selected features**.
 - b. Choose the correct coordinate system.
 - c. For the **Output feature class** box, select the **Browse** button and navigate to the folder in which you wish to save your data and give it an appropriate name.
 - d. Choose **Shapefile** from the **Save as type** drop-down box.
 - e. Click **Save** and **OK**.
6. Click **Yes** to make the new shapefile appear in your table of contents.

Creating a new shapefile from an existing layer based on the view extent of ArcMap:

You can create a new shapefile based the view extent of an existing layer.

1. Open ArcMap: **Start > Programs > ArcGIS > ArcMap**. Open an existing or new map.
2. Click the **Add data** button and add the layer from which you wish to make a selection.
3. Right click on the layer in the Table of Contents from which you wish to create a new layer and choose **Data > Export Data**.
4. In the **Export Data** dialog box:
 - a. For the **Export** drop-down box choose **All features in view extent**.
 - b. Choose the correct coordinate system
 - c. For the **Output feature class** box, select the **Browse** button, navigate to the folder in which you wish to save your data and give it an appropriate name.
 - d. Choose **Shapefile** from the **Save as type** drop-down box.
 - e. Click **Save** and **OK**.
5. Click **Yes** to make the new shapefile appear in your Table of Contents.