# Basic Editing in ArcMap

Data in GIS are always read-only unless you start an editing session. Even then, you must have read/write permission on the folder/file to make any changes (translation, you will not be able to make changes to anything in M:\GISDATA). If you need to have your own version of a file that is stored in these folders, you can make a copy in a folder you own (such as your H:\ drive)
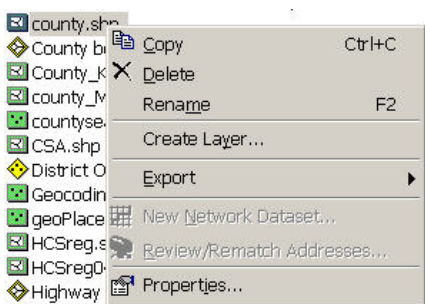
In ArcCatalog, right click the layer; select Copy. Navigate to a directory you have write access to and select Paste. If you create a GIS project directory on the network (i.e. H:\ drive), this will be backed up. Data you copy to your local hard drive (C:\) will not.

Editing Toolbar

Layers and tables are edited using the Editor toolbar. (If the Editor Toolbar is not visible, Select View > Toolbars and select Editor.)

To start an edit session, select Editor from the Editor toolbar and select Start Editing.

| ! | You can only perform edits in one directory at a time. Make sure the directory you choose contains the file(s) you want to edit. |

Once an edit session is started, the tools within the Editor toolbar will be activated. Use the ▶ icon to select a feature to edit.

1 2   3   4   5 6

1. Select Tool - Select element to edit
2. Sketch Tool - add a new feature to the target layer
3. Tasks: create new feature; cut polygon, etc
4. Target Layer - All new features will be added to the target layer
5. Open Attribute dialog

| ! | Besides making sure you are editing in the correct directory, you must also check that the target layer is the correct destination for all new features. |

1. ► **Select tool**

Before editing, select an element or elements for editing.

2. 🖉 **Sketch tool**

Tools are used to draw new features in the data layer. You will generally use the pencil, but explore the other options for more advanced tools.
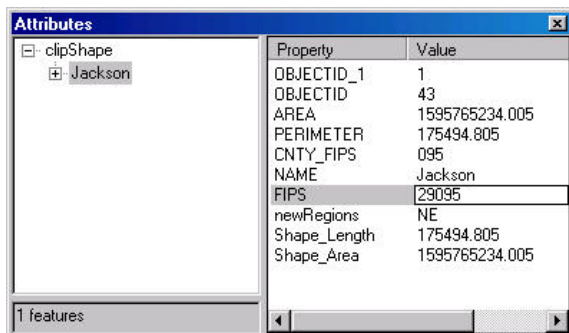
3. Task `Task: Create New Feature ▼`

Generally you will be creating a new feature, but there are other tasks, such as reshape feature and cut polygon that you will occasionally need. Click the down arrow to see these.

4. Target `Target: ClipExample ▼`

All features you add with the sketch tool are added to the target layer. The layer type (point, line or polygon) determines what sort of feature you will be adding when you use the sketch tool. Click the down arrow to change the target layer.

5. ▦ **Open Attribute**

Opens a dialog that let's you change the attribute values for the selected element(s).

Attributes	☒
⊟ clipShape	
⊞ Jackson	

| Property	Value
OBJECTID_1	1
OBJECTID	43
AREA	1595765234.005
PERIMETER	175494.805
CNTY_FIPS	095
NAME	Jackson
FIPS	29095
newRegions	NE
Shape_Length	175494.805
Shape_Area	1595765234.005

1 features

6. 🖼 **Open vertices**

Opens a dialog that allows you to precisely manipulate each vertex of an element by editing the X and Y coordinates of each.

⚠ **Selection tab**

When you start to choose elements to edit, check the Selection Tab located at the bottom of the Table of Contents (layer list).

☑ ambSurg
☑ areaOffices
☑ Day Care
☑ EMS02shp
☑ county

`Display | Source | Selection`
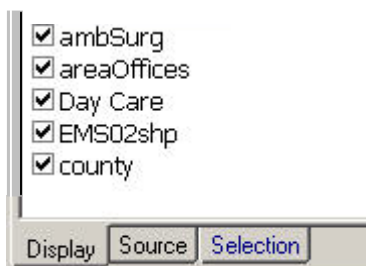
If you only want to make changes to one layer, uncheck all the other layers to limit the possibility that you will make changes to the wrong layer.
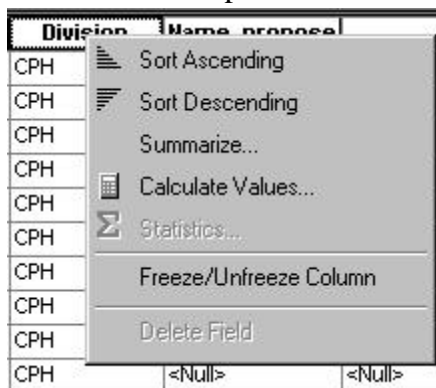
This also makes it easier to pick only the features you need to edit.

Calculations and Edits to the Attributes

| PERIMETER	CNTY_FIPS	NAME	FIPS
161328.38004	045	Clark	29045
188930.287274	005	Atchison	29005
135178.75613	199	Scotland	29199
210925.29083	147	Nodaway	29147
154878.797795	197	Schuyler	29197
209056.912678	171	Putnam	29171
112103.019601	227	Worth	29227
138743.14463	129	Mercer	29129
177340.440129	081	Harrison	29081

Open the Attribute Table and change any of the values by clicking and typing in a cell of the table.

If you need to change multiple records to the same value, use the Calculate Values command, available on an open attribute table.

Division	Name proposed
CPH	≜ Sort Ascending
CPH	≡ Sort Descending
CPH	Summarize...
CPH	
CPH	▦ Calculate Values...
CPH	Σ Statistics...
CPH	
CPH	Freeze/Unfreeze Column
CPH	
CPH	Delete Field
CPH	<Null> <Null>

Select a column heading; right click; select Calculate Values.

PERIMETER	CNTY_FIPS	NAME	FIPS	Shape_Length	Shape_Area	newRegions
161328.38004	045	Clark	29045	161328.376009	1325126598.62909	<Null>
188930.287274	005	Atchison	29005	188930.284178	1418003047.89607	<Null>
135178.75613	199	Scotland	29199	135178.755698	1136889235.12402	<Null>
210925.29083	147	Nodaway	29147	210925.292885	2272987079.03052	<Null>
154878.797795	197	Schuyler	29197	154878.803361	797513360.659105	<Null>
209056.912678	171	Putnam	29171	209056.914216	1344826007.72803	<Null>
112103.019601	227	Worth	29227	112103.018102	690579085.352755	<Null>
138743.14463	129	Mercer	29129	138743.142613	1178026907.63411	<Null>
177340.440129	081	Harrison	29081	177340.439639	1880327525.06602	<Null>
143376.219242	075	Gentry	29075	143376.221628	1273206608.79434	<Null>

Record: 1 Show: All Selected Records (11 out of 115 Selected.) Options ▾
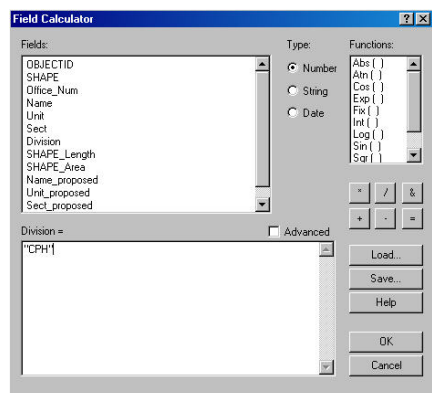
If there are any features selected, only the selected records will be changed. Selected records are highlighted in blue.

A variety of functions are available in the upper right of the dialog. If you are familiar with update queries in Access, some of the functions will look familiar.

Text fields will need quotation marks around the values.

Copying features between layers

When features already exist in another layer, you can easily copy these features into your target layer. This will work as long as the features have the same geography type (point, line, or polygon). Select the element. Click Copy then Paste. The feature will be copied into the Target Layer. Where field names are the same, the attributes will be copied as well.


Copy

Paste
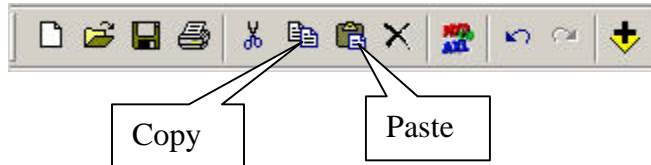
Snapping

When you are drawing new elements, you may need to have them snap to existing elements so that you have no gaps or overlaps. Select Editor > Snapping to open the snapping dialog. You can snap to either a vertex of a line, anywhere along an edge, or just on the endpoints. The lower part of the dialog controls the snapping properties of the elements you are adding.
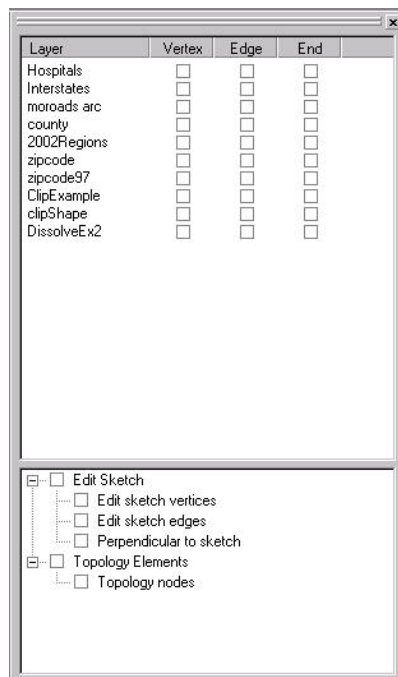
Set the priority of the layer to snap to by dragging more important layers to the top of the layer list.

Advanced Editing Tools

If you want to draw a simple box or circle, add the
Advanced Editing toolbar.
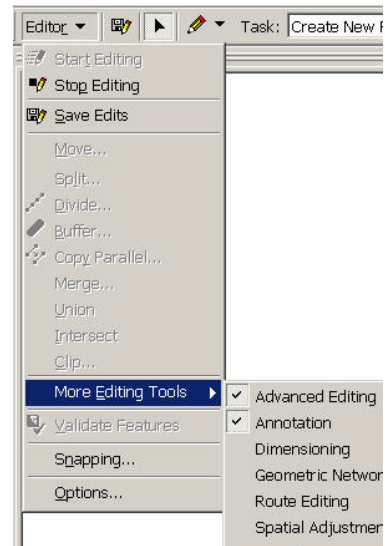
Sketching

Use either the pencil tool or the circle of box tool to add new features. There are some context menus while you are in sketch mode that allow you to do things like delete the vertex you just drew etc.

Editing Vertices

Double click an existing element to see all the individual vertices.

Delete vertex - Put the cursor over an existing point and right click. You can then delete that vertex.
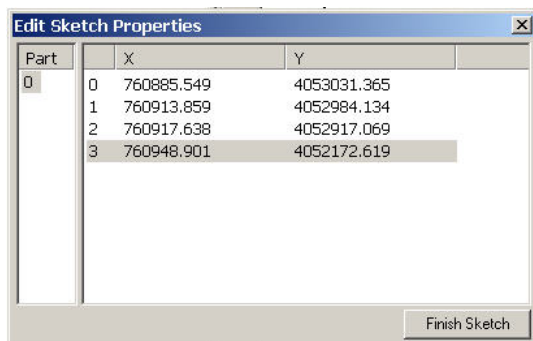
Add vertex - Put the cursor between points, right click. Choose add vertex to add a new point along a line.

Move a vertex - select the point and drag to a new location.

Once you have completed your sketch, make sure to right click and select Finish Sketch.

You can also interact with the values of the coordinates in the sketch Properties dialog.

Part		X	Y
0	0	760885.549	4053031.365
	1	760913.859	4052984.134
	2	760917.638	4052917.069
	3	760948.901	4052172.619

Save your Edits!
Once you have completed your edits, you can either select Editor > Save and then select Stop Editing, or simply select Editor > Stop Editing (if there are any changes, you will be prompted to save them).

| Editor ▾ | 🖫 Save Edits | ▶ | ✎ ▾ | Task: | Create New Feature | ▾ | Target: | | ▾ | ▥ |

Start Editing
Stop Editing

If you make an error and <u>don't</u> want to save your edits, specify No when prompted to save your edits.

TIP: If you are starting a command that you are unfamiliar with, do a Save right before you begin. If the command doesn't behave as you expected, you can Stop Editing without saving and return back to how the file looked since the last time you did a save.

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