

# Getting Started

## Working with Tables in ArcMap

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Tables are database components consisting of rows and columns. In ArcMap, one of the desktop applications of ArcGIS, each row, or record, contains information describing a geographic feature displayed in the map. For example, in a table associated with a map showing the locations of fire hydrants, each row describes the information for a specific hydrant and each column contains a type of attribute used to describe the hydrants such as an identification number, manufacturer, installation date, or date of last inspection. Tables are stored in a database such as Microsoft Access, dBASE, Oracle, or Microsoft SQL Server.

### Tables in ArcGIS and ArcView 3.x

Attribute data for features in ArcView 3.x is stored in tables. Tables containing nonspatial data stored in dBASE files can be added in both ArcView 3.x and ArcMap. ArcMap tables can display the same data formats as ArcView 3.x. Tables can also be viewed in ArcCatalog by using the Preview tab.

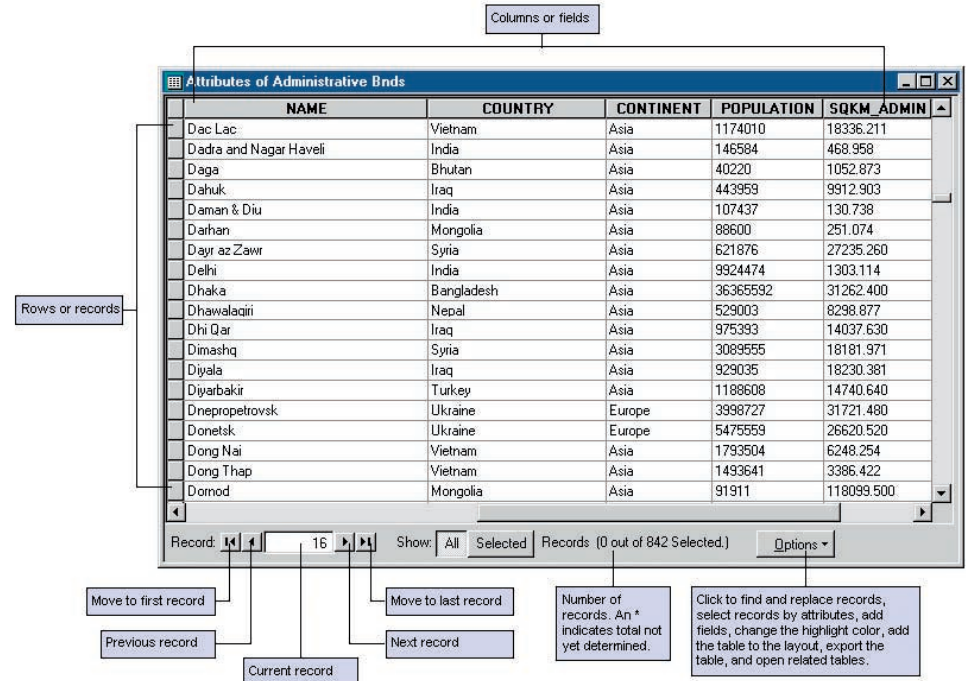
### Common Table Tasks

In ArcMap, tables can be queried to select features by attribute values or update an attribute field for a feature's record. Tables can also enhance a map layout by providing additional information about the features displayed on a map.

To open an attribute table for a layer in ArcMap, simply right-click on the layer in the table of contents and choose Open Attribute Table from the context menu. The bar at the bottom of the table window displays the number of the selected record, how many records are in the table, and how many records have been selected. Use the arrow keys in this bar to scroll through the records. Use the All and Selected buttons to toggle between viewing all the records or only selected records. Menu choices for most common table tasks, such as Find and Replace and Add a Field, can be found by clicking on the Options button located on the lower right-hand side of the table window.

### Selecting Features by Attributes

Although features can be selected by visually inspecting a table and clicking on the desired record, this is generally not the most thorough and efficient method for locating records. Select By Attribute, available from the menu



The bottom of the table window displays information about the table. The Options menu provides choices for easily performing common table tasks.

in ArcMap or the Options menu in the table window, will identify all the records that meet the specified search criteria.

1. With the table window open, click on the Options button and choose Select By Attribute from the menu.
2. In the Select By Attribute dialog box, click on the drop-down box next to Method to choose a selection procedure (e.g., Create a new selection, Add to current selection).
3. In the list of attribute fields, double-click the field that will be used for the selection.
4. Choose a logical operator (e.g., =, >, <) by clicking on it.
5. Select a value from the Unique Values list for the selected attribute field or type a value directly into the text box.
6. Click Verify to validate that the SQL expression is in the correct format and will execute successfully.
7. Click Apply. The records that match the search criteria will be highlighted in the table.

Use the Save and Load buttons in the Select By Attribute dialog box to save a query expression so that a selected record set can be quickly re-created by loading the saved expression. SQL queries can also be typed directly in the text box. Click on the SQL Info button

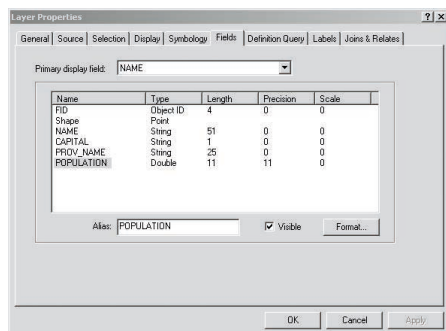
and ArcMap will supply the SQL keywords, reserved characters, and other restraints on queries for the type of database being used.

### Updating an Attribute for a Feature

Feature attributes sometimes store data that changes—the date of the last inspection, population figures, or tax assessments amounts. Attribute data stored in an ArcMap table can be updated by directly editing the attribute table.

1. With the map open in ArcMap, start an editing session by choosing View > Toolbar > Editor to display the Editor toolbar. Click on the Editor menu in the Editor toolbar and choose Start Editing.
2. Open the table to be edited.
3. Locate the record containing the attribute value to be edited by scrolling or querying the table.
4. Select the field to be edited in that record. Type in the new value. Press Enter.
5. Edit any other attribute fields in the same manner. Discard an edit by clicking the Undo button located on the Standard toolbar.
6. When finished editing, click on the Editor menu and choose Stop Editing.

Although edits can be made to a table

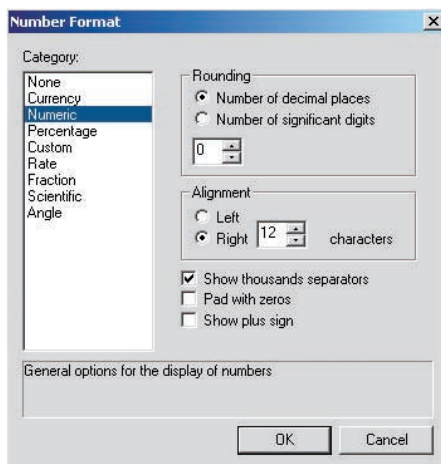


without starting an editing session by right-clicking in a table, these changes cannot be undone as they can in an editing session.

### Adding a Table to a Layout

Adding a table to a layout can provide information about the features shown by the map. Before adding a table to a layout, the table's appearance can be modified by changing the text font and size, displaying only selected records, or hiding columns. Once a table has been added to a layout, its characteristics cannot be changed. To make additional changes, delete the table from the layout, change the table in the table window, and add the table to the layout again.

1. Open the table that will be added to the layout.
2. In the lower right-hand corner of the table window, click on the Options button and choose Appearance.
3. In the Table Appearance dialog box, use the drop-down boxes to set the font, color, and size of the text in the table.
4. If numbers in the table require formatting (e.g., adding thousands separators, positive signs), right-click on the layer in the table of contents in ArcMap and choose Properties.
5. In the Layer Properties dialog box, click on the Fields tab.
6. Select the numeric field to be formatted. Click on the Format button.
7. In the Number Format dialog box, choose a category and set any rounding features, alignment, or other formatting characteristics. Click OK.
8. If only records for selected features should appear in the table in the layout, select and display those records as previously described.
9. Hide unwanted columns by holding the cursor over the area between the column to hide and the column to its right. The cursor becomes a double vertical bar. Hold the left mouse button and drag the bar to the left to hide the column. Reverse the process to unhide the column.
10. Make final adjustments to the table window. Click the Options button and choose Add Table to Layout.
11. Click on the layout in the area where the table should appear and drag out the table



frame. Adjust the table frame's position in the layout if necessary.

12. Once the table has been inserted in the layout, return to the table window, choose Options > Appearance, and set the table text characters back to the original settings.

*Before placing a table in a map layout, make any necessary changes to the table's appearance. Click on the Format button in the Layer Properties dialog box to modify how numbers will display.*

Other common tasks with tables not discussed here include joining tables, adding new fields, and generating reports. Data contained in another table can be related to features in a map by joining the tables based on a common field. New information about features can be added by creating a new field in an attribute table and populating it. Information contained in an attribute table can be organized, formatted, and printed in a report using ArcMap software's built-in report generator. For more information on working with tables in ArcMap, see the ArcMap online help or read *Getting to Know ArcGIS*, which is available from the GIS Store ([www.esri.com/gisstore](http://www.esri.com/gisstore)). **AU**