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**Desktop GIS Manual**

We recommend that you use ArcGIS Pro instead of ArcMap. Esri will no longer support ArcMap after March 01, 2026, and is shifting to ArcGIS Pro as their main platform. ArcGIS Pro integrates the functionality of ArcMap, ArcCatalog, ArcToolbox, ArcScene, and ArcGlobe within one application, allowing you to switch between 2D and 3D visualization, analysis, and editing. It is faster, more intuitive, and has more features than ArcMap. All work done in ArcMap can be imported to ArcGIS Pro.

1. *To download ArcGIS Pro (The desktop GIS) From My Esri:*
2. Go to Downloads in MyEsri. <https://my.esri.com/#/downloads>
   1. Can also be found by going to **My organizations**, then **Downloads.**
3. In the list of available products, next to **ArcGIS Pro**, confirm that the version number (for example, 2.6) is correct. Click **View Downloads**.
4. In the list of product components, next to ArcGIS Pro, click **Download**.

*To download ArcGIS Pro from ArcGIS Online:*

1. Sign in to your ArcGIS Online Organization
2. Click your username and then go to **My Settings**
3. Click the **Licenses** Tab
4. Next to ArcGIS Pro, click **Download**

*B. To install ArcGIS Pro:*

1. Make sure that the computer meets the system requirements. [ArcGIS Pro 2.6 system requirements—ArcGIS Pro | Documentation](https://pro.arcgis.com/en/pro-app/get-started/arcgis-pro-system-requirements.htm) (When the system is updated you will need to find the new requirements.)
2. Run the ArcGIS Pro installer program
   1. On the first screen click **Next**
   2. On the second screen, read and accept the license agreement. Then click **Next.**
   3. For the installation context, choose **Per-Machine**, This requires an account with administrative privileges. If you are using an account without admin privileges, choosing **Per-User** is the correct option.
   4. You will then be prompted to choose whether to download **ArcGIS Pro**, **ArcGIS Pro Intelligence**, or **both**. By default Intelligence will not be selected. Intelligence is a program that works more closely with the data. We have not looked into it, however it seems to allow you to use multiple sources of data at once and perform advanced analytics such as spatial, temporal, statistical, predictive, and relational. I would recommend giving it a look, however ArcGIS Pro will fulfill all basic needs.
   5. Choose an **installation folder**. If you do not have a specific drive in mind, leave the default and click **Next.**
   6. Click **Install**.
   7. Once completed, click **Finish.** You can now run the program(s).
   8. It is highly recommended that you install the offline help system(s) for the program(s) you downloaded.
      1. Browse the installation folder until you find **ArcGISProHelp.msi.**
      2. Execute the program and choose the manuals for either ArcGIS Pro, ArcGIS Pro Intelligence, or both.

*C. Importing ArcMap Documents into ArcGIS Pro:*

1. **Download** the ArcMap files from the shared ArcGIS Online folder. <https://www.arcgis.com/home/group.html?id=967675853d294a69a96622353d6784e0#overview>
2. **Extract** the contents from the ZIP file. The location it is extracted to is up to you.
3. Start ArcGIS Pro.
4. Under **New**, click **Start without a template**.
5. Click the **Insert** tab, and then click **Import Map.**
6. Browse to the extracted folder. Select the **.mxd**  file.
7. Click **OK.**

*D. Creating a geodatabase in ArcGIS Pro (This is required to make tables):*

1. Start ArcGIS Pro.
2. Open the **Catalog** pane. It should be on the right of the screen.
   1. To open, click **View**, then **Catalog**.
3. Right-click the **Databases** folder or a folder under **Folders** and click **New File Geodatabase.**
4. Browse to where you would like the file saved, enter a name, then click **Save.**
   1. A file geodatabase is created in the location you selected and is automatically added to the project under the **Databases** folder in the **Catalog** pane.

***OR***

1. Open the **Create a file Geodatabase** tool in ArcGIS Pro.
   1. On the ribbon, click the **Analysis** tab and click **Tools**. In the **Geoprocessing** pane, type the tool name in the search box or browse to **Data Management Tools** > **Workspace**.
2. Specify the folder location.
3. Type a name.
4. Choose the ArcGIS Version.
5. Click **Run.**

*Creating Features (Specifically Tables):*

1. After creating a geodatabase, right click the **Geodatabase** in the **Catalog**. Under **New,** choose **Table**.
   1. If you choose **Feature Class** you can include polygons, lines, or points on the map as part of the table.
2. Name the table, use the same name for the **Alias** if asked.
3. Select **Default** for storage configuration.
   1. You may use a configuration keyword if you require the following:
      1. Large picture files- Use keyword **MAX\_FILE\_SIZE\_256TB**
      2. Using Oracle- **SDELOB** (This will tell the database to store the spatial data in BLOB format)
      3. Using languages win non-Latin characters (i.e. Chinese, Russian)- **TEXT\_UTF16**
4. Add **Fields**. Each field will become a column of the table. The **Field Name** will be the column names. **Data Type** refers to what will be in the **Fields**. **OBJECT ID** is required by default and should not be touched.
   1. **Short Integer**- Non fraction numbers between -32,768 and 32,768
   2. **Long Integer**- Non fraction numbers between -2,147,483,648 and 2,147,483,647
   3. **Float**- Fraction numbers between 3.4E38 and 1.2E38
   4. **Double**- Fraction numbers between 2.2E308 and 1.8E308
   5. **Text**- Specify length as 2,000,000. It will limit your maximum characters otherwise.
   6. **Dates-** mm/dd/yyyy hh:mm:ss, can specify AM or PM
   7. **BLOBS-** Items stored as strings of binary. Images, multimedia, bits of code. Must have a custom loader/viewer or a third party application to load items into a BLOB field or view contents of a BLOB field.
   8. **GUID-** Global ID and GUID data types store registry style strings consisting of 36 characters enclosed in curly brackets. These strings uniquely identify a feature or table row within a geodatabase and across geodatabases.
   9. **Raster**- Images. Highly recommended only small images are used here. (If using a feature class with shape files- A shapefile cannot contain raster datasets. Hyperlinks must be used in this case.) (If you use a raster, you will be limited to 255 characters in all fields. If you wish to have larger blocks of text do not include a raster, refer to attachments below.)
5. Click **Finish.**

*Add Attachments to a Feature Class:*

Attachments provide a flexible way to manage additional information that is related to your features. Attachments allow you to add files to individual features and can be images, PDFs, text documents, or any other type of file. Similar to hyperlinks, attachments allow you to associate multiple files to a feature, store the files in the geodatabase, and access them in more ways. You can view attachments from the Identify window, from the Attributes window (when editing), in the attribute table window, and through HTML pop-up windows. The media attachment should be titled after the recipe title in the title cell of the attribute table if it is a photo or video of a recipe or after the location if it is the picture of a location.

1. **Enable attachments** on the feature class or table.
   1. On the **Analysis tab**, in the **Geoprocessing group**, click **Tools**. The Geoprocessing pane appears.
   2. In the search box, type **enable** and click **Enable Attachments.**
   3. Click the **Input Dataset** drop-down arrow, then browse and choose the source geodatabase feature class containing the features to which you want to attach files.
   4. Click **Run.**
2. **Add Attachments.**
   1. On the **Edit tab**, in the **Selection group**, click **Attributes**.
   2. Click **Select** and select the feature to which you want to attach a file.
   3. Expand the selected items in the pane and click the feature.
   4. Click the **Attachments tab**.
   5. On the toolbar, click **Add**.
   6. The Select Attachment file browser appears. Use the file browser to select the files you want to attach to the feature, and click **Open**.
   7. The file is copied to the attachment table.
3. Other options with attachments
   1. You can **Save, Update, Open, and Remove** attachments from the toolbar in the **Attachments tab**.

*E. Adding Existing Layers from ArcGIS Online:*

1. Make sure a map or scene is your active view.
2. On the **Map tab**, in the **Layer group**, click **Add Data**.
3. Under **Portal**, click **All Portal** in the quick links panel.
4. Type “layer” in the Search box and press **Enter**.
5. To find layers defined by Esri, add the search term “owner:esri” in the Search box along with any other appropriate keywords.
6. Click the layers in the search results that you want to add.
7. Click **OK**.

*Import layers from the web:*

1. Download layer from web, it should be a **ZIP** file
2. Extract contents of the **ZIP** file to a folder on your computer
3. Open **ArcGIS Pro**
4. Navigate to **Add Data**
5. Navigate to the folder on your computer holding the extracted **ZIP file**
6. Select the files present and choose **Add Data**

Works cited

[*Add layers and layer packages to a map—ArcGIS Pro | Documentation*. (n.d.). Retrieved December 2, 2020, from https://pro.arcgis.com/en/pro-app/help/mapping/layer-properties/add-layers-to-a-map.htm](https://www.zotero.org/google-docs/?NhpzWF)

[*Create a feature class—ArcGIS Pro | Documentation*. (n.d.). Retrieved December 2, 2020, from https://pro.arcgis.com/en/pro-app/help/data/feature-classes/create-a-feature-class.htm](https://www.zotero.org/google-docs/?NhpzWF)

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[*Download, install, and authorize—ArcGIS Pro | Documentation*. (n.d.). Retrieved December 2, 2020, from https://pro.arcgis.com/en/pro-app/get-started/install-and-sign-in-to-arcgis-pro.htm](https://www.zotero.org/google-docs/?NhpzWF)

[*How To: Add multiple documents as attachments to a feature class*. (n.d.). Retrieved December 2, 2020, from https://support.esri.com/en/technical-article/000012142](https://www.zotero.org/google-docs/?NhpzWF)

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