How to use geospatial PDFs in Adobe Acrobat and Acrobat Reader

Using layers
In many geospatial PDFs, the GIS layers can be turned on and off to view underlying data in more detail. To use this feature, select the **Layers** icon in Adobe Acrobat or Adobe Reader and then click the box to the left of the map you wish to review (Map 1/11 in the example below). A list of layers will open:

![Layers panel](image)

The eye icon indicates which layers are visible. To turn a layer on or off, click the eye icon to the left of the layer’s name. This is a very useful feature if you want to see data hidden below certain layers (e.g., an aerial photo below land use layer).

Viewing attribute information
Geospatial PDFs also allow users to view data associated with a geographic feature by using the **Object Data Tool**. Not all geospatial PDFs included this data. For our example PDF, the “What’s in my Neighborhood (MPCA)” layer includes attributes.

1. Under **Edit** (or the **Tools** pane in Acrobat), select **Analyze** and then **Object Data Tool**.
2. Click on a feature. If there is data associated with it, then the name and attributes will be shown on the right side of the Adobe Viewer.
Using geospatial tools
Geospatially enabled PDFs allow you to find locations, measure distances, and add location markers. You can also copy coordinates to the clipboard for use with a web-mapping service such as Google Earth or Bing Maps. You can use geospatial location tools to:

- find and mark location coordinates
- measure distance, perimeter, and area
- change the coordinate system and measurement units
- search for a location in a document

Step 1: Determine which Adobe product you have installed
Adobe offers numerous products that can open PDF documents, and its software comes with a variety of tools depending on license level. If you have Adobe Acrobat Standard, Adobe Acrobat Professional, or Adobe Reader (Version 9.x or higher), you will have access to the geospatial tools.

Step 2: Locate and turn on the geospatial tools

- In Adobe Standard or Professional - View the geospatial measuring tools by selecting Analyze under Tools pane or Tool Sets and then Manage Tool Sets from the dropdown menu under Edits at the top of the window.
- In Adobe Reader - View the geospatial measuring tools by selecting Analysis from the dropdown menu under Edits at the top of the window.
- You also can use the Help dropdown menu to locate the tools.

Step 3: Use the geospatial tools

Find map locations
1. Under Edit (or the Tools pane in Acrobat), select Analyze and then Geospatial Location tool.
2. Right-click on the map and select Find A Location.
3. Enter the latitude and longitude values (degrees, minutes, seconds, or decimal) and click Find.
When at least one location is available, the page will center on a highlighted blue square.

4. When the PDF includes more than one map, use the Next or Previous button to view other results. Multiple locations are available:
   - when a document contains multiple maps, such as a smaller map within a larger map
   - when a document contains multiple pages of a map, such as a map of a county and then a map of a city within the county

5. To add a comment, click the location marker and add the information in the comment box.

6. To end the search, right-click inside the map and select Hide Location Search.

Mark geospatial locations
1. Under Edit (or the Tools pane in Acrobat), select Analyze and then Geospatial Location tool.
2. Move the cursor over the document to view latitude and longitude values of areas that contain geospatial information.
3. To find a location, right-click on the map and select Find A Location.
4. Enter the latitude and longitude values and click Find.
5. To mark a location with geospatial information, right-click on the map and select Mark Location.
6. To add a comment, click the location marker and add the information in the comment box.
Measure distance, perimeter, and area on maps

You can use Acrobat measuring tools to calculate distance, perimeter, and area on any geospatially enabled PDF. Snap markers indicate whether you are on a path or path end point as you move the cursor over content and show the latitude and longitude as you move the cursor over geospatial content.

1. Under Edit (or the Tools pane in Acrobat), select Analyze and then Measuring Tool.
2. In the Measurement Tool display, select a measurement type:
   - distance
   - area
   - perimeter
3. Select a snap-to type:
   - snap to paths
   - snap to end points
   - snap to midpoints
   - snap to intersections
4. Select what you would like to measure:
   - Using the Distance tool, click where you want to begin measuring, drag to the end point, and click again.
   - Using Perimeter tool, click the map in one corner of the perimeter and then drag to each corner. Click at each corner and then double-click at the end point.
   - Using Area tool, click the map at one corner of the area and then drag to another corner. Click before changing directions and then double-click at the end to display the total area.
5. When you are finished, right-click and select Complete Measurement or Cancel Measurement.

Copy location coordinates for use with a web-mapping service

1. Under Edit (or the Tools pane in Acrobat), select Analyze and then Geospatial Location tool.
2. Right-click the location on the map and select Mark Location.
3. Open the location annotation and copy the information. The data is copied in this format: latitude, then longitude, separated by a space.
4. Paste the data into a web-mapping service that can interpret the data.

Change measurement units within a document

Right-click on the map with the Measuring tool. Then select Distance Unit or Area Unit and choose a measurement type.
Change geospatial measuring preferences

You can change the measurement units for all geospatial PDFs in the Preferences dialog box by clicking Measuring (Geo) from under Categories.

- **Enable Measurement Markup** – Add a label to a geospatial measurement and selecting Use Label and then entering your text.

- **Snap Settings** – Choose which path parts you want measurements to snap to.

- **Display Value As** – Choose how latitude and longitude values are calculated:
  - **Decimal** - Displays latitude and longitude as a decimal fraction
  - **Degrees, Minutes, Seconds** - Divides each longitude degree into 60 minutes and 60 seconds

- **Display Direction As** - Choose between **Signed** and **Named**. Named direction uses N (north) or S (south) for latitude and E (east) and W (west) for longitude.

- **Always Display Latitude And Longitude As WGS 1984** - Select to use the current standard reference frame for earth (World Geodetic System 1984). For older maps drawn with an earlier grid, you can deselect this option to see the original values; coordinate positions may be different from current standards used in GPS devices and web-mapping services.

- **Use Default Distance Unit** – Choose which measurement unit you want to use.

- **Use Default Area Unit** – Choose to measure an area using a different type of unit (instead of the distance unit).

Source: Adapted from Acrobat Help / Geospatial PDFs, http://helpx.adobe.com/acrobat/using/geospatial-pdfs.html