



## Geographic Information System (GIS) Data Viewers

### INFORMATION SHEET

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#### ● What is a GIS data viewer?

A GIS data viewer is software that can view vector and raster format data; it is an automated system for spatially managing and analyzing geographic data.

#### ● Why do GIS data viewers matter to the USDA Farm Service Agency (FSA) and Aerial Photography Field Office (APFO)?

FSA and APFO produce two main datasets: Common Land Unit (CLU) and digital ortho imagery.

CLU is vector data. It resides in shapefile format. Digital ortho imagery is raster data. It resides in TIFF and TIFF World, GeoTIFF, MrSID (MG2 or MG3), and JPEG2000 formats primarily.

This data is produced for day to day management of USDA programs, and much of the work is done in GIS. This data is also to a great degree available for public consumption.

#### ● Are all viewers created equal?

No. Viewers vary greatly. Factors affecting overall functionality include levels of licensing, speed, primary purpose for the software, and bells and whistles. In the end, however, the use of one viewer over another is left up to personal preference and financial considerations.

#### ● How much do viewers cost?

Viewers range in price from free to upwards of \$10,000, depending on levels of licensing and software extensions the user may require. Specific pricing information should be obtained directly from software vendors as prices and products change frequently.

#### ● What are some of the free viewers?

The following is a list of some software available at no cost for viewing GIS data:

1. Tatuk GIS Viewer Version 1.8.7.342 and 1.12.0.365
  - a. Views MrSID MG2/MG3, JPEG2000, and ECW formats.
  - b. Views shapefiles.
  - c. Seven languages available on menu bar.
  - d. Can create PDF format maps.
  - e. **Does not recognize the 4<sup>th</sup> band in a 4-band image.**
  - f. Download website:  
<http://www.tatukgis.com/products/viewer/viewer.aspx>
2. Global Mapper 9
  - a. Views MrSID MG2/MG3, ECW, and JPEG2000 formats; however **does not view the infrared band in JPEG2000 format** (could change in fall 2008).
  - b. Views shapefiles/feature classes.
  - c. Views JPEG2000 and ECW formats.
  - d. Download website:  
<http://www.globalmapper.com/>
3. PCI Geomatica FreeView
  - a. Views shapefiles.
  - b. Many image enhancement options.
  - c. **Can view 4 band imagery in geotiff and JPEG2000 formats.**
  - d. Download website:  
<http://www.pcigeomatics.com/products/freeview.html>
4. ESRI ArcGIS Explorer
  - a. Supports JPEG2000, GeoTIFF, and MrSID but **does not view the 4<sup>th</sup> band in a 4-band image.**
  - b. Support for shapefiles, geodatabases, and KML files.
  - c. Can perform some spatial analysis.
  - d. Download website:  
<http://www.esri.com/arcgisexplorer>

5. ESRI ArcExplorer 9.2
  - a. Views MrSID MG2 format.
  - b. Views shapefiles.
  - c. Available for Windows, Mac, Unix, Linux.
  - d. Available in several languages.
  - e. Does not support MG3, ECW or JPEG2000.
  - f. Download website:  
<http://www.esri.com/software/arcexplorer/download.html>

**I received my digital imagery order from APFO. What should I view it with?**

That depends on the product. Some viewers can view almost any product, while others can only view selected formats. The **PCI Geomatica FreeView** viewer can view all digital imagery APFO delivers. The following can view most imagery APFO delivers:

1. Tatuk GIS Viewer.
2. Global Mapper 9.
3. ESRI software including:
  - a. ArcGIS 9.x
  - b. ArcGIS 8.3 with the raster update, which can be downloaded from  
<http://support.esri.com/index.cfm?fa=downloads.patchesServicePacks.viewPatch&PID=43&MetaID=579>
  - c. ArcView 3.x with the appropriate plugin, which can be downloaded from  
[http://www.lizardtech.com/download/dl\\_download.php?detail=geo\\_avmrsid\\_dll&platform=win](http://www.lizardtech.com/download/dl_download.php?detail=geo_avmrsid_dll&platform=win)
  - d. ArcGIS Explorer
  - e. ArcExplorer 9.2

**What data viewers does the Aerial Photography Field Office (APFO) use?**

APFO employs the ESRI ArcGIS software suite, selected extensions, and custom tools to accomplish GIS production level work. APFO also uses other viewers identified in this document, in support of customer related inquiries and needs.

**What about the States/FSA Service Centers?**

USDA FSA State Offices and Service Centers use ArcGIS 9.1 and ArcSDE geodatabases for management of CLU.

**Any advice on choosing the right viewer?**

Research the viewers thoroughly, especially if you are going to pay for the software. Determine what your core requirements are, the purpose for which you need the software, and identify the viewer that best meets your needs.

Consider whether you're just using the viewer to view imagery, or if you want to work with vector data (points, lines, and polygons), Global Positioning Systems (GPS), spreadsheets and databases as well.

Also remember if you pay for a license, many times you need to pay annual maintenance fees to continually upgrade to the newest version without paying for the software all over again.

**Who do I contact for more information?**

1. For information on data viewers, contacting software vendors directly or browsing their website is always recommended. For more information on free GIS data viewers and viewer downloads, go to the following sites:  
<http://software.geocomm.com/viewers/>  
<http://gislounge.com/ll/freedataviewers.shtml>  
<http://spatialnews.geocomm.com/features/viewers2002/>  
<http://www.apfo.usda.gov/viewers.htm>
2. If you have general questions about data viewers, contact GIS Specialist Zack Adkins at (801)844-2925 or GIS Specialist Louise Mathews at (801)844-2934.
3. For APFO sales and product information, contact USDA-FSA-APFO at 2222 W 2300 S, Salt Lake City UT, 84119-2020, call 801-844-2922, or visit [www.apfo.usda.gov](http://www.apfo.usda.gov).

**Note to reader:**

Information regarding data viewers contained within this document is provided for customer convenience only. USDA-FSA-APFO does not support or endorse these products or services.