



United States Department of Agriculture

## Geographic Information System (GIS) Software for Image Viewing INFORMATION SHEET April 2016

### What is GIS software?

GIS software can display many types of geospatial data; it is a system for spatially managing and analyzing geographic data and information.

### Why does GIS software matter to the USDA Farm Service Agency (FSA) and Aerial Photography Field Office (APFO)?

GIS software is used daily at APFO and in FSA offices throughout the country. FSA and APFO produce two main datasets: The Common Land Unit (CLU) and digital ortho imagery.

CLU is vector data. It resides in shapefile format and in geospatial databases. Digital ortho imagery is raster data. It primarily resides in TIFF, GeoTIFF, MrSID, and JPEG 2000 formats, or is accessible through web services.

This data is produced for management of USDA programs, and much of the work is done in GIS software. Currently, only the digital ortho imagery is available for public consumption.

### Are all software programs equal?

No. Software varies greatly, and in most cases the software programs are far more than mere “viewers”. Higher end GIS software is capable of sophisticated geospatial processing. Factors affecting overall functionality include levels of licensing, speed, primary purpose for the software, and available functionality. In the end, however, the use of one product over another is left up to personal preference and financial considerations.

### How much does the software cost?

Software can range in price from free to thousands of dollars, 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 free software programs which can be used as data viewers?

The following is a partial list of some software available at no cost for viewing GIS data. Most of them have at least some GIS functionality beyond merely viewing the imagery. These companies often sell more complete software programs. The websites provide information on the viewers’ capabilities.

1. TatukGIS Free Viewer  
<http://www.tatukgis.com/Downloads/TrialFreeVersions/Viewer.aspx>
2. Global Mapper  
<http://www.blumarblegeo.com/products/global-mapper-download.php>
3. PCI Geomatica FreeView  
<http://www.pcigeomatics.com/resources-support/more-resources/downloads>
4. ESRI ArcGIS Explorer  
<http://www.esri.com/software/arcgis/explorer/download>
5. LizardTech GeoViewer  
<https://www.lizardtech.com/geoviewer-pro/overview>
6. QGIS  
<http://qgis.org/en/site/>

On the APFO website some of these links can be found as well as basic instructions for using the programs.  
<http://www.fsa.usda.gov/FSA/apfoapp?area=home&subject=prod&topic=vdi>

### 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 products listed above can view most of the imagery products delivered by APFO.

## ● What software does the Aerial Photography Field Office (APFO) use?

APFO uses the ESRI ArcGIS software suite, selected extensions, and custom tools for GIS production level work. APFO also uses other software identified in this document, in support of customer related inquiries and needs. Some APFO personnel also use remote sensing software such as ERDAS Imagine, ENVI, and SocetSet.

## ● What about the States/FSA Service Centers?

USDA FSA State Offices and Service Centers use ArcGIS together with web services for management of CLU and other agency related work. In some of the offices remote sensing or other geospatial software may also be used.

## ● Any advice on choosing the right viewer?

Research the viewer software 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 software that best meets your needs.

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

Also remember that 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, and browsing their website is always recommended. For more information about free GIS data viewers try the following sites:  
<http://software.geocomm.com/viewers/>  
<http://www.gislounge.com/free-gis-data-viewers/>
2. For general questions about data viewers, contact GIS Specialists Nathan Pugh at (801) 844-2927 or David Davis at (801) 844-2933.
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.