



Free High-Resolution Aerial Photographs Available for North Dakota

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For those who would like to use remote sensing technology in North Dakota high-resolution color aerial photographs are available free on the Internet for the entire state. The National Agriculture Imagery Program (NAIP) county photographs available on the North Dakota GIS Hub (http://gis1.state.nd.us/NAIP_2003/) are 1-meter resolution, color aerial images acquired during the growing season by the United States Department of Agriculture starting in 2003. Only the 2003 images for North Dakota are available for free download from the North Dakota GIS Hub. The 2003 downloads are courtesy of the Natural Resources Conservation Service (NRCS) and the North Dakota Geological Survey. Images from 2004 and 2005 can be purchased from the USDA Aerial Photography Field Office in Salt Lake City. Information for ordering the more recent images is available by email: sales@apfo.usda.gov or by telephone from 801-975-3503.

The NAIP images are geo-referenced to a map coordinate system and zone used by the USDA for all of their digital geographic information system (GIS) data. This means that users can display the imagery in a GIS program on their computer and add other GIS layers such as their digital field boundaries, global positioning system (GPS) points and harvest yield data. These additional GIS layers will be displayed in the correct space on the images. The primary purpose of the 1 meter NAIP imagery is to support USDA Field Service Centers located in counties throughout the United States.

The NAIP image provides sufficient detail to recognize variations in soil type, crop development, range quality and drainage problems. The imagery could also be useful for a variety of activities from recreation to rural business. The imagery provides a detailed background view to identify and quantify features on the ground.

The county image data is made available in MrSID compressed image format. This results in high quality images but also in the file size being very large. Each county file ranges from 200 to 500 megabytes which means downloads require a high-speed Internet connection. Also because of the MrSID image file format, users must use a computer program capable of viewing that file format. Most GIS computer programs are capable of reading and displaying MrSID images. A GIS program is also required to overlay other GIS or GPS data on the images. Some GIS programs will also allow users to outline areas on the images and determine the area of that portion of the image. Many GIS programs are available; some simple viewing GIS programs can be downloaded free from the Internet. Commercial GIS programs range in price from a few hundred dollars to several thousands of dollars. More information on GIS software is available from the NDSU Geospatial Education Web Page at <http://134.129.78.3/geospatial/>.