



ND Forest Service Use Geospatial Technologies

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North Dakota Forest Service personnel are using geospatial technologies to enhance their work in forest management. Several ND Forest personnel are using a geographic information system (GIS) computer software to manage forest and riparian projects. Seven individuals participated in a GIS training workshop in Grafton on October 10, 2005 conducted by John Nowatzki, NDSU extension geospatial technology specialist. Participants learned how to use fGIS, a free GIS program developed by the Wisconsin Department of Natural Resources.

Craig Brumbaugh, Riparian Forestry Specialist in Grafton, is using geospatial technologies to help manage the Cart Creek in Pembina, Walsh and Cavalier Counties. State Forester, Tom Nowatzki is using these technologies in managing state forest land across the state. Robert Harsel, Forest Resource Management Specialist in Lisbon, is using GIS, GPS and aerial photography in Sheyenne National Grasslands in Ransom County. These and other North Dakota foresters start by acquiring accurate points and routes and boundaries using global positioning system (GPS) units. They use the fGIS program to display the GPS data on high-resolution aerial photography. The GIS program allows them to visualize and determine the number of acres included in their project area. They are using one-meter resolution National Agricultural Imagery Program (NAIP) aerial photography acquired during the growing season.

Since the NAIP imagery is high resolution and taken during the growing season, foresters can identify various types and quality of vegetation. In the future, ND Foresters intend to use GPS to mark insect and disease infestations and then use GIS to compare known infested areas with other spatial data to identify possible causes for the infestations. The GIS software allows users to overlay GPS-collected data on digital soil maps and elevation data. Weather data is another example of remotely sensed data that is available for forest management. The North Dakota Weather Network monitors and records local weather conditions throughout North Dakota and disseminates these detailed data in a GIS format on the NDAWN web site.

Nowatzki will offer additional GIS workshops for individuals who want to learn how to use fGIS. These workshops will be scheduled at various locations across North Dakota. Anyone interested in participating in an fGIS workshop can contact the Agricultural and Biosystems Engineering Department at NDSU. If you are interested in attending an fGIS workshop send an email to Lori at Lori.Sholts@ndsu.nodak.edu or telephone 701-231-7261.

More information about geospatial technology is available from the NDSU Agriculture and Biosystems Engineering Department Web site at <http://www.ageng.ndsu.nodak.edu>. Follow the links to Extension Programs and Geospatial Technology Education.