



## *South Dakota*

### ***1. Organizational Approach to GIT:***

The South Dakota Resource Conservation and Forestry Division (<http://www.state.sd.us/doa/forestry/index2.htm>) is located within the Department of Agriculture (DOA) (<http://www.state.sd.us/doa/doa.html>). The Division is an active user of GIT, although use remains at the individual project level at this time. The Division receives most of its assistance in using GIT from the state's Bureau of Information and Telecommunication (BIT), and from users in other state agencies. In addition, some technical support assistance is provided by GIS software vendors. The Division has no dedicated GIT staff. The Forest Inventory and GIS Specialist is the Division's only staff person for whom GIT is a primary function. He supports all Division GIT needs, but also has additional technical forestry functions. GIS is primarily used in the Division's main office in Pierre, while field foresters use GPS for various projects. Although no formal GIT policy exists, Ray Sowers, the Division Director (State Forester) "requires the use of GIS for decision making," map making, and other uses within the Division. In regard to benefits, GIT use has allowed the Division to better understand and present the key issues that affect state forests. Issues regarding GIT include obtaining funding to buy satellite imagery and attend training sessions that cover advanced GIS software. Other issues include access to data, and developing a means to distribute digital GIT data created within the Division.

### ***2. GIT Applications and Data Utilized:***

The Division uses GIS and in-house collected GPS data for several applications, such as the tracking of Volunteer Fire Department (VFD) fire trucks statewide. The Division also has a digital database that uses digitized ArcView shape files showing the locations of past wildland **fires** fought by the state and the VFDs. The Division also has raster and vector databases that model potential locations for catastrophic wildfires across the entire state. In addition, digital orthophotos are used for some fire and fuels reduction projects. For **forest health** management (FHM), the Division uses digitized sketch-maps provided by the U.S. Forest Service (USFS) and GIS in conjunction with the Division's spatial database of ArcInfo coverages, and ArcView shape files that shows the locations of pine beetle infestations in the Black Hills. Another use of GIS and ArcView shape files is the Division's mapping of various Stewardship Incentive Programs (SIPs) project locations on **private lands**. The Division is also using GIS, GPS and digital orthophotos for **forest characterization** in its role in the USFS's Forest Inventory and Analysis (FIA) program for South Dakota.

The Division is currently using ArcGIS 8.1 and ArcView 3.2a as its primary GIS software. The State of South Dakota has state geographic information base data in both vector and raster form. These data are available to state government users, including the Division, from a secure state government server. The Bureau of Information and Telecommunication has developed a custom data search engine specifically for government uses of ArcView 3.2a. The system, called "Data Hound," facilitates geospatial data searches by providing necessary project data through a simplified interface. Development of a version for ArcView 8.1 is currently underway. Users outside of state government can access the data through a secure website provided by the South Dakota Geologic Survey. Raster data sets include 1:24,000 scale digital elevation models (DEMs); U.S. Geological Survey (USGS) digital raster graphics (DRGs) in 1:24,000, 1:100,000, and 1:250,000 scales; and 1:12,000 scale digital orthophotos. Vector data sets include USGS and USFS digital line graphics (DLGs) such as roads, hydrography and Public Land Survey System (PLSS) data. The Division is not currently using satellite imagery, but is investigating its use, depending on the cost of imagery and software to use it. The Division also uses data generated by DOA, several other state agencies, and base data from the USGS EROS Data Center, the Natural Resource Conservation Service (NRCS), and the USFS.

### ***3. Statewide and Other GIT Linkages:***

The Bureau of Information and Telecommunications (BIT) is the informal lead agency in the state providing support and coordination of GI/GIT (<http://www.state.sd.us/bit/index.htm>). It has had a designated GIS Coordinator since 1995. Support is provided in the form of hardware resources; geographic data storage, including the state's geographic information base data archive; backup capabilities; and coordination of metadata development for statewide data sets. South Dakota has four groups that influence or conduct GI/GIT coordination in the state, including a policy level GIS Steering Committee (<http://www.state.sd.us/gis>) the Technical Advisory Group (<http://intranet.state.sd.us/gis/>), the South Dakota GIS Standards group, and the South Dakota GIS Users Group. The Division's GIS Specialist attends meetings held by these groups.

The State of South Dakota has purchased GeoConnect software to establish an NSDI compliant clearinghouse node that will soon be operational. The best source for data and metadata now is the South Dakota Geological Survey's web site (<http://www.sdgs.usd.edu/digitaldata/index.html>), which is a secure website requiring user verification, as described above.