



1. Organizational Approach to GIT:

The Idaho Department of Lands (IDL) (<http://www2.state.id.us/lands/BureausList.htm>) is an active user of GIT. IDL has been a user of geographic information since the department was created when Idaho was granted statehood and is used to support the IDL's mission as a land management agency. According to State Forester Winston Wiggins, IDL has had an integrated management approach to departmental data since the mid 1970s and GIT has been adopted to help implement this approach. The GIS/Cartography Section has 8.5 staff and is located within IDL's Management Information Systems (MIS) Bureau. Section staff provide support for IDL at the main office in Boise, as well as maintain GIS databases and software at 14 field offices located throughout Idaho. GIT is used at each of these field offices in varying degrees depending on available data and GIT expertise. Major preprocessing of GIT data is done at the main IDL office in Boise and then distributed to the field offices. All data distribution among IDL offices was previously handled via CD ROM. However, IDL began installation of a wide area network (WAN) in 2001 that will greatly increase data distribution efficiency. The GIS/Cartography Manager heads up the Section and coordinates the acquisition, value added processing, and distribution of geospatial data, and coordinates and maintains state land records.

IDL does not have any specific policies regarding the use of GIT. However, Legislation enacted in the 2000 session (Ch. 3, Title 58, Section 58-330 of the Idaho Code) directed IDL to centralize the deeds of all fee simple property, buildings and encumbrances that are owned by the state and maintain such information in "a GIS database." This provision provided funding and staffing for two of the staff within the Section to conduct this work. IDL has realized several benefits from GIT use, including faster and better access to and display of updated GI, the ability to use geospatial data seamlessly, and improved decision making by resource managers who can spatially view and analyze different types of data together. One issue for IDL concerns the rapid increase in intra-agency and inter-agency GIT use without commensurate increases in data management, which has resulted in inefficiencies due to duplication of effort and data.

2. GIT Applications and Data Utilized:

The leading users of GIT within IDL are the Forest and Fire Management Bureaus, which use GIT for many applications. The Forest Management Bureau uses GIS for several **state land** applications, including timber cruises, sale maps, timber inventory, and estimating culvert sizes for roads. IDL's Fire Management Bureau uses GIS to administer **wildfire** protection for 12 forest protection districts covering over six million acres. Other uses include fire hazard and risk modeling, and mapping during on-going fires for strategic and tactical planning. IDL has also utilized LANDSAT-derived vegetation data and GIS in creating fire fuel models for developing fire management analysis systems and fire hazard risk models. Some of the work has been conducted with U.S. Forest Service (USFS) and the Bureau of Land Management (BLM). IDL's Forestry Assistance Bureau uses GIS to assist **private land** owners, for cumulative **watershed** effects (CWE) analysis, and for **conservation**, such as administering the Forest Practices Act on private, state and federal lands. GIS is also used to support **forest health** activities as described below.

Much of the GIS/Cartography Section's GIT work is related to land ownership information. It is delineating ownership data using BLM's Geographic Coordinated Data Base (GCDB) as the cadastral control. Since 1993, IDL has converted more than 2,000 BLM GCDB files into topologically structured GIS data coverages for use in IDL's Land Records System. These data are also provided to Idaho counties via the Idaho State Tax Commission in support of standardized county parcel mapping, as well as to the

USFS, the BLM, the Bureau of Reclamation (BOR), the Idaho Department of Water Resources, and others to provide a consistent base for the Public Land Survey System (PLSS). IDL has had a cooperative land ownership project with the BLM that has been ongoing for about a year. IDL is supplying state ownership data to the BLM to be incorporated into their ownership layer for BLM's 1:100,000 scale surface status maps. IDL will in-turn receive a fully attributed ownership layer. An ongoing cooperative project among BOR, BLM, and IDL will create a complete statewide standard cadastral geographic database for Idaho using a combination of GCDB and 1:24,000 scale Public Land Survey data from the IDL database.

IDL's State Integrated Property Records Project is an effort to enhance access and **communications** regarding **state lands** data. This project was authorized by Legislation as cited in Section 1. Work is underway to develop and maintain a web-enabled GIS site where all state leased property, state leased buildings, state-owned buildings, rights-of-way, and encumbrances can be analyzed. This public site will eventually have the capability to display all property ownership, including state, federal and private lands, and be able to integrate other geospatial data. A prototype ArcIMS™ application has been built that can display state land ownership and buildings along with base data for Ada County (<http://gis.idl.state.id.us/GIShtm/static/LandRec.htm>), and is expected to be implemented statewide in the near future. All of the digital raster graphics (DRGs) and about eight, one-degree blocks have been projected to the Idaho Transverse Mercator projection, to be used as backdrop information. The Section and Bureau staff maintain IDL's own website (IDL-GIS) for geospatial data (<http://gis.idl.state.id.us/>) as described below.

A combination of GIS and GPS is being used to support **forest health** applications. Aerial insect activity surveys are conducted annually and then digitized by IDL personnel. A Tussock moth spray project is being done as a pilot project this year in a small area in northern Idaho. Ownership blocks are being identified as areas to spray or not-to-spray based on survey results. These data are then loaded to an on-board computer in the helicopter. As the aircraft flies over these lands, the spray nozzles are turned on and off depending on the spray/no-spray attributes in the ownership layer.

Field offices hold 82 copies of ArcView™ and 23 copies of ArcView Spatial Analyst™ software. The Boise office maintains 16 copies of ArcView™ and seven copies of ArcInfo™ software. Data include digital orthophotos, aerial photography at the 1:15,840 scale, GPS data, and satellite imagery. Aerial photography is an important tool used by IDL and other resource management agencies. IDL maintains a statewide photography index map showing aerial photography flown by various sources from 1965 to the present. IDL resource managers contribute to the IDL corporate geo database by locating features using GPS, digital orthophotos, digitized aerial photography, and on-sight inspections. All of the bureaus use GIS base data layers such as roads, hydrography, PLSS, ownership, boundary coverages, digital elevation models (DEMs), and a number of other data layers from other agencies.

Idaho recently acquired statewide SPOT imagery (10-meter panchromatic) that is available through the State GIS Coordinator and can be shared with all state agencies, local governments, state universities, federal agencies, and tribal governments operating within Idaho. An example of SPOT data use is the development of an ArcIMS™ application to display SPOT data for small scale views and digital orthophotos for large scale views. IDL will use this resource to complement existing products.

3. Statewide and Other GIT Linkages:

The State GIS Coordinator serves as the official focal point for statewide GI/GIT activities in Idaho. Established in early 2000 in the Information Technology Resource Management Council (ITRMC), the role of the Coordinator is to coordinate, facilitate, and encourage data sharing, acquisition, and standardization among GIS users in the state. Idaho also has a Federal Framework Coordinator who serves as the U.S. Geological Survey (USGS) Idaho Mapping Liaison. The responsibilities of the Liaison position include development of data standards, custodianship, maintenance, and documentation. The

Liaison also coordinates the work of various framework data committees and facilitates partnerships within the federal government and with others. The Idaho Geospatial Committee (IGC) serves as the lead GI/GIT group in the state. It sets and directs GI/GIT policy and guidelines in the state. Because only three state representatives may serve at any given period on the IGC, IDL is not currently a member, but it does serve on subcommittees of the IGC.

INSIDE (Interactive Numeric Spatial Information Data Engine) Idaho (<http://insideidaho.org/>) is the officially recognized statewide clearinghouse for GI in Idaho. It is planned to be a distributed clearinghouse where agencies will host their own data. In some cases, smaller departments or agencies will collaborate with the INSIDE Idaho site using existing Web enabled GIS sites to host their data. INSIDE Idaho is a digital data clearinghouse created to provide a centralized location to share and exchange geospatial and numeric data and provide effective ways to deliver data and serve the citizens of Idaho in an easily accessible web-enhanced environment. The web site is a cooperative effort with many federal and state agencies as well as local communities, and includes five major categories: Geodata, Numeric Data, Atlas maps, Interactive mapping, and an online Tutorial. As mentioned above, IDL maintains a GIS website (IDL-GIS) (<http://gis.idl.state.id.us/>), which serves as a clearinghouse for Idaho GIS data and provides service to state, federal, private, and public groups or individuals. IDL-GIS has over 100,000 files (more than 60 GB of data) available for downloading, as well as an interactive map server which can be used to download the data, build maps and identify map features.