



1. Organizational Approach to GIT:

The Hawaii Division of Forestry and Wildlife (DOFAW) (<http://www.state.hi.us/dlnr/dofaw/>) is located within the Department of Land and Natural Resources (DLNR). GIT is utilized for individual forestry applications and on a project-by-project basis. The Division receives technical support and data as needed from the State Office of Planning. In addition, Hawaii Natural Heritage Program staff provides GIS mapping services on a contractual basis as needed, and work closely with all Division staff. Utilizing the Heritage Program, Division staff augments DOFAW's own in-house capability as needed to meet deadlines or for large-scale projects. The Heritage Program provides this same kind of support and expertise for many natural resource organizations in the state, including The Nature Conservancy of Hawaii, where it is located, the University of Hawaii, Department of Defense, U.S. Fish and Wildlife Service (USF&WS), and the U.S. Geological Survey's (USGS) Biological Resources Division.

The locus of DOFAW expertise is within the Planning and Information Services Section at the main administrative office in Honolulu. The Planning and Information Services Section Head is responsible for developing DOFAW's GIT policy, such as identifying and prioritizing data creation projects, securing funding for data collection and providing training and technical support. In addition to the efforts of the Section Head, one dedicated full-time GIS technician produces large-scale professional quality maps and web graphics as needed for various projects. Two additional foresters in the section utilize desktop GIS and remote sensing (RS) data on a regular basis in the production of data layers and to provide training support to staffs in other parts of the Division who wish to apply GIS to specific projects. A few other individuals within the Division on the islands of Kauai, Oahu and Hawaii utilize desktop GIS occasionally for general mapping. Issues regarding GIT primarily center on the difficulties of retaining staff due to the lack of competitive salaries offered by state government in comparison with the private sector and with the federal government.

2. GIT Applications and Data Utilized:

DOFAW applies GIS in several program areas, including **forest health**, **fire** and emergency response, **watershed** protection and **recreation** applications. Various data are utilized, including SPOT data from 1995 and LANDSAT data from 1993 for some of these applications. However, due to the tropical nature of the Hawaiian Islands, it has been difficult to assemble complete cloud-free RS data sets. Digital orthophotos are currently being produced under contract with the U.S. Natural Resources Conservation Service, though the completion date of this project is unknown at this time. Most of the data used by the Division with GIS are derived from the Office of Planning. DOFAW has become the lead state agency in maintaining the public lands data layer. Other data layers for the management of specific resource areas have been created and maintained by DOFAW. The Hawaii Natural Heritage Program has become a major partner in the development and use of GIT by DOFAW since 1997. The Heritage program maintains the Rare Biological Elements database, which pertains to threatened and endangered **wildlife** and is one of the most important geospatial databases used by the Division. In 2000, DOFAW in conjunction with several other resource management agencies throughout the state, including the Heritage Program, initiated a Gap Analysis Program (GAP) project which will create comprehensive **land cover** maps using new LANDSAT imagery as well as identification of critical habitat areas. This project is now fully under way with a dedicated staff of two full-time employees and in-kind contributions from cooperating agencies, including the National Oceanic and Atmospheric Administration (NOAA) and its Coastal Services Center, USGS's Biological Research Division, the USF&WS Bishop Museum, the University of Hawaii and the National Park Service. It is expected that this land cover mapping will be completed in 2003.

3. Statewide and Other GIT Linkages:

The Office of Planning (OP), which is administratively attached to the Department of Business, Economic Development and Tourism (DBEDT), was formally designated by legislation in 1996 as the lead agency to plan and coordinate development of a GIT program in Hawaii state government. OP serves as a repository and clearinghouse for access to state data for use with GIS. Most of these data, including foundational or framework layers, can be obtained from a web site maintained by OP (www.hawaii.gov/dbedt/gis). A Hawaii FGDC Clearinghouse Node has recently been established but is not yet fully functional. Most of DOFAW's data used GIS are derived from OP. The Office also develops additional databases and applications, encourages other State agencies to supplement existing data with their information, and provides some GIS services to other agencies. The Division has received some technical support from OP. The Office also provides staff for the Hawaii Geographic Information Coordinating Council (HIGICC), which was established as a non-profit organization to coordinate geographic data activities and issues within the State of Hawaii including all State, County, Federal and private sector GIT activities (<http://wailea.mhpcc.edu/HIGICC>).