

## *Wildlife and Habitat*

GIT use for wildlife is strongly related to State Foresters' use of the technology for land cover analysis. GAP data is often used by SFOs for both applications. Nearly one third of SFOs reported using GIT for wildlife and/or habitat management. SFO applications range from simple use of GPS to delineate habitat boundaries to satellite imagery use such as through the federal Gap Analysis Program (GAP). Wildlife protection under the Endangered Species Act is a strong impetus for State Foresters to use GIT, although better knowledge of biodiversity is also being applied to ecosystem stability and tourism. An example of GIT used for wildlife is a study that analyzed the effects of intensively managed industrial forests on avian diversity and productivity in South Carolina (Lancai et. al. 2000) At least 13 SFOs use GIS for wildlife efforts, while four and nine SFOs report using GPS and RS, respectively. Over half of the RS data SFOs use is from satellites.



The Hawaii Division of Forestry and Wildlife (DOFAW) also serves as the lead wildlife agency in the State, and thus uses GIS for this mission. 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. DOFAW and several other resource management agencies, including the Heritage Program, initiated a GAP project in 2000. Efforts are under way to 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, the USGS Biological Research Division, the U.S. Fish and Wildlife Service, Bishop Museum, the University of Hawaii and the National Park Service. It is expected that this land cover mapping will be completed in 2003.



The South Carolina Forestry Commission does not use GIT for wildlife applications at this time. However, it is anticipated that the Land and Water Resources Division of DNR will make products and data from GAP available through its website clearinghouse. The Commission intends to use these data in land use planning at county and state levels for identification of areas of unique habitat that should be targeted for protection as part of forest management efforts.



### *Wisconsin*

The Division of Forestry uses GIS for wildlife habitat inventory, and wildlife and vegetation ecology monitoring. Digital orthophotos are used in most applications. The Division also uses satellite imagery for land cover applications. Cooperation with the USFS and other federal agencies includes efforts that developed ecological classification systems consistent with the National Hierarchical Framework of Ecological Units (NHFEU), and Albers and Omernik approaches to projection and ecoregion mapping. NHFEU is a methodology that systematically divides the country into progressively smaller areas of land and water that have similar physical and biological characteristics and ecological processes.



### *Washington*

DNR uses GIS extensively on state lands. Wildlife habitat inventory and conservation planning, along with environmental analysis and ecosystem planning have been important applications. GIS has been used for threatened and endangers species concerns, most recently in salmon recovery analysis.



### *Illinois*

The Division of Resource Protection and Stewardship staff uses ArcView™ in conjunction with available data from DNR, and GPS for several applications, including wildlife. Specifically, the Division uses GIS to access threatened and endangered species occurrence and Illinois Natural Areas Inventory sites, which have high quality natural communities. The Division also applies GIS and GPS for statewide ecosystem planning and management, including using GPS to delineate boundaries of nature preserves.

In addition, integrated planning efforts between ORC foresters and wildlife biologists, and the Natural Resource Conservation Service (NRCS) have resulted in the development of a habitat restoration plan for land enrolled in the Wetland Reserve Program (WRP). The locations and outline of the wetlands were delineated using GPS and were then imported into ArcView™ to facilitate planning for the layout of forest and open land management areas. GIS use facilitates data sharing and makes it easier to visualize restoration alternatives, in addition to providing much higher quality maps.

# Habitat Areas Under the Wetland Reserve Program (WRP) - Kennedy County, Illinois

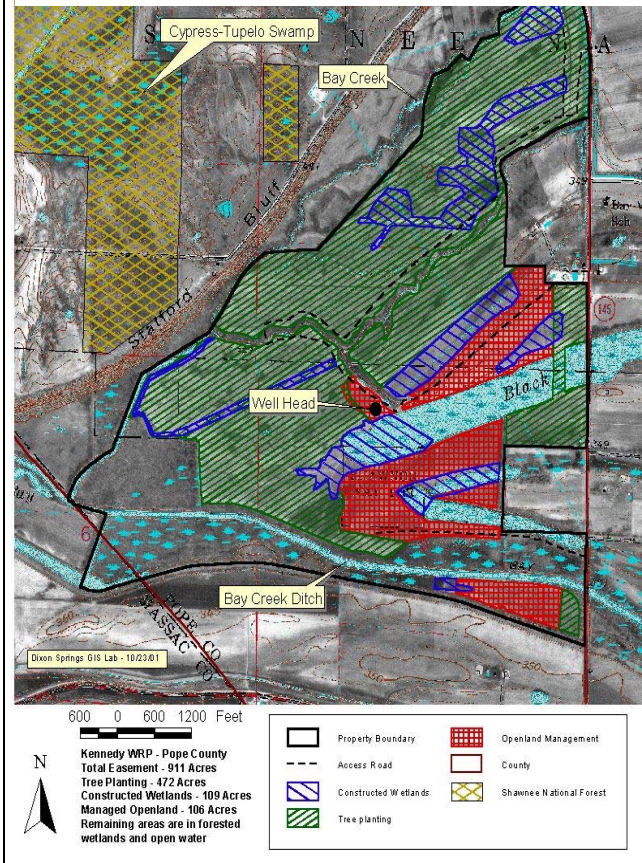


Image:  
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