

GIS Applications for Management and Planning at Merritt Island National Wildlife Refuge Complex, US Fish and Wildlife Service

Frederic W. Adrian, and Cheri Ehrhardt, Merritt Island National Wildlife Refuge,
Department of the Interior, Titusville, FL

The history of GIS use at the Merritt Island National Wildlife Refuge Complex (MINWRC) is short. The first real application was to map a wildfire on one of the outlying properties in 2001. This fire burned for several days before the State Division of Forestry even knew that it was on federal lands. This wildfire helped highlight the fact that the MINWRC did not have the GIS databases and GIS skills needed to effectively manage these federal lands. Over the next few years, several members of the staff, only one of whom had any real knowledge of GIS, took it upon themselves to acquire imagery, obtain data (e.g., boundaries and infrastructure), and create databases (e.g., refuge flora and fauna). Some of this work was contracted out, but most was done in house. Where possible, existing data was begged, borrowed or stolen, which led to some confusion in ascertaining the proper projections and accuracies. Minimal funding was spent on hardware, and networking was, and still is, archaic.

In spite of these challenges, progress was actually made. Several databases now exist depicting land and fire management units on all of the refuges in the complex. Also available is information on roads, water control structures and facilities. The mapping of wildfires and prescribed burns has progressed, as has the mapping of restoration of habitat for the federally threatened Florida scrub-jay (*Aphelocoma coerulescens*). The acquisition of these data helped greatly when the MINWRC began to develop comprehensive conservation plans. Our experience shows that useful GIS support and products can be generated without extensive expenditures.

**5th Southern Forestry and Natural Resources GIS Conference
June 12-14, 2006
Asheville, NC**