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Creation of a Geospatially Rectified Digital Archive for South Florida and the Everglades: The 1940 Aerial Photography Photoset

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Historic aerial photographs of South Florida are a source of valuable information of pre-drainage land cover and land use patterns in the Everglades. The U.S. Geological Survey, in partnership with other agencies, is creating a digital archive of historic aerial photography of this area. Work on the digital archive has progressed with the creation of two open file reports publishing maps from 1927 – 1935 and imagery from 1940. Additional imagery has been scanned but is not yet published.

The 1940 photoset includes approximately 920 high quality panchromatic images of south Florida. The 1:40,000-scale photography covers an extensive area south of Lake Okeechobee. Unreferenced imagery (300 dpi) was published in an Open File Report and can be accessed via the Internet at URL: http://sofia.usgs.gov/publications. In October 2004, we completed rectifying higher resolution imagery from this set (1 m. pixel). The entire set of high resolution 1940s imagery will be available in the near future on the above mentioned website.

The digital, referenced imagery constitutes a broad-scale, high-resolution record of the Everglades landscape going back six decades. It will form the basis for detecting changes in land use and land cover using geographic information systems and spatial analysis methods. To develop and test change detection methods, we selected the Southern Inland and Coastal System of the Everglades and created a geodatabase of historic photography. This pilot project includes rectified raster images from 1940, 1952, 1964, 1987 and 1995, which we will use to conduct a spatial analysis of changes in vegetation patterns.