

MRLC Consortium

National Land Cover Database 2001

Introduction

Regional and global changes in land cover and land use, including such essential categories as forest and grassland cover, agricultural uses, and urban and suburban settlement, are still poorly documented. An improved understanding of land use and land cover is critical to evaluating the contemporary changes of ecosystems and to developing the baseline needed to protect and mitigate future impacts to ecosystem health. General land cover information is essential for many environmental, land management, and modeling applications.

Objectives:

The goal of this project is to develop the 2001 National Land Cover Database (NLCD). The NLCD provides the Nation with nationally complete, current, and consistent public domain information on the Nation's land use and land cover.

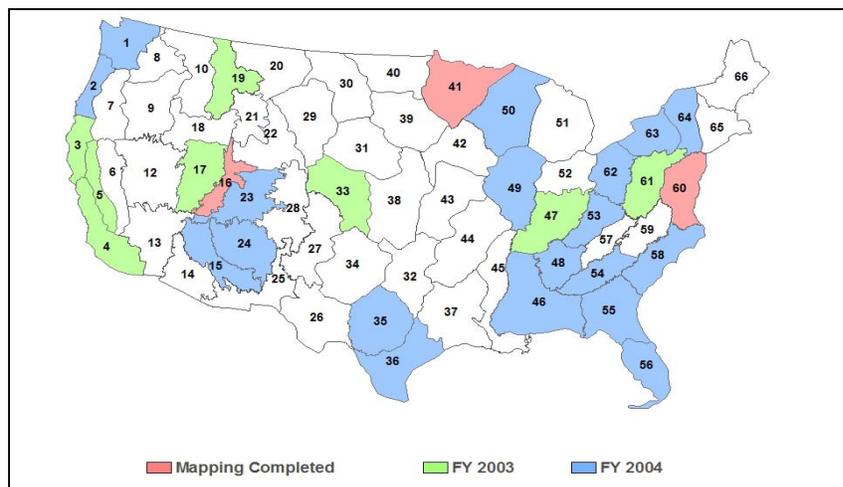
Background:

In 1993, a consortium of federal agencies called the Multi-Resolution Land Characteristics (MRLC) Consortium pooled their resources to purchase Landsat-5 satellite data for mission applications, and to create a National Land Cover Database with this circa 1992 data. The Consortium is repeating this effort and has purchased Landsat-7 data with plans to produce NLCD 2001. MRLC Consortium partners include EPA, NOAA, USFS, USGS, NASA, NPS, USFWS, BLM and NRCS. The USGS EROS Data Center (EDC) has taken the lead developing the NLCD 2001 methods and also coordinates the creation of the database.

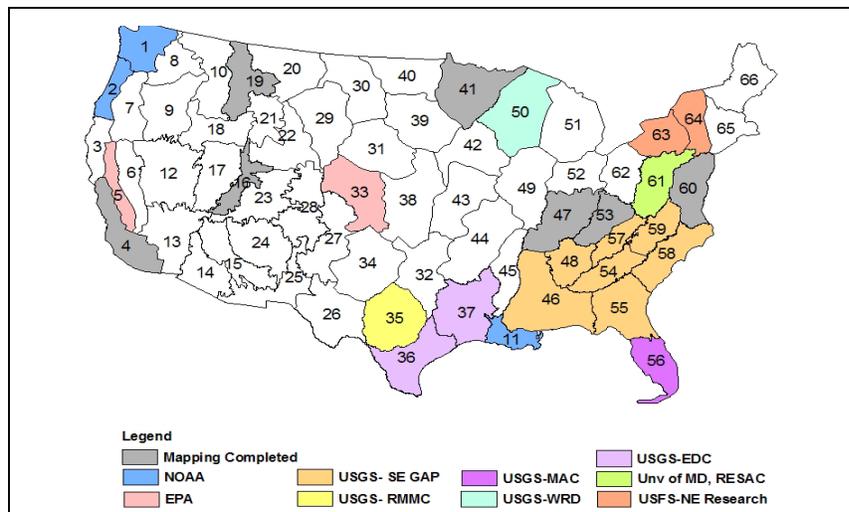
Strategy and Approach:

The NLCD will be produced over a 5-year period, from FY 2001 to FY 2006, at a total cost of about \$12M. The entire U.S., including Puerto Rico, will be covered. This project is supported by USGS appropriated funds, reimbursable

funds, and in-kind contributions from MRLC Partners. The database approach allows for mapping zones to be done independently by government analysts, contractors, or cooperators. Maximum effort is being expended to use partnerships to accomplish the mapping through proposals, inter-agency agreements, and other cost-share agreements.



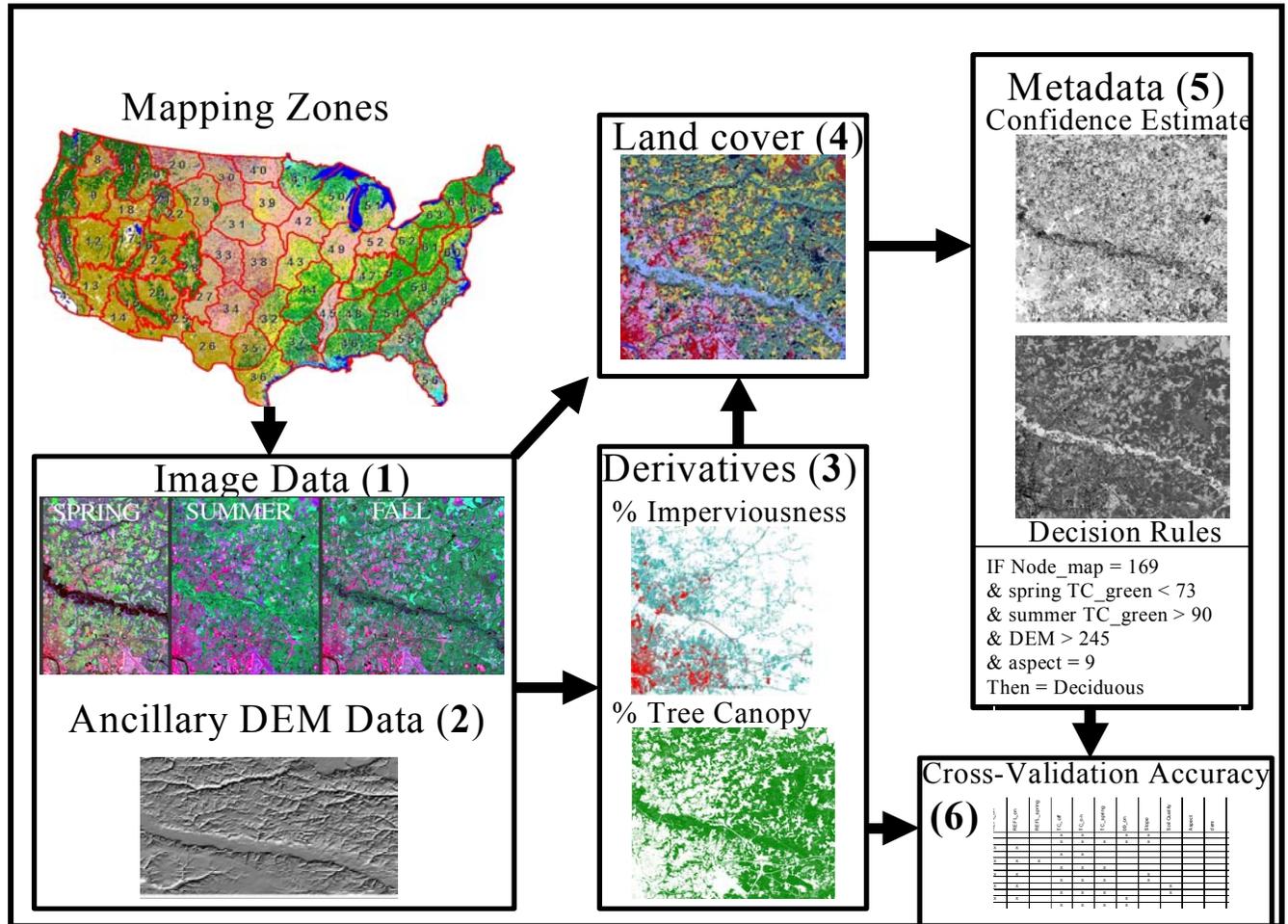
NLCD 2001 Draft Mapping Zone By Fiscal Year



Lead NLCD 2001 Land Cover Partner By Mapping Zone



National Land Cover Database 2001 Diagram



- (1) Normalized tasseled cap (TC) transformations of Landsat 7 imagery for three dates per scene (early, peak and late greenness).
- (2) Ancillary data including a 30 m Digital Elevation Model, with calculations of slope, aspect and a positional index.
- (3) Image derivatives of percent imperviousness and percent tree canopy estimates per-pixel.
- (4) Twenty classes of land-cover data derived from the imagery, ancillary data and derivatives.
- (5) Classification rules, confidence estimates and comprehensive spatial metadata.
- (6) Cross-Validation estimates of model precision for initial accuracy measures.

For more information visit our website at www.mrlc.gov

